ACRONYMS AND ABBREVIATIONS

To ensure a more reader-friendly document, the U.S. Department of Energy (DOE) limited the use of acronyms and abbreviations in this environmental impact statement. In addition, acronyms and abbreviations are defined the first time they are used. The most common acronyms and abbreviations used in the text of this document are listed below.

CFR	Code of Federal Regulations
DOE	U.S. Department of Energy (also called *the Department*)
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FR	*Federal Register*
LCF	latent cancer fatality
MTHM	metric tons of heavy metal
NEPA	National Environmental Policy Act, as amended
NRC	U.S. Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act, as amended
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 micrometers or less
REMI	Regional Economic Models, Inc.
RMEI	reasonably maximally exposed individual
Stat.	United States Statutes
TSPA	Total System Performance Assessment
U.S.C.	United States Code

UNDERSTANDING SCIENTIFIC NOTATION

DOE has used scientific notation in this EIS to express numbers that are so large or so small that they can be difficult to read or write. Scientific notation is based on the use of positive and negative powers of 10. The number written in scientific notation is expressed as the product of a number between 1 and 10 and a positive or negative power of 10. Examples include the following:

Positive Powers of 10	**Negative Powers of 10**
$10^1 = 10 \times 1 = 10$	$10^{-1} = 1/10 = 0.1$
$10^2 = 10 \times 10 = 100$	$10^{-2} = 1/100 = 0.01$
and so on, therefore,	and so on, therefore,
$10^6 = 1{,}000{,}000$ (or 1 million)	$10^{-6} = 0.000001$ (or 1 in 1 million)

Probability is expressed as a number between 0 and 1 (0 to 100 percent likelihood of the occurrence of an event). The notation 3×10^{-6} can be read 0.000003, which means that there are three chances in 1,000,000 that the associated result (for example, a fatal cancer) will occur in the period covered by the analysis.

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INTRODUCTION

Background

This volume of the Yucca Mountain Repository Final EIS consists of responses to comments DOE received on the Draft EIS and Supplement to the Draft EIS. The public-comment and related processes for each document are described below.

DRAFT ENVIRONMENTAL IMPACT STATEMENT

The U.S. Department of Energy (DOE, or the Department) issued the *Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250D) in July 1999 for public comment. The purpose of this environmental impact statement (EIS) is to assess potential impacts from the Proposed Action–to construct, operate and monitor, and eventually close a monitored geologic repository at Yucca Mountain–to provide the necessary background, data, and analyses to help decisionmakers and the public understand the potential environmental impacts. DOE announced the availability of the Draft EIS for public review and comment in the *Federal Register* on August 13, 1999 (64 *FR* 44217); this announcement began a 180-day comment period, which was scheduled to end on February 9, 2000. On February 8, 2000, DOE announced a 19-day extension to the public comment period to February 28, 2000 (65 *FR* 6192).

Commenters were invited to submit their comments by regular mail, electronic mail (E-mail), facsimile transmission (faxes), and at public hearings at 21 locations. In addition, DOE held a meeting with representatives of Native American tribes and organizations to solicit their comments. Figure CR-1 shows the locations and dates of the public hearings.

DOE received more than 11,000 comments on the Draft EIS from Federal agencies; state, local, and tribal governments; public and private organizations; and individuals. These comments were presented as recorded statements at the Native American meeting, recorded statements at the public hearings shown on Figure CR-1 (the statement of each speaker is a separate comment document), or in written documents submitted at those hearings or sent to DOE by regular mail, electronic mail, and facsimile.

This Comment-Response Document includes all of the comments on the Draft EIS that DOE received through August 31, 2001, and the DOE responses to those comments. DOE considered and evaluated comments received after August 31, 2001, and concluded that none had raised new issues not already captured in timely comments and already considered in the EIS analysis. For a number of topics, "summary comment responses" provide a single response to multiple comments on the same or related subjects.

As part of this Final EIS, DOE has included compact disks that contain electronic images of the certified transcripts of the Native American meeting and all public hearings held during the public comment period on the Draft EIS. These compact disks also contain electronic images of all comment documents (including transcripts for each commenter at the public hearings) that DOE received on the Draft EIS through August 31, 2001; these images include brackets that identify the comments to which DOE has responded in this Comment-Response Document. In addition, DOE has placed this material on the Internet site for the proposed Yucca Mountain Repository (*www.ymp.gov)*, and has placed copies in DOE Reading Rooms across the country.

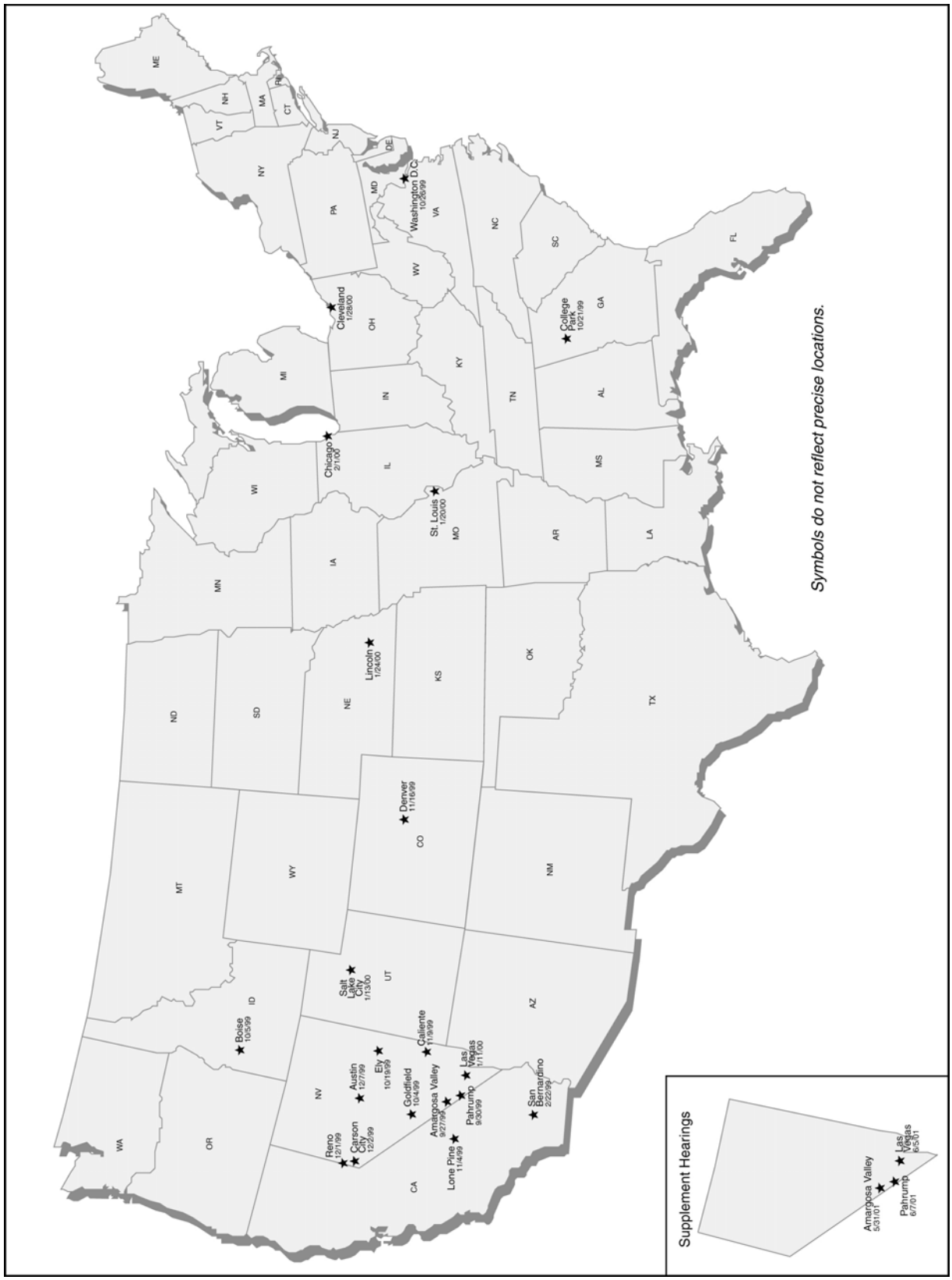

Figure CR-1. Locations of public hearings on Yucca Mountain Repository Draft EIS and Supplement to the Draft EIS.

Tables CR-1 and CR-2 (at the end of this Introduction) provide pointers to all of the comments received through August 31, 2001, from organizations and individuals, respectively. These tables point to the locations in this Comment-Response Document where the reader can find particular comments and the DOE responses. On several occasions, speakers at public hearings represented other individuals. In such cases, the tables list the person who spoke at the hearing. Table CR-3 is a cross-reference from the comments and responses back to the commenter(s). This table identifies who made each comment and, for summary comments, the group of commenters.

SUPPLEMENT TO THE DRAFT EIS

In May 2001, DOE issued the *Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250D-S). The purpose of the Supplement was to present the latest repository design information and the corresponding environmental impact analyses. The U.S. Environmental Protection Agency (EPA) announced the availability of the Supplement for public review and comment in the *Federal Register* on May 4, 2001 (66 *FR* 22540); this announcement began a 45-day comment period, which was scheduled to end on June 25, 2001. On June 22, 2001, DOE extended the comment period to 57 days (May 4 to July 6, 2001) (66 *FR* 33534).

In June, during a review of its mailing records, DOE discovered that it had inadvertently not sent the Supplement to the Draft EIS to about 700 stakeholders who had requested and received a copy of the Draft EIS. The Department acknowledged this oversight (66 *FR* 34623, June 29, 2001), sent the Supplement to the Draft EIS to these stakeholders, and provided them an opportunity to submit comments during a separate 45-day comment period (June 29 to August 13, 2001).

DOE invited commenters to submit their comments on the Supplement by regular mail, electronic mail, facsimile transmission, and at public hearings held at the locations shown on Figure CR-1. In addition, DOE held a meeting with representatives of Native American tribes and organizations to solicit their comments.

In relation to the Supplement, DOE received more than 1,900 comments from Federal agencies; state, local, and tribal governments; public and private organizations; and individuals. Like the comments on the Draft EIS, the comments were presented as recorded statements at the Native American meeting, recorded statements at the public hearings on the Supplement shown on Figure CR-1 (the statement of each speaker is a separate comment document), or in written documents submitted at those hearings or sent to DOE by regular mail, electronic mail, and facsimile. DOE appreciates the time and effort of everyone who participated in this process.

This Comment-Response Document includes all the comments on the Supplement to the Draft EIS that DOE received through August 31, 2001. DOE has integrated these comments, as appropriate, with the comments it received on the Draft EIS. This Comment-Response Document provides the DOE responses to these comments. In addition, DOE has reviewed all comments received after August 31, 2001, for their potential to affect the analyses in the Final EIS and concluded that none had raised new issues not already captured in timely comments and already considered in the EIS analysis.

As mentioned above, Tables CR-1 and CR-2 list all of the comments received through August 31, 2001, from organizations represented and individuals, respectively. These tables point to the locations where the reader can find particular comments. Table CR-3 is a cross-reference from the comments and responses back to the commenter(s). This table identifies who made each comment and, for summary comments, the group of commenters.

As mentioned for the comments received on the Draft EIS, the compact disks provided with the Summary of this Final EIS contains complete images of all comments received on the Supplement through August 31, 2001. In addition, DOE has placed this material on the Internet site for the proposed Yucca Mountain Repository (*www.ymp.gov*), and has placed copies in DOE Reading Rooms across the country.

HOW DOE CONSIDERED PUBLIC COMMENTS

DOE assessed and considered public comments on the Draft EIS and the Supplement to the Draft EIS, both individually and collectively. Some comments led to EIS modifications; others resulted in a response to explain DOE policy, to refer readers to information in the EIS, to answer technical questions, to further explain technical issues, to correct reader misinterpretations, or to provide clarification.

A number of comments provided valuable suggestions on improving the EIS. As applicable, the responses in this volume identify changes that DOE made to the EIS as a result of comments.

Methodology

Because of the large number of submittals (letters, e-mails, faxes, comment forms, public hearing transcripts) received during the public comment periods on the Draft EIS and the Supplement to the Draft EIS, DOE elected to extract and categorize comments and, as appropriate, group the same or similar comments for response. This approach enabled the Department to more efficiently consider, individually and collectively, all comments received on the Draft EIS and the Supplement, and to respond to those comments.

The following list highlights key aspects of the DOE approach to capturing, tracking, and responding to public comments on the Draft EIS and the Supplement:

- DOE read all comment documents and their attachments to identify and extract comments. As a part of this process, DOE reviewed technical attachments (e.g., reports) for potential applicability to the EIS. After comment identification, DOE grouped individual comments by categories (called *bins*) and assigned each comment to an expert in the appropriate discipline to prepare a response. Senior-level experts reviewed each response to ensure technical and scientific accuracy, clarity, and consistency, and to ensure that the response fully answered the comment.

- Frequently, more than one commenter submitted identical or similar comments. In such cases, DOE grouped the comments and prepared a single summary response for each group. Summarization of comments was also appropriate because of the large number of comments received.

- To the extent practicable, DOE presented the comments in this document by topic. Each comment-response pair, individual or summary, consists of three parts: (1) the number of the submitted comment document and the comment number, or for summary comments, the number of comments summarized, (2) the individual or summary comment, and (3) the response. While this Comment-Response Document is generally organized by topic, some comment documents dealt with multiple issues. DOE chose to identify the multiple issues as one comment and answer each element of the comment. For this reason, there are instances where comments and their responses address issues that are unrelated to the topic (that is, the Comment-Response Document chapter and section) to which the comment was assigned.

- To the extent practicable, this Comment-Response Document presents the comments extracted from comment documents as stated by the commenters. That is, with the exception of correcting obvious

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errors and other minor modifications (see next bullet), DOE has neither edited nor rewritten the comments submitted. Comments grouped and summarized for response are, of necessity, paraphrased, but DOE made every effort to capture the essence of every comment included in a comment summary.

- DOE did not modify certified transcripts of public hearings. However, some transcripts contained obvious errors (for example, misspelled names or words). For this Comment-Response Document, DOE corrected such errors in the extracted comments. Similarly, DOE deleted extraneous material (such as repeated words) from extracted comments whenever such a deletion would not alter the meaning of the comment. The compact disk included with this Final EIS contains an image of the text of each hearing transcript as certified by the court reporter; if appropriate, the transcript includes an errata sheet noting errors that DOE corrected.

- DOE made every effort to be fully responsive to every comment it received on the Draft EIS and the Supplement. When the meaning of a comment was not clear, DOE made a reasonable attempt to interpret the comment and respond based on that interpretation. In such cases, the response is preceded by a statement of the DOE interpretation of the comment.

An Overview of Key Issues Raised in Comments

This section provides short summaries of a variety of key issues raised by commenters (presented in underlined *italics*) during the public comment process for the *Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (the Draft EIS) and for the *Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (the Supplement to the Draft EIS). It also provides DOE responses to those key issues. DOE identified the issues as "key" based on factors such as:

- The number of comments received on a particular issue.

- The extent to which an issue concerned fundamental aspects of the Proposed Action.

- The nature of the comments as characterized by the commenters. For example, the U.S. Nuclear Regulatory Commission (NRC or the Commission) categorized its comments into those that DOE should address to complete the Final EIS, those of lower priority that apply to specific topical areas, and those that are for consideration only.

- The extent to which DOE changed the EIS in response to the issue.

The main body of this Comment-Response Document contains all the comments DOE received on the Draft EIS and on the Supplement to the Draft EIS, and the DOE responses to those comments. DOE encourages readers to review the specific comments and DOE responses for particular areas of interest.

I. NUCLEAR WASTE POLICY ACT PROCESS

Why is Yucca Mountain the only site that DOE is studying?

Congress made the decision to focus on the Yucca Mountain site as a potential geologic repository when it amended the Nuclear Waste Policy Act of 1982 (the EIS refers to the amended Act as the NWPA). The Nuclear Waste Policy Act of 1982 provided for a process for selecting

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sites for technical study as potential geologic repository locations. In accordance with this process, DOE identified nine candidate sites, the Secretary of Energy nominated five of the nine sites for further consideration, and DOE issued environmental assessments for the five sites. DOE recommended three of the five sites, of which Yucca Mountain was one, for possible study as a candidate repository site. In 1987, Congress amended the Nuclear Waste Policy Act of 1982 directing the Secretary of Energy to perform site characterization activities only at the Yucca Mountain site, and, if the site was found suitable, to make a determination whether to recommend that the President approve the site for development of a repository. A final environmental impact statement must accompany any approval recommendation.

The NWPA specifies that it is not necessary for the EIS to consider the need for a repository, alternatives to geologic disposal, or alternative sites to Yucca Mountain. Although the NWPA does not require an evaluation of alternatives to a repository in this EIS, DOE evaluated a No-Action Alternative to provide a basis for comparison with the Proposed Action.

Why did DOE change its guidelines for determining the suitability of the Yucca Mountain site?

DOE has not amended its general guidelines (10 CFR Part 960) to avoid the elimination of the Yucca Mountain site from consideration. Rather, the purpose of the new Yucca Mountain-specific guidelines (10 CFR Part 963) is to implement the NWPA, given the regulations and criteria of the Environmental Protection Agency (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63), and to provide a technical basis to assess the ability (or performance) of a geologic repository at Yucca Mountain to isolate spent nuclear fuel and high-level radioactive waste from the environment.

The Nuclear Waste Policy Act of 1982 [Section 112(a)] directed the Secretary of Energy (and by extension, DOE) to issue general guidelines for the recommendation of sites for characterization, in consultation with certain Federal agencies and interested Governors, and with the concurrence of the NRC. These guidelines (issued in 1984 at 10 CFR Part 960) were to include factors related to the comparative advantages among candidate sites located in various geologic media, and other considerations such as the proximity to storage locations of spent nuclear fuel and high-level radioactive waste, and population density and distribution.

In 1987, amendments to the Nuclear Waste Policy Act specified Yucca Mountain as the only site DOE was to characterize. For this reason, DOE proposed in 1996 to clarify and focus its 10 CFR Part 960 guidelines to apply only to the Yucca Mountain site (to be codified at 10 CFR Part 963), but never issued these guidelines as final. In 1999, DOE proposed further revisions to the draft Part 963 guidelines for three primary reasons:

a. To address comments that criticized the omission of essential details of the criteria and methodology for evaluating the suitability of the Yucca Mountain site.

b. To update the criteria and methodology for assessing site suitability based on the most current technical and scientific understanding of the performance of a potential repository, as reflected in the DOE report, *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998).

c. To be consistent with the then-proposed site-specific licensing criteria for the Yucca Mountain site issued by the NRC (the Commission has since promulgated criteria at 10 CFR Part 63), and the then-proposed site-specific radiation protection standards issued by the

Environmental Protection Agency (EPA has since promulgated standards at 40 CFR Part 197).

In 2001, DOE promulgated its final 10 CFR Part 963 guidelines to establish the methods and criteria for determining the suitability of the Yucca Mountain site for the location of a geologic repository. These final guidelines are principally the same as those proposed in 1999.

DOE's design has evolved from a primary reliance on the natural barrier system to one that relies on an engineered barrier system. This is inconsistent with the concept of geologic disposal as defined by the Nuclear Waste Policy Act.

The repository design has evolved to reflect ongoing DOE evaluations, design and performance-related reviews by external organizations, such as the Nuclear Waste Technical Review Board, and other influences such as public comments. If the Yucca Mountain site was approved and licensed for construction, the final design would balance the waste isolation abilities and associated uncertainties of the natural system with those of the engineered barrier system, based on an evaluation of their total system performance.

DOE believes that achieving this balance is in keeping with the NWPA. The Act directed DOE to investigate and potentially develop a permanent geologic repository for spent nuclear fuel and high-level radioactive waste in a deep subsurface location that would provide a reasonable assurance of adequate protection for the public and the environment. The Act [Section 121(b)(1)(B)] also directs the use of engineered barriers for a geologic repository at Yucca Mountain by requiring the Nuclear Regulatory Commission to develop criteria that would provide for the use of multiple barriers in the design of the repository. The Act thereby encourages, rather than limits or otherwise prohibits, the use of engineered barriers. The NRC incorporated in its criteria (10 CFR Part 63) the requirement that the repository be predicated on the use of both natural and engineered barriers to enhance the resiliency of the repository and increase confidence that performance objectives will be met.

Why design a repository that would release radioactive materials into the environment?

Given the current state of technology, it is virtually impossible to design and construct a geologic repository that would provide a reasonable expectation that there would never be any releases of radioactive materials. DOE would design, construct, operate and monitor, and eventually close a repository that would meet public health and environmental radiation protection standards and criteria established by the EPA and the NRC. Congress, in the Energy Policy Act of 1992, directed the EPA to develop public health and environmental standards for the protection of the public from releases of radioactive materials stored or disposed of in a repository at the Yucca Mountain site. Congress also directed the NRC to publish criteria for licensing a repository that would be consistent with the radiation protection standards established by the EPA. In part, the EPA standards (40 CFR Part 197) and NRC criteria (10 CFR Part 63) prescribe radiation exposure limits that the repository, based on a performance assessment, must be designed not to exceed during a 10,000-year period after closure.

In the EIS, DOE has evaluated the environmental impacts of the proposed repository's natural and engineered barrier system, which is designed to isolate radioactive materials from the environment for thousands of years. As a result of this evaluation, DOE would not expect the repository to result in impacts to public health beyond those that could result from the prescribed radiation exposure and activity concentration limits during the 10,000-year period after closure.

Further, DOE estimates that the average peak dose to a hypothetical individual from the repository would be substantially less than the dose received from natural background radiation.

II. PUBLIC INVOLVEMENT

Why has DOE ignored the scoping comments from the public? For example, DOE should be considering the lack of emergency response capabilities, the effects of volcanism and transportation, and economic and demographic information on a community-by-community basis.

DOE considered all comments—oral and written—it received during the scoping process for the EIS. More than 500 individuals submitted more than 1,000 comment documents during the 120-day public scoping period, which began on August 7, 1995, and ended December 5, 1995. DOE carefully reviewed the comments, grouped them in categories of common issues or subjects, and responded to all the issues, including the examples cited above, in the *Summary of Public Scoping Comments Related to the Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DIRS 104630-YMP 1997).

The EIS summarizes the primary areas of concern raised by the public's scoping comments. In response to those comments, DOE modified the scope of the EIS to include, for example, additional information and analyses on the disposal of Greater-Than-Class-C low-level waste. However, some of the scoping comments raised issues or concerns that were not germane to the Proposed Action or No-Action Alternative, such as the constitutional basis for disposal in Nevada, or that would have resulted in uncertain or speculative analyses. In the latter case, DOE acknowledged such issues and concerns in the summary of public scoping comments, but did not analyze them in the EIS.

The public comment processes for scoping, the Draft EIS, and the Supplement to the Draft EIS were inadequate because insufficient time was available to provide comments, and public hearings were poorly publicized and held in the wrong locations.

DOE's public involvement process during the development of the EIS is consistent with Council on Environmental Quality and DOE regulations on implementing NEPA, and DOE guidance on public participation during the preparation of EISs.

Before publishing the Notice of Intent to prepare this EIS, DOE notified its stakeholders, the media, Congressional representatives, the Office of the Governor of Nevada, affected units of local government in the Yucca Mountain vicinity, the NRC and other Federal agencies such as the Bureau of Land Management and National Park Service, and the Nuclear Waste Technical Review Board of its plans to prepare the EIS and its approach to the scoping process. In addition, DOE met with 13 Native American tribes and organizations and provided them the same information.

When DOE published the Notice of Intent, it mailed a series of information releases to Yucca Mountain stakeholders notifying them of the opportunity to comment on the scope of the EIS; sent press releases and public service announcements to newspapers and television and radio stations; and made information about Yucca Mountain, the EIS, and the NEPA process available on the Internet (www.ymp.gov) and in public reading rooms across the country. To reach low-income and minority communities, DOE contacted news publications and radio stations that tend

to service these communities to notify them of the scoping meetings and the locations of available information.

In 1995, DOE held 15 public scoping meetings across the country during a 120-day public scoping period. DOE considered each of the comments included in the more than 1,000 documents it received during the scoping process and, in response, included additional information, modified analytical approaches, and evaluated additional implementing alternatives in the Draft EIS. For example, DOE evaluated potential impacts from the transportation and disposal of an expanded inventory, such as Greater-Than-Class-C low-level waste.

During the preparation of the EIS, DOE held discussions with a number of government agencies and other organizations to discuss issues of concern, obtain information for inclusion or analysis in the EIS, and initiate consultations or permit processes. For example, DOE asked the American Indian Writers Subgroup to prepare a document that recorded the viewpoints and concerns of Native Americans about Yucca Mountain and the EIS (see DIRS 102043-AIWS 1998).

DOE distributed 3,400 copies of the Draft EIS to stakeholders and held 10 public hearings throughout Nevada and 11 public hearings elsewhere across the country during a 199-day comment period (August 13, 1999, through February 28, 2000). During the comment period, DOE encouraged stakeholders to offer comments on the document at the public hearings and by mail, facsimile, and the Internet.

Before the public hearings, DOE placed advertisements in local newspapers, including local Spanish-language newspapers, and distributed public service announcements and press releases to more than 175 local and national stakeholders and media outlets to publicize information that would be accessible to the general public and to minority and low-income communities. In addition, in concert with the publication of the Draft EIS, DOE made available Spanish-language fact sheets about Yucca Mountain and the proposed repository.

DOE generally selected locations for public hearings in Nevada based on their proximity to potential transportation routes and the potential repository site, or based on communities having relatively large populations. Given the impracticality of holding hearings at every location potentially affected by the transportation of spent nuclear fuel and high-level radioactive waste, DOE selected national hearing locations in the major metropolitan areas most likely to experience large numbers of shipments or at locations close to nuclear power plants.

In May 2001, DOE issued the *Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*, which it distributed to more than 4,000 stakeholders. The Department encouraged these stakeholders to submit comments during a 45-day comment period, which it later extended to 57 days (May 4 through July 6, 2001).

In June 2001, during a review of its mailing records, the Department discovered that it had inadvertently not sent the Supplement to the Draft EIS to about 700 stakeholders who had requested and received a copy of the Draft EIS. DOE acknowledged this oversight, sent the Supplement to the Draft EIS to these stakeholders, and provided them an opportunity to submit comments during a separate 45-day comment period (June 29 through August 13, 2001).

DOE held three public hearings in Nevada during the comment period. It held no hearings outside Nevada because the Supplement focused primarily on matters involving repository design. Commenters were encouraged to submit comments at public hearings and by mail,

facsimile, and the Internet during the comment periods. DOE used means comparable to those it used for the Draft EIS (advertisements, releases, and announcements) to notify the public.

In Volume III of this EIS, DOE has presented and responded to all comments on the Draft EIS and the Supplement to the Draft EIS received by August 31, 2001. In response to comments, DOE has modified the EIS in a variety of ways, including clarifications or changes to the text, new or more recent information (such as 2000 Census data and population projections), and modified analyses (such as those for transportation impacts in which it modified the characteristics of the representative commercial spent nuclear fuel and accident source terms).

DOE's public notices for the Draft EIS were inadequate and should have provided additional meaningful and relevant information, such as a description of the Proposed Action and its implications for people along transportation routes.

DOE designed the advertisements and public notices to provide the public with notice of the availability of the Draft EIS, and the opportunities and ways in which stakeholders could participate in public hearings (at specific locations and times) or provide comments by other means. The notices and advertisements indicated that the EIS evaluates the potential impacts of constructing, operating and monitoring, and eventually closing a repository at Yucca Mountain in Nye County, Nevada, to dispose of our Nation's spent nuclear fuel and high-level radioactive waste. They also indicated that the EIS will help Federal officials make informed decisions, and further informed the reader how interested parties could obtain additional information, including copies of the Draft EIS.

III. EIS ADEQUACY

DOE needs to issue another Draft EIS or a Supplemental EIS because the Draft EIS did not provide sufficient information or analysis, and was substantively and legally deficient. DOE ignored or inadequately considered impacts (such as tourism and gaming, transportation, human health), failed to perform an adequate evaluation of cumulative impacts (contributions of Nevada Test Site activities and environmental contamination), dismissed consideration of Native American impacts and issues, and assessed repository performance and potential environmental contamination using unsubstantiated assumptions, limited and inadequate data, and optimistic interpretations.

Each of the asserted inadequacies is addressed in greater detail elsewhere in this document. In summary, however, DOE believes that the EIS is consistent with NEPA and NWPA requirements. The level of information and analyses, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts, and the use of bounding assumptions to address incomplete or unavailable information or uncertainties provide an assessment of environmental impacts consistent with the applicable requirements.

The EIS, which DOE prepared using the best reasonably available data, analyzes a variety of implementing alternatives and scenarios. These alternatives and scenarios reflect potential repository design and operating modes, waste packaging approaches, and transportation options for shipping spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site. DOE included a No-Action Alternative that analyzed two scenarios to provide a basis for comparison with the Proposed Action.

For both the Proposed Action and the No-Action Alternative, the EIS evaluates the affected environment and estimates potential environmental impacts in regions of influence for each

resource area. DOE used information from a broad range of studies to obtain or evaluate the information needed for the assessment of Yucca Mountain as a monitored geologic repository. These include, for example, reports and studies sponsored by DOE, other Federal agencies, the State of Nevada, universities, the National Academy of Sciences, and affected units of local government. In addition, DOE identified the use of incomplete information or the unavailability of information to characterize uncertainties in the data or analytic approaches. DOE acknowledges that the results of analyses often have associated uncertainties, and has described such uncertainties throughout the EIS.

The Draft EIS discussed ongoing site characterization activities and design evaluations, and the potential for resulting changes to repository design. Since the publication of that document, DOE has improved its understanding of the interactions of potential repository features with the natural environment, and the advantages of a number of design features (such as titanium drip shields) to enhance waste containment and isolation. DOE published the *Supplement to the Draft Environmental Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* to provide the updated information to the public. While aspects of the design evolved from those in the Draft EIS, the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain (such as transportation of spent nuclear fuel and high-level radioactive waste) remained unchanged. For this reason, the Supplement to the Draft EIS was published to address the most recent design enhancements, including various operating modes to manage heat generated by emplaced spent nuclear fuel and high-level radioactive waste. The Final EIS carries forward for impact analysis the repository design described in the Supplement to the Draft EIS.

DOE should have considered a range of alternatives, such as other sites, treatment technologies, and alternatives to geologic disposal.

The NWPA [Section 114(f)(2) and (3)] provides that DOE need not consider in the EIS the need for a geologic repository and alternatives to isolating spent nuclear fuel and high-level radioactive waste in a repository. In addition, the Act provides that the EIS does not have to consider any site other than Yucca Mountain for development as a repository. For these reasons, this EIS does not analyze alternatives other than the Proposed Action and the No-Action Alternative.

In the *Final Environmental Impact Statement, Management of Commercially Generated Radioactive Waste* (DIRS 104832-DOE 1980), DOE evaluated alternatives to mined geologic disposal, including very deep borehole disposal, disposal in a mined cavity that resulted from rock melting, island-based geologic disposal, subseabed disposal, ice sheet disposal, well injection disposal, transmutation, space disposal, and no action. In a 1981 Record of Decision on that EIS, DOE decided to develop mined geologic repositories for the disposal of spent nuclear fuel and high-level radioactive waste.

DOE has failed to define its Proposed Action clearly.

Before the NWPA was enacted, DOE did consider other technological approaches. As stated in the Draft EIS and the Supplement to the Draft EIS, DOE analyzed a variety of scenarios and implementing alternatives that it could implement to construct, operate and monitor, and eventually close a repository at Yucca Mountain. The purpose of these scenarios and implementing alternatives, which reflect potential design considerations, waste packaging approaches, and modes for transporting spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site, was to (1) provide the full range of potential environmental impacts of the

Proposed Action and the No-Action Alternative; (2) reflect potential decisions, such as the mode of transport, that the EIS would support; and (3) retain flexibility in the design of the repository to maintain the ability to reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency.

Many of the issues relating to how a repository would be operated and how the spent nuclear fuel and high-level radioactive waste would be packaged would be resolved only in the context of developing the detailed design for a possible License Application, and the subsequent regulatory review of that application. Therefore, DOE cannot predict with certainty how it would eventually resolve these issues. However, to enable an improved understanding of the potential environmental impacts from a more specifically defined Proposed Action, DOE has identified its preferred alternatives, simplified aspects of the Proposed Action, and modified its analyses and presentation of information to illustrate the full range of potential environmental impacts likely to occur under any reasonably foreseeable mode of transportation, or repository design and operating mode. Thus, for example, DOE has identified mostly rail as its preferred mode of transport both nationally and in Nevada, and demonstrated through analysis that the mostly truck and mostly rail national transportation scenarios provide the full range of environmental impacts.

Why didn't DOE identify a preferred alternative or scenario?

In the Draft EIS, DOE indicated its preferred alternative was to proceed with the Proposed Action to construct, operate and monitor, and eventually close a repository for the disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain. DOE has now identified mostly rail as its preferred mode of transportation, both nationally and in the State of Nevada.

DOE has not identified a preference among the five potential rail corridors in Nevada. If the Yucca Mountain site was approved, DOE would issue at some future date a Record of Decision to select a mode of transportation. Thereafter, for example, if DOE selected mostly rail (both nationally and in Nevada), it would then identify a preference for one of the rail corridors in consultation with affected stakeholders, particularly the State of Nevada. In this example, DOE would announce a preferred corridor in the Federal Register and other media. No sooner than 30 days after the announcement of a preference, DOE would publish its selection of a rail corridor in a Record of Decision. A similar process would occur in the event that DOE selected heavy-haul truck as its mode of transportation in the State of Nevada.

DOE has not identified other preferences under the various scenarios presented in this Final EIS. As noted above, specific details of operating the repository and related features would be resolved only in the context of developing a License Application for review by the NRC.

Why did DOE evaluate a No-Action Alternative that includes unreasonable scenarios?

DOE analyzed the No-Action Alternative to serve as a basis for comparing the magnitude of potential environmental impacts of the Proposed Action. Under the No-Action Alternative, and consistent with the NWPA, DOE would terminate activities at Yucca Mountain and undertake site reclamation to mitigate any significant adverse environmental impacts. In addition, DOE would prepare a report to Congress, with the Department's recommendations for further action to ensure the safe, permanent disposal of spent nuclear fuel and high-level radioactive waste, including the need for new legislative authority. Under any future course that would include continued storage at the generator sites, commercial utilities and DOE would have to continue managing spent nuclear fuel and high-level radioactive waste in a manner that protected public

health and safety and the environment. However, the future course that Congress, DOE, and the commercial utilities would take if Yucca Mountain were not approved remains uncertain.

DOE recognizes that a number of possibilities could be pursued, including continued storage of spent nuclear fuel and high-level radioactive waste at existing sites and/or one or more centralized locations, study and selection of another location for a deep geologic repository, the development of new technologies, or reconsideration of alternatives to geologic disposal. The environmental considerations of these possibilities have been analyzed in other contexts in other documents to varying degrees. Implementation of any of these possibilities likely would require new legislation, the details of which would be speculative at best.

In light of these uncertainties, DOE decided to illustrate the range of potential environmental impacts by analyzing two No-Action Alternative scenarios that could occur without additional legislation–long-term storage of spent nuclear fuel and high-level radioactive waste at the current sites with effective institutional control for at least 10,000 years, and long-term storage with no effective institutional control after about 100 years. Although the Department agrees that neither of these scenarios is likely to occur, it selected them for analysis because they provide a basis for comparison to the impacts of the Proposed Action and because they reflect a range of the impacts that could occur.

IV. EIS-RELATED DECISIONS

DOE cannot base decisions on this EIS.

DOE believes that the EIS adequately analyzes the potential environmental impacts that could result from the Proposed Action or the No-Action Alternative. This belief is based on the level of information and analysis, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts, and the use of bounding assumptions where information is incomplete or unavailable, or where uncertainties exist.

For the same reasons, if the site was approved, DOE believes that the EIS provides the environmental impact information necessary to make certain broad transportation-related decisions, namely the choice of a national mode of transportation outside Nevada (mostly rail or mostly legal-weight truck), the choice among alternative transportation modes in Nevada (mostly rail, mostly legal-weight truck, or heavy-haul truck with use of an associated intermodal transfer station), and the choice among alternative rail corridors or heavy-haul truck routes with use of an associated intermodal transfer station in Nevada. However, follow-on implementing decisions, such as the selection of a specific rail alignment in a corridor, or the specific location of an intermodal transfer station in Nevada or the need to upgrade heavy-haul truck routes, would require additional field surveys, State and local government and Native American tribal consultations, environmental and engineering analyses, and NEPA reviews.

DOE already has decided to recommend the Yucca Mountain site.

At the time DOE prepared this Final EIS, it had not made a decision on the proposed repository at Yucca Mountain. The Secretary of Energy will make a determination on whether to recommend the site to the President on the basis of a number of different types of information, including that contained in the Final EIS. Any recommendation would be accompanied not only by the Final EIS, but also by other information designated in Section 114 of the NWPA. This includes a description of the proposed repository, including preliminary engineering specifications for the facility; a description of the proposed waste form or packaging; an explanation of the relationship

between the proposed waste form or packaging and the geologic medium of the site; a discussion of the site characterization data that relate to the safety of the site; preliminary comments of the NRC concerning the sufficiency of information for inclusion in any Departmental License Application; the views and comments of the governor and legislature of any state or the governing body of any affected Native American tribe; comments made by the Secretary of the Interior, the Council on Environmental Quality, the EPA, and the NRC, including comments on the Final EIS; other information considered appropriate by the Secretary; and any impact report submitted by the State of Nevada.

V. SOCIOECONOMICS

Why has DOE restricted the socioeconomic region of influence to three Nevada counties? A restricted region of influence underestimates socioeconomic impacts that would occur in the entire State of Nevada and in individual communities through which DOE could transport materials.

To identify the socioeconomic region of influence, DOE estimated the residential distribution of the future anticipated workforce by considering where current employees associated with the Yucca Mountain Project and the Nevada Test Site now reside. Based on this estimate, about 98 percent of the expected repository workforce would reside in Clark, Lincoln, and Nye Counties. Thus, these would be the counties, if any, that would be expected to experience socioeconomic impacts from the construction, operation and monitoring, and closure of a repository at Yucca Mountain.

Although DOE defined the region of influence as such, it has not limited the socioeconomic analyses to these three counties; it assessed the remaining 14 counties (called the *Rest of Nevada*) taken together. DOE did not report the combined results for the 14 counties in the Draft EIS because collectively their impacts would be much smaller than the already low impacts estimated for the three-county region of influence. In response to comments however, the Final EIS reports the combined results for the Rest of Nevada.

DOE defined the transportation-related region of influence to include Clark, Lincoln, and Nye Counties as well as other counties through which a potential branch rail line or heavy-haul route would pass. The potential transportation-related socioeconomic impacts presented in the EIS focused on the three-county region of influence, but also were reported as an aggregate for the other counties for certain measures commensurate with their relative level of impact (for example, Gross Regional Product).

Why does DOE use outdated population data?

When DOE prepared the Draft EIS, it based the Nevada population estimates on the then-most-recent available information (1996-1997) from the U.S. Bureau of the Census. The Department used these data in its economic and demographic forecasting model (REMI) to project population growth in the regions of influence and to evaluate socioeconomic impacts from the Proposed Action (both repository and Nevada-related transportation). For its transportation health and safety analyses, however, DOE relied on 1990 population data, which were the then-most-recent data incorporated in the standard models used for such analyses.

In general, the Bureau of the Census is the preferred source of information for use in DOE socioeconomic analyses because it provides a greater level of consistency across geopolitical boundaries than most other data sources. Bureau information is based on the direct collection of

information, while other information sources often rely either on some form of the Bureau information or on proxies such as telephone and electrical connections to households and businesses. The information for a particular variable provided by local and state agencies or private vendors can differ, sometimes significantly, because of the use of different methods, source data, level of detail and terminology. In addition, Bureau of the Census information is readily available and updated population estimates are available annually.

In response to comments and recently available information, DOE has updated its population estimates in the regions of influence to reflect the most recent state and local information, as well as the Bureau of the Census 2000 population summary data for Nevada. For the repository- and transportation-related regions of influence, DOE performed REMI simulations to establish an updated population baseline by accounting for population estimates and projections provided by county governments. In the absence of county information, DOE used population estimates and projections from the Nevada State Demographer's Office. The updated population baselines were then used to estimate populations for Clark, Nye, and Lincoln Counties and the Rest of Nevada through 2035. These population projections were compared and adjusted to the 2000 Census population summary data. In this way, model population projections reflected the most recent available information.

To update the health and safety analyses associated with transportation in Nevada, DOE used the baseline population for each county in the region of influence, forecast the population to 2035, and scaled impacts accordingly. For example, if a county's population was estimated to double from 1990 to 2035, DOE assumed that the population along the associated rail corridor also would double and scaled the radiological impacts accordingly. In certain locales, however, such as around the planned Las Vegas Beltway, DOE used local sources of population information to better reflect population growth trends (in this instance, information from a report prepared for the City of North Las Vegas).

On a national basis, DOE scaled the 1990 population-based impacts upward to reflect the relative state-by-state population growth to 2035. The projections are based on 2000 Census data.

In general, public health impacts to populations residing along candidate transportation routes or rail lines would increase directly with an increase in population (from 1990 to 2035 population estimates), if all other factors relevant to estimating such impacts remained constant. However, some factors, such as the number of anticipated rail shipments and the computer model used to estimate the dose to the public during traffic stops, have changed because of new information or in response to comments. For this reason, the health impacts in the Final EIS are similar to, and in some instances less than, those reported in the Draft EIS, despite generally increased population estimates.

Why didn't DOE analyze the impacts associated with the negative perceptions (stigma) attached to a potential repository at Yucca Mountain? The negative perceptions associated with the repository and transportation of radioactive materials would cause people and businesses to avoid places and products, thereby causing a significant adverse impact to the economy of the State of Nevada and local communities that the EIS should evaluate.

During scoping for the EIS, DOE received comments saying that the EIS should analyze perception-based and stigma-related impacts that could arise from the construction and operation of a repository and from the transportation of spent nuclear fuel and high-level radioactive waste. In considering these comments, DOE recognized that perceptions depend on the underlying value systems of the individual forming the perception. Perception-based impacts would not

necessarily depend on the actual physical impacts or risks from repository operations or transportation. Further, people do not consistently act in accordance with negative perceptions, and thus the connection between public perception of risk and future behavior would be uncertain or speculative at best. For these reasons, DOE determined that including analyses of perception-based and stigma-related impacts in the Draft EIS would not provide meaningful information.

Nevertheless, in light of the comments received on the Draft EIS concerning this subject, DOE commissioned a new examination of relevant studies and literature on perceived risk and stigmatization of communities to determine whether the state-of-the-science in predicting future behavior based on perceptions had advanced sufficiently since scoping to allow DOE to quantify the impact of public risk perception on economic development or property values in potentially affected communities. Of particular interest were those scientific and social studies carried out in the past few years that directly relate to either Yucca Mountain or to DOE actions such as the transportation of foreign research reactor spent nuclear fuel. In addition, this examination evaluated the conclusions of previous literature reviews, such as those conducted by the Nuclear Waste Technical Review Board and the State of Nevada, among others. The examination concluded that:

- While in some instances risk perceptions could result in adverse impacts on portions of a local economy, there are no reliable methods whereby such impacts could be predicted with any degree of certainty

- Much of the uncertainty is irreducible, and

- Based on a qualitative analysis, adverse impacts from perceptions of risk would be unlikely or relatively small.

While stigmatization of southern Nevada can be envisioned under some scenarios, it is not inevitable or numerically predictable. Any such stigmatization would likely be an aftereffect of unpredictable future events, such as serious accidents, which are not anticipated to occur. As a consequence, DOE addressed but did not attempt to quantify potential impacts from risk perceptions or stigma in this Final EIS.

VI. ENVIRONMENTAL JUSTICE AND NATIVE AMERICAN ISSUES

DOE did not adequately consider Native American viewpoints. Although the EIS acknowledges Native American viewpoints, DOE did not incorporate these viewpoints into the analyses and resulting conclusions.

DOE believes that it appropriately considered Native American viewpoints by incorporating into the EIS the Native Americans' own identification of potential impacts to historic and other cultural resources important to sustaining and preserving their cultures.

DOE has maintained long-term and ongoing interactions with Native American tribes regarding Yucca Mountain. DOE initiated its Native American Interaction Program in 1987 to consult and interact with tribes and organizations on the characterization of the Yucca Mountain site, and the possible construction and operation of a repository. DOE also interacts cooperatively with the Consolidated Group of Tribes and Organizations, which consists of officially appointed tribal representatives responsible for presenting their tribal concerns and perspectives to the Department.

During the preparation of the EIS, DOE interacted with Native American tribes on a range of topics of interest to assess their viewpoints and perspectives. In addition, DOE supported the American Indian Writers Subgroup of the Consolidated Group of Tribes and Organizations in its preparation of *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement* (DIRS 102043-AIWS 1998). The results of this report are included in the EIS.

Based on the results of the report, DOE acknowledges in the EIS that people from many Native American tribes have used the area proposed for the repository as well as nearby lands; that the lands around the site contain cultural, animal, and plant resources important to those tribes; and that the implementation of the Proposed Action would continue restrictions on free access to the area around the repository site. Furthermore, the presence of a repository would represent an intrusion into what Native Americans consider an important cultural and spiritual area. These concerns not withstanding, DOE and the Consolidated Group of Tribes and Organizations recognize that restrictions on public access to the area have been generally beneficial and protective of cultural resources, sacred sites, and traditional cultural properties.

Why is DOE not honoring the Ruby Valley Treaty of 1863 with the Western Shoshone Nation?

A 1985 U.S. Supreme Court decision (*United States v. Dann*, 470 U.S. 39 (1985)) held that the Western Shoshone claim to land associated with the Ruby Valley Treaty has been extinguished, and that fair compensation has been made. The Western Shoshone people maintain that the Ruby Valley Treaty of 1863 gives them rights to 97,000 square kilometers (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 *United States v. Dann*, the Supreme Court ruled that even though the 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.

DOE did not adequately evaluate environmental justice relative to transportation. DOE's two-staged assessment process masks significant impacts to minorities and low-income populations, and its failure to identify either specific locations or specific characteristics of affected communities demonstrates the inadequacy of the analysis.

As required by Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, DOE performs environmental justice analyses to identify and address, as appropriate, the potential for its actions to cause disproportionately high and adverse impacts to minority or low-income populations. The approach to environmental justice analysis in this EIS is consistent with Council on Environmental Quality guidance. The goal of this approach is to identify whether any high and adverse impacts would fall disproportionately on minority and low-income populations. The approach first analyzes the potential impacts on the general population as a basis for comparison. Second, based on available information, the approach assesses whether there are unique exposure pathways, sensitivities, or cultural practices that would result in high and adverse impacts on minority and low-income populations. If such potential impacts could indeed be high and adverse, the approach then compares the impacts on minority and low-income populations to those on the general population to determine whether any high and adverse impacts fall disproportionately on minority and low-income populations. In other words, if high and adverse impacts on a minority or low-income population would not appreciably exceed the same type of

impacts on the general population, no disproportionately high and adverse impacts would be expected.

In response to comments, DOE has reevaluated available information to determine whether the Draft EIS overlooked any unique exposure pathways or unique resource uses that could create opportunities for disproportionately high and adverse impacts to minority and low-income populations, even though the impacts to the general population would not be high and adverse. Additional unique pathways and resources were identified and analyzed, although none revealed a potential for disproportionately high and adverse impacts. For example, DOE estimated the potential health impacts from a subsistence diet based primarily on game taken from lands near the repository exclusion areas and concluded that high and adverse health and safety impacts would be unlikely.

DOE also has updated and refined information germane to its environmental justice analysis. The EIS now includes, for example, additional and more detailed mapping of minority populations, and additional mapping and information that describes the proximity of tribal lands and cultural and ceremonial areas to potential rail corridors in Nevada. Based on the additional information and resulting analysis, DOE has concluded that disproportionately high and adverse impacts from the construction and operation of a rail line or intermodal transfer facility would be unlikely.

DOE's evaluation of health and safety impacts to minority and low-income populations residing along spent fuel and high-level waste transportation routes is inadequate; only an analysis of actual routes on a segment-by-segment basis would allow DOE to substantiate its conclusion that there would be no disproportionately high and adverse health and safety impacts.

DOE fulfills the requirements of Executive Order 12898 by looking first at whether the impacts on minority and low-income populations would be high and adverse, and then whether any potential high and adverse impacts would fall disproportionately on such populations. As discussed below, it is not necessary to examine the composition of the general population residing along existing spent nuclear fuel and high-level waste transportation corridors before DOE can reasonably conclude that there would be no disproportionately high and adverse impacts to minority and low-income populations from the transportation of radioactive materials.

The EIS analyzes potential public health effects of both routine (incident-free) transportation of radioactive materials and transportation accidents involving radioactive materials. First, regarding routine transportation, the EIS considers vehicular air emissions and doses from exposure to radioactive materials during transport. The EIS estimates the impact from air emissions to be 1 emissions-related fatality during the 24-year transportation campaign. The EIS also estimates that the 24-year transportation campaign would cause fewer than about 3 latent cancer fatalities among the public, and fewer under the preferred mostly rail scenario. Although many people would be exposed nationwide over a long campaign, the radiation dose to any exposed individual would be very low. In this context, DOE does not consider such impacts to be high. In addition, DOE does not know of a plausible mechanism under these circumstances whereby low-income or minority populations could incur high and adverse impacts when the general public does not. Because there could be no disproportionately high and adverse impacts on low-income or minority populations, it is not necessary to examine the composition of the population along existing transportation corridors to conclude that the potential public health effects from exposure to radioactive materials during routine transportation do not implicate environmental justice concerns.

The EIS also estimates the number of people in the general public who could be killed by accidents involving transportation of spent fuel and high level waste. The two mechanisms for such impacts are bodily trauma from collisions or exposure to radioactivity that would be released if a sufficiently severe accident were to occur. The EIS estimates that the 24-year transportation campaign would cause fewer than 5 deaths among the general public from trauma sustained in collisions with vehicles carrying spent nuclear fuel or high-level radioactive waste. In this context, DOE does not consider such impacts to be high. Moreover, DOE does not know of a plausible mechanism under these circumstances whereby low-income or minority populations could incur high and adverse impacts when the general public does not.

Only if a severe accident was to occur that resulted in a considerable release of radioactive materials would it be possible for the affected population to sustain high and adverse health effects, but the probability of such an event occurring is remote, so the overall associated risk to the general public is low. Moreover, as is true of all transportation accidents, it is impossible to predict where along a transportation corridor an accident could occur (unlike accidents at fixed-facility locations), and, thus, who might be affected. Therefore, as with routine transportation and trauma effects of accidents, it is not necessary to examine the composition of the population along transportation corridors to conclude that the radiological risk resulting from transportation accidents would not constitute a disproportionately high and adverse impact on low-income or minority populations.

Although the transportation of radioactive materials would not result in disproportionately high and adverse impacts on low-income and minority populations, there are reasons to examine the composition of the population along newly proposed transportation corridors (such as the alternative locations of rail corridors in Nevada) that do not apply to existing highways and railways. In a consideration of where to locate a new transportation corridor, the impacts of the construction and use of a newly created route on land use, socioeconomics, noise, air quality, and aesthetics, to name a few categories, could vary by location. For example, constructing a new highway that might benefit the population as a whole might nevertheless so disrupt a minority or low-income population living along the proposed route as to result in disproportionately high and adverse impacts. Selecting among alternative new routes could offer opportunities to avoid high and adverse impacts that would fall disproportionately on low-income or minority populations relative to the general population that would not be present when considering existing transportation corridors. Therefore, even though the health effects from exposure to radioactive materials from transportation activities would not implicate environmental justice concerns in selecting new routes, other factors could. For these reasons, DOE examined the composition of the population along the five candidate routes for a new rail corridor in Nevada to determine the minority and low-income populations residing along the proposed corridors.

VII. TRANSPORTATION

Why did DOE assume that national shipments would either be by "mostly" rail or by "mostly" legal-weight truck when neither scenario is reasonable?

DOE evaluated the potential environmental impacts from the transportation of spent nuclear fuel and high-level waste from 5 DOE and 72 commercial sites to a potential repository at Yucca Mountain. At this time, many years before shipments to a repository could begin, it is impossible

to predict accurately the number of shipments by either truck or rail. For this reason, DOE evaluated two scenarios for moving the materials to Nevada:

- Transport using mostly legal-weight trucks
- Transport using mostly rail

DOE evaluated these scenarios to ensure that it considered the range of potential environmental impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste.

DOE believes that the mostly rail case, in which more than 95 percent of spent nuclear fuel and high-level radioactive waste would be shipped by rail, would most closely approximate the actual mix of truck and rail shipments. In reaching this conclusion, DOE has assessed the capabilities of the sites to handle larger (rail) casks, the distances to suitable railheads, and historical experience in actual shipments of nuclear fuel, waste, or other large reactor-related components. In addition, DOE considered relevant information published by sources such as the Nuclear Energy Institute and the State of Nevada.

Nonetheless, in response to comments, DOE has analyzed the effects of different mixes of rail and truck shipments. The results of this analysis confirm the Department's estimate that the mostly rail and mostly legal-weight truck scenarios represent a reasonable range (lower and upper bound) of potential environmental impacts from the transportation of spent nuclear fuel and high-level radioactive waste.

Why didn't DOE identify the specific rail and highway routes that will be used to ship spent nuclear fuel and high-level radioactive waste?

At this time, many years before shipments could begin, it is impossible to predict which highway routes or rail lines DOE would use. Before such shipments began, state or tribal governments could designate alternate preferred highway shipping routes, and highways and rail lines could be built or modified.

Therefore, for the analysis in this EIS, DOE selected potential highway routes in accordance with U.S. Department of Transportation regulations, which require the use of preferred routes (typically highways and bypasses that are part of the Interstate Highway System). The Department based its selection of potential rail routes on current rail practices, because there are no comparable Federal regulations applicable to the selection of rail routes for the shipment of radioactive materials.

In response to public comments, DOE has included maps of the representative highway routes and rail lines it used for analysis in the EIS. It also included potential health and safety impacts associated with shipments for each state through which shipments could pass.

The transportation-related public health and safety analysis was inadequate because DOE did not consider community-by-community population characteristics, such as the locations where individuals live and work.

DOE does not believe that it is necessary or appropriate to consider population characteristics on a community-by-community basis to determine potential public health and safety impacts from the transportation of spent nuclear fuel and high-level radioactive waste. The use of widely accepted analytic tools, latest reasonably available information, and cautious but reasonable

assumptions if there are uncertainties, offer the most appropriate means to arrive at conservative estimates of transportation-related public health impacts.

In this EIS, DOE has used computer models it has used in previous EISs and other studies. These models are widely accepted by the national and international scientific and regulatory communities. For instance, DOE selected the RADTRAN 5 computer program to estimate radiological impacts to populations from incident-free transportation and from accidents. RADTRAN, which was originally developed by Sandia National Laboratories in the late 1970s, has been used in many other previous DOE EISs, and it has undergone periodic review and revision. In 1995, an independent review of RADTRAN 4 (immediate predecessor to RADTRAN 5) demonstrated that it yielded acceptable results when compared to "hand" calculations. More recently, an independent review found that RADTRAN 5 overestimates the measured radiation dose to an individual from moving radiation sources.

To ensure that the EIS analyses reflect the latest reasonably available information, DOE has either incorporated information that has become available since the publication of the Draft EIS or modified existing information to accommodate conditions likely to be encountered over the life of the Proposed Action. For example, the analysis in the Draft EIS relies on population information from the 1990 Census. In this Final EIS, DOE has scaled impacts upward to reflect the expected relative state-by-state population growth to 2035, using 2000 Census data.

Although the EIS analyses are based on the latest reasonably available information and state-of-the-art analytic tools, not all aspects of incident-free transportation or accident conditions can be known with absolute certainty. In such instances, DOE has relied on conservative assumptions that tend to overestimate impacts. For instance, DOE assumed that the radiation dose external to each vehicle carrying a cask during routine transportation would be the maximum allowed by U.S. Department of Transportation regulations. Similarly, DOE assumed that a hypothetical individual, the "maximally exposed individual," would be a resident living 30 meters (100 feet) from a point where all truck shipments would pass. Under these circumstances, the maximally exposed individual would receive a dose of about 6 millirem from exposure to all truck shipments (6 millirem represents an increased probability of contracting a fatal cancer of 3 in 1 million). Although it can be argued that individuals could live closer to these shipments, it is highly unlikely that an individual would be exposed to all shipments over 24 years of shipments to the repository, even though DOE incorporated this highly conservative assumption in the analysis.

However, in response to comments, DOE has considered locations at which individuals could reside nearer the candidate rail corridors and heavy-haul truck routes in Nevada as a way of representing conditions that could exist anywhere in potentially affected communities. For example, DOE assumed that a maximally exposed individual could reside as close as 4.9 meters (16 feet) to a potential heavy-haul truck route. During the 24-year period of repository operations, this maximally exposed individual would receive an estimated dose of about 29 millirem (if exposed to all shipments), resulting in an increased fatal cancer probability of 2 in 100,000.

These exposures would be well below those received from natural background radiation and would not be discernible even if doses could be measured. For comparison, the lifetime likelihood of an individual incurring a fatal cancer from all other causes is about 1 in 4.

Why didn't DOE analyze a range of accidents that reflect real-life conditions?

DOE did analyze a range of accidents that reflect the range of reasonably foreseeable "real-life conditions." Real-life conditions that would involve various types of collisions, various natural

disasters, specific locations (such as mountain passes), or various infrastructure accidents (such as track failure) in effect constitute a combination of cask failure mechanisms, impact velocities, and temperature ranges, which the EIS does evaluate. Because it is impossible to predict what real-life conditions might be involved in any accidents that could occur, DOE has revised the EIS to describe the maximum reasonably foreseeable accident in terms of cask failure mechanisms and accident forces, and to ensure that the analysis accounts for all reasonably foreseeable real-life conditions. Accident scenarios are modeled in this fashion to accommodate the almost infinite number of variables that any given accident could involve.

In the Draft EIS, DOE considered six categories of increasingly severe and unlikely accident scenarios. The analyses hypothesized one accident scenario to represent each category, along with a corresponding projection of the amount of radioactive material a transportation cask could release. The analyses estimated impacts of postulated releases in three population zones – urban, suburban, and rural – and under two weather conditions – slowly dispersing conditions and moving air conditions. The analyses also estimated impacts from an unlikely but severe accident scenario called a maximum reasonably foreseeable accident.

In the Draft EIS, for example, DOE evaluated the ability of large aircraft components (engines and engine shafts) to penetrate shipping casks. DOE considered both small military aircraft and commercial aircraft at velocities representative of takeoffs and landings and at higher velocities. DOE found that these aircraft components would not penetrate a shipping cask sufficiently to cause a release of radioactive materials.

DOE has revised the transportation accident analyses in the EIS to reflect new information. For example, since the publication of the Draft EIS, the NRC published *Reexamination of Spent Fuel Shipment Risk Estimates*, NUREG/CR-6672 (DIRS 152476-Sprung et al. 2000). DOE has concluded that the models used for analysis in the Draft EIS relied on assumptions about spent nuclear fuel and cask response to accident conditions that caused an overestimation of the resulting impacts.

Based on the revised analyses, DOE has concluded in the EIS that casks would continue to contain spent nuclear fuel fully in more than 99.99 percent of all accidents (of the thousands of shipments over the last 30 years, none has resulted in an injury due to release of radioactive materials). This means that of the approximately 53,000 truck shipments, there would be an estimated 66 accidents, each having less than a 0.01-percent chance that radioactive materials would be released. The chance of a rail accident that would cause a release from a cask would be even less. The corresponding chance that such an accident would occur in any particular locale would be extremely low.

Why didn't the EIS discuss emergency response and accident mitigation? An adequate EIS requires an understanding of the responsibilities for emergency management and response training, accident mitigation, the administration of funds for emergency response assistance, and ultimate liability in the event of a transportation accident.

As discussed in the EIS, accidents involving spent nuclear fuel or high-level radioactive waste shipments could occur. However, only the most highly unlikely accidents (less than 0.01 percent of all accidents) would result in the release of radioactive materials from the transportation casks. DOE has, however, analyzed the potential human health effects from these unlikely transportation accidents. These analyses did not take credit for emergency response and intervention, or other mitigation measures. For this reason, DOE concludes that its estimates of human health effects would not be exceeded, if an accident involving a release of radioactive materials was to occur.

Regardless, in response to comments, DOE has revised the EIS to provide information on emergency response responsibilities. Under the NWPA, DOE is required to provide technical and financial assistance to states for training of public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions it plans to transport spent nuclear fuel and high-level radioactive waste. However, state and tribal governments have primary responsibility to respond to and protect the public health and safety in their jurisdictions in accidents involving radioactive materials.

DOE also has revised the EIS to include information on accident liability and to clarify the applicability of the Price-Anderson Act in the event of a nuclear incident. This Act establishes a system of private insurance and Federal indemnification providing as much as $9.43 billion to compensate for damages or injuries suffered by the public.

Will DOE conduct full-scale testing of the transportation casks?

The NWPA requires DOE to use casks certified by the NRC when transporting spent nuclear fuel and high-level radioactive waste to a repository. The Commission's certification regulations indicate that cask testing must represent the kinds of forces that a cask would encounter in a severe transportation accident. A cask's ability to survive the tests prescribed by the regulations (10 CFR Part 71) can be demonstrated either through component analysis or through scale-model and full-scale testing to demonstrate and confirm the performance of the casks. The NRC would decide which level of physical testing or analysis was appropriate for each cask design submitted.

VIII. REPOSITORY DESIGN AND LONG-TERM PERFORMANCE

Why didn't DOE analyze the latest design in the Draft EIS?

In the Draft EIS, DOE evaluated a preliminary design based on the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) that focused on the amount of spent nuclear fuel (and associated thermal output) that DOE would emplace per unit area of the repository (called *areal mass loading*). Areal mass loading was represented in the Draft EIS by three thermal load scenarios: a high thermal load of 85 metric tons of heavy metal (MTHM) per acre, an intermediate thermal load of 60 MTHM per acre, and a low thermal load of 25 MTHM per acre. The purpose of these scenarios was not to place a limit on the choices among alternative designs because, as stated in the Draft EIS, DOE expected the repository design to continue to evolve in response to ongoing site characterization and design-related evaluations. Rather, DOE selected these analytical scenarios to represent the range of foreseeable design features and operating modes, and to ensure that it considered the associated range of potential environmental impacts.

Since issuing the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The result of the design evolution process was the development of the *flexible design* (which the Supplement to the Draft EIS called the Science and Engineering Report Flexible Design). Although this design focuses on controlling the temperature of the waste package surface and the rock between the waste emplacement drifts (as opposed to areal mass loading), the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain remain unchanged since the Draft EIS. DOE evaluated the flexible design in the Supplement to the Draft EIS, which it issued for public review and comment in May 2001.

This Final EIS addresses all aspects of the Proposed Action, including the flexible design. DOE acknowledges in the EIS that it could modify or refine the flexible design further during the license application process, if the site was approved for development.

DOE doesn't understand the hydrologic setting. There exist sufficient uncertainties and a lack of understanding of such fundamental factors as the relationships between the underlying aquifer of interest and the overlying geologic units that DOE should continue to study the geohydrologic setting at the site and surrounding region.

DOE believes that it has sufficient information and understanding of the hydrologic setting to make an adequate determination of the potential environmental impacts from the Proposed Action. DOE, the U.S. Geological Survey, and others have been evaluating and assessing the hydrologic setting and associated characteristics at the Yucca Mountain site and nearby region for more than two decades. During this time DOE has modified its site characterization program to reflect new information and assessments and to accommodate reviews by independent parties, both internal and external to the Department. Nevertheless, DOE recognizes that additional information would refine its understanding of the regional groundwater flow system, and would reduce uncertainties associated with flow and transport in the alluvial, volcanic, and carbonate aquifers.

To obtain additional information, DOE has supported Nye County in the Early Warning Drilling Program to characterize further the saturated zone along possible groundwater pathways from Yucca Mountain as well as the relationships among the volcanic, alluvial, and carbonate aquifers. Information from the ongoing site characterization program (and possible Testing and Performance Confirmation Program, which is described below) would be used in conjunction with that of the Early Warning Drilling Program to refine the Department's understanding of the flow and transport mechanics of the saturated alluvium and valley-fill material south of the proposed repository site, and to update conceptual and numerical models used to estimate waste isolation performance of the repository. When DOE published the Draft EIS, only limited information from the Early Warning Drilling Program was available. Since then, however, this program has gathered additional information, which DOE has incorporated in the EIS.

In addition, DOE has installed a series of test wells along the groundwater flow path between the Yucca Mountain site and the Town of Amargosa Valley as part of an alluvial testing complex. The objective of this program is to better characterize the alluvial deposits beneath Fortymile Wash along the east side of Yucca Mountain. Single- and multi-well tracer tests have begun and the results thus far have strengthened the basis of the site-scale saturated flow and transport model. Information from this program has been incorporated in the EIS.

DOE has begun to implement a *Testing and Performance Confirmation Program*, elements of which address the hydrologic system. The purpose of this program is to evaluate the accuracy and adequacy of the information used to determine whether the repository would meet long-term performance objectives. The Testing and Performance Confirmation Program, which would continue through closure of the repository (possibly as long as about 300 years), would offer a means to further understanding of the hydrologic system and to reduce uncertainties.

The Yucca Mountain site should be discarded because subsurface fracturing will allow contaminated groundwater to reach humans in less than 1,000 years, thus meeting the disqualifying condition established by DOE in its guidelines (10 CFR 960.4-1).

As discussed above, DOE's original 1984 site suitability guidelines (10 CFR Part 960) have been superseded by Yucca Mountain-specific guidelines (10 CFR Part 963) promulgated by DOE in 2001. Even though 10 CFR Part 960 no longer applies to Yucca Mountain, DOE believes that information and analyses do not support a finding that the site would have been disqualified under the groundwater travel time disqualifying condition at 10 CFR 960.4-2-1(d). Under that condition, a site would be disqualified if the expected groundwater travel time from the disturbed zone (the area in which properties would change from construction or heat) to the accessible environment would be less than 1,000 years along any pathway of likely and significant radionuclide travel. The definition of groundwater travel time in 10 CFR 960.2 specifies that the calculation of travel time is to be based on the average groundwater flux (rate of groundwater flow) as a summation of travel times for groundwater flow in discrete segments of the system. (In this case, the geologic and hydrologic subunits comprising the unsaturated and saturated zones.) As a practical matter, this definition provides for the consideration of the rate at which most of the water moves through the natural system to the accessible environment.

As part of its site characterization activities, DOE has undertaken various studies to identify and consider characteristics of the unsaturated (above water table) and saturated (water table) zones, such as the flow of water and transport of radionuclides, that are relevant to analyzing groundwater travel times. DOE also has considered physical evidence such as the chemistries and ages of water samples from these zones. Because of the inherent uncertainties in understanding such natural processes as groundwater flow, DOE has developed numerical models to represent an approximation of these processes and to bound the associated uncertainties.

Based on these models, which incorporate the results of these studies and available corroborating physical evidence, DOE estimates that the median groundwater travel times would be about 8,000 years, and average groundwater travel times would be longer. These models indicate that small amounts of water potentially moving in "fast paths" from the repository to the accessible environment could do so in fewer than 1,000 years. However, the models and corroborating physical evidence indicate that most water would take substantially longer than 1,000 years to reach the accessible environment. Given this, DOE believes that the site would not have been disqualified under the groundwater travel condition at 10 CFR 960.4-2-1.

How can DOE possibly predict repository performance given the uncertainties associated with the lack of data, untested computer models and chaotic nature of the long-term processes involved?

DOE acknowledges that it is not possible to predict with certainty what will occur thousands of years into the future. The National Academy of Sciences, the EPA, and the NRC also recognize the difficulty of predicting the behavior of complex natural and engineered barrier systems over long periods. The NRC regulations (see 10 CFR Part 63) acknowledge that absolute proof is not to be had in the ordinary sense of the word, and the EPA has determined (see 40 CFR Part 197) that reasonable expectation, which requires less than absolute proof, is the appropriate test of compliance.

DOE, consistent with recommendations of the National Academy of Sciences, has designed its performance assessment to be a combination of mathematical modeling and natural analogues. Performance assessment explicitly considers the spatial and temporal variability and inherent

uncertainties in geologic, biologic and engineered components of the disposal system and relies on:

a. Results of extensive underground exploratory studies and investigations of the surface environment.

b. Consideration of features, events and processes that could affect repository performance over the long-term.

c. Evaluation of a range of scenarios, including the normal evolution of the disposal system under the expected thermal, hydrologic, chemical and mechanical conditions; altered conditions due to natural processes such as changes in climate; human intrusion or actions such as the use of water supply wells, irrigation of crops, exploratory drilling; and low probability events such as volcanoes, earthquakes, and nuclear criticality.

d. Development of alternative conceptual and numerical models to represent the features, events and processes of a particular scenario and to simulate system performance for that scenario.

e. Parameter distributions that represent the possible change of the system over the long term.

f. Use of conservative assessments that lead to an overestimation of impacts.

g. Performance of sensitivity analyses.

h. Use of peer review and oversight.

DOE is confident that its approach to performance assessment addresses and compensates for various uncertainties, and provides a reasonable estimation of potential impacts associated with the ability of the repository to isolate waste over thousands of years.

Earthquakes and volcanoes will cause releases of radioactive waste.

DOE has analyzed the potential public health and safety impacts that could arise from natural events such as earthquakes and volcanic activity. The disruptive nature of earthquakes and volcanic activity differ materially, both in terms of probabilities (likelihood of occurrence) and the possible disruptive nature of the events themselves. Volcanism over the long-term life of the repository, with eruptions and magma flow, would be highly unlikely, while seismic activity and its consequent ground motion would be more likely to occur.

While the occurrence of events cannot be predicted exactly, risks can be estimated statistically. Computer simulations allow DOE to estimate risks from natural events. Thus, the EIS contains an analysis of the probabilities and effects of such events on radionuclide release, and the resultant potential human health impacts to the public.

Sudden displacements along faults, and the resulting earthquakes, could affect the repository in two ways: (1) seismic shaking could damage surface facilities and subsurface engineered barriers resulting in the release of radioactive materials, and (2) ruptures along faults at Yucca Mountain could provide pathways for water flow and radionuclide migration to the underlying aquifer. Earthquakes potentially would have the greatest impact on surface facilities during operations, but DOE would design each structure to withstand the ground movement associated with severe earthquakes. Regardless, DOE estimated the potential impacts that could result from a “beyond-

design-basis" seismic event that would result in the collapse of the Waste Handling Building and consequent damage to spent nuclear fuel assemblies. DOE determined that the resulting impacts associated with this scenario would be small (primarily due to the physical form of the assemblies, reduced releases due to the building rubble, and distance to the nearest population).

The underground-engineered barriers (primarily waste packages and drip shields) would be less susceptible to damage from rockfalls because of their structural integrity and size. The nature of the rock in the proposed repository is such that rockfalls would be limited in terms of the size and number of rocks that fall. DOE has determined that the drip shields overlying the waste packages would be likely to withstand rockfalls over the first 10,000 years of emplacement, thereby protecting the waste packages.

Volcanic eruptions with magma flow into the emplacement drifts could result in the release of volcanic ash and entrained waste into the atmosphere. These events could damage the waste packages and result in a release to the environment. DOE estimated the potential impacts on the nearest population conservatively (tending to overestimate), assuming the direction and speed of wind transport of an ash plume and determined that the potential for public health and safety impacts would be very small. DOE also determined that magma flows would have minimal impacts on the long-term performance of the repository.

Based on these analyses, DOE concluded that the releases and resulting exposures from seismic or volcanic activity in the event of either an earthquake or a volcanic eruption would be within the standards set by the EPA and the NRC.

Because of the long-lived nature of spent nuclear fuel and high-level radioactive waste, DOE's performance assessment should consider future changes to society, human knowledge and language, and other human-related features.

DOE's total system performance assessment was guided by the radiation protection standards established by the EPA (40 CFR Part 197) and the NRC (10 CFR Part 63). The EPA standards provide, for instance, that DOE should not estimate future changes to society, the biosphere (other than climate), human biology, or human knowledge or technology. Rather, these factors should remain constant over time and should be considered as they existed at the time of assessment. In contrast, however, these standards require the DOE performance assessment to vary factors related to the geology, hydrology, and climate, based on cautious but reasonable assumptions of the changes that could affect the proposed repository over the next 10,000 years.

Societal changes will occur. However, DOE (and the National Academy of Sciences, NRC, and EPA) believe it impossible to predict the extent and magnitude of such changes, because speculation about future society and lifestyle variations can be endless and are not scientifically supportable. Rather, DOE has included conservative assumptions and scenarios, such as climatic change, into its analyses to accommodate the inherent uncertainties associated with estimating repository performance over the long term. DOE's confidence in its performance assessment is enhanced by its adherence to the principles of safety margin and the defense-in-depth that are provided by the multiple natural and engineered barriers included in the base design and its recent enhancements (the flexible design).

In any event, after closure of the repository, DOE would be responsible for maintaining institutional control over the site as required by the NRC. The framework for DOE's program for continued oversight and a postclosure monitoring program is described below.

DOE should commit to a long-term program to monitor the repository after closure.

DOE would design and implement a postclosure monitoring program in compliance with the NRC regulations (10 CFR Part 63). Before closure, DOE would submit a license amendment to the NRC for review and approval. The license amendment application would include, among other items:

a. An update of the assessment of the performance of the repository for the period after closure

b. A description of the postclosure monitoring program

c. A detailed description of the measures to be employed to regulate or prevent activities that could impair the long-term isolation of the waste, and to preserve relevant information for use by future generations

The application also would describe DOE's proposal for continued oversight to prevent any activity at the site that would pose an unreasonable risk of breaching the repository's engineered barriers, or increase the exposure of individual members of the public to radiation beyond limits allowed by the NRC. DOE has modified the EIS to include the types of monitoring and other institutional controls that would be contemplated. However, the Department would define the details of this program during the consideration of the license amendment for closure. This would allow the Department to take advantage of new technological information, as appropriate.

Organization of the Comment-Response Document

This Comment-Response Document contains the comments received on the Draft EIS and the Supplement to the Draft EIS and the DOE responses to them.

DOE extracted the individual comments from all other comment documents and categorized them according to the topical outline prepared for this Comment-Response Document. Because a number of comments were similar in nature, the Department summarized them. The chapters of this document contain every comment DOE received (either in summaries or individually) and the DOE responses, as follows:

Chapter 1 Proposed Action
Chapter 2 Nuclear Waste Policy Act
Chapter 3 National Environmental Policy Act
Chapter 4 Other Legal, Regulatory, and Policy Issues
Chapter 5 Alternatives
Chapter 6 Spent Nuclear Fuel and High-Level Radioactive Waste
Chapter 7 Repository Design, Performance, and Affected Environment
Chapter 8 Transportation Modes, Routes, Affected Environment, and Impacts
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Chapter 11 Impact Mitigation and Compensation
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Chapter 13 contains comments that DOE received that are outside the scope of this EIS, and responses to those comments as appropriate.

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Section 114(a)(1)(D) of the NWPA specifies that any Site Recommendation the Secretary of Energy submitted to the President must include a final environmental impact statement together with comments received from four Federal agencies – the Department of the Interior, the Council on Environmental Quality, the Environmental Protection Agency, and the Nuclear Regulatory Commission – on the Final EIS. To facilitate agency review of this Final EIS, DOE has included three of the agencies' complete comment documents on the Draft EIS and the Supplement to the Draft EIS and the DOE responses to the comments in those documents before Chapter 1. (The Council on Environmental Quality did not submit comments on the Draft EIS or the Supplement.)

The compact disks that are part of this Final EIS contain electronically scanned images of the transcripts of all the public hearings along with scanned images of all letters, electronic mail, facsimiles, etc., for both the Draft EIS and the Supplement.

A number of the responses to comments contain references to supporting documents. The reference lists in this Comment-Response Document include the documents cited only in this volume. It does not include references to documents cited in other volumes of this EIS and listed in those volumes. DOE has not listed documents cited in submitted comments unless the corresponding response also cites that reference.

How To Use this Comment-Response Document

Tables CR-1 and CR-2 provide alphabetical guides to the location of comments provided by organizations and individuals, respectively. Table CR-2 lists anonymous submittals as "Anonymous"; in addition, it lists as "Illegible" submittals for which DOE could not read the signature. To find a comment and the DOE response, locate the commenter's name (by individual or organization) in the appropriate table and turn to the index location listed. The identification number in parentheses after the index location identifies the comment-response pair.

As an actual example, Ms. Cheryl Alexander submitted a letter (comment document EIS000255) that contains five identified comments. If one wanted to read the DOE responses to Ms. Alexander's comments, one would first find her name in Table CR-2. In addition to her name, the table includes the locations of her five comments. For example, one is directed to Sections 8.1, 5.1, 8.3.3, 3.3, and 13 of the Comment-Response Document and to comment-response pairs 170, 27, 23, 50, and 5, respectively. Note that DOE responded to all of Ms. Alexander's comments in summary responses.

If one wanted to read Ms. Alexander's comments in the context of her original letter, one would find comment document EIS000255 on the compact disk included with this Comment-Response Document, on the Yucca Mountain Project's Internet web site (http://www.ymp.gov), or in the copy at the nearest DOE Reading Room. Comment document EIS000255 is a scanned image of Ms. Alexander's letter with brackets around each identified comment.

Table CR-3 is a cross-reference from the comments and responses back to the commenter(s). This table identifies who made each comment and, for summary comments, the group of commenters.

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KEY AGENCY COMMENTS AND RESPONSES

Section 114 (a)(1)(D) of the NWPA specifies that any site recommendation by the Secretary of Energy submitted to the President must include comments on the EIS received from four Federal agencies—the Department of the Interior, the President's Council on Environmental Quality, the Environmental Protection Agency, and the Nuclear Regulatory Commission. This section of the Comment-Response Document includes copies of the comments from these agencies on the Draft EIS and Supplement to the Draft EIS, followed by responses to the comments. DOE has included these materials as a convenience for these agencies as they review the Final EIS. The information in this section includes the following:

1. U.S. Department of the Interior

    a. Comments on the Draft EIS - Comment Document 1969
    b. Comments on the Supplement to the Draft EIS – Comment Document 10066

2. U.S. Environmental Protection Agency

    a. Comments on the Draft EIS - Comment Document 1632
    b. Comments on the Supplement to the Draft EIS – Comment Document 10231

3. U.S. Nuclear Regulatory Commission

    a. Comments on the Draft EIS - Comment Document 1898
    b. Comments on the Supplement to the Draft EIS – Comment Document 10248

The President's Council on Environmental Quality did not comment on the Draft EIS or the Supplement to the Draft EIS.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

In Reply Refer to:
ER 99/712

EIS001969

FEB 28 2000

RECEIVED

MAR 07 2000

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North Las Vegas, Nevada 89036-0307

Dear Ms. Dixon:

The United States Department of the Interior (Department) has reviewed the draft environmental impact statement (DEIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, and offers the following comments.

BACKGROUND INFORMATION

The Nuclear Waste Policy Act (NWPA) was enacted by Congress in 1982 in recognition of the need to provide for the permanent disposal of spent nuclear fuel and high-level radioactive waste in the United States. Currently, approximately 70,000 metric tons of heavy metal (MTHM) of spent nuclear fuel and high-level radioactive waste is housed at some 77 sites across the United States. In 1986, the Department of Energy (DOE) narrowed the number of potentially acceptable sites for a geologic repository to three (3) sites in three (3) States. However, Congress in 1987 amended the NWPA and directed the Secretary of Energy to characterize only the Yucca Mountain as a potential location for a geologic repository, setting forth a process for the Federal Government to decide whether to designate Yucca Mountain as the site for a repository. Yucca Mountain is located in Nye County, Nevada, approximately 100 miles northwest of Las Vegas, Nevada, on the western boundary of the Nevada Test Site (NTS).

POTENTIAL ADVERSE IMPACTS TO BIOLOGICAL RESOURCES

1... The Department's Fish and Wildlife Service (Service) is responsible for protection of trust resources which include species listed as threatened or endangered under the Endangered Species Act of 1973 (ESA), as amended, birds protected under the Migratory Bird Treaty Act, and other biological resources managed under the National Wildlife Refuge (NWR) System. The Service is concerned with possible adverse effects to these and other resources that could

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1 cont. result from the operation of the Yucca Mountain facility. Trust resources on or in the vicinity of the proposed waste storage facility include the following:

- Yucca Mountain is at the northern edge of the range for the desert tortoise (*Gopherus agassizii*) which is listed as threatened under the ESA. On July 23, 1997, the Service issued a biological opinion to DOE for programmatic activities associated with site characterization studies at Yucca Mountain (File No. 1-5-96-F-307R).

- Rainfall runoff accumulating in low lying areas at the NTS such as Frenchman Flat, attract migratory birds to the area.

- The Desert National Wildlife Range, located approximately 30 miles to the east of the proposed repository, provides habitat for numerous wildlife species that are unique to the Mojave Desert ecosystem.

- The Ash Meadows NWR is located approximately 25 miles south of Yucca Mountain and provides habitat for 12 species listed under the ESA, including the Devils Hole pupfish (*Cyprinodon diabolis)* and Ash Meadows Amargosa pupfish (*Cyprinodon nevadensis mionectes).* Ash Meadows also provides aquatic and riparian habitat essential for other sensitive species of plants and invertebrates and for migratory and resident bird species. These and other wildlife species are dependent upon several free-flowing springs within the boundary of the refuge.

2... The NWPA requires DOE to provide reasonable assurance that the environment will be protected from the hazards posed by the Yucca Mountain repository. In order to meet this requirement, DOE has conducted numerous detailed analyses of Yucca Mountain's geology and hydrology for the past 15 years. Through these and other activities associated with site characterization, DOE has amassed a large body of evidence to support the likely determination that Yucca Mountain is the most suitable site to store the nation's high-level nuclear waste. Despite the fact that the most advanced technology is being utilized to design a foolproof waste barrier system for the repository and given the fact that the waste would remain radioactive for many thousands of years, we continue to be concerned that a facility of this nature inherently poses some degree of risk to wildlife resources. Our primary concerns are as follows:

Groundwater flows in aquifers below Yucca Mountain are generally to the south. Therefore, radionuclides and toxic chemicals, if introduced to the groundwater either by a short-term catastrophic event (e.g. earthquake, flood) or through long-term (i.e. >1,000 years) degradation of the waste storage containers, could eventually migrate to environmentally sensitive areas such as Ash Meadows NWR. A recent study found that the plutonium compound PuO2, once thought to be the most stable form of plutonium waste, can be oxidized by water making it more soluble and increasing the risk of groundwater contamination from storage facilities (Haschke et al. 2000).

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2 cont. We find these and other uncertainties associated with containment of high level radioactive waste to be cause for concer..

3 Transportation of high level radioactive waste to Yucca Mountain by truck or rail from nuclear facilities nationwide also has the potential to impact wildlife resources should a breach in containment occur. There is an inherent risk associated with transportation of any hazardous material. Although DOE has conducted detailed analysis of worst-case scenarios, even the best waste management strategies cannot predict every possibility. We understand that the radioactive waste would be transported in a virtually leak-proof stainless steel cask in the form of dry pellets which would make release of any waste material extremely remote. Nevertheless, there remains a potential environmental risk, albeit minuscule, at any given point along the proposed rail or highway transportation corridor.

4 Cumulative environmental effects from the future operation of the Yucca Mountain repository and past activities at the NTS are also of concern. Possible impacts to groundwater and spring discharges resulting from activities at NTS, approximately 25 miles north of Ash Meadows NWR, are being evaluated by DOE, the Service and the U.S. Geological Survey (USGS). Activities at the NTS which may have resulted in contamination of the region include both atmospheric and subterranean tests of nuclear devices and other tests involving radioactive materials, controlled atmospheric releases of numerous gaseous materials, and disposal and destruction of various types of solid and liquid wastes. The extent to which these activities have placed wildlife resources at risk is still under investigation. DOE's Environmental Management Program is focused on identifying the nature and extent of contamination from the nuclear weapons programs at DOE facilities. This process is underway at the NTS with ongoing environmental restoration and waste management activities.

ACCIDENTS

5 We agree with the DOE that a major accident involving a shipment of this material is of low probability with a level of general uncertainty, and therefore, is not quantified to be zero. Moving70,000 metric tons of high- level nuclear waste, including 50 metric tons of weapons grade materials, from sites that are almost entirely east of the Mississippi River, over a 100 year period, almost ensures that an accident will occur, sometime, somewhere. Testing has shown that conditions exist under which shipping casks can be penetrated or ruptured (page 6-33 of the EIS). It is not clear in the draft whether a head-on truck or train collisions and train derailments will produce such conditions but it is important that the final EIS address DOE's plans to contain or control such events and their impacts.

SABOTAGE

6 That there are devices already in existence that can penetrate the truck shipping casks (page 6-33 of the EIS) if used by saboteurs, must not be taken lightly. That the trains and trucks will be guarded solves part of the problem, but not entirely. It is presumed that the guards will be armed, but would that protect against an intentional derailment? If the act of sabotage is successful, how would DOE address response and cleanup or control?

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HIJACKING

7 We could find no mention, in the EIS, of the possibility of one of the trucks being hijacked. A hijacked truck could be driven anywhere and used as a threat. A hijacked trucks would be most vulnerable when they are stopped so that the guards and drivers can eat or sleep. How does DOE plan to address this situation?

RADIATION

8 If we are interpreting Table 4-34 (page 4-59) correctly, over a 70 year life span a person living within 12 miles of the repository would receive a life time radiation dose of between 38 to 100 millirems from the repository depending on the thermal load scenario used. Is this correct? If so, it is significantly lower than the NRC's standard of 100 millirems per year at abandoned mines after reclamation. We believe that it is unusual that a person residing near this repository would receive less radiation than would one who lived near many other areas containing less radiation, such as abandoned mine sites. If our interpretation is incorrect, and the correct dose rate is between 38 and 100 millirems per year, then the low thermal load matches the NRC standard. Perhaps this figure needs to be reevaluated in the final EIS to clear up this ambiguity.

CONFLICTS WITH EXISTING LAND USES

9 The need for rights of way across public lands to access the Yucca Mountain Facility could create conflicts with existing land uses in the area through traffic, construction, accidents and incidental spillage of nuclear materials containers. How will these be addressed?

SPECIFIC COMMENTS:

Draft Environmental Impact Statement, Summary.

10 **Page S-36, 5.4.1.3 Geology, first paragraph.**

Most of the faulting that affected Yucca Mountain occurred during the 11.4 to 14 Ma interval of volcanic activity and not subsequent to the activity, as stated in the text.

11 **Page S-36, 5.4.1.3 Geology, second paragraph.**

The correct name of the repository host rock is the Topopah Spring Tuff, not "Topopah Springs Formation" or "Topopah Springs formation."

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12 **Page S-37, 5.4.1.3 Geology, first paragraph.**

Point (3) states that the Topopah Spring Tuff was chosen because of ". . . its location away from major faults that could adversely affect the stability of underground openings. . ." This statement implies that the Topopah Spring Tuff is not intersected by major faults, which it most assuredly is. Faults cut through all of the Tertiary volcanic units in the proposed repository area, including the Topopah Spring Tuff. Solitario Canyon fault and several other known faults cut through the Topopah Spring Tuff, some immediately adjacent to the underground facilities.

The relationship between faulting and the selection criteria of the Topopah Spring Tuff as the repository host rock in the Summary and the Draft EIS itself (page 3-24) is unclear and needs more detailed and accurate explanation. The selection of Topopah Spring Tuff cannot be predicated on its lack of proximity to seismically active faults. If so, the site would not be viable. Clarification is needed.

13 **Page S-37, second paragraph.**

The statement, "The Solitario Canyon fault forms the major bounding fault on the west side of Yucca Mountain, and volcanic units in the mountain tilt eastward as a result of displacement along this and lesser faults through the mountain . . .," needs clarification. There are faults on the east side of Yucca Mountain. The faults that bound the eastern side of the proposed repository area, the Bow Ridge and Paintbrush Canyon faults, to name just two (see table 3-8, Characteristics of major faults at Yucca Mountain, v. 1 - Impact Analysis, Draft EIS), need to be mentioned here. Additionally, because these latter two north-trending faults dip to the west beneath the repository area and the adjacent material handling facilities that would be built at the north and south portals, understanding the seismic hazard potential of these faults is extremely important.

In addition, easterly tilts are not the result of movement on the Solitario Canyon fault and "lesser faults through the mountain." These tilts are the result of movement on a whole series of block-bounding faults, of which the Solitario Canyon fault is one.

Draft Environmental Impact Statement.

14 **Page 3-14, Section 3.1.3.1 Physiography (Characteristic Land forms).**

This section label and content are confusing. The unnumbered subsections on Site Stratigraphy and Lithology, Selection of Repository Host Rock, and Potential for Volcanism at the Yucca Mountain site should be numbered subsections under the main section 3.1.3, Geology, and not the subsection of Physiography, to which they have little relation.

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15 **Page 3-16, Site Stratigraphy and Lithology.**

The sedimentary history of the region including the Tertiary sedimentary rocks (for example Pavits Springs Formation) need to be discussed in this section and included in Table 3-6 (page 3-19).

16 "Paleozoic and Precambrian" need to be substituted for "pre-Cenozoic" in order to correspond with the wording in the referenced Table 3-6, page 3-19.

17 **Page 3-19, first paragraph.**

The "pre-Cenozoic" (see above) rocks are also exposed at Calico Hills and Striped Hills, which are as close or closer to Yucca Mountain than are the pre-Cenozoic rocks at Bare Mountain, and therefore should be included in the discussion.

For clarity, the borehole (first paragraph) should be described as 2 kilometers east of the crest of Yucca Mountain, because Yucca Mountain is physiographically defined as all the numerous ridges that surround the borehole.

18 **Page 3-21, last paragraph.**

The statement, "Volcanic rocks younger than the Tertiary units. . .," is incorrect. Most of the volcanic rocks are Tertiary in age, including the Skull/Little Skull lava flows, the lava flow at the south edge of Crater Flat, the 10 Ma basaltic dike, and the 3.7-Ma cones and flows in Crater Flat.

19... **Page 3-22, Figure 3-7, General bedrock geology of the proposed repository Central Block area.**

This figure is inaccurate and does not correctly correspond to Figures 3-8, 3-10, or the original geologic map (Day and others, 1998). The following changes and/or additions need to be made:

a. The configuration of the Drill Hole Wash fault needs to be mapped as shown in Figure 3-10.

b. The Ghost Dance fault needs to continue to the southwest and not abruptly terminate as shown is this Figure (see Figure 3-10).

c. The zone of intense faulting between the Bow Ridge and Ghost Dance faults is missing. This zone connects with the Dune Wash fault. These faults are shown in the cross-section (Figure 3-8).

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19 cont.

d. The small intra block faults need to be included in the Figure because the contacts are drawn incorrectly without them. Figure 3-8 cannot be reconciled with Figure 3-7 without these mapped faults.

e. For clarity, the cross-section line in Figures 3-7 and 3-8 should be named A-A', not B-B', because there is only one cross section on these maps.

f. Because no lower block is shown, the "upper block" text needs to be deleted from the "Proposed drift boundary" in the Legend.

20 **Page 3-23, Figure 3-8, Simplified geologic cross-section of Yucca Mountain, West to east.**

The mismatch of contacts between units, which appears as wiggles, is incorrect. The Figure needs to show these contacts correctly.

21 **Page 3-24, first paragraph, and Page 3-33, Flood Potential.**

Boulders as large as 2 meters in diameter, as well as sand, silt, and clay, are part of the alluvial deposits on these fans and stream beds. This boulder-size material has the potential for significant destructive force during the flash floods.

22 **Page 3-25, Section 3.1.3.2 Geologic Structure.**

Discussion of the occurrence of joints and fractures in the volcanic rock at Yucca Mountain is needed in this section, including mention of the geographic and stratigraphic distribution of fractures, and whether they are fault- and/or stratigraphically-controlled.

23 **Page 3-25, Section 3.1.3.2 Geologic Structure, second paragraph.**

"Major crustal compression" and "crustal extension" need to have an associated direction, such as "Major east-west crustal compression" and "east-west crustal extension."

Crustal compression is stated to have occurred between 350 and 50 Ma, but there is no evidence for east-west compression younger than about 100 Ma in this region.

24 Day and others 1996 should be changed to 1998, both here and in the References (page 12-8).

25... **Page 3-25, Section 3.1.3.2 Geologic Structure, fifth paragraph.**

It is stated here that the ". . . total estimated displacement on the most active block-bounding faults . . . during the past 1.6 million years is less than 50 meters. . . (Simonds and others, 1995)." This statement is from the Conclusion section of Simonds and others (1995) and is misleading

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25 cont. when taken out of context. All measurements of Quaternary (1.6 Ma to present) displacement on these faults range from 0 to 6 m with most displacement in the 1-2.5 m range, as reported in Table 2 of Simonds and others (1995). Reference Table 3-8 in this paragraph to help clarify this point.

26 **Page 3-25, Section 3.1.3.2 Geologic Structure, sixth paragraph.**

The statement, "The Solitario Canyon fault along the west side of Yucca Mountain is **the** major block-bounding fault . . .," is incorrect. The Solitario Canyon fault is one of numerous block-bounding faults that are shown on Figure 3-10. These include the Northern Windy Wash, Fatigue Wash, Solitario, Iron Ridge, Dune Wash Bow Ridge, Midway Valley, Paintbrush Canyon faults, just to name those within 4 km radius of the proposed perimeter of the repository.

27 **Page 3-25, Section 3.1.3.2 Geologic Structure, last paragraph.**

This short treatment of intra block faults (the subsidiary faults between the block bounding faults) places undue emphasis on NW-trending faults by discussing them first. Within the central block, where the repository would be sited, the intra block faults with the longest map traces and the largest amounts of displacement are the Ghost Dance Fault (splitting the center of the block) and the block-margin faults ("Imbricate Zone" of Scott, 1990) that are just west of the Bow Ridge Fault. Day and others (1998, USGS Map I-2601) and Scott and Bonk (1984) also document this. The NW- trending faults, such as the Sundance Fault, though characterized correctly, are relatively minor in comparison (Potter and others, USGS OFR 98-266, in press). It would be more appropriate to mention the much larger Ghost Dance fault first.

28 **Page 3-26, Figure 3-9, Types of geologic faults.**

For clarity, definitions of normal and reverse faults need to uniquely specify the correct sense of motion. For a normal fault reword the description, "dip-slip fault where one block has moved downdip relative to the other," to "dip-slip fault where the upper block has moved downdip relative to the lower block." For reverse fault, reword "dip-slip fault where one block has moved updip relative to the other" to "dip-slip fault where the upper block has moved updip relative to the lower block."

A diagram is needed for low-angle normal faults, such as in Calico Hills east, and Bare Mountain west, of Yucca Mountain.

29 **Page 3-27, Figure 3-10, Mapped faults at Yucca Mountain and in the Yucca Mountain vicinity.**

In the legend, the strike-slip fault symbol should have arrows showing relative sense of lateral motion (as on map), as well as an explanation of the strike-slip symbol. As it is, the legend only shows the dip-slip component on these faults.

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30 **Page 3-28, Table 3-8, Characteristics of major faults at Yucca Mountain.**

Define the late Quaternary in years for clarity.

31 **Page 3-29, Section 3.1.3.3 Modern Seismic Activity.**

The seismicity map with faults needs to be shown here as a numbered Figure.

32 **Page 3-30, fifth paragraph.**

The correct statement is that there is no observable strain measured *within the error of the data.*

33 **Page 3-30, Section 3.1.3.4 Mineral and Energy Resources.**

There is no discussion of energy resources in this section. The Yucca Mountain site is about 200 km SW of producing oil fields in Railroad Valley (one of two valleys in the state that have produced commercial oil). Published literature on the presence or absence of oil resources in the Yucca Mountain/NTS area include Chamberlain (1991 AAPG abstract), who suggested that Yucca Mountain is situated over a billion-barrel oil field, and Trexler and others (1996, AAPG Bulletin v. 80, no. 1), who disputed this, as did Grow and others (Hi-Level Waste Proceedings, 1994). Although it appears that there is a low potential for mineral and energy resources in the context of today's recovery technology, a discussion of the potential resources should be included here.

34 **Page 3-36, Section 3.1.4.2.1 Regional Groundwater.**

There is insufficient data to fully characterize the site-scale hydrology of the area. Because of the complexity of the geology and inconsistencies between the Large Hydraulic Gradient and thermal data, additional boreholes, appropriately configured, that penetrate to the Paleozoic carbonates beneath the Tertiary tuffs should be considered.

There is a lack of data on the hydrologic interaction between the Tertiary tufts and the underlying Paleozoic carbonate aquifers.

35 **Page 3-39 and Page 3-51, Section 3.1.4.2 Groundwater.**

The **range** of infiltration rates, hydraulic conductivities, etc. should be used rather than the average, especially in the case where the range is large. For example, apparent hydraulic conductivities range over 3 orders of magnitude (page 3-51). Also, the average infiltration rate of 6.5 mm/yr on page 3-39 is misleading because fracture systems allow much more rapid flow locally. The difficulty of Yucca Mountain hydrology is in the inability to predict which fractures or faults will act as highly transmissive zones. Care must be taken to show ranges of behavior so that best and worst case scenarios can both be evaluated.

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36 **Page 3-79, Section 3.1.8 Occupational and Public Health and Safety.**

The radiological hazards and their consequences were discussed in a concise way such that the average citizen can draw conclusions about the risks of the proposed and alternative actions. The background information that was provided to develop an understanding of ionizing radiation and the hazards/risks was especially helpful.

37 In summary, as DOE continues to further characterize the suitability of the proposed Yucca Mountain site in sufficiently isolating high-level radioactive waste and spent nuclear fuel, we look forward to continued coordination on protection of the Department's trust wildlife and other resources. The Service's Southern Nevada Field Office is interested and available to provide technical support in development and implementation of monitoring programs for Yucca Mountain operations. The Service's technical support can be integrated with ongoing groundwater monitoring programs by several other agencies in the vicinity of Yucca Mountain. DOE and USGS have collaborated since 1989 on the Environmental Monitoring Program in order to better understand the hydrology of this area. Monitoring is essential in our view and will help to ensure that any changes in the environment are detected and investigated appropriately. We look forward to working with the DOE on this important national initiative.

The Department appreciates the opportunity to review this DEIS. We hope our comments will be useful in evaluating the Yucca Mountain site for a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. References are included on the following page.

Should you have any questions or wish to discuss our comments further, please do not hesitate to call Dr. Vijai N. Rai of this Office at (202)208-6661.

Sincerely,

Willie R. Taylor
Director
Office of Environmental Policy
and Compliance

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REFERENCES:

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RESPONSES TO U.S. DEPARTMENT OF THE INTERIOR COMMENTS ON THE DRAFT EIS (Comment Document 1969)

1. On December 17, 1998, DOE requested a species list from the U.S. Fish and Wildlife Service and initiated consultation to evaluate whether the Proposed Action could affect the threatened desert tortoise or protected species at Ash Meadows, Devils Hole, or along transportation corridors. In a Biological Assessment submitted to the U.S. Fish and Wildlife Service on April 24, 2000, DOE concluded that the Proposed Action would not affect the listed species in the Ash Meadows or Devils Hole areas because these areas are in a different regional groundwater sub-basin from Yucca Mountain. The Fish and Wildlife Service concurred with this conclusion during consultation on the effects of repository construction, operation and monitoring, and closure on threatened and endangered species (see the Fish and Wildlife Service Final Biological Opinion in Appendix O of the EIS). Furthermore, there are no playas in the vicinity of Yucca Mountain where surface water could accumulate and attract migratory birds. The playa at Frenchman Flat is located approximately 35 kilometers (22 miles) east of Yucca Mountain and would be unaffected by the Proposed Action.

   DOE did determine that the Proposed Action could affect the desert tortoise and consequently has proposed mitigation measures to minimize effects. If the Secretary of Energy recommends approval of the Yucca Mountain site to the President, and Yucca Mountain is ultimately authorized for the disposal of spent nuclear fuel and high-level radioactive waste, DOE would implement all reasonable and prudent mitigation measures and comply with the terms and conditions of the Final Biological Opinion from the U.S. Fish and Wildlife Service. See Appendix O of the EIS for the Opinion.

   The Desert National Wildlife Range, approximately 48 kilometers (30 miles) east of the repository, would be unaffected by the Proposed Action unless the Valley Modified Corridor, which could be on, or adjacent to, the southern boundary of the Range, was selected. With regard to the transportation implementing alternatives in the State of Nevada, DOE believes this EIS is sufficient for the determination of the relative merits and a selection decision among the various corridors and shipment modes discussed in the EIS, but acknowledges additional environmental review would be required to assess the potential impacts of specific route alignment within a corridor. DOE would continue discussions with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act, as amended, on any corridor or alignment within a corridor determined to require further environmental review and would implement the terms and conditions of any subsequent Biological Opinions.

2. DOE believes that the comments expressed by the U.S. Fish and Wildlife Service concerning risks to wildlife resources are addressed in the EIS. Section 4.1.8 of the EIS discusses the potential for catastrophic events (including earthquakes) occurring at the Yucca Mountain Repository during construction, operation and monitoring, and closure of the repository, and the consequences of these events. As described in Section 4.1.3, flooding would be unlikely to release contaminants because the design of critical surface facilities would withstand the most severe reasonably possible floods. Chapter 5 discusses impacts from the long-term performance of the repository. The evaluations included impacts from volcanic (Section 5.7.2) and seismic disturbances, as well as impacts from the slow degradation of waste packages over thousands of years. This slow degradation has the highest potential to spread contaminants as they are leached into the groundwater beneath Yucca Mountain.

   Section 3.1.4.2.1 of the EIS shows that the flow path of groundwater from Yucca Mountain extends to Jackass Flats and the Amargosa Desert, and continues southward to the primary point of discharge at Franklin Lake Playa in Alkali Flat. The EIS recognizes that some groundwater reaching this far might bypass Franklin Lake Playa and continue into Death Valley. The EIS also recognizes that a fraction of the groundwater that reaches the Amargosa Desert might flow through the southeastern end of the Funeral Mountains to springs in the Furnace Creek Wash in Death Valley National Park. The springs in Ash Meadows (including Devils Hole) are not along the groundwater flow path from Yucca Mountain. As described in Section 3.1.4.2.1, groundwater beneath Yucca Mountain flows to the Amargosa Desert but does not discharge in Ash Meadows. From Ash Meadows to the low axis (Carson Slough) of the Amargosa Desert, the groundwater table declines

about 64 meters (210 feet), indicating that the groundwater flows from Ash Meadows toward the Amargosa Desert, not the other way around.

Chapter 5 of the EIS does not specifically address the risks to people and natural resources in Death Valley National Park from the use and consumption of groundwater. However, it clearly indicates that risks would decrease with increased distance from the repository. Accordingly, impacts to the Park, because it is far from Yucca Mountain, would be negligible.

In Section 5.3 of the EIS, DOE concluded that the predicted long-term levels of radionuclide concentrations in groundwater and the resulting dose levels at the predicted discharge area in Amargosa Valley would be low. As a consequence, DOE does not expect that the dose rates to plants and animals would cause measurable detrimental effects in populations of any species because the rates would be less than 100 millirad per day. The International Atomic Energy Agency concluded that chronic dose rates of much less than 100 millirad per day are unlikely to cause measurable detrimental effects in populations of even the more radiosensitive species in terrestrial ecosystems (DIRS 103277-IAEA 1992). The DOE interim technical standard, *A Graded Approach for Evaluating Dose to Aquatic and Terrestrial Biota*, which the Department made available for interim use on July 20, 2000, contains more information about potential effects of radiation on biota.

The comment also refers to a recent laboratory finding that a species of plutonium oxide has a higher solubility than the species most often considered to be the normal oxidized form of the metal (plutonium dioxide) (DIRS 150367-Haschke, Allen, and Morales 2000). Scientists working on the Yucca Mountain Project are aware of this finding. DOE believes that the finding is within the range of conservatisms built into the plutonium solubility model used to model the long-term performance of the repository.

3. DOE agrees that a release of hazardous materials during accidents involving spent nuclear fuel or high-level radioactive waste would be very unlikely. With regard to the potential impacts to wildlife resources, a transportation accident could result in the dispersal or death of individual members of a species within a localized area but would be unlikely to have long-term detrimental effects upon a population as a whole.

4. This comment accurately summarizes some of the issues involving the potential cumulative impacts associated with the Proposed Action and some of the ongoing evaluations being conducted by the Department and other agencies, including the U.S. Fish and Wildlife Service. In preparing Chapter 8 of the EIS, the Department reviewed many past, present, and reasonably foreseeable future actions to determine where there was potential for cumulative impacts. Chapter 8 of the EIS describes both the short-term and long-term impacts of the proposed repository, along with transportation and manufacturing cumulative impacts.

5. The shipping casks used to transport these spent nuclear fuel and high-level radioactive waste are massive and tough with design features that comply with strict regulatory requirements that ensure the casks perform their safety functions even when damaged. Numerous tests and extensive analyses have demonstrated that casks would provide containment and shielding even under the most severe kinds of accidents. In addition, since the publication of the Draft EIS, the Nuclear Regulatory Commission published *Reexamination of Spent Fuel Shipment Risk Estimates* (DIRS 152476-Sprung et al. 2000). Based on the revised analyses, DOE has concluded in the EIS that casks would continue to contain spent nuclear fuel fully in more than 99.99 percent of all accidents (of the thousands of shipments over the last 30 years, none has resulted in an injury due to release of radioactive materials). This means that of the approximately 53,000 truck shipments, there would be an estimated 66 accidents, each having less than a 0.01-percent chance that radioactive materials would be released. The chance of a rail accident that would cause a release from a cask would be even less. The corresponding chance that such an accident would occur in any particular locale would be extremely low. Section J.1.4.2.1 of the EIS presents consequences for accidents that could release radioactive materials.

   With regard to the containment or control of accident events, DOE would rely on a number of actions including the training of public safety officials and the implementation of safeguards and security plans. Section 180(c) of the NWPA requires DOE to provide technical assistance and funds to states for training public safety officials and appropriate units of local government and tribes through whose jurisdictions DOE

shipments would pass. DOE anticipates financial and technical assistance to eligible jurisdictions to begin at least 4 years before the commencement of shipments to the repository.

Concerning safeguards and security plans, DOE would comply with all requirements of 10 CFR Part 73, including preshipment planning, communications, armed escorts and tamper-indicating devices on shipping casks. Regarding shipment routes, pursuant to U.S. Department of Transportation regulations, 49 CFR 397.101 and DIRS 154766-NRC (1980), added protection would be afforded by the selection of routes which exhibit certain criteria including the likelihood of swift law enforcement response, avoidance of tactically disadvantageous locations such as long tunnels or bridges spanning heavily populated areas, and flexibility to adjust schedules to accommodate unexpected situations.

6. Transportation shipments would be protected from sabotage. The Nuclear Regulatory Commission has developed a set of rules specifically aimed at protecting the public from harm that could result from sabotage of spent nuclear fuel casks. Known as physical protection or safeguards regulations (10 CFR 73.37), these security rules are distinguished from other regulations that deal with issues of safety affecting the environment and public health. The objectives of the safeguards regulations are to minimize the possibility of sabotage and facilitate recovery of spent nuclear fuel shipments that could come under control of unauthorized persons.

   Cask safety features that provide containment, shielding, and thermal protection also provide protection against sabotage. The casks would be massive. The spent nuclear fuel in a cask would typically be only about 10 percent of the gross weight; the remaining 90 percent would be shielding and structure.

   Although it is not possible to predict the types of potential sabotage events with certainty, DOE has examined various accident scenarios, which can provide a sense of the consequences that could occur in such events. In addition, DOE has specifically analyzed the potential consequences of sabotage against a truck or rail cask. The results of this analysis indicate that the maximally exposed individual would increase the risk of incurring a fatal cancer from approximately 23 percent (the current risk of incurring a fatal cancer from all other causes) to about 29 percent. The same event could cause 48 latent cancer fatalities in an assumed population of a large urban area.

   Because of the attacks on September 11, 2001, the Department and other agencies are reexamining the protections built into their physical security and safeguards systems for transportation shipments. As dictated by results of this reexamination, DOE would modify its methods and systems as appropriate.

   In response to public comments, DOE has included a discussion on the range of potential costs of cleanup following a severe transportation accident in Appendix J of the EIS. This discussion reviews calculations of land area contaminated and costs for cleanup presented in past studies, including a report used in the 1986 Environmental Assessments (DIRS 154814-Sundquist et al. 1985), and information submitted by the State of Nevada in its comments on the Draft EIS. The information submitted by the State included estimates of cleanup costs as high as $270 billion. Cost data used in the studies reviewed in Section J.1.4.2.5 included data compiled from case studies involving actual cleanup of radioactive materials contamination. Section J.1.4.2.5 discusses environmental restoration after a release of radioactive material.

7. Transportation shipments would be protected from sabotage. The Nuclear Regulatory Commission has developed a set of rules specifically aimed at protecting the public from harm that could result from sabotage of spent nuclear fuel casks. Known as physical protection or safeguards regulations (10 CFR 73.37), these security rules are distinguished from other regulations that deal with issues of safety affecting the environment and public health. The objectives of the safeguards regulations are to minimize the possibility of sabotage and facilitate recovery of spent nuclear fuel shipments that could come under control of unauthorized persons.

8. The interpretation is correct. In the Draft EIS, the maximally exposed individual would receive an estimated dose of 38 to 100 millirem over 70 years. Table 4-35 (Footnote c) and Section 4.1.7.5.3 of the Draft EIS explain this dose. Section 4.1.2 of the EIS discusses the highest potential annual dose would be less than 2 millirem per year.

Exposure scenarios at reclaimed uranium mines or mills are much different from the potential exposure near the proposed repository at the Yucca Mountain site. The key differences at Yucca Mountain would be the lack of high uranium and uranium decay product source material, lack of tailings with enhanced concentrations of uranium decay chain radionuclides, and the location of the potential public dose receptor at the boundary of the controlled area (15 millirem per 40 CFR Part 197). Further, potential public exposures at Yucca Mountain would be held to a much more rigorous standard than 100 millirem per year. The discussions in Sections 4.1.2 and 4.1.7, along with the supporting information in Section G.2, explain potential public radiation doses.

9. Sections 6.3.1, 6.3.2, and 6.3.3 of the EIS address the potential impacts of Nevada legal-weight truck, heavy-haul truck, and branch rail line implementing alternatives, respectively, including land-use impacts. These sections recognize and describe the impacts related to construction and operation of branch rail lines and developing or upgrading highways, including traffic impacts. Section 6.2.4.2 addresses impacts from accidents, including spills.

   DOE acknowledges that some land-use conflicts could be inevitable during the construction and operation of a transportation corridor for the Yucca Mountain Repository. The implementing alternatives for transportation described in the EIS were based in part on attempts to avoid or minimize potential land-use conflicts.

   DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada. Should the branch rail line implementing alternative be selected and a preferred rail corridor identified, additional engineering and environmental studies would be conducted as a basis for detailed design and for appropriate National Environmental Policy Act reviews. During this process, DOE would initiate consultations with responsible local, State, Federal, and tribal agencies, landowners, and other stakeholders to identify, acquire, and evaluate additional information and develop mitigative actions necessary to minimize potential impacts, including land use.

10. DOE agrees that most of the faulting occurred during this period and Section S.4.1.3 of the EIS Summary has been changed to, "Yucca Mountain is a product of volcanic and seismic activity that occurred 14 million to 11.5 million years ago."

11. DOE has corrected the name of the repository host rock to "Topopah Spring Tuff."

12. DOE agrees that it cannot predicate its selection of the Topopah Spring Tuff for the repository on the lack of proximity to seismically active faults. The Department has changed the statement in the Summary and Section 3.1.3 of the EIS to indicate that it chose the repository emplacement area because of its location away from major faults that could adversely affect the stability of underground openings.

13. The comment is correct that the Solitario Canyon fault is not the only block-bounding fault identified in the EIS. However, DOE did not modify the text of the Summary in order to keep it understandable to a wide range of readers. DOE has, however, clarified the text in Section 3.1.3.2 of the EIS, which also refers readers to numerous reference materials on the subject.

14. The purpose of Section 3.1.3.1 is to provide a broad overview of regional and site geology. The purpose of the subsections that are part of Section 3.1.3.1 is to address specific issues of particular concern or interest to the public (such as faulting and seismic activity) or that are a definite change of topic (for example, mineral and energy resources). DOE agrees that it could put the topics identified in the comment in separately numbered sections, but made an editorial decision not to do so.

15. Although the EIS is concerned with the sedimentary history of the region and sedimentary rock units at Yucca Mountain, the main focus is on those units important for the study of groundwater infiltration, flow, and transport. Table 3-6 is highly generalized and identifies only the Topopah Spring Tuff, the repository host rock, by name. The commenter is referred to other parts of Section 3.1.3 of the EIS that describe the

history and stratigraphy of the Yucca Mountain area, and to Table 3-7, which describes the Tertiary rock units at Yucca Mountain in more detail than Table 3-6.

16. DOE has revised the text of Section 3.1.3.1 of the EIS such that the parenthetical explanation "(that is, Paleozoic and Precambrian)" follows the reference to Pre-Cenozoic.

17. This comment is correct. DOE has revised Section 3.1.3.1 of the EIS to include the exposures at Calico Hills and Striped Hills.

18. DOE has revised Section 3.1.3.1 of the EIS to state that volcanic rocks younger than Tertiary age pertain only to the four northeast-trending cinder cones in the center of Crater Flat, dated at about 1 million years old, and the Lathrop Wells basaltic cinder cone, dated at 70,000 to 90,000 years old.

19. DOE has updated the general bedrock geology figure in Section 3.1.3.1 in the EIS as described in the comment to show additional faults in the repository block area. The figure is now consistent with the simplified geologic cross-section figure that follows it.

    This comment suggested that the cross-section line in these figures should be named A-A', not B-B'. DOE has made this modification.

    DOE provided the upper block label in the figure to help the reader identify the area shown because the EIS discusses other blocks.

20. The maps in Chapter 3 of the EIS depicting fault information are simplified and show only selected faults. However, DOE has added more faults to the general bedrock geology in Section 3.1.3.1 to make it more consistent with the cross-section figure that follows.

21. Section 3.1.3 of the EIS has been changed to indicate that the alluvial deposits on fans and in stream beds includes boulders, cobbles, pebbles, sand, silt and clay; Section 3.1.4.1.2 has been modified to indicate that mud flows may include boulder-size material.

22. DOE has modified the discussion in Section 3.1.3.2 of the EIS. The faults described are well-defined structures; joints, along which there is no appreciable movement, also occur in the rock units mapped at the site. Within the Paintbrush Group (Tiva Canyon, Yucca Mountain, Pah Canyon, and Topopah Spring tuffs), joints have been subdivided into three groups based on how they developed and their approximate time of origin: early cooling joints, later tectonic joints, and joints due to erosional unloading (DIRS 151945-CRWMS M&O 2000). Each group of joints exhibits specific characteristics with respect to joint length, orientation, and connectivity. The cooling and tectonic joints have similar orientations (generally trending north-south), whereas cooling joints include irregularly spaced horizontal joints as well. Joints that developed from erosional unloading are variably oriented but trend predominantly east to west, perpendicular to the cooling and tectonic joints. Tectonic joints occur throughout the Paintbrush Group; cooling joints occur in each of the welded units. In general, the Tiva Canyon tuff and the Topopah Spring tuff have the highest joint frequencies and joint connectivities. The nonwelded Yucca Mountain tuff and the Pah Canyon tuff have the fewest joints. Geologic, geoengineering, and hydrologic aspects of fractures are discussed in detail in the *Yucca Mountain Site Description* (DIRS 151945-CRWMS M&O 2000). DOE has added to Section 3.1.3.2 of the EIS more information about joints and fractures in the volcanic rock at Yucca Mountain.

23. The text in Section 3.1.3.2 has been modified to indicate that major east-west crustal compression occurred periodically in the Great Basin between about 350 million years ago to about 65 million years ago. This compression moved large sheets of older rock great distances upward and eastward over younger rocks to produce mountains. References to support this discussion include Armstrong (DIRS 101583-1968), Fleck (DIRS 150625-1970), CRWMS M&O (DIRS 100127-1998), and Dunne (DIRS 102861-1986).

24. DOE has updated the subject reference.

25. DOE has clarified this paragraph in Section 3.1.3.2 of the EIS, as suggested by the comment.

26. The comment is correct; text in Section 3.1.3.2 has been revised for clarity. The Solitario Canyon fault is not the only block-bounding fault identified.

27. DOE has reorganized the paragraph in question to discuss the Ghost Dance fault, which occurs in the middle of the repository block, before discussing the northwest-trending faults.

28. The description of faults in Figure 3-9 of the Final EIS has been clarified.

29. DOE has changed the legend on the mapped faults figure in Section 3.1.3.2 to label the arrows in the figure as strike-slip faults.

30. DOE believes that it has made the table in Section 3.1.3.2 of the EIS more accurate by removing the word "late" from the column heading related to Quaternary displacement.

31. During EIS preparation, DOE decided to omit a seismicity map in favor of a simpler presentation. The Department made this decision with the understanding that more detailed seismic information is available in the *Yucca Mountain Site Description* (DIRS 151945-CRWMS M&O 2000). With regard to showing faults on a seismic map, seismic events do not correlate with mapped surface traces or Quaternary faults, as indicated in Section 3.1.3.3 of the EIS.

32. DOE believes the paragraph is correct as written. The main point of this paragraph is that the strain rate is significantly less than the rate reported by Wernicke et al. (DIRS 103485-1998), which did not account for the coseismic and postseismic effects of the 1992 Little Skull Mountain earthquake.

33. The EIS presents the results of various investigations on mineral and energy resources. DOE considers the likelihood of finding oil or gas to be low in the vicinity of the proposed repository. Drilling of numerous boreholes to depths beyond 1829 meters (6,000 feet) in the area found no indications or shows of oil of gas. Therefore, DOE decided not to include a detailed discussion of mineral and energy resource potential in the EIS, but rather to refer the reader to the numerous references that discuss these issues. This approach is consistent with the regulations of the Council on Environmental Quality [40 CFR Part 1501.7(a)(3)] that direct agencies to identify and eliminate from detailed study those issues which are not significant.

34. DOE, in cooperation with Nye County, has initiated a program (called the Early Warning Drilling Program) to characterize further the saturated zone along possible groundwater pathways from Yucca Mountain, as well as the relationships among the volcanic, alluvial, and carbonate aquifers. Information from the ongoing site characterization program and from the performance confirmation program (if Yucca Mountain is approved for a repository), would be used in conjunction with that of the Early Warning Drilling Program to refine the Department's understanding of the flow and transport mechanics of the saturated alluvium and valley-fill material south of the proposed repository site, and to update conceptual and numerical models used to estimate waste isolation performance of the repository. When DOE published the Draft EIS, only limited information from the Early Warning Drilling Program was available. Since then, however, this program has gathered additional information (see Section 3.1.4.2.1 of the Final EIS).

35. The EIS describes why the quantity of water moving through the proposed repository would be small compared to other sources of recharge in the region and to the amount of groundwater moving through the area. DOE believes that presenting ranges of infiltration rates in this case would add unnecessary complexity. More information, including temporal and spatial ranges of net infiltration, is in the Water Source and Movement discussion in Section 3.1.4.2.2 of the EIS.

    DOE disagrees that description of an average net infiltration over the area of the repository is misleading. (It should be noted that the EIS now presents a different infiltration estimate due to the results of an updated infiltration study.) The EIS also considers smaller areas of higher and lower infiltration. Section 3.1.4.2.2 identifies infiltration rates over an order of magnitude higher in areas where thin alluvium overlies highly permeable rock. It would be misleading to imply that these higher infiltration rates occur over large areas.

DOE agrees that it is difficult to predict which fractures or faults would act as highly transmissive zones. However, much has been learned from studies, particularly chlorine-36 studies, that have suggested a correlation between subsurface locations where there is evidence of "fast pathways" (less than 50 years) and physical conditions in the mountain and on the surface. The Water Source and Movement discussion in Section 3.1.4.2.2 describes these correlations.

36. Thank you for your comment.

37. DOE acknowledges and appreciates the offer of technical support from the U.S. Department of the Interior and its individual bureaus on the Yucca Mountain Project monitoring programs. Such cooperation will inevitably increase the knowledge base on the local environment and help ensure minimal impacts of the Proposed Action on regional wildlife and other natural resources.

010066

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

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In Reply Refer To:
1793 (360)

Ms. Carol M. Borgstrom
Director, Office of NEPA Policy and Compliance
U.S. Department of Energy
Washington, D.C. 20585

Reference: U.S. Department of Energy's (DOE) Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada

Dear Ms. Borgstrom:

1 Thank you for the opportunity to review the above-referenced supplement to the Draft Environmental Impact Statement (EIS) for the proposed radioactive waste repository at Yucca Mountain. At this time, this Office does not have the technical expertise to evaluate the nature of the environmental impacts that may be expected from the modified design compared to the Draft EIS. If you should have any questions, please contact Andrea McLaughlin of my staff at (202) 452-7717.

Sincerely,

B.R. Hyde, Jr.
Manager, Protection and Response Group

cc: Willie R. Taylor, Director, Office of Environmental Policy and Compliance
Robert Anderson, Deputy Assistant Director, Minerals, Realty, and Resource Protection

MAY 22 2001

EH-42 (1)

RESPONSES TO U.S. DEPARTMENT OF THE INTERIOR COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10066)

1. Thank you for your reply.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

EIS001632

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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

February 11, 2000

Ms. Wendy R. Dixon
EIS Project Director
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307, M/S 010
North Las Vegas, NV 89036-0307

Dear Ms. Dixon:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality's implementing regulations (40 CFR 1500-1508), the Environmental Protection Agency (EPA) is providing you comments on the Draft Environmental Impact Statement (EIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, dated July 1999 (DOE/EIS-0250D, CEQ# 990282).

The Proposed Action addressed in the draft EIS is to construct, operate, monitor, and eventually close a geologic repository at Yucca Mountain in southern Nevada for the disposal of spent nuclear fuel and high-level radioactive waste currently in storage at 72 commercial and five Department of Energy (DOE) sites across the nation.

As outlined in this letter and accompanying detailed comments, EPA is seeking a number of clarifications about and additional data on the environmental impacts of the proposed project. We expect that DOE will be able to provide this information and enable EPA to fully assess the project's impacts. EPA is therefore rating the Yucca Mountain EIS as "EC-2", Environmental Concerns-Insufficient Information. EPA's major issues are summarized below, and our detailed comments are enclosed.

1 EPA commends DOE for what is generally a well-organized and plain English document
2... on a highly complex subject. However, EPA could not always find data or explanations to support the conclusions drawn. A prime example of this is that EPA found insufficient data to support the prediction of the movement of radionuclides in the saturated zone beneath the repository. These data are needed to determine if the facility's performance will satisfy applicable radiation standards designed to protect ground water resources and public water

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2 cont. supplies. As you know, EPA has proposed standards applicable to Yucca Mountain.

The draft EIS acknowledges that on-going studies at the proposed repository site and the continuing investigations of engineered barriers and waste package designs are not scheduled to be completed until after the submission of the final EIS. The continuing site characterization and data collection raise questions about whether a supplemental environmental impact statement will be needed once the final design and waste content are determined. CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when there are substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact.

If the Department's subsequent analysis of design choices indicates that the draft EIS/final EIS bounded the potential impacts, a supplemental draft and/or final EIS may not be needed. However, even if not strictly required by NEPA, a supplemental EIS or another document subject to public review and comment may be advisable given the potentially significant changes in final design and waste content. At a minimum, the final EIS must describe the changes from the draft EIS and update the discussion of impacts on the environment and public health. Our detailed comments provide examples of areas of uncertainty which lead to this conclusion.

3... EPA devoted considerable attention to the no-action alternatives and noted the public controversy about how realistic these are. EPA agrees that aspects of the no-action alternatives are speculative. However, the agency also believes that they provide a basis for comparison with the preferred alternative for the purposes of NEPA. We caution DOE, however, that should the U.S. decide not to proceed with constructing and operating the repository at Yucca Mountain and to pursue another solution, DOE would need to do a full examination of alternatives and their environmental impacts, within the confines of any national legislation.

EPA's review also focused on the national transportation aspects of this project. EPA appreciates that the actual shipments of waste will not likely occur for another 10 years and understands DOE's reluctance to provide additional information on routes for waste transport. However, EPA sees no reason why DOE cannot commit to making this information available as the time for shipments approaches, as the Department is doing now for shipments to the Waste Isolation Pilot Plant in New Mexico. Once DOE has greater certainty about the routes along which waste shipments will travel, the Department will also be able to update and expand upon, if needed, the environmental justice or other route-specific impact analyses. Specifically with regard to tribal governments, EPA encourages DOE to conduct a comprehensive tribal consultation process wherever waste shipments may cross tribal lands.

In addition, EPA suggests that the final EIS provide a section which lays out the responsibilities of various federal, state, local and tribal agencies in regulating, approving and monitoring shipments of radioactive waste. This information should provide additional

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assurance to the public that a national network of controls is in place designed to ensure public safety.

Thank you for the opportunity to review this document. If you have any questions or would like to meet to discuss our comments further, please contact Susan Absher of my staff. She may be reached at 202/564-7151.

Sincerely,

Richard E. Sanderson
Director
Office of Federal Activities

Enclosures: 2
Summary of Rating Definitions
Detailed EPA comments on the draft EIS

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DETAILED EPA COMMENTS on
Draft EIS for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain
(DOE/EIS-0250D, July 1999)

Section 1. Purpose and Need for Agency Action

4 Section 1.2.3, page 1-7. The second full paragraph describes the treatment process for high-level waste from storage in waste tanks through solidification. Part of that process "ordinarily includes separation of the waste into high-activity and low-activity fractions." However, after describing what happens to the "high-activity fraction," there is no mention of what happens with the "low-activity fraction." The low-activity fraction is still high-level waste, and this discussion should include the disposition of the low-activity fraction.

Section 2. Proposed Action and No-action Alternative

No-Action Alternative

3 cont. Section 2.2, page 2-59: This section describes the no-action alternative (no further site characterization at Yucca Mountain) and lays out two scenarios for this alternative: (1) wastes are stored at current locations and monitored/maintained for 10,000 years; or, (2) wastes are maintained for only 100 years, after which they are assumed to be abandoned. The Draft EIS acknowledges (page 2-60) that should there be a decision not to proceed with the repository, neither of these scenarios is likely; rather, the scenarios were chosen to provide a basis of comparison with the proposed action.

EPA agrees that while aspects of the no-action alternatives are speculative, they do provide a basis for comparison with the preferred alternative for the purposes of NEPA. We caution DOE, however, that should the U.S. decide not to proceed with constructing and operating the repository at Yucca Mountain, DOE would need to do a full examination of alternative solutions and their environmental impacts, within the confines of any national legislation.

Evolving Design of the Repository: General Comments

5... Page 2-6 indicates that there are many uncertainties about the final design of the repository and several of its components:

> "This EIS describes and evaluates the current preliminary design concept for repository surface facilities, subsurface facilities and disposal containers."
>
> "Plans for the repository would continue to evolve during the development of the final repository design and as a result of the NRC licensing review."
>
> "For these reasons, DOE developed implementing alternatives and analytical scenarios to bound the environmental impacts likely to result from the Proposed Action."

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5 cont. Page 2-10 states:

> "DOE continues to investigate design options . . . for final repository design; Appendix E identifies design features and alternative design concepts that DOE is considering for the final design (for example, smaller waste packages, a waste package design using two corrosion-resistant materials . . .). . . . DOE has assessed each of the design options still being considered for the expected change it would have on short- and long-term environmental impacts and has compared these impacts to the potential impacts determined for the packaging, thermal load and transportation scenarios evaluated in the EIS. . . DOE has concluded that the analytical scenarios and implementing alternatives evaluated in this EIS provide a representational range of potential environmental impacts the Proposed Action could cause."

The continuing site characterization and data collection raise questions about whether a supplemental environmental impact statement (SEIS) is needed once the final design and waste content are determined. CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when there are substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact.

If the Department's subsequent analysis of design choices indicates that the draft EIS/final EIS bounded the potential impacts, a supplemental may not be needed. However, even if a supplemental is not strictly required by NEPA, a supplemental or other document subject to public review and comment may be advisable given the potentially significant changes in final design and waste content. At a minimum, the final EIS must describe the changes from the draft EIS and update the discussion of impacts on the environment and public health. Examples of areas of uncertainty which lead to this conclusion are given below in the comments referring to pages 2-6, 2-10, 2-32, 2-37 (Section 2.1.2.4), and 2-81.

Evolving Design of the Repository: Specific Comments

6 Page 2-6, final two paragraphs of 2.1.1: The repository performance and dose assessments in the draft EIS are based on models and assumptions in the DOE Viability Assessment Report (DOE/VA - DOE/RW-0508) that are now outdated. For example, the draft EIS analyzes the Module I & II inventory increases which were not part of the DOE/VA. Also, the DOE/VA examined the performance of a waste package design that is now obsolete. The assessments in the final EIS should describe/assess the new EDA II design, particularly those aspects of the new design that modify the performance assessment.

7 Page 2-17, Figure 2-10 does not identify the proposed locations for the cask maintenance facility and landfill. Locations of these need to be identified in order to assess their potential impacts.

8... Page 2-21, 2.1.2.1.5: The second paragraph mentions "water used for cooling tower operations." We found no other description or reference to a cooling tower. The final EIS should explain the purpose of this operation and any possible radiological or chemical contamination from the

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8 cont. cooling tower.

9 Page 2-31: The third full paragraph describes removing materials from the repository during subsurface construction that occurs simultaneously with waste emplacement. What plans does the Department have for monitoring the water and other material being removed during waste emplacement operations? Monitoring should ascertain that no radioactive contamination is being removed. While it is not likely that such contamination will occur, there is always the possibility of contaminants adhering to the surface of waste packages and getting into the water or material being removed, or of an accident occurring.

10 Page 2-32: The second paragraph contains a general description of the waste package used for the performance assessment. The description of the waste package must be updated in the Final EIS.

11 Page 2-37, Section 2.1.2.3. In the final paragraph, the statement that DOE would use institutional controls "to limit or prevent intentional and unintentional activities in and around the closed repository" is problematic. EPA and the National Academy of Sciences maintain that prevention of such activities, including intrusion into the repository, cannot be assumed once active controls are discontinued. Since this paragraph refers to time beyond any reasonable active control period, e.g., more than 100 years, it should be amended to read "to attempt to limit intentional and

12 unintentional activities...." Second, this paragraph states, "Provisions could be added for post-closure monitoring." The final EIS should elaborate on when and how DOE would add post-closure monitoring.

13 Page 2-37, Section 2.1.2.4, first paragraph: When does the Department expect to have a performance confirmation program in place, and how will DOE decide which data to evaluate? We note that this paragraph says that the "performance confirmation programs could include" the listed data types. [emphasis added] EPA recommends using all of these factors to improve the performance assessment.

14 Page 2-40, Section 2.1.3.2, first paragraph: Please confirm whether only heavy-haul trucks will be used from commercial sites, or if legal-weight trucks may also be used.

90 Page 2-58, Section 2.1.4.3: This discussion does little to help the reader understand the design features and alternatives that affect operations and costs. We note that DOE intends to "evaluate the environmental impacts associated with the updated design in the final EIS." This section should be revised to clarify the discussion.

15... Page 2-58, Section 2.1.5: The discussion of "estimated costs" provides broad cost categories without an explanation of how these were derived. Also, there is no indication of how costs occur over time; no indication of the discount rate used to present all costs in 1998 dollars; and no indication of whether these are all direct costs of construction or if they include indirect costs such as that for siting the repository. TRW 1999e, the draft EIS cost summary report, is cited, but the final EIS should provide the reader more detail on costs.

Page 2-67, Section 2.2.3: The comments for section 2.1.5 apply here also. In addition, Table 2-6

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15 cont. provides only limited information and leaves out how storage costs were developed and how these compare to industry estimates.

16 Page 2-74, Section 2.4.3, first paragraph: The last sentence indicates that long-term (100 to 10,000 years) impacts were assessed only where DOE "could establish estimates of impacts." Were there any important impacts which were not assessed for this reason? If so, how does DOE plan to address them? (See 40 CFR § 1502.22)

17 Page 2-80, Table 2-8: It appears that the dose equivalent listed in this table for the maximally exposed member of the public (2.4 rem) is an annual value. If so, EPA assumes this value is listed in error. While EPA does not have transportation standards, compare this value to the limit for exposure to individuals of 0.015 rem per year (40 CFR Part 191) during the post-closure period of a repository.

18 Page 2-80, Section 2.4.4.1, last paragraph: Please explain the conclusions that short-term impacts would be less than a factor of 2 for thermal-load scenarios and that the impacts would be highest for the low thermal load and lowest for the high thermal load scenario.

19 Page 2-81, Section 2.4.4.2, final bullet: This item should refer to the Section 6 discussion of assessing impacts on cultural resources of Native Americans.

Section 3. Affected Environment

General Ground Water Issues

20 Section 3 of the draft EIS provides information about the hydrogeologic conditions in the vicinity of Yucca Mountain. The certainty of this information varies considerably, and it is difficult for the reader to understand how uncertainties will be resolved and how the data still being gathered will affect the design of the repository and the projections for ground water contamination. EPA suggests that the final EIS summarize ongoing studies and their expected impact on design and on ground water quality projections.

21 Most of the ground water studies described in Section 3 were done on a regional scale and may not provide accurate site-specific data for the saturated zone beneath the proposed repository. Section 3 provides general statements about ground water data, but fails to inform the reader about aquifer-specific data, such as the length of time data have been collected on the carbonate aquifer and the number of wells sampled over various periods of time. This information is particularly important for modeling the transport of radionuclides in the saturated zone.

22... EPA has previously discussed with DOE and NRC the calculations used to determine whether applicable radiation standards are met; determining whether the standard is met requires DOE to project the concentration of radionuclides in the water at the point of compliance. In order to do this, DOE must identify various scenarios for the type and quantity of waste released over time, transport path, and the concentrations predicted for the various options for representative volumes

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22 cont. of ground water (e.g. 10 to 1,285 acre feet), at the various distances selected as possible points of compliance. We did not find this data identifiable in the draft EIS and suggest that the final EIS provide a discussion of this information and a summary table.

Section 3.1.4, Specific Hydrology Comments

23 Page 3-41, Section 3.1.4.2.2: This section describes the Topopah Spring tuff unit, in which the repository will be built, as fractured, very permeable, and extensively interconnected; and, perched water forms at its contact with the underlying Calico Hills non-welded unit. Page 3-48 states that water chemistry analysis has found that "perched water reached its current depth with little interaction with rock. This, in turn, provides strong evidence that flow through faults and fractures is the primary source of perched water." The final EIS should address this concern: if seismic activity occurred at these fault zones, water could move faster (or slower) through the faults and fractures, possibly increasing the mounding of perched water. This is different than the "upwelling" referred to on page 3-49.

24 Page 3-46: The final EIS should provide an up-to-date analysis of the chlorine-36 transport data.

25 Page 3-49: Lower carbonate aquifer. Since data are limited, the EIS should not conclude that the lower carbonate aquifer has an upward gradient. Page 3-51 states that there is only one transmissivity value based on tests from a single well. Also, on page 3-52, it seems preliminary to count this aquifer as a possible source of inflow to the volcanic aquifers. The final EIS should acknowledge the limited confidence that can be placed on the gradient interpretation with the data currently available.

26 Page 3-52: The final EIS should provide data from the ongoing investigations on the cause of the potentiometric difference north and south of the site, and it should describe what these data suggest about the potential for water from the north to flood the repository.

27 Page 3-57: In the discussion about water levels in the 7 wells, the significance of their proximity or distance to Fortymile Wash is unclear.

28 Page 3-63, Section 3.1.5.1.4: This section states that "Fortymile Wash and some of its tributaries might be classified as Waters of the U.S..." It is likely that Fortymile Wash is a Water of the U.S., as well as the Amargosa River and its tributaries: Yucca Wash, Drill Hole Wash, Midway Valley Wash, Busted Butte Wash, Solitario Canyon Wash, and Crater Flat. Also, tributaries to the washes stated above may meet the Waters of the U.S. criteria, per U.S. Army Corps of Engineers assessment.

Other Section 3 issues

29 Page 3-31: We are confused about the discussion of the Amargosa River system and the statement that there is a ground water discharge near Beatty, NV. The final EIS should clarify the direction of the ground water flow which, according to Figure 3-13 (page 3-38), does not appear to be in the direction of Beatty.

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30 Page 3-79, Section 3.1.8: The assessments of impacts to the local populations appropriately focus on the current demographics of the area. However, there should also be some consideration given to short-term (~20 years) projections of population and land use, particularly in the area directly south of the repository where potential receptors are located. While the National Academy of Science (NAS) recommends against long term (thousands of years) projections of population characteristics, the changing demographics in the greater region around the site argue for considering a reasonable compromise between long term projections and a static situation, such as extending local planning projections for a decade or two. For example, projections of growth at the 20-kilometer location indicate modest population increases.

31 Page 3-82, second full paragraph: The DOE's value of 0.0005 latent cancer fatalities per person-rem is lower than the Federal Guidance level of 0.000575 latent cancer fatalities per person-rem (Table 7.3, page 174, Federal Guidance Report 13, "Cancer Risk Coefficients for Environmental Exposure to Radionuclides," EPA 402-R-99-001, September 1999). Since DOE was one of the funding, reviewing, and approving agencies for this study, EPA recommends that the Federal guidance level be used.

32 Page 3-142, Section 3.3.3: This section states that, "DOE calculated the river flow past each population center...and used this number in the calculation to determine dose to the population." The final EIS should provide the dose calculation used.

33 Page 3-142, Sections 3.3.2 and 3.3.3: The draft EIS briefly discusses ground and surface water impacts, but we were unable to find an assessment of ground water contamination from a surface spill. The transportation impacts analysis should consider ground water recharge zones and the proximity of transportation corridors to ground water supplies and community water systems.

Section 4. Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure

Section 4.1.3, Impacts to Hydrology

34 Page 4-24: Activity in drainages and washes may require a Section 404 permit if it takes place in Waters of the U.S.

35 Page 4-25, Section 4.1.3.3: The assessment of impacts to ground water should reference the discussion on radionuclide transport in ground water in Section 5.2. Readers may be confused by the page 4-25 discussion which focuses on the impact from spills and the potential for a contaminant to infiltrate and percolate through the unsaturated zone, rather than on the full range of ground water contamination.

Other Ground Water Concerns

36... Container breaches. The final EIS should discuss the expected scenarios for container breaches and the associated impacts on ground water, taking into account ground water contamination

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36 cont. levels at various distances and under various repository loadings. These analyses should cross-reference discussions on impacts to ground water.

37 Impact on ground water from transport spills. The draft EIS assesses the impact of spills on surface water, but the final EIS should also assess ground water contamination from a surface spill. The transportation impacts analysis should consider ground water recharge zones and the proximity of transportation corridors to ground water supplies and community water systems.

Section 4.1.4, Biological Resources

38 Page 4-30, Section 4.1.4.2: This section states that "routine releases of radioactive materials from the repository would consist of radioactive noble gases, principally isotopes of krypton and radon." Does DOE have any examples of where these types of releases are currently occurring? If so, are they monitored and have there been any impacts to biologic communities?

39 Page 4-33: DOE should plan to construct the evaporation ponds with side slopes or a ramp to facilitate wildlife use.

40 Page 4-35: While the impact on the threatened desert tortoise population is unclear (see comment on section 6.3.1.1), EPA questions whether the impact should be rated as low or very low. Some federally listed desert tortoises were killed during site characterization and more will likely be killed during construction, operation and monitoring, and closure. With increased human activity and traffic over the life of the project, the increases may be significant. EPA notes that DOE is obtaining a Biological Opinion from the Fish and Wildlife Service (page 4-33); any mitigation/conditions for protecting the tortoise should be listed in the final EIS.

Section 5. Environmental Consequences of Long-Term Repository Performance

41... Long-Term Repository Performance: General Comment

EPA disagrees with certain aspects of the performance assessment described in Section 5 and in Appendix I. The Total System Performance Assessment, presented in the Viability Assessment for Yucca Mountain and captured in the draft EIS analysis, relies in some instances on extreme performance cases which either omit or overestimate certain effects.

EPA recommends using an approach -- reasonable expectation -- which focuses on a more realistic depiction of repository performance and which recognizes the inherent uncertainties in projecting repository performance over the long term. This more realistic approach projects the expected behavior of the waste containment and isolation system, but avoids extreme assumptions and use of unrealistic performance scenarios.

We believe the final EIS would be strengthened by identifying the more conservative assumptions used in the assessment. Identifying these would give the reader a better sense of the variability inherent in the estimates of repository performance and provide the public with a more balanced

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41 cont. performance projection.

Section 5.1, Inventory for Performance Assessment Calculations

42 Table S-1 on page 5-5 and the related discussion in sections 5.1 and 8.3.1.2.3 (Atmospheric Radioactive Material Impacts) fail to consider post-closure releases of radon from the spent nuclear fuel in the time period beyond 10,000 years. EPA's proposed standards for Yucca Mountain at 40 CFR Part 197 require an analysis of the dose to a reasonably maximally exposed individual for the period beyond 10,000 years through the time of peak dose (64 FR 46976, August 27, 1999). The National Academy of Sciences' Yucca Mountain panel in 1995 estimated that the Yucca Mountain site would be stable on the order of one million years. The final EIS must therefore discuss releases of radon-222 (^{222}Rn), which will result from the decay of the considerable inventory of uranium in the spent nuclear fuel.

43 Section 5.5 (Atmospheric Radiologic Consequences) concludes that carbon-14 (^{14}C) is the only radionuclide that has the potential for transport through the atmosphere. Likewise, section 8.3.1.2 addresses only ^{14}C releases with respect to cumulative impacts. The draft EIS does examine the exposures to workers and offsite individuals from radon as a result of various operations. However, as noted by Sullivan and Pescatore ("Release of Radon Contaminants from Yucca Mountain: The Role of Buoyancy Driven Flow," T.M. Sullivan and C. Pescatore, Brookhaven National Laboratory, BNL-52468, February 1994):

> "Barometric and wind pumping at Yucca Mountain may cause long-term ^{222}Rn removal from the oxidized spent fuel waste. The problem of enhanced ^{222}Rn release to the accessible environment would pose itself later in time (after 20,000 years and peaking in roughly 200,000 years) and would last for as long as unsaturated conditions would prevail at Yucca Mountain."

44 EPA's analysis of spent fuel radionuclide inventories in support of the promulgation of 40 CFR Part 191 (see EPA 520/4-79-007A, 1977) indicates a ^{222}Rn content of about 1 curie per metric ton of heavy metal, at 100,000 years following discharge from a light water reactor. This would imply a repository inventory for ^{222}Rn of about 63,000 curies at about 100,000 years for the currently authorized Yucca Mountain repository. Because of its energetic radiations and numerous daughter radionuclides, ^{222}Rn presents a significantly larger risk per unit of radioactivity than ^{14}C.

45 Section 5.5 also indicates (introductory paragraph) that impacts for the global population were estimated. What value was used for the projected collective dose received by the global population?

46 Page 5-5: The final EIS should explain the statement on page 5-5 that chemically toxic materials were eliminated from consideration because "their total quantity would be very low and dilution in the repository environment would reduce their concentration to below toxic levels before they entered the saturated ground water system."

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47 Page 5-13: Section 5.2.3.4 discusses the different paths radionuclides can take, but should discuss pathways through the alluvial, volcanic and carbonate aquifirs.

Section 5.3. Locations for Impact Estimates

48 Page 5-23: This section states "Because of this pressure difference, water from the volcanic aquifer does not flow into the carbonate aquifer; rather the reverse occurs." This statement relies on just one data point in the carbonate aquifer. In Chapter 3, this uncertainty was noted. One data point does not provide certainty, and the EIS should not assume that the entire carbonate aquifer has an upward gradient, given the amount of fracturing and faulting involved. Nor should the EIS state that no contamination will occur at Ash Meadows, since Chapter 3 noted that it was a discharge point.

49 Page 5-27, second paragraph and Page 5-31, bottom paragraph: Page 5-27 states that 22 acre-feet of water per year infiltrate through the repository, while page 5-31 cites 25 acre-feet. Which value is correct?

50 Page 5-43, Section 5.7.2, second paragraph: It would be helpful to have a graphic representation of the results of the volcanic activity analyses.

51 Page 5-44, first paragraph: It is difficult to understand the first part of this paragraph. Please explain the sentence: "Because of its low velocity, the magma would not be removed from the waste package."

Section 6. Environmental Impacts of Transportation

National Transportation Impacts.

52 Section 6.2.1: This section describes how the EIS bounds the impacts to human health, safety and the environment from transportation by examining the two extremes of transportation possibilities - -mostly rail and mostly legal-weight truck. Based on DOE's analysis, EPA agrees with DOE's overall assessment that radiological impacts to the public from transportation of wastes to Yucca Mountain will be small.

53 In addition, the EIS recognizes the need to prepare for and respond to accidents. Page 6-30 highlights section 180(c) of the Nuclear Waste Policy Act under which DOE will provide technical assistance and funding to state, local and tribal public safety programs on transportation emergencies. This page also describes how transportation contractors must prepare an emergency response plan and take other steps to deal with the consequences of accidents.

54... EPA appreciates that the actual shipments of waste will not likely occur for another 10 years and understands DOE's reluctance to provide additional information on likely routes for waste transport. However, EPA sees no reason why DOE cannot commit to making this information available as the time for shipments approaches. DOE is doing this now for shipments to the

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54 cont. Waste Isolation Pilot Plant in New Mexico. Once DOE has greater certainty about the routes along which waste shipments will travel, the Department will also be able to update and expand upon, if needed, the environmental justice or other impact analyses which are route-specific.

55 In addition, EPA suggests that the final EIS provide a section which lays out the responsibilities of various federal, state, local and tribal agencies in regulating, approving and monitoring shipments of nuclear waste. This information should provide additional assurance to the public that a national network of controls is in place designed to ensure public safety.

56 Page 6-17, Section 6.1.3, second paragraph: The next-to-last sentence says that "an air quality conformity analysis [for carbon monoxide] may be required." If a conformity determination is needed, it should be made before completion of the NEPA process. EPA suggests such information be included in the final EIS.

57 Page 6-20, third bullet: The term "dose risk" is not a standard term. What does it mean when used in the phrase, "to estimate radiological dose risk to populations"?

58 Page 6-38, Section 6.3.1.1: DOE recognizes that desert tortoises will be killed as a result of transportation operations. The Department reaches the conclusion that "any desert tortoises killed by trucks transporting spent nuclear fuel or high-level radioactive waste probably would be only a small fraction of all desert tortoises killed on highways." This may be true, but what is the anticipated impact of this operation relative to the desert tortoise population on the Nevada Test Site (NTS)? The higher concentration of shipments on the NTS could result in a proportionately higher impact than in the general environment. However, it may be possible that the impact on the tortoise population might be less than in the general environment since the NTS has a protection program in place. See also EPA comment on page 4-35.

Section 7. Environmental Impacts of the No-Action Alternative

59 Page 7-38, end of the first partial paragraph: EPA appreciates that for comparison purposes and to avoid the appearance of bias toward the preferred alternative, "DOE did not want to overestimate the impacts from Scenario 2." However, the document should provide an estimate or a range of impacts for the reader.

Section 8. Cumulative Impacts

60 Page 8-27, Section 8.2.2.1.2: This section refers to 40 CFR Part 61 which contains EPA's Clean Air Act regulations for radiological effluents from a variety of facilities; however, this rule is not applicable to Yucca Mountain. More appropriate references are 40 CFR Part 191, Subpart A (Environmental Standards for Management and Storage, 50 FR 38066, September 19, 1985) or proposed 40 CFR Part 197, Subpart A (Environmental Standards for Storage), both of which address airborne radiological releases and external exposures from Yucca Mountain during the operational period.

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61 Page 8-47, Table 8-22: This table and several other tables in section 8 list "MEI dose (millirem)", but do not indicate whether this dose occurs in one year or over the total closure period. Some of the doses are rather large compared to established radioactive waste standards, such as the 58 millirem listed for the MEI dose for Inventory Module 1 or 2. To properly judge the impact, the exposure period must be specified.

62 Page 8-66, Table 8-46: For Inventory Module 1, the gross alpha concentration is missing.

63 Page 8-74, Item 7 and the final paragraph: This item, *Greater Confinement Disposal* (GCD), does not indicate that there is transuranic radioactive (TRU) waste at the Nevada Test Site, in addition to low-level radioactive waste (LLW). The final EIS should so note since the TRU waste has a greater potential for adding to the impact from Yucca Mountain than does the LLW.

64 Page 8-75, Table 8-55: Out of the 9.3 million curies in GCD, tritium and americium are the only ones identified as "major or known isotopes." DOE needs to state the basis for determining a "major isotope."

65 Page 8-77, Section 8.3.2.1.2: This section assumes that the risk of radiological impacts is directly scalable to the radiological content of the waste disposed in the GCD facility. However, the GCD wastes are disposed in a different manner than that contemplated for the Yucca Mountain repository (namely, closer to ground surface) and the source term likely contains a different mixture of radionuclides than anticipated for disposal at Yucca Mountain; therefore, relating the risk of GCD disposal to its inventory is overly simplistic and should be re-examined.

Section 9. Management Actions to Mitigate Potential Adverse Environmental Impacts

Design Changes

66... Pages 9-12 through 9-16, Section 9.2.8: The design alternatives discussed in this section are outdated with the Department's adoption of the EDA II design. The final EIS should discuss the new design of the engineered barrier components (e.g., elements designed to minimize water contact with the packages, increase containment lifetime, or retard radionuclide movement out of the repository); it should also discuss the operational choices (e.g., a prolonged retrievability period) that dictated the design changes and reduced uncertainties in assessing performance of the system.

The final EIS should also contrast significant changes in the engineered barrier performance assessment with the assessments for the older design. For example, the DOE/VA design assumed a juvenile package failure at 1,000 years, a major contributor to the dose calculations within 10,000 years. Estimating the rate and timing of juvenile failures is very difficult since the failure mechanisms are hard to predict. With the addition of drip shields, this uncertainty is effectively eliminated since releases would only occur if a drip shield is breached over a package with a juvenile failure - a very low- probability event.

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66 cont. The performance assessment of the new design should describe the string of processes and events needed to release radionuclides, e.g., the probability that a drip shield would prematurely fail, the probability that a waste package would prematurely fail, the probability that these failures would be co-located, and the probability that a ground water seep would be located over the failed drip shield. A presentation in the final EIS that describes the new design in terms of its expected performance can help justify the design change, support the bounding argument for the older design, and increase confidence in the repository assessments.

Tribal Coordination/Consultation (various sections and appendices)

67 Page 9-22: This section refers to the Yucca Mountain Project Native American Interaction Program for promoting a government-to-government relationship with area tribes. Pages C-7 to C-9 also discuss DOE's interaction with tribal governments on the proposed project. Representatives from the "Consolidated Group of Tribes and Organizations" have met with DOE on a range of issues. The Consolidated Group includes Southern Paiute Tribes, Western Shoshone Tribes, Owens Valley Paiute and Shoshone Tribes, and the Las Vegas Indian Center. EPA commends DOE's efforts to work with Tribes within Nevada and neighboring states, but we also encourage DOE to inform and reach out to other Tribes which may be affected by waste shipments.

Shipments of spent nuclear fuel and/or DOE high-level radioactive waste may cross Tribal lands in various parts of the country, and if DOE has not already done so, we encourage the Department to commence a government-to-government consultation process with such Federally-recognized Tribes. In order to facilitate public and agency disclosure under NEPA, the final EIS should identify those Tribes which may be affected by the transportation of waste across or close to Tribal land. This discussion should also include any potential effects on tribal resources.

68 The draft EIS (Figures 2-26 and 2-27) depicts U.S. interstate and rail routes which are potential corridors for waste proposed for disposal at Yucca Mountain. We recommend that the final EIS provide a modified overlay of these two figures to depict Tribal lands through which waste bound for disposal at Yucca Mountain may pass via road or rail. The Bureau of Indian Affairs (BIA) has a 1993 map for Indian Land Areas in the lower 48 states. This map depicts the location of tribal lands in relationship to the Federal highway network, and may be useful for this effort.

69 Pages 3-68 through 3-70: This section discusses tribal historical and cultural beliefs but provides little information on how Native Americans think the proposed project may affect their cultural resources. Page 3-70 refers to a resource document prepared by the American Indian Writers Subgroup, but does not summarize the concerns therein or explain how to obtain a copy of the document.

70 We also note that while Appendix D indicates that the draft EIS was distributed to the Department of the Interior's Office of Environmental Policy and Compliance (Dr. Willie R. Taylor), it does not appear that a copy was sent directly to the Bureau of Indian Affairs (BIA). We recommend that the Department of Energy provide the BIA with a copy of the final EIS.

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Section 11. Statutory and Other Applicable Requirements

Pages 11-6 and 11-7, Nevada Water Quality Standards

71 It is unclear whether the draft EIS has fully analyzed potential water quality impacts of the proposed project (especially the environmental consequences of long-term repository performance) per Nevada water quality standards. The final EIS should provide this analysis and discuss any needed mitigation.

72 Section 1.3.2 states that waterborne chemically toxic materials that could threaten human health are present in materials disposed of in the repository, the most abundant being uranium, as well as nickel, chromium and molybdenum (used in the waste package). EPA agrees with the analysis on page 5-6 of the conditions under which waste materials disposed at Yucca Mountain could threaten human health: (1) the waste packages and their contents are exposed to water, (2) radionuclides and/or chemically toxic materials in the package materials or wastes become dissolved or mobilized in the water, and (3) radionuclides or chemically toxic materials are transported in water to an aquifer; further, such water must be withdrawn via a well or surface discharge point and used by humans as drinking water or in the human food chain.

73... Pages 11-6 and 11-7 of the Draft EIS highlight several important requirements of the Federal Clean Water Act (CWA) and Nevada's Revised Statutes which were passed to carry out the legislative requirements of the CWA and EPA's regulatory programs. The draft EIS recognizes the CWA Section 313 requirement that any project or activity by a Federal department or agency resulting (or which may result) in the discharge or runoff of pollutants comply with Federal, State, local and interstate water pollution requirements. Water Quality Standards are designed to protect both existing and designated beneficial uses of a water body. The Water Quality Standards adopted by the State of Nevada and approved by U.S. EPA require that:

- The water must be suitable for the watering of livestock without treatment.
- The water must be suitable as habitat for fish and other aquatic life existing in a body of water.
- The water must be suitable for propagation of wildlife and water fowl without treatment.
- The unique ecological or aesthetic value of the water must be maintained.
- The water must support natural enhancement or improvement of water quality in any water which is downstream (see NAC 445A.122, approved by U.S. EPA under authority of the Federal CWA).

Page 3-31 describes the hydrologic system of the Yucca Mountain region, noting that the Amargosa River system drains Yucca Mountain and surrounding areas. The Yucca Mountain regional groundwater system includes "discharge points," defined as "locations where groundwater reaches the surface." The draft EIS notes that groundwater discharges to channels near Beatty, Nevada, south of Tecopa, California, and in southern Death Valley, California. (See also EPA's question about the Beatty discharge point under Section 3 issues.)

Because the Amargosa River flows into Death Valley, California (p. 3-31), it is presumably an interstate water regulated by Nevada water quality standards (NAC 445A.213(5)). These standards provide that "Radioactive materials attributable to municipal, industrial or other controllable sources must be at the minimum concentrations which are physically and

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73 cont. economically feasible to achieve. In no case must materials exceed 1/10 of the 168-hour values for other radioactive substances specified in National Bureau of Standards Handbook 69." Regarding radioactive materials, the Water Quality Standards stipulate that "...concentrations in water must not result in accumulation of radioactivity in plants or animals that result in a hazard to humans or harm to aquatic life" (NAC 445A.121(6)).

California Water Quality Standards

74 Page 3-31 states that ground water reaches the surface at three locations, including one in southern Death Valley, California. However, the draft EIS does not discuss whether any potential migration and subsequent discharge of contaminated groundwater from the project (from repository construction, operation, closure, or long-term performance) would be consistent with the State of California's Water Quality Standards for this geographic area. The final EIS should provide this analysis and discuss any needed mitigation.

75 The relevant California standards are in the Water Quality Control Plan for the Lahontan Region, developed by the California Regional Water Quality Control Board, approved by EPA and last updated in October 1994. This Plan identifies water quality objectives for surface waters; specifically, page 3-6 of the Plan specifies "Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life." The Plan further provides that waters with a designated beneficial use of "MUN" (waters used for community, military or individual water supply systems) shall not contain a concentration of radionuclides in excess of the limits specified in Table 4, Section 64443 (radioactivity) of Title 22 of the California Code of Regulations.

The Plan identifies larger hydrologic units (such as the Amargosa Hydrologic Unit and the Death Valley Hydrologic Area), and geographically smaller subunits (such as the Tecopa Wetlands, and minor surface waters and minor wetlands in the Death Valley Hydrologic Area), and lists specific beneficial uses that must be protected. Beneficial uses for the Tecopa Wetlands include municipal and domestic water supply, freshwater habitat, wildlife habitat, preservation of biological habitats of special significance, habitat for rare, threatened and endangered species, migration of aquatic organisms, and water quality enhancement. Many of these same beneficial uses also apply to the minor surface waters and minor wetlands of Death Valley, which in addition are designated beneficial uses of ground water and fresh water replenishment.

Compliance with Resource Conservation and Recovery Act (RCRA), Page 11-11

76... Mixed radioactive and hazardous waste is subject to RCRA requirements, including applicable permitting requirements. The draft EIS states that DOE will not accept hazardous waste for disposal at Yucca Mountain and that any hazardous or mixed waste which is generated will not be treated or disposed on-site, nor will it be stored for more than 90 days. Accordingly, "DOE does not expect to need a Resource Conservation and Recovery Act permit for its activities at the proposed repository."

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76 cont. Page 1-7 of the draft EIS indicates that high-level wastes from DOE sites would be immobilized through vitrification before shipment to Yucca Mountain. Vitrification meets the RCRA Land Disposal Restriction treatment standard for these wastes. Various DOE documents indicate that organic solvents and hazardous chemicals, in addition to toxic heavy metals, are typically contained in high-level radioactive waste. The final EIS should explain why the high-level waste to be disposed of at Yucca Mountain will not be RCRA regulated.

77 The final EIS should also clarify the applicability of RCRA to the data presented in Table I-10 (page I-15) in Volume II, "Inventory [kilograms] of Chemical Materials Placed in the Repository under the Proposed Action." Under "high-level radioactive waste" the table lists 19,000 kilograms of barium, 43,000 kilograms of cadmium, 2,000 kilograms of lead, 200 kilograms of mercury, and 300 kilograms of selenium. Pursuant to RCRA, EPA has established regulatory levels (mg/L) for barium (100.0 mg/L), cadmium (1.0 mg/L), lead (5.0 mg/L), mercury (0.2 mg/L), and selenium (1.0 mg/L). (See 40 CFR 261.24, Toxicity Characteristics.)

PCBs and Asbestos

78 Section 11 of the draft EIS does not discuss the applicability of the Toxic Substances Control Act or of regulations governing asbestos disposal. The final EIS should clarify whether any waste proposed for disposal at Yucca Mountain is or may be contaminated with PCBs (polychlorinated biphenyls), or whether any radioactive asbestos waste is destined for disposal at Yucca Mountain, and, if so, the regulatory implications of such.

Other Section 11 Comments

79 Page 11-18, Table 11-2: The table should include DOE Order 435.1 which applies to this action unless the requirements of the order "overlap or duplicate" requirements of the Nuclear Regulatory Commission (NRC).

80 Page 11-20, Table 11-3: The table should list 40 CFR Part 191, Subpart A (Environmental Standards for Management and Storage) which applies to certain areas in the vicinity of the proposed Yucca Mountain repository.

Section 14. Glossary

81... Page 14-8, definition of "controlled area": This definition is inconsistent with how this term is used in 40 CFR Part 191 (see 50 FR 38085, September 19, 1985) and in proposed 40 CFR Part 197 (64 FR 47013, August 27, 1999). The definitions in EPA's rules limit the controlled area size to no more than five kilometers from the repository footprint. (There is an additional option in proposed 40 CFR Part 197 with which this definition is also inconsistent.) EPA recognizes that the size of the controlled area for physical control purposes during the active institutional control period might be different than the area used for performance assessment purposes, but if so, the distinction should be clarified on page 14-8 and in the appropriate places in the final EIS.

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82 Page 14-19, definition of "inadvertent intrusion": The word "unintended" needs to be inserted before "disturbance," i.e., "The *unintended* disturbance of a disposal facility ...." As currently written, the definition would include purposeful intrusions.

83 Page 14-19, definition of "institutional control": This definition should distinguish between "active institutional control," which requires the presence of humans to take actions to safeguard and repair the repository, and "passive institutional control," which also includes controls such as permanent markers and land records to warn future generations of dangers from the disposal site.

84 Page 14-22, definition of "maximally exposed individual": The last sentence of this definition equates the maximally exposed individual (MEI) with the "reasonably maximally exposed individual (RMEI)," a term used in the recently proposed 40 CFR Part 197 (see 64 FR 46988 and 47014/47015, August 27, 1999). These two terms are very different. The dose incurred by the MEI is calculated by using the most conservative values (i.e., producing the highest dose) for all parameters needed to calculate the dose to an individual. The dose incurred by the RMEI, on the other hand, assumes that one or a few parameters are at their maximum or most conservative values while the others are at their average values.

Page 14-29, definition of "reasonably maximally exposed individual": See previous comment.

Appendix I. Environmental Consequences of Long-Term Repository Performance

85 Page I-49, fourth full paragraph: The document described in the final sentence should be referred to as Federal Guidance Report No. 11.

86 Page I-111, last reference. Please replace the authors' names in the first column with the EPA report number.

Appendix J. Transportation

87 Page J-8, second full paragraph: This paragraph discussed the methodology used to estimate the radiation impact resulting from accidents. The spectrum of possible accident severity was divided into categories. Then "each category of severity received a conditional probability of occurrence." A release fraction was assigned to each category. Please provide a brief discussion of how values were assigned and a table listing the values.

Appendix K. Long-Term Radiological Impact Analysis for the No-Action Alternative

88 Page K-7, Figure K-3: This map shows failure times for above-ground concrete storage modules. The no-action impact analysis looked at a 100-year time frame, yet Figure K-3 indicates that in some areas of the country, failure could be expected in less than 75 years and, in other areas, between 75-100 years. The final EIS should evaluate the premature failure potential for those areas of the country where such could be expected in less than 100 years.

89... Page K-26, Section K.2.5.2: This section discusses the potential for criticality involving stored

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89 cont. spent fuel. EPA agrees with the assessment that criticality for high-level nuclear waste is impossible, but believes the EIS should expand the assessment of low probability for criticality in stored spent fuel canisters. The text states that only water entry, and its retention in the canisters, would allow a criticality to develop; and, the discussion further acknowledges the possibility of degradation of the concrete storage facilities, allowing water entry. Yet, the text does not assess the probability that dripping water could corrode the fuel containers, allowing water to enter and remain there for some time, potentially causing a criticality.

The text discusses three types of criticality events, but does not connect them to more explicit container corrosion failures scenarios or evaluate the relative probabilities of each failure type. DOE should more explicitly analyze corrosion failures (penetration of the container and corrosion of the internal components) from water entering the storage container and the potential for various criticalities. It is plausible that dripping water could corrode a storage container, allowing water to collect and fill the container (a scenario similar to NRC's performance scenario for a breached waste package in the repository).

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RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT EIS (Comment Document 1632)

1. Thank you for your comment.

2. DOE assumes that the fundamental data referred to in the comment mean such things as aquifer properties, retardation coefficients, hydraulic heads, etc. Such data are detailed in the documents referenced in Appendix I of the EIS.

   Appendix I contains detailed information in support of Chapter 5 of the EIS. As stated in the introduction to Appendix I, the long-term performance analysis was conducted using a TSPA model and supporting data derived from the TSPA models and data that support other Yucca Mountain Project documents. As also stated, the purpose of Appendix I is not to republish the large body of available information but to reference the sources of the information and describe any special additional modeling and data used for the EIS. Some common background material was duplicated as an overview to enhance understanding of the incremental material. Thus, much of the detailed data on saturated zone modeling in this EIS is from the *Total System Performance Assessment for the Site Recommendation* (DIRS 153246-CRWMS M&O 2000) and the *FY 01 Supplemental Science and Performance Analyses* (DIRS 155950-BSC 2001), as referenced in the Final EIS.

   The Final EIS discusses the new Environmental Protection Agency standard (40 CFR Part 197).

3. DOE agrees with the Environmental Protection Agency's assertions regarding future actions should the United States decide to not proceed with construction and operation of a repository at Yucca Mountain. As stated in Section 2.2 of the EIS, if Yucca Mountain was determined to be unsuitable or was not approved by the President or Congress, DOE would prepare a report to Congress. This report, required by the NWPA, would contain DOE recommendations for further action to ensure the safe, permanent disposal of spent-nuclear fuel and high-level radioactive waste, including the need for new legislative authority. Other than this action, the future course that Congress, DOE, and the commercial nuclear utilities would take is uncertain. Several possibilities could be pursued, including centralized interim storage or the study of another location for a a deep geologic repository. However, it would be too speculative to say that any of these actions would be pursued.

4. As explained in the EIS, the purpose of the pretreatment process is to separate the high-activity fraction, which requires the permanent isolation afforded by a repository, from the low-activity fraction. This large volume of low-activity waste is subject to a "waste incidental to reprocessing determination," as provided for in DOE's Radioactive Waste Management Manual (DOE M435.1-1). A waste stream can be managed as low-level waste if the waste incidental to reprocessing determination shows that it meets the following criteria:

   - The key radionuclides are removed to the extent technically and economically practical (this is accomplished by pretreatment).

   - It is managed to meet safety requirements comparable to the performance objectives set out in 10 CFR Part 61, Subpart C, Performance Objectives.

   - It is managed in accordance with the DOE M 435.1-1 low-level waste requirements and is incorporated into a solid physical form at a concentration less than the Class C limits set out in 10 CFR 61.55.

   The Waste Incidental to Reprocessing provision was included in the August 6, 1998, drafts of DOE Order 435.1 and DOE M 435.1-1 that were made available for public comment. DOE has since issued DOE Order 435.1 for implementation.

DOE has modified Section 1.2.3 of the EIS to reflect that low-level waste would be disposed of in accordance with applicable regulations.

5. As the Environmental Protection Agency notes, the Draft EIS evaluated the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) for repository surface facilities, and disposal containers (waste packages). DOE noted in the Draft EIS (in Section 2.1.1.5, for example) that the analyzed designs were preliminary and were likely to evolve in various ways. Since it issued the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The results of the design evolution process was the development of the Science and Engineering Report flexible design. This design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass loading), but the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain are unchanged. DOE evaluated the flexible design in a Supplement to the Draft EIS, which was released for public review and comment in May 2001.

   Aspects of the design in the Supplement to the EIS (as well as this Final EIS) are likely to continue to evolve, particularly in relation to the means of controlling heat generated by spent nuclear fuel and high-level radioactive waste. Under Section 114(a) of the NWPA, DOE must provide a description of the proposed repository, including preliminary design specifications, as part of any Site Recommendation. If the Yucca Mountain site was approved, a more refined flexible design would be determined only at the time of License Application to the Nuclear Regulatory Commission. That design probably would continue to change as a result of the License Application process.

   In this Final EIS, DOE varied design parameters to create lower- and higher-temperature operating modes in such a way to provide the range of potential environmental impacts. DOE believes that the EIS adequately analyzes each design element investigated, the resulting short- and long- term environmental impacts, and mitigation measures. Further, the analyses incorporate conservative assumptions that tend to overestimate impacts, as identified in the EIS. For example, in Section G.1.1 of the EIS the total nonradiological air quality impacts were the sum of the calculated maximum concentrations regardless of wind direction. This conservatively maximized air quality impacts. This type of approach to estimate impacts conservatively was applied to all other resources, as appropriate.

   Because of the various implementing alternatives and scenarios analyzed as well as the conservative nature of the analyses, DOE believes that the analyses represent a realistic upper bound of environmental impact that could occur from the implementation of the Proposed Action.

6. The Draft EIS evaluates the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) for repository surface and subsurface facilities as well as disposal containers (waste packages). It also evaluates the plans for the construction, operation and monitoring, and closure of the repository. DOE recognized before it published the Draft EIS that plans for a repository would continue to evolve during the development of any final repository design and as a result of any licensing review of the repository by the U.S. Nuclear Regulatory Commission. The design evolution is evaluated in the Supplement to the Draft EIS and integrated into the Final EIS. The Supplement to the Draft EIS incorporates new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies.

   As described in the Supplement to the Draft EIS and incorporated into the Final EIS, the waste package has been redesigned to include a thick outer shell of corrosion-resistant high-nickel alloy (Alloy-22) and a thick inner shell of stainless steel for strength. This newer design resists corrosion far better than the design described in the Draft EIS, and has improved the predicted performance of the repository and reduced uncertainties associated with that performance. A description of the flexible design waste package can be found in Section 2.3.4.1 of the Supplement to the Draft EIS and Section 2.1.2.2.2 of the Final EIS.

The type and amount of neutron absorber necessary for a specific waste package design would be determined by DOE prior to receipt of a license from the Nuclear Regulatory Commission to receive and posses spent nuclear fuel and high-level radioactive waste. This would have to be done consistent with a criticality analysis methodology that has been accepted by the Commission. The specifics of that methodology are presented in Disposal Criticality Analysis Methodology Topical Report, which DOE submitted to the Commission in January 1999.

7. DOE has considered onsite and offsite locations for the Cask Maintenance Facility. A site for the landfill has not yet been identified. DOE would identify an appropriately sized landfill at the repository site for nonhazardous and nonradiological construction and sanitary solid waste, and for similar waste generated during operation, monitoring, and closure of the repository. Although the Cask Maintenance Facility may not be located at the Yucca Mountain site (therefore not depicted on current site drawings), the EIS analysis assumed the landfill and the Cask Maintenance Facility would be located at the repository. By doing so, the environmental impacts of these facilities were considered in the EIS. DOE believes that the amount of information in the EIS on these facilities is adequate to determine representative environmental impacts.

8. Figure 2-10 shows the location of the cooling tower at the North Portal Operations Area. DOE would use the cooling tower exclusively for air conditioning of surface facilities at the repository. The tower would not be a source of chemical contamination or radiological emissions. The Final EIS has been revised to state that the cooling tower is not a source of chemical or radiological emissions or contamination.

9. DOE would emplace waste packages in underground tunnels at the same time it was constructing additional tunnels. However, the two areas of operation would be isolated from one another. Section 4.1.3.2 of the EIS discusses potential impacts to surface water from repository construction, operations, maintenance, monitoring, and closure. As stated in that section, DOE would pump water from subsurface construction areas to a lined evaporation pond at the South Portal Operations Area. It would pump water from the emplacement areas, if any, to a lined evaporation pond at the North Portal Operations Area, but only after verifying that it was not contaminated.

   DOE would remove solid materials through mining operations, but only from the development area. Bulkheads would isolate this area from the emplacement side, and the ventilation system would ensure that air leaks would be from the development side to the emplacement side (because it would maintain a lower pressure on the emplacement side).

10. As described in the Supplement to the Draft EIS and incorporated into the Final EIS, the waste package has been redesigned to include a thick outer shell of a corrosion-resistant high-nickel alloy (Alloy-22) and a thick inner shell of stainless steel for strength. This newer design would resist corrosion far better than the design described in the Draft EIS, and would improve the predicted performance of the repository and reduced uncertainties associated with that performance. Section 2.1.2.2.4 of the EIS describes the waste package design.

11. DOE agrees that the limitation or prevention of intentional and unintentional activities around the closed repository could not be guaranteed.

12. DOE would design and implement a postclosure monitoring program in compliance with the Nuclear Regulatory Commission regulations (10 CFR Part 63). Before closure, DOE would submit an application for a license amendment to the Commission for review and approval. The application would include, among other items:

    1. An update of the assessment of the performance of the repository for the period after closure

    2. A description of the postclosure monitoring program

3. A detailed description of measures to regulate or prevent activities that could impair the long-term isolation of the waste, and to preserve relevant information for use by future generations

The application also would describe DOE's proposal for continued oversight to prevent any activity at the site that would pose an unreasonable risk of breaching the repository's engineered barriers, or increase the exposure of individual members of the public to radiation beyond limits allowed by the Nuclear Regulatory Commission. DOE has modified Chapter 9 of the EIS to include the types of monitoring and other institutional controls that would be contemplated. The Department would develop the details of this program during the consideration of the license amendment for closure. This would allow the Department to take advantage of new technological information, as appropriate.

13. DOE agrees that the limitation or prevention of intentional and unintentional activities around the closed repository could not be guaranteed.

14. DOE believes that the mostly rail scenario, in which more than 95 percent of spent nuclear fuel and high-level radioactive waste would be shipped by rail, and the rest by legal-weight truck, would most closely approximate the actual mix of truck and rail shipments. In reaching this conclusion, DOE considered the capabilities of the sites to handle larger (rail) casks, the distances to suitable railheads, and historic experience in actual shipments of nuclear fuel, waste or other large reactor-related components. DOE also considered relevant information published by sources such as the Nuclear Energy Institute and the State of Nevada. In addition, DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada.

15. The EIS focuses on analyses of potential environmental impacts, including impacts to human health and safety. DOE provided the estimated cost information as a point of comparison between the Proposed Action and the No-Action Alternative. The cost estimates in the Draft EIS were in 1998 dollars with no escalation or discount rates. The reference cited in the comment (DIRS 104980-CRWMS M&O 1999) provides the basis for the Proposed Action cost estimate for the period from 2002 to 2116. As stated in that reference, most of the detailed information came from existing cost estimates for the 1999 to 2116 period in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) and from the *Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program* (DIRS 102031-DOE 1998), which both provide detailed year-by-year cost estimates. The EIS estimates include all costs from 2002 forward (when DOE anticipates a decision regarding development of a repository at Yucca Mountain). Costs for the Proposed Action and the No-Action Alternative would be the same up to that time. Costs for siting and characterization of the Yucca Mountain site were not included in the Draft EIS estimates. Section 2.1.5 of the Final EIS provides revised cost estimates for the repository flexible design.

The No-Action Alternative cost estimate in Section 2.2.3 of the EIS is a comparative cost estimate and only includes costs different from the costs of the Proposed Action. For example, the No-Action costs do not include storage costs until 2010 when a repository would first accept spent nuclear fuel and high-level radioactive waste because storage until that point would be required under both the Proposed Action and the No-Action Alternative. The No-Action cost estimate is based on, and consistent with, existing industry experience for dry onsite storage of spent nuclear fuel and high-level radioactive waste. Section 2.2.3 of the Final EIS provides revised cost estimates for the No-Action Alternative.

16. The full quote of the last sentence is:

"Because these projections are based essentially on best available scientific techniques, DOE focused the assessment of long-term impacts on human health, biological resources, surface-water and groundwater resources, and other resource areas for which the analysis determined the information was particularly important and could establish estimates of impacts." (Draft EIS, p. 2-74)

The intent of this statement is that DOE assessed all important impacts in the long-term period. No analyses were omitted because of inability to establish an estimate. Some resource areas (such as noise, utilities, and

services) were deemed to have no foreseeable impact and no detailed analysis was necessary. DOE realizes that even the full quote is confusing and has, therefore, revised the language in the Final EIS.

17. The value of 2.4 rem listed in the table in Section 2.4.4.1 of the EIS would be the dose to a hypothetical person assuming that exposure would be limited to 100 millirem per year. DOE has added a footnote to the table to include this information. Section 6.2.3.1 contains more information.

18. The statement is correct, and the information in Section 4.1 of the Draft EIS supports the conclusions. However, the paragraph in question was out of place in the Draft EIS. Potential impacts of the transportation of spent nuclear fuel would not be related to thermal load scenarios of the Draft EIS or to the flexible design analyzed in the Final EIS. The paragraph in question has been deleted.

19. The purpose of the bullet in Section 2.4.4.2 referred to in this comment is to identify salient conclusions that can be drawn from the information in the summary table in that section. For this reason, DOE has not included modifications or references to other sections in the Final EIS.

20. DOE believes that it has sufficient information and understanding of the hydrologic setting to adequately determine the potential environmental impacts from the Proposed Action. DOE and others have been evaluating and assessing the hydrologic setting and associated characteristics at the Yucca Mountain site and nearby region for many years. DOE's site characterization program has been redirected from time-to-time to reflect and accommodate reviews by independent parties, both internal and external to the Department. Nevertheless, it is clear that the regional and site-specific hydrologic setting is complex and uncertainties remain. Additional information would refine DOE's understanding of, for instance, the regional groundwater flow system, and would further reduce uncertainties associated with flow and transport in the alluvial, volcanic and carbonate aquifers.

    In recognition of these uncertainties, DOE has supported Nye County with its program (called the *Early Warning Drilling Program*) to characterize further the saturated zone along possible groundwater pathways from Yucca Mountain, as well as the relationships among the volcanic, alluvial, and carbonate aquifers. Information from the performance confirmation program (if Yucca Mountain is approved for a repository) could be used in conjunction with that of the Early Warning Drilling Program to refine the Department's understanding of the flow and transport mechanics of the saturated alluvium and valley-fill material south of the proposed repository site, and to update conceptual and numerical models used to estimate waste isolation performance of the repository. When DOE published the Draft EIS, only limited information from the Early Warning Drilling Program was available. Since then, however, this program has gathered additional information (see Section 3.1.4.2.1 of the EIS).

    In addition, DOE has installed a series of test wells along the groundwater flow path between the Yucca Mountain site and the Town of Amargosa Valley as part of an alluvial testing complex. The objective of this program is to better characterize the alluvial deposits beneath Fortymile Wash along the east side of Yucca Mountain. Single- and multi-well tracer tests have begun and the results thus far have strengthened the basis of the site-scale saturated flow and transport model. This program is described in Section 3.1.4.2.1 of the EIS.

    Although DOE has improved its understanding of the hydrologic system, uncertainties would remain given the time frame of concern (waste isolation for thousands of years). If the site was approved, DOE would institute a *performance confirmation and testing program*, elements of which would address the hydrologic system. The purpose of this program would be to evaluate the accuracy and adequacy of the information used to determine whether the repository would be expected to meet long-term performance objectives. The performance confirmation program, which would continue through closure of the repository (possibly as long as 300 years), would offer a means to further understanding of the hydrologic system and reduce uncertainties.

21. DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the

Early Warning Drilling Program. Recent results from this program have been incorporated into this Section 3.1.4.2.1 of the EIS.

Section 3.1.4.2.2 of the EIS refers to large hydraulic gradient north of the site. Specific information related to the saturated zone and carbonate aquifer can be found in the cited references in Section 12 of the EIS. With regard to the saturated zone and the carbonate aquifer, one well (UE 25p #1) penetrated the carbonate aquifer at Yucca Mountain, another well (NC-EWDP-2DB), along the potential flow path in Fortymile Wash, has penetrated the carbonate aquifer and an upward hydraulic gradient was present. Well NC-EWDP-2DP, along with six additional planned wells, will help characterize the carbonate aquifer system near Yucca Mountain as part of the Nye County Early Warning Drilling Program. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Elsewhere in the general area, particularly at the southern end of the Nevada Test Site and eastward from the springs in Ash Meadows, the hydraulic relationship between the lower carbonate aquifer and overlying units is well understood (DIRS 101167-Winograd and Thordarson 1975). The very presence of the springs in Ash Meadows demonstrates the fact of an upward hydraulic gradient in the lower carbonate aquifer. Because the lower carbonate aquifer is buried by some 6,000 feet of unconsolidated deposits in the Amargosa Desert west of the springs in Ash Meadows, no wells have been drilled into this aquifer. Claassen (DIRS 101125-1985) presents the hydraulic and hydrochemical evidence of subsurface discharge from the lower carbonate aquifer to the alluvial fill of the Amargosa Desert to the west of Rock Valley Wash. In addition, several investigations have concluded from hydrologic, chemical, and isotopic evidence that the lower carbonate aquifer is the source of the large springs in Furnace Creek Wash (Death Valley). Thus, the understanding of the flow system and hydraulic relationships of the lower carbonate aquifer are based not only on data from well UE 25p #1 at Yucca Mountain, but on a large body of regional hydrologic and chemical evidence collected over the past 40 years.

22. The Draft EIS reported groundwater concentrations and then compared the results to current Safe Drinking Water Act standards for four points of compliance: 5, 20, 30 and 80 kilometers (3, 12, 19, and 50 miles) from the repository. It reported the concentrations for both the mean and 95th percentile of a set of 100 stochastic realizations of the undisturbed case release scenario, which determines the type and quantity of waste released over time. Chapter 5, Appendix I, and the Viability Assessment (DIRS 101779-DOE 1998) discuss this scenario. The Draft EIS reported results for three thermal load scenarios for the peak occurring within 10,000 years after repository closure.

    DOE did not use the concept of representative volume in the Draft EIS because of the nature of the groundwater model, which was the same as that used for the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998). This model simulates the saturated zone transport as a series of six parallel tubes that follow the general flow of groundwater south through Amargosa Valley to the surface discharge point at Franklin Lake Playa. These one-dimensional tubes have a concentration identified at the repository footprint (that is, all repository footprint water flows through the tubes), a dilution factor characterizes how much dispersion would occur, and a delay factor accounts for sorption. Thus, at the point of compliance the model assumes that groundwater is repository footprint water with a conservative dilution factor and delay time.

    Since publication of the Draft EIS, the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission finalized their environmental protection and licensing criteria regulations (40 CFR Part 197 and 10 CFR Part 63, respectively), which provide an individual protection standard for the proposed Yucca Mountain Repository.

    For the Final EIS, DOE used the definition of the Reasonably Maximally Exposed Individual (RMEI) from 40 CFR 197.21, which defines the individual as a hypothetical person who could meet the following criteria:

    (a) Has a diet and living style representative of the people who are now residing in the Town of Amargosa Valley, Nevada. DOE must use the most accurate projections, which might be based upon surveys of the people residing in the Town of Amargosa Valley, Nevada, to determine their current diets and living styles and use the mean values in the assessments conducted for Sections 197.20 and 197.25.

(b) Drinks 2 liters (0.5 gallon) of water per day from wells drilled into the groundwater at the location where the RMEI lives.

The location of the RMEI described in 40 CFR Part 197 would be where the predominant groundwater flow path crosses the southern boundary of the Nevada Test Site which coincides with the southern boundary of the controlled area as defined in the regulation. This point is approximately 18 kilometers (11 miles) from the proposed repository. DOE has concluded that it is not necessary to analyze in the Final EIS a hypothetical individual at locations closer than approximately 18 kilometers to the repository because it is unreasonable to assume that anyone would reside in this area, because:

- An individual would need to install and operate a water well in volcanic rock at more than 360 meters (1,200 feet) deep to reach the water table at costs significantly above (and likely prohibitive) those that would be incurred several kilometers farther south of the repository where the water tables lies less than 60 meters (200 feet) beneath the surface through sand and gravel. and

- Locations closer than 18 kilometers (11 miles) are within the controlled area defined in the EPA standard for a Yucca Mountain repository and therefore not in the postclosure accessible environment defined by EPA.

The updated analysis in the Final EIS estimates potential groundwater impacts reported for the compliance point prescribed in 40 CFR Part 197 [approximately 18 kilometers (11 miles) from the proposed repository]. As part of a comprehensive presentation of impacts, this EIS is charged with providing groundwater impacts for two other important down gradient locations. These are 30 kilometers (19 miles), where most of the current population in the groundwater path is located, and 60 kilometers (37 miles) where the aquifer discharges to the surface (this location is also known as Franklin Lake Playa). This analysis indicates that for the first 10,000 years there would be only very limited releases, attributable to a small number of early waste package failures (zero to three, and possibly as many as five) due to waste package manufacturing defects, with very small radiological consequences (see Table 5-6). For the first 10,000 years after repository closure, the mean and 95th-percentile peak annual individual dose would be thousands of times less than the Environmental Protection Agency standard, which allows up to 15-millirem-per-year dose rates during the first 10,000 years. The peaks would be even smaller at greater distances.

DOE has revised the definitions of the maximally exposed individual and RMEI in the Final EIS. Chapters 4, 6, and 7 now use the term “maximally exposed individual,” and Chapter 5 uses “individual.” The individual is the “reasonably maximally exposed individual” defined in 40 CFR Part 197.

In addition, the Final EIS updated the groundwater protection analyses consistent with criteria provided at 40 CFR 197.30. The results of these analyses are provided in Tables 5-6 and 5-10 of Chapter 5 of the Final EIS and show that both the mean and 95th percentile estimated radionuclide concentrations during the 10,000 regulatory period are thousands of times less than the regulatory limits.

23. Section 3.1.4.2.2 of the EIS indicates that perched water is formed when water percolating down through the subsurface encounters a zone of lower permeability and, as a result, accumulates. Vertical movement of water probably stills occurs, but at a slower rate below the perched water than above. In the tilted strata at Yucca Mountain, the accumulation of perched water must be accompanied by a feature such as a fault to restrict the lateral movement of water. The surface of the perched water then remains at a fairly stable elevation once the inflow and outflow rates are balanced. At Yucca Mountain this is attributed to less infiltration (a drier climate than when most of the perched water accumulated) and/or the elevation of the perched water reaching a point where the lateral restriction changes and the water “spills” out, or it could just reflect a long-term, steady-state condition.

The commenter is correct that seismic activity could change the rate at which water moves in the unsaturated zone, but it would be much less likely to change the quantity of water moving through the unsaturated zone because quantity is related chiefly to climate. That is, the rate at which water would reach the perched zone might increase for a short period of time as water above it “drained” from the system as a result of increased permeability. But eventually the amount of water reaching the perched water would again be controlled by

the amount of water entering the system (that is, infiltration). For either the short-term increase in flux or the long-term climate-driven flux to cause significant "mounding" of the perched water, the seismic activity would have to result in a decreased permeability below the perched zone and/or an extension (lengthening) of the lateral restriction to flow. A scenario of increased perched water elevation is not addressed in the EIS because neither of these conditions would be expected to occur to any significant extent as a result of seismic activity. Compared to the overlying Topopah Spring welded unit, seismic activity might cause less fracturing in the Calico Hills nonwelded unit (the unit causing the perching condition), but it would not be expected to decrease the latter's permeability. The barrier to lateral flow at faults is believed to be the result of the juxtaposition of a more permeable layer against a less permeable layer caused by the fault displacement. Therefore, to lengthen the barrier, the offset would have to be lengthened. This is an obvious result of displacement, but the greatest displacement in the Yucca Mountain area [32-centimeter (13-inch); Section 3.1.3.3 of the EIS] would be exceeded less than once in 100,000 years. Correspondingly, fault displacement would not be expected to significantly increase the depth of perched water.

DOE has considered hundreds of "what if" scenarios involving features, events, and processes (FEPs) and how they might affect the long-term performance of the repository. Those scenarios not excluded because of low probability or low consequences or for other reasons were subjected to more detailed analysis and included in long-term performance modeling. This process is documented in DOE's FEP database and associated documentation. The FEP process does not specifically address "mounding" of the perched water, but it does cover what is believed to be a more realistic scenario; the relatively rapid draining of the perched water due to seismic activity. In this case, were such an event to take place after containers in the repository had begun to degrade, it could result in a fast pulse of contamination reaching the saturated zone. This scenario was excluded from analysis in the long-term performance modeling because it was reasoned that the volume of water associated with the perched system is not great enough to cause a significant "pulse" to the saturated zone.

24. As part of its site characterization activities, DOE has conducted a variety of investigations into the nature of water falling as precipitation on Yucca Mountain and passing through the unsaturated zone to the groundwater beneath. One such study has been to quantify the concentrations of certain radioisotopes in the Exploratory Studies Facility. Isotopes, such as chlorine-36 and tritium, which occur naturally and as a byproduct of atmospheric nuclear weapons testing, serve as indicators of the rate of flow through the unsaturated zone (see Section 3.1.4.2.2 of the EIS for details).

Results from preliminary studies have identified these isotopes in concentrations that tend to suggest that there are connected pathways through which surface precipitation has percolated to the repository horizon within the last 50 years. However, these isotopes have been found at locations that are generally associated with known, through-going faults and well-developed fracture systems close to the faults at the proposed repository horizon.

To ensure the correct interpretation of this chemical signal, DOE instituted additional studies to determine if independent laboratories and related isotopic studies can corroborate the detection of elevated concentrations of these radioisotopes. Results of the validation studies to this point have not allowed firm conclusions and, thus, the evaluations continue.

DOE believes that these findings do not indicate that the Yucca Mountain site should be declared unsuitable for development as a repository. Most of the water that infiltrates Yucca Mountain moves slowly through the matrix and fracture network of the rock, and isotopic data from water extracted from the rock matrix indicates that residence times might be as long as 10,000 years. Furthermore, after excavating more than 11 kilometers (8.4 miles) of tunnels at Yucca Mountain for the Exploratory Studies Facility, DOE determined that only one fracture was moist (there was no active flow of water). This observation has been confirmed in test alcoves that are not subject to the effects of drying from active ventilation.

Nevertheless, the total system performance assessment incorporates the more conservative water movement data as well as information from other water infiltration and associated hydrogeological studies. As a result of this evaluation, DOE would not expect the repository (combination of natural and engineered barriers) to exceed the prescribed radiation exposure limits during the first 10,000 years after closure.

25. DOE has started a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into this Section 3.1.4.2.1 of the EIS.

    With regard to the saturated zone and the carbonate aquifer, one well (UE 25p #1) penetrated the carbonate aquifer at Yucca Mountain, another well (NC-EWDP-2DB) along the potential flow path in Fortymile Wash penetrated the carbonate aquifer and an upward hydraulic gradient was present. Well NC-EWDP-2DP, along with six additional planned wells, will help characterize the carbonate aquifer system near Yucca Mountain as part of the Nye County Early Warning Drilling Program. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Elsewhere in the general area, particularly at the southern end of the Nevada Test Site and eastward from the springs in Ash Meadows, the hydraulic relationship between the lower carbonate aquifer and overlying units is well understood (DIRS 101167-Winograd and Thordarson 1975). The very presence of the springs in Ash Meadows demonstrates the fact of an upward hydraulic gradient in the lower carbonate aquifer. Because the lower carbonate aquifer is buried by some 6,000 feet of unconsolidated deposits in the Amargosa Desert west of the springs in Ash Meadows, no wells have been drilled into this aquifer. Claassen (DIRS 101125-1985) presents the hydraulic and hydrochemical evidence of subsurface discharge from the lower carbonate aquifer to the alluvial fill of the Amargosa Desert to the west of Rock Valley Wash. In addition, several investigations have concluded from hydrologic, chemical, and isotopic evidence that the lower carbonate aquifer is the source of the large springs in Furnace Creek Wash (Death Valley). Thus, the understanding of the flow system and hydraulic relationships of the lower carbonate aquifer are based not only on data from well UE 25p #1 at Yucca Mountain, but on a large body of regional hydrologic and chemical evidence collected over the past 40 years.

26. Section 3.1.4.2.2 of the EIS refers to the large hydraulic gradient north of the Site. An expert elicitation panel addressed this feature and narrowed its likely cause to two theories: (1) flow through the upper volcanic confining unit or (2) semi-perched water. The consensus of the panel favored the perched-water theory. Whatever the cause, the experts were in agreement that the probability of any large transient change in the configuration of this gradient is extremely low (DIRS 100353-CRWMS M&O 1998). DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into Section 3.1.4.2.1 of the Final EIS.

27. The reference from which DOE extracted this information does not correlate water-level fluctuations with proximity to Fortymile Wash. The Draft EIS mentioned this only because Fortymile Wash is an area of periodic recharge, which could have a local, temporary affect on the elevation of groundwater (see Section 3.1.4.2.2 of the EIS). The reference to the wells' proximity to Fortymile Wash has been removed.

28. The washes listed in the comment are tributaries to Fortymile Wash, and Fortymile Wash is a tributary to the Amargosa River. Because they are tributaries, the EIS text acknowledges that these washes might be classified as "waters of the United States." At present, there has been no formal designation of these drainage channels. Without such a designation, DOE believes that it is appropriate in the EIS to continue to indicate that these washes might be classified as waters of the United States. The Department will continue to coordinate with the Army Corps of Engineers regarding any possible future designation of these or other affected washes.

29. Section 3.1.4.1.1 of the EIS discusses surface water in the region of Yucca Mountain and indicates that groundwater discharges to the channel of the Amargosa River near the community of Beatty, Nevada. The purpose of this discussion is only to identify areas along the river channel where surface water exists on a regular basis. It is not to identify the source of the groundwater that supplies the flow; this information is included in the discussion of regional groundwater in Section 3.1.4.2.1 of the EIS (which includes

Figure 3-13). In the discussion of Basins in Section 3.1.4.2.1, the description of the Pahute Mesa-Oasis Valley groundwater basin indicates groundwater outflow is southward to the Amargosa Desert. The flow arrow shown in Figure 3-13 of the Draft EIS at the south end of the Pahute Mesa-Oasis Valley basin points southward toward Amargosa Desert and shows the groundwater pathway to be beneath the community of Beatty. Accordingly, groundwater discharged in the area of Beatty comes from the Pahute Mesa-Oasis Valley basin.

30. DOE revised its socioeconomic baseline projections and estimated impacts for the Final EIS incorporating population data available from the State of Nevada and local communities. The revisions include an estimated baseline projection to 2035 for the socioeconomic parameters considered in the EIS. In the Final EIS, the estimated population distribution within 80-kilometers (50-miles) of the repository is also based on projections to 2035 utilizing information available from State and local sources. The allocation of individuals to a particular sector within the 80-kilometer area was based upon surveys conducted in 2000. Figure 3-25 of the EIS provides the population distribution for 2035.

31. The Environmental Protection Agency recently published an age-specific risk factor of 5.75 chances in 10 million per millirem for fatal cancer (DIRS 153733-EPA 2000). However, DOE currently uses the value of 5.0 and 4.0 chances in 10 million per millirem for fatal cancer for members of the public and workers, respectively, as recommended by the International Commission on Radiological Protection (DIRS 101836-ICRP 1991). When recommending these risk factors, the International Commission on Radiological Protection also expressed the desirability, for purposes of radiation protection, to use the same nominal risk factors for both men and women and for a representative population with wide ranges in age. The Commission stated that although there are differences between the sexes and populations of different age-specific mortality rates, these differences are not so large as to necessitate the use of different nominal risk factors. However, the higher risk factor for members of the public compared to that recommended for workers accounts for the fact that children comprise a relatively large part of the population and are more sensitive to the effects of radiation (cancer induction) than adults. Although the embryo-fetus is more radiosensitive (with a radiation risk factor about two times that for the whole population) it is protected by the body of the mother and comprises a small part of the overall population. Pregnant women are not unduly radiosensitive, especially to low levels of radiation.

    Both the Agency and DOE recognize that there are large uncertainties associated with these risk factors, as expressed by the National Council on Radiation Protection and Measurements comment on the result of their uncertainty analysis in the risk coefficients that " … show a range (90 percent confidence intervals) of uncertainty values for the lifetime risk for both a population of all ages and an adult worker population from about a factor of 2.5 to 3 below and above the 50th percentile value" (DIRS 101884-NCRP 1997). The Department believes that the 15-percent difference in these risk factors is well within other uncertainties and would provide little additional information to the decisionmaking process that this document informs. For these reasons, DOE will continue to use risk factors recommended by the International Commission on Radiological Protection in their National Environmental Policy Act documents.

32. Appendix K of the EIS cites reference documents that include the details of the dose calculations. Information on these documents is available at DOE Reading Rooms and on the DOE Internet site (*http://www.ymp.gov*).

33. The EIS sections cited by this comment identify potentially affected waterways and groundwater characteristics pertaining to the 77 commercial and DOE generator sites. Sections 7.2.1.3 and 7.2.2.3 discuss the potential hydrologic impacts associated with the No-Action scenarios.

    With regard to transportation, Sections 3.2.2.1.3 and 3.2.2.2.3 of the EIS provides information on hydrology related to transportation corridors within Nevada. Table 3-37 and 3-39 present surface-water resources and groundwater basins, respectively, along the candidate rail corridors. Table 3-58 and 3-59 do the same for candidate heavy-haul truck routes. For Nevada transportation, potential impacts to hydrology from construction and operations are presented throughout Chapter 6. For example, see Section 6.3.2.2.1. The analyses are based on an identification of surface-water resources within the 400-meter (0.25-mile) corridor

for each alternative and outside the corridor, but within 1 kilometer (0.6 mile). Designated groundwater basins are identified.

DOE does not specifically analyze a transportation accident, such as a spill, involving contamination of surface water or groundwater because the casks are designed to be watertight and spent nuclear fuel and high-level radioactive waste are not easily dispersed in water. While small particles could be generated by the impact forces of an accident, and driven out of a shipping cask by a severe fire, the amount of contamination that could ultimately enter groundwater would be much lower than that which would initially enter surface waters. Factors such as soil sorption of radionuclides, rate of flow into recharge areas, dilution by rain water and surface water, dilution by the large volume of groundwater, and delay associated with infiltration would mitigate and greatly reduce any contamination that could occur. Therefore, water pathway contamination, including subsequent contamination of food and natural resources, would not be a significant contributor to the radiological risks of transporting spent nuclear fuel. DOE has, however, identified potential mitigation measures for surface water and groundwater from the construction and operation of transportation systems. See Sections 9.3.3.1 and 9.3.3.2 of the EIS.

34. DOE agrees with this comment and recognizes the potential need for Section 404 permitting. Section 11.2.2 of the EIS discusses this potentially applicable requirement. As indicated in Section 11.2.2, DOE may need to obtain a permit from the U.S. Army Corps of Engineers if the repository or the transportation facilities requires the discharge of dredge or fill materials into waters of the United States.

35. DOE concurs with this suggestion. Cross-references to Chapter 5 have been added to Section 4.1.3.3 to avoid confusion between short-term preclosure effects and long-term performance after closure.

36. In the analysis of long-term performance, breaches of the containers were not treated as separate scenarios but rather the result of modeling a number of features, processes, and events that then lead to various types of container breaches. As such then, there are no expected scenarios for container breaches. The impacts to groundwater result directly from the overall scenarios considered: nominal or “undisturbed” scenario, volcanic events, and human intrusion. These are clearly differentiated in the Draft EIS and the Final EIS with regard to groundwater impacts. Container breach is merely a process that is component to these broader scenarios. The Final EIS points out that general corrosion is a primary process for failure driving the dose results for the whole post-10,000-year period. Section I.5.1 of the Final EIS discusses waste package failures versus time and discusses the modes of failure and the relationship to the annual dose history.

37. DOE does not specifically analyze a transportation accident, such as a spill, involving contamination of surface water or groundwater because the casks are designed to be water tight and spent-nuclear fuel and high-level radioactive waste are not easily dispersed in water. While small particles could be generated by the impact forces of an accident, and driven out of a shipping cask by a severe fire, the amount of contamination that might ultimately enter groundwater would be much lower than that which would initially enter surface waters. Factors such as soil sorption of radionuclides, rate of flow into recharge areas, dilution by rain water and surface water, dilution by the large volume of ground water, and delay associated with infiltration would mitigate and greatly reduce any contamination that might occur. Although DOE’s analyses in Chapter 6 take into account the proximity of surface waters and ground water basins (see Section 6.3.2.2.1 of the EIS as an example), water pathway contamination, including subsequent contamination of food and natural resources, would not be a significant contributor to the radiological risks of transporting spent-nuclear fuel. Analyses performed in previous EISs (see Section 1.5.3 and Table 1-1) have consistently shown that the airborne pathway has the greatest potential for exposing large numbers of people to radioactive material in the event of transportation accident resulting in the release of radioactive materials. DOE has, however, identified potential mitigation measures for surface water and groundwater from the construction and operation of transportation systems. The reader is referred to Sections 9.3.3.1 and 9.3.3.2.

While DOE believes the information presented in these sections of the EIS are sufficient to assess the relative merits of the alternatives, the Department acknowledges additional environmental reviews would be required to assess the potential impacts of such things as specific alignments through a transportation corridor.

38. Section G.2.3.2 of the EIS discusses releases of noble gases from spent nuclear fuel in repository surface facilities in more detail. Releases of noble gas radionuclides could occur at any commercial nuclear reactor sites that handle spent nuclear fuel. Such releases are documented in annual and semiannual environmental reports and published in a Nuclear Regulatory Commission summary, *Radioactive Materials Released from Nuclear Power Plants* (DIRS 155108-Tichler, Doty, and Lucadamo 1995).

    Krypton and other noble gases do not accumulate in environmental or biological media and, therefore, present little hazard to humans or the environment. Radon is somewhat different because of its decay products, but so little radon is released from spent nuclear fuel that it is almost immediately indistinguishable from naturally occurring radon in the environment. As stated in Section 4.1.4.2 of the EIS, estimated doses to plants and animals would be small and impacts from those doses would be unlikely to affect the population of any species because the doses would be much lower than 100-millirad-per-day. The International Atomic Energy Agency has stated that there is no convincing evidence that chronic exposures of 100 milliard per day will harm plant or animal populations. Neither of these noble gases is typically monitored in biologic communities because the potential for impact is so small.

39. DOE would consider providing escape ramps from trenches, including ponds and basins, as a mitigation measure (see Section 9.2.3.2 of the EIS).

40. The loss of a small number of tortoises along roads and at the repository site would not affect the long-term survival of the local or regional population of desert tortoises. Tortoises are widespread throughout the region and large tracts of undisturbed tortoise habitat surround Yucca Mountain. Research at Yucca Mountain during site characterization confirms that activities similar to those proposed would have little effect on adjacent populations (DIRS 104294-CRWMS M&O 1999). Only five Desert Tortoise deaths have been attributed to site characterization activities. The rate of tortoise mortality would remain comparable to that observed during site characterization because the amount of traffic would be similar. Under the legal-weight truck scenario, the repository would receive about 40 shipments a day of supplies, materials, and equipment (Section J.3.6.1 of the EIS), and up to six shipments of spent nuclear fuel or high-level radioactive waste (Section J.1.2.1 of the EIS). During site characterization, the daily average number of vehicles passing traffic counters in 1993 and 1994 was between 40 and 55 (DIRS 104294-CRWMS M&O 1999). DOE and the U.S. Fish and Wildlife Service have completed consultation on the potential effects of repository construction, operation, and monitoring and closure on threatened and endangered species. In its Biological Opinion, the Fish and Wildlife Service concluded that these actions would not jeopardize the continued existence of the Mojave population of the desert tortoise. That Opinion includes an unlimited take provision of tortoises along roads at Yucca Mountain, in part because deaths due to vehicles are anticipated to be infrequent. (See Appendix O of the EIS for the Biological Opinion.) Section 4.1.4 of the Final EIS has been modified to better explain the conclusion that the Proposed Action would not affect the tortoise population.

41. In general, the uncertainty approach used in the EIS uses realistic ranges of values for inputs and, where possible, acknowledges the uncertainty. In some instances, conservative assumptions are necessary to avoid the possibility of understating the potential impacts of the proposed Yucca Mountain Repository.

    An interesting outcome of a full uncertainty analysis of a system such as the proposed repository is that the use of "expected values" (for example, averages) for all parameters does not actually predict the expected outcome very well. Because of the skewed aspect of many input parameters to the models (a reflection of the real nature of the underlying data), the results predicted using only mean values actually produce a low-probability occurrence, usually in the 90th percentile or above of the outcomes predicted in a full stochastic assessment. Thus, it is more reasonable to perform a full stochastic assessment and report the expected outcome in terms of the statistics computed from the results. DOE did this in the EIS by reporting the mean outcome and the tail probability (95th percentile). However, the EIS has been revised to more clearly and more fully discuss both the modeling uncertainties and the degree of conservatism in the modeling.

42. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

43. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

44. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

45. The referenced statement in Section 5.5 of the Draft EIS is an error. There was no global population calculation performed for the Draft EIS. The statement has been removed.

46. The overview of the screening process in the Draft EIS referred to a process detailed in Appendix I. DOE believes that Appendix I provided sufficient detail for a full understanding of what was done. In the updated analysis presented in the Final EIS, a different screening process was used due to design changes. This new screening process is detailed in Appendix I and cross-referenced in Chapter 5 of the Final EIS. The discussion in Final EIS Appendix I was designed to provide as clear and comprehensive explanation as possible.

47. The intent of Section 5.2.3.4 of the Draft EIS (Sections I.2.2 and I.2.8 of the Final EIS) is to describe the process models and radionuclide movement tendencies. Section 3.1.4.2.1 provides aquifer and pathway information.

48. DOE recognizes that additional data would further define the flow system and reduce uncertainties about the interactions among the alluvial, volcanic, and carbonate aquifers in the saturated zone. DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrologic relationships between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into Section 3.1.4.2.1 of the Final EIS.

    It is correct that only one well penetrates the lower carbonate aquifer at Yucca Mountain. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Additional wells are being drilled to characterize the carbonate aquifer system near Yucca Mountain as part of the Early Warning Drilling Program. One of the wells drilled under this program, which is about 19 kilometers (12 miles) south of the repository site, also penetrated the carbonate aquifer and shows an upward gradient at that location.

    With regard to the comment on Ash Meadows, groundwater that infiltrates through Yucca Mountain does not discharge at the Devils Hole Protective Withdrawal or in Ash Meadows. The elevation of the water table in the Devils Hole/Ash Meadows area is about 64 meters (210 feet) higher than the water table in the Amargosa Desert to the west and south. This east-to-west decline in the elevation of the water table indicates that groundwater from the carbonate rocks beneath the Devils Hole Hills flows westward across Ash Meadows toward Amargosa Desert--not the other way around. Therefore, contaminants from Yucca Mountain could not discharge at springs in Devils Hole and Ash Meadows nor contaminate the aquifer.

49. This comment identifies the infiltration rates for the high and intermediate thermal loads. The amount of infiltration, or flux, that would go through the proposed repository would vary based on the thermal loads being considered. Sections 5.4.1, 5.4.2, and 5.4.3 of the Draft EIS address the high, intermediate, and low thermal load scenarios, respectively. For each scenario, the footprint of the repository (that is, the size of the repository perpendicular to downward moving infiltration) expands to a larger size to support the lower waste loading. With the high thermal load scenario, the waste would be tightly packed and an estimated 27,000 cubic meters (22 acre-feet) of water would infiltrate through the repository. An estimated 31,000 cubic meters (25 acre-feet) of water would go through the repository under the intermediate thermal load scenario. With a low thermal load repository, the waste would be spread out and an estimated 57,000 cubic meters (46 acre-feet) of water would infiltrate through the repository. The same concept is applicable to the higher-and lower-temperature operating modes, which influence the size of the underground emplacement and, therefore, the estimated quantity of water that would infiltrate.

50. Section 5.7.2 of the Final EIS presents dose history curves for the volcanic scenarios showing the mean and 95th-percentile curves along with lines for the nominal case for comparison to results for various volcanic disturbance scenarios and the undisturbed waterborne release results.

51. This is a valid point. The sentence in question is confusing and has been deleted from the EIS.

52. Thank you for your comment.

53. DOE thanks the Environmental Protection Agency for its input. Information presented in Section M.5.1 of the EIS provides additional information related to emergency response planning and Section M.6 provides additional information on financial assistance programs.

54. If the Yucca Mountain site was approved for development of a repository, shipping routes would be identified at least 4 years before shipments began and Section 180(c) assistance would be made available approximately 4 years prior to shipments through a jurisdiction (see Section M.6 of the EIS). In accordance with 10 CFR 73.37(a)(7), actual route selection and submission to the Nuclear Regulatory Commission would occur 1 or more years before a route's use for shipment (see Section M.3.2.1.2 for more information). At this time, many years before shipments could begin, it is impossible to predict with a reasonable degree of accuracy which highway route or rail lines DOE would use. In the interim, states and tribes may designate alternative preferred highway routes, and highways and rail lines might be constructed or modified. Therefore, for purposes of analysis in this EIS, DOE identified representative highway routes in accordance with U.S. Department of Transportation regulations, which require the use of preferred routes (Interstate System highway, beltway or bypass, and state or tribal designated alternate route) that reduce time in transit (see Figure 6-11). DOE identified rail lines based on current rail practices, as there are no comparable Federal regulations applicable to the selection of rail lines for shipment of radioactive materials (see Figure 6-12).

    In response to public comments, DOE has included, state maps of representative highway routes and rail lines it used for analysis in Appendix J of the EIS (see Section J.4). Section J.4 includes potential health and safety impact estimates associated with shipments for each state through which shipments could pass.

55. Because of the public's interest in transportation, DOE has added to this EIS Appendix M and maps and tables that show the analyzed routes and estimated health and safety impacts for each state through which the shipments would pass. Appendix M provides general background information about transportation-related topics, such as transportation regulations (Section M.2), transportation operations (Section M.3), cask testing (Section M.4), and emergency response (Section M.5).

    DOE has issued a draft Request for Proposals requiring the Regional Servicing Contractor to prepare a transportation plan that describes the Contractor's operational strategy and delineates the steps it would implement to ensure compliance with all regulatory and other DOE requirements. This includes identification of proposed routes and associated routing considerations, coordination and communication with all participating organizations and agencies, including other Regional Servicing Contractor(s), DOE, state, Native American tribal, and local governments, and interactions with appropriate Federal and state organizations. The route and mode determinations would be interactive. If, during the course of the mode or route determinations, one of the previously determined factors changed, the site-specific mode and route analysis would be reevaluated to ensure consistency.

56. The Conformity Review discussions have been updated in all sections. Conformity Review results are summarized in Section 6.3.1.1 of the EIS for the mostly legal-weight truck scenario, in Section 6.3.2.1 for the mostly rail scenario, and in Section 6.3.3.1 for the heavy-haul truck scenario. The Conformity Review was focused on with levels of carbon monoxide and particulate matter (PM_{10}), for which the Las Vegas air basin has been classified as being in "serious nonattainment." Since the Draft EIS was published, the mostly rail scenario has been selected by DOE as the preferred transportation option. The Conformity Review found that more detailed analyses (that is, a Conformity Determination) would be required for the construction phase of a branch rail line in the Valley Modified Corridor, if that rail corridor was selected. The other corridors would not present a conflict with the General Conformity requirements for carbon monoxide and PM_{10}.

Emissions for constructing a branch rail line in the Valley Modified Corridor are estimated in the Conformity Review to be up to 145 metric tons (160 tons) per year (160 percent of the General Conformity threshold level) for carbon monoxide, and up to 120 metric tons (130 tons) per year (190 percent of the General Conformity threshold level) for PM_{10}.

The carbon monoxide emissions within the nonattainment area would result from fuel use by the construction vehicles and vehicle emissions from commuter and supply traffic to the Yucca Mountain site. The PM_{10} releases would include the emissions from disturbing the ground and from fuel combustion of the construction equipment. Dust abatement measures (for example, water applications) would reduce fugitive dust PM_{10} emissions by 70 percent. The emissions estimates could be reduced further by lengthening the construction time or more detailed task planning to reduce the production of emissions.

Emissions from a branch rail line in the Valley Modified Corridor into the nonattainment area would occur during the much longer operations phase, as the locomotive passed through the nonattainment area on its way to the Yucca Mountain site. However, operations phase emissions would not exceed the General Conformity threshold levels. The estimated operations emissions for a branch rail line in the Valley Modified Corridor would be 81 percent of the carbon monoxide General Conformity threshold level and less than 3 percent of the PM_{10} General Conformity threshold levels.

In addition, the Conformity Review compared the Valley Modified Corridor carbon monoxide and PM_{10} release estimates to the Nevada carbon monoxide and PM_{10} State Implementation Plans (DIRS 156706-Clark County 2000; DIRS 155557-Clark County 2001). The construction phase Valley Modified carbon monoxide emissions estimates would be less than 0.2 percent of the total daily carbon monoxide inventory emitted into the nonattainment area. The construction phase Valley Modified PM_{10} emissions estimates would be less than 0.08 percent of the daily and annual PM_{10} inventory emitted into the Las Vegas Valley air basin.

57. DOE defined “dose risk” in a text box in Section 6.1.1 of the EIS as follows:

“Dose risk is the sum of the products of the probabilities (dimensionless) and the consequences (person-rem) of all potential transportation accidents.”

58. DOE and the U.S. Fish and Wildlife Service (see Appendix O of the EIS) have concluded that the loss of a small number of tortoises along roads and at the repository site would not affect the long-term survival of the local or regional population of desert tortoises. Tortoises are widespread throughout the region and large tracts of undisturbed tortoise habitat surround Yucca Mountain. Research at Yucca Mountain during site characterization confirms that activities similar to those proposed would have little effect on adjacent populations. The rate of tortoise mortality would remain comparable to that observed during site characterization because the amount of traffic would be similar. Under the legal-weight truck scenario, the repository would receive about 40 shipments a day of supplies, materials, and equipment (Section J.3.6.1 of the EIS), and six shipments of spent nuclear fuel or high-level radioactive waste (Section J.1.2.1). During site characterization, the daily average number of vehicles passing traffic counters in 1993 and 1994 was between 40 and 55 (DIRS 104294-CRWMS M&O 1999). The U.S. Fish and Wildlife Service has authorized an unlimited take of tortoises along roads at Yucca Mountain during repository construction and monitoring and closure in part because deaths due to vehicles are anticipated to be very infrequent (see Appendix O). Section 4.1 has been modified to better explain the conclusion that the Proposed Action would not affect the tortoise population.

59. As is typical for deterministic analyses such as those performed to evaluate No-Action Scenarios 1 and 2, the EIS analysis used best estimate single-input values to produce a best estimate result. As is also typical with these analyses, a separate analysis (semi-quantitative) addressed the uncertainty associated with the input values and assumptions and provided an assessment of the effects these uncertainties could have on the model results (see Section K.4 of the EIS for details).

However, for Scenario 2 the analysis provided a range of best estimate impact values between regions for collective, as well as individual, impacts (see the tables in Section K.3.1 of the EIS). This was done to illustrate the importance of environmental transport human exposure (exposed population) parameters. Also

under this scenario, a range of accident impacts was provided for high and low populations. Under Scenario 1, impact ranges were not developed because all collective and individual impacts were extrapolated from information provided by the Nuclear Regulatory Commission's environmental assessment of the Calvert Cliffs Independent Spent Fuel Storage Installation (DIRS 101898-NRC 1991).

As stated in Section K.4 of the EIS, DOE attempted to quantify a range of uncertainties associated with mathematical models and input data, and estimated the potential effect these uncertainties could have on collective human health impacts. By summing the uncertainties discussed in Sections K.4.1, K.4.2, and K.4.3 of the EIS where appropriate, DOE estimated that total collective impacts over 10,000 years could have been underestimated by as much as 3 or 4 orders of magnitude. However, because there are large uncertainties in the models used for quantifying the relationship between low doses (that is, less than 10 rem) and the accompanying health impacts, especially under conditions in which the majority of the populations would be exposed at a very low dose rate, the actual collective impact could be zero.

On the other hand, impacts to individuals (human intruders) who could move to the storage sites and live close to the degraded facilities could be severe. During the early period (200 to 400 years after the assumed loss of institutional control), acute exposures to external radiation from the spent nuclear fuel and high-level radioactive waste material could result in prompt fatalities. In addition, after a few thousand years onsite shallow aquifers could become contaminated to such a degree that consumption of water from these aquifers could result in severe adverse health effects, including premature death. Uncertainties associated with these localized impacts relate primarily to the inability to predict accurately how many individuals could be affected at each of the 77 sites over the 10,000-year analysis period. In addition, the uncertainties associated with localized impacts would exist for potential consequences resulting from unusual events, both manmade and natural. Therefore, as discussed in Section K.4 of the EIS, uncertainties resulting from future changes in natural phenomena and human behavior that cannot be predicted, process model uncertainties, and dose-effect relationships, when taken together, could result in overestimating or underestimating the impacts by as much as several orders of magnitude relative to the values listed in Section K.3.

60. DOE referenced 40 CFR Part 61 primarily because it provided a direct comparison to an air quality emission standard. Since publication of the Draft EIS, the Environmental Protection Agency promulgated *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada*, at 40 CFR Part 197, which included an annual dose limit to a member of the public of 15 millirem (40 CFR 197.4). In accordance with requirements of the Energy Policy Act, the Nuclear Regulatory Commission subsequently promulgated Yucca Mountain licensing criteria, which includes a Preclosure Public Health and Environmental Standard at 10 CFR 63.204 of 15 millirem per year to a member of the public. The appropriate sections of the EIS (including those mentioned in Chapter 8) have been updated to reflect a comparison to the recently promulgated standard of 15 millirem.

61. The maximally exposed individual dose values in Table 8-22 of the Draft EIS are the integrated doses over the period of closure; six years each for the high and intermediate thermal-load scenarios and 15 years for the low thermal-load scenario. In Table 8-28 of the Final EIS (the table that corresponds to Table 8-22 of the Draft EIS), the closure period for the Inventory Modules ranges from 12 to 23 years for the higher-temperature and lower-temperature repository operating modes.

62. The Department has revised the table to include the information on gross alpha concentration in Table 8-49 of the Final EIS.

63. As indicated in Section 8.3.2.1, information on Greater Confinement Disposal on the Nevada Test Site is from the *Final Environmental Statement on the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996). DOE included the description as it appears in the Nevada Test Site Final EIS, but DOE did not base its analysis on this description. Rather, the Department relied on the analyses in the Nevada Test Site EIS for input to Chapter 8. The Department acknowledges, however, that transuranic radionuclides are a part of the category of Greater Confinement Disposal, with americium isotopes as one example. The discussion in Section 8.3.2.1 of the Final EIS includes the presence of transuranic radionuclides in this category.

64. As indicated in Section 8.3.2.1, information on Greater Confinement Disposal on the Nevada Test Site is from the *Final Environmental Impact Statement on the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996). The designation of "major known isotopes or wastes" is intended only to give the reader a broad sense of what would be included in the appropriate waste category and does not affect the analysis in this EIS. The Department relied on the analyses in the Nevada Test Site EIS for input to Chapter 8. As a consequence, DOE did not repeat the detailed composition of the radioactivity at the Nevada Test Site in this chapter.

    A footnote to Table 8-53 in the Final EIS clarifies that the table is intended for information purposes only.

65. In response to this comment, DOE has reexamined the discussion of waste subject to Greater Confinement Disposal and has modified Section 8.3.2.1.2 of the EIS to indicate that there is no credible mechanism for the long-term release of materials from the Greater Confinement Disposal to the accessible environment.

    The material subject to Greater Confinement Disposal is placed in boreholes that are approximately 37 meters (120 feet) deep; the waste itself is no closer than approximately 21 meters (70 feet) to the surface. DOE has reviewed previous analyses at the Nevada Test Site and has concluded that there is no credible pathway for long-term release of materials by resuspension of nonvolatile radionuclides because the material is sufficiently far below the surface. In addition, evapotranspiration exceeds precipitation in this region and this, coupled with the fact that the boreholes are sufficiently above the water table, indicates that there is no credible scenario for the Greater Confinement Disposal material to enter the groundwater.

66. As the Environmental Protection Agency notes, the Draft EIS evaluated the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS-101779-DOE 1998) for repository surface facilities, and disposal containers (waste packages). It also evaluated the plans for the construction, operation and monitoring, and closure of the repository. DOE recognized before it published the Draft EIS that plans for a repository would continue to evolve during the development of any final repository design and as a result of any licensing review of the repository by the U.S. Nuclear Regulatory Commission. The design evolution is evaluated in the Supplement to the Draft EIS and integrated into the Final EIS. The Supplement to the Draft EIS incorporates new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies. Section 2.3.4 of the Supplement describes the design modifications (engineered barrier designs) including the addition of drip shields and refined waste packages.

    With regard to the design process, DOE is moving forward with a final design but acknowledges, as noted above and as documented by the Supplement to the Draft EIS, the design could further evolve. The updated design information presented in the Supplement was carried forward to the Final EIS. However, DOE believes the design has progressed to a point that it provides a reasonable basis for estimating the range of potential short- and long- term impacts that would likely result from any final design.

67. As noted by the EPA, DOE has consulted, and will continue to consult, with tribal governments as sovereign entities that possess authority and responsibility for Native American territory. A major objective of these consultations is to ensure that the EIS addresses the full range of Native American cultural and technical concerns related to the Proposed Action. Moreover, in these consultations DOE makes every effort to avoid compromising the interests of individual tribes and, thus, to minimize conflicts between tribes and tribal groups or other local (nontribal) government entities.

    Native Americans have expressed general concern about the impacts of the candidate rail corridors, heavy-haul truck routes, and intermodal transfer station locations. Consistent with its trust responsibilities, DOE does not intend to take action, make decisions, or implement programs without consulting affected tribal governments. In all cases, project decisions will incorporate input from affected tribes.

    DOE prepared the EIS in accordance with Section 2 of the Nuclear Waste Policy Act of 1982, which defines affected Indian Tribes as "…any Indian Tribe—(A) within whose reservation boundaries a monitored

retrievable storage facility, test and evaluation facility, or a repository for high-level waste or spent nuclear fuel is proposed to be located; and (B) whose federally defined possessory or usage rights to other lands outside the reservations boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by locating such a facility: Provided that the Secretary of Interior finds, upon the petition of the appropriate government officials of the Tribe that such effects are both substantial and adverse to the tribe." For this EIS, "Native American" means "Indian" or "American Indian."

68. In response to public comments, DOE has revised Figures 2-25 and 2-26 of the EIS to show Federally recognized tribal lands located along highway and rail routes that could be used for national transportation.

69. DOE has maintained a Native American Interaction Program with 16 tribes and one organization since the mid-1980s. Tribal representatives are named by their respective tribes to sit on a DOE-funded, self-organized committee called the Consolidated Group of Tribes and Organizations, whose charter is to present their respective tribal concerns and perspectives to the Department. The Group meets twice per year and participates in field trips to Yucca Mountain to impart cultural resource protection information and to become more aware of the studies being conducted. While the Group does not support the potential use of Yucca Mountain as a repository, they have agreed to be involved in an honest and participatory process. DOE will continue to support the Group and Native American Interaction Program while carrying out the mission of characterizing the Yucca Mountain site. The DOE also supported an American Indian Writers Subgroup process in the preparation of a report that provides Native American perspectives on the repository to be used in writing the EIS. The Native American Interaction Program is described in Section 3.1.6.2.1 of the EIS. The Native American view of the affected environment is described in Section 3.1.6.2.2 of the EIS and the impacts from the Proposed Action are discussed in Chapter 4 of the EIS. Section 4.1.5.2 of the EIS addresses the Native American viewpoint with regard as to how the proposed project would affect cultural resources in the Yucca Mountain area. Section 4.1.13.4 of the EIS discusses the Native American perspective regarding the proposed repository and the surrounding region. These beliefs have been documented in *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement* (DIRS 102043-AIWS 1998), which has been sent to the commenter.

70. The Department of the Interior's expressed policy is that its bureaus receive National Environmental Policy Act documents through a coordinated distribution from its Office of Environmental Policy and Compliance. In addition, DOE will send a copy of the Final EIS directly to the Bureau of Indian Affairs as recommended.

71. Chapter 5 and Appendix I of the EIS describe environmental consequences (primarily potential groundwater impacts) from the long-term performance of the repository. Section 5.4 of the EIS contains information on the radiological impacts on human health, and Section 5.6 examines the consequences from chemically toxic materials during the first 10,000 years after closure. Environmental Protection Agency regulations (40 CFR Part 197) and Nuclear Regulatory Commission regulations (10 CFR Part 63) require that DOE demonstrate that releases from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep doses resulting from such releases below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    Nevada water-quality regulations (Nevada Administrative Code 445A.119-225), discussed in Section 11.2.2 of the EIS, are not applicable to the long-term performance of the repository. These regulations specify water-quality standards that the Environmental Protection Agency and the State regulate by issuing permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 of the EIS discusses the impacts to surface-water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. DOE would comply with all applicable permit conditions.

72. Thank you for your comment.

73. Chapter 5 and Appendix I of the EIS describe environmental consequences (primarily potential groundwater impacts) from the long-term performance of the repository. Section 5.4 of the EIS contains information on the radiological impacts on human health, and Section 5.6 examines the consequences from chemically toxic materials during the first 10,000 years after closure. Regulations established by the Environmental Protection Agency (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that doses resulting from releases of radionuclides from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep such releases below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    Nevada water quality regulations (Nevada Administrative Code 445A.119-225), discussed in Section 11.2.2 of the EIS, are not applicable to the long-term performance of the repository. These regulations specify water quality standards that the Environmental Protection Agency and the State regulates by issuing permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 of the EIS discusses the impacts to surface water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. However, DOE does not anticipate any impacts from the repository on watering of livestock without treatment, habitat for fish and other aquatic life existing in a body of water, the suitability of the water for propagation of wildlife and waterfowl without treatment, or any unique ecological or aesthetic value of the water. DOE would comply with all applicable permit conditions.

74. Chapter 5 and Appendix I of the EIS describe environmental consequences from the long-term performance of the repository. Regulations established by both the Environmental Protection (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that doses resulting from releases of radionuclides from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep such releases well below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    The State of California Water Quality Standards are not directly applicable to discharges of groundwater to the surface. Water quality standards established by the Environmental Protection Agency and the states are regulated by the issuance of permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 discusses impacts to surface-water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. DOE would comply with all applicable permit conditions.

75. The cited regulations are not directly applicable to the long-term performance of the proposed Yucca Mountain Repository. Regulations established by both the Environmental Protection Agency (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that releases from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep doses resulting from such releases well within the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    The concentration of radionuclides at the chief discharge point (Franklin Lake Playa) after 10,000 years would not be deleterious to human heath (see Section 5.4) or to the health of plants or animals (see Section 5.9). Concentrations of radionuclides downgradient from Franklin Lake Playa (farther away from Yucca Mountain) after 10,000 years would be even lower.

76. Under *Waste Acceptance System Requirements Document* (DIRS 110306-DOE 1999), RCRA-regulated high-level radioactive waste would not be accepted for disposal at the Yucca Mountain repository. DOE is aware that the high-level radioactive waste at both the Idaho National Engineering and Environmental Laboratory and the Hanford Site contains listed hazardous wastes that would have to be "delisted" by the Environmental Protection Agency and the appropriate States. The Department would have to petition the Environmental Protection Agency to delist the waste. Petitions to the relevant states could also be required. DOE would work with the states and the Environmental Protection Agency to ensure they have the information they need to evaluate the delisting petitions.

    DOE high-level radioactive waste also exhibits certain characteristics of hazardous waste (specifically corrosivity and toxicity) prior to treatment. The treated waste would not exhibit any of the characteristics of a hazardous waste. Characteristic hazardous wastes do not require a petition and rulemaking by the Environmental Protection Agency to exit the hazardous waste system, although the Department would need to have supporting data and information to demonstrate that the characteristics have been removed from the treated waste form.

    DOE has revised the discussion in Chapter 11 of the Final EIS to clarify these questions.

77. The table in question appears in Section I.3.2 of the Final EIS. A footnote has been added to the table to show that the high-level waste form that would be disposed of in the proposed repository would not exhibit the Characteristic of Toxicity as measured by the Toxicity Characteristic Leaching Procedure. Section 11.2.4 discusses listed waste that would have to be delisted prior to emplacement in the repository. Waste shipped to the repository would not be regulated as hazardous waste under the Resource Conservation and Recovery Act.

78. Asbestos is not used in the manufacture of nuclear fuel, nor is it contained in high-level radioactive waste. Polychlorinated biphenyls (PCBs) are not used in the manufacture of nuclear fuel. While some high-level radioactive wastes are contaminated with PCBs, detectable levels of PCBs are unlikely to remain in the vitrified high-level radioactive waste forms. Therefore, the Toxic Substances Control Act, its implementing regulations, and regulations governing disposal of asbestos (or PCBs) are not applicable to the proposed repository.

79. DOE approved Order 435.1 after it issued the Draft EIS. As a result, it has included DOE Order 435.1 in the Final EIS table (Section 11.3), and has deleted the reference to DOE Order 5820.2A.

80. DOE has revised Table 11-1 of the EIS to include a discussion of the Yucca Mountain-specific radiation standards at 40 CFR Part 197 that would govern surface and subsurface operational activities at the repository. These new standards implement the general requirements of 40 CFR Part 191 for the proposed Yucca Mountain Repository.

81. This comment is correct. DOE has modified the definition of "controlled area" in the Glossary (Chapter 14) to be consistent with 40 CFR Part 197.

82. DOE agrees with this recommendation and has included this change in the EIS Glossary.

83. In EIS Glossary, DOE has modified the definition of institutional control to include the distinction between active and passive control.

84. DOE has revised these definitions in the Final EIS. Chapters 4, 6, and 7 now use the term "maximally exposed individual," and Chapter 5 uses "receptor." The receptor is equivalent to both the "reasonably maximally exposed individual" defined in the Environmental Protection Agency's regulations at 40 CFR Part 197. This change reflects the regulatory definitions and requirements for long-term performance recently promulgated by both agencies.

85. The text and reference cited in this comment do not appear in the Final EIS.

86. The reference format that DOE used in the EIS is consistent with document traceability requirements the Department established for the Yucca Mountain Project. The Environmental Protection Agency report number is part of the reference text.

87. Section J.1.4.2.1 of the EIS contains a discussion of accident severity categories, conditional probabilities, and release fractions. Figure J-9 shows the values for pressurized-water and boiling-water reactor spent nuclear fuel, respectively.

88. Both No-Action scenarios assume that the onsite storage facilities would remain under effective institutional control for the first 100 years. This means that they would be monitored and maintained with repairs being made as necessary to ensure the integrity of the dry storage canisters. DOE recognizes that the weather-protection structures (metal buildings for DOE below-grade storage vaults and reinforced concrete storage modules for commercial spent nuclear fuel), as currently constructed, would not likely remain intact for the 100-year institutional control period without major repairs. Therefore, the Department assumed that a major repair effort would occur 50 years into the 100-year period (see the figure in the introduction to Chapter 7 of the EIS). For purposes of analysis, DOE assumed this major repair effort to require 50 percent of the manpower and materials required to completely replace the facilities. Collective occupational radiation doses were estimated to be 72 and 118 person-rem for the Proposed Action and Module 1 scenarios, respectively (see DIRS 104596-Orthen 1999). Although not reported separately, these impacts have been included in the short-term (first 100 years) impacts for both scenarios, as discussed in Sections 7.2.1 and 7.3.2 of the EIS.

    Although the analysis assumed that under institutional control the storage facilities would be maintained and repaired as necessary, Sections K.4.1.1 and K.4.3.1 of the EIS discuss the uncertainties associated with maintenance of institutional control and uncertainties associated with environmental degradation and corrosion rates along with their potential impacts on the reported results. As stated in Section K.4.1.1, premature failure of effective institutional controls could result in an earlier release of radioactive materials to the accessible environment. However, this scenario would probably increase overall impacts by no more than a factor of 2.

89. DOE agrees that there is some limited potential for a criticality event to occur in degraded spent nuclear fuel canisters. However, DOE believes the discussion in Section K.2.5.2 of the EIS includes the appropriate level of analysis and qualitative description of probability. There are many uncertainties and speculative processes involved in the hypothetical scenario that assumes no effective institutional control after approximately 100 years, as well as the sequence of events that could occur within that scenario. DOE does not believe it is possible to establish defensible probabilities for this No-Action accident scenario or the components of the scenario described in this comment that could lead to potential criticality during extended periods of dry storage with no institutional control (Scenario 2 of the No-Action analysis). Other factors that the analysis would have to quantify to estimate those probabilities would be different climatic conditions around the country, the different types of commercially available dry storage configurations, the range of burnup in the spent nuclear fuel, and the initial enrichment of the fuel.

    Rather than specific probability analyses of the impacts associated with this No-Action scenario, the EIS provides qualitative descriptions of the relative likelihood of criticality events. First, the EIS states that criticality could be possible (in degraded storage canisters) if other conditions were met simultaneously. Those other conditions are a configuration that would allow water to enter but not drain out of the storage canister and fuel containing sufficient fissionable atoms to allow criticality. The second condition would depend on initial enrichment and burnup of the fuel. The EIS also states that a small amount of the spent nuclear fuel would be likely to have the appropriate enrichment burnup combinations, which could enable criticality to occur. Three types of criticality events were acknowledged as possible with only the most energetic type having potential to produce large impacts. That event is possible, but highly unlikely. It could happen only if sufficient amounts of fissionable material were brought together suddenly into a critical configuration. The more likely possibility would be for water to build up around degraded fuel elements. If fissions began to occur, the water would boil away and the criticality would stop. As noted in Section K.2.5.2 of the EIS, even the most energetic criticality would be unlikely to exceed the impacts associated with an aircraft crash onto a degraded dry storage module as evaluated in Section K.2.5.1. Therefore, DOE believes

that further quantification of the probability of such an event would not provide useful information or be defensible.

90. As noted in the comment, DOE indicated in the Draft EIS its intention to evaluate updated designs in the Final EIS. Design updates were first presented and evaluated in the Supplement to the Draft EIS issued in May, 2001 and then integrated into the Final EIS. The Supplement to the Draft EIS presents new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies.

With regard to the design process, DOE is nearing a final design but acknowledges, as noted above and as documented by the Supplement to the Draft EIS, the design could further evolve. However, DOE believes the design has progressed to a point that it provides a reasonable basis for estimating the range of potential short- and long- term impacts that would likely result from any final design.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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COMPLIANCE ASSURANCE

JUN 28 2001

Dr. Jane R. Summerson, EIS Document Manager
M/S 010
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307
North Las Vegas, NV 89036-0307

Dear Dr. Summerson:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality's implementing regulations (40 CFR 1500-1508), the Environmental Protection Agency (EPA) is providing you comments on the Supplement to the Draft Environmental Impact Statement (EIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, dated May 2001 (DOE/EIS-0250D-S, CEQ # 010159).

The Proposed Action addressed in the draft EIS was to construct, operate, monitor, and eventually close a geologic repository at Yucca Mountain in southern Nevada for the disposal of spent nuclear fuel and high-level radioactive waste currently in storage at 72 commercial and five Department of Energy (DOE) sites across the nation. The draft EIS described the potential environmental impacts of constructing, operating, monitoring and closing the repository.

While the fundamental repository concept has not changed from that described in the draft EIS, the design has continued to evolve. That evolution is described in the *Yucca Mountain Science and Engineering Report,* a summary of which was distributed to recipients of the Supplement. The Supplement evaluates the potential impacts of the so-called *flexible design* described in the Science and Engineering Report, and compares these to the impacts described in the draft EIS. EPA commends DOE for preparing the May 2001 Supplement to update the information in the draft EIS.

EPA's comments on the Supplement are detailed in the enclosure. We request additional information to clarify certain information, impacts and conclusions drawn in the Supplement.

1... Because the Supplement is limited in scope, it does not address the comments EPA made on the draft EIS regarding the national transportation aspects of the project, nor does it provide most of

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1 cont. the additional data we requested on the projects's potential environmental impacts. EPA therefore continues to have environmental concerns with the project, per our rating of the draft EIS as "EC-2", Environmental Concerns-Insufficient Information.

EPA also notes that although this Supplement updates the repository design with current information, research at Yucca Mountain continues and DOE expects to make further refinements even after preparing the final EIS. In preparing the EIS at this stage of this complex, long-term project, DOE has determined that the range of operating modes in the current flexible design will produce environmental impacts representative of the range produced by foreseeable future designs and operating modes, and has conservatively estimated the bounds of the potential impacts of the flexible design. DOE is continuing to analyze the performance of the repository under different operating modes in an attempt to further reduce uncertainties and improve its performance.

2 EPA appreciates the benefits of ongoing research and recognizes the desirability of achieving the safest possible repository performance. If ongoing scientific studies support the EIS's bounding information, then the NEPA requirement to disclose the environmental impacts of a project should be satisfied. However, EPA encourages DOE to provide public review of and comment on new information that affects the project's design and operation. And, CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when an agency makes substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

3 As a general comment, EPA notes that since this supplement was prepared, the EPA Administrator has signed 40 CFR Part 197, *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada."* The final EIS and any other supplements should reference these standards. Also, any subsequent documents should incorporate the provisions of Part 197 into the discussion and comparisons made in the EIS, e.g., the references to the "postclosure receptor" being located 20 kilometers south of the repository are outdated.

Thank you for the opportunity to review this Supplement. If you have any questions or would like to meet with EPA on these comments, please contact Susan Absher of my staff. She may be reached at 202/564-7151.

Sincerely,

Anne Norton Miller
Acting Director
Office of Federal Activities

Enclosure

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SPECIFIC EPA COMMENTS
Supplement to the Draft EIS for a Geologic Repository for the Disposal of
Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain
(DOE/EIS-0250D-S, May 2001)

4 Page 2-11, Section 2.3.1. This section describes repository closure, but provides no details on post-closure monitoring other than a reference to the NRC proposed rules. The final EIS should provide a more detailed description.

5 Page 2-12, Section 2.3.2.1. In the final sentence of the first paragraph, it is unclear why the "basic facilities for personnel support, warehousing, security, a concrete plant for fabricating and curing precast components and supplying concrete for in-place casting, and transportation (motor pool)" are inside the radiation control area (RCA). If such facilities have radiation concerns, the reasons and impacts should be explained.

6 Page 2-13, Figure 2-4. The "potential commercial spent nuclear fuel aging area" is inside the RCA but apparently outside the security station. What security controls will there be for this area?

7 Page 2-21, Section 2.3.3.2. The second paragraph states that "this low ventilation rate [0.1 cubic meter per second] would permit monitoring of the air stream exhausting from the drifts for leaks of radioactive material, but would not contribute significantly to removal of heat from the emplacement drifts." This is followed by a discussion of the higher ventilation rate [15 cubic meters per second] under the new flexible design, but there is no mention of monitoring. Does this mean that the flexible design does not allow for monitoring of the exhaust air? If so, this raises public health and on-site safety concerns. The final design must include effective monitoring and a system to divert the air into high-efficiency filtering systems in case releases are detected.

8 Page 2-31, Section 2.4. The last two sentences of the fourth paragraph state: "The effect of drift spacing on these related parameters would be less than the effect of waste package spacing in the analytical scenarios presented in this Supplement. Therefore, DOE did not perform a quantitative evaluation of the environmental impacts of variable drift spacing." EPA questions the basis for this statement and conclusion. What about interactions? The distance between waste packages is an independent design factor from the distance between drifts. Therefore, there is a range of potential conditions and impacts that could occur. These impacts should be assessed or a more detailed rationale provided for the statements and conclusion.

9 Page 2-31, Section 2.4. The first sentence of the final paragraph identifies "Uncertainties in future funding profiles or the order of...waste shipments" could affect the construction of the repository. The next sentence states that this approach could "potentially increase confidence in meeting the schedule for waste receipt and emplacement." DOE should explain how uncertainties in funding can result in increased confidence for meeting the schedule.

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10 Page 3-11, Section 3.1.8, Accidents. All of the doses to the maximally exposed individuals exceed by 2.5 to 3.2 times the current radionuclide NESHAPs standards. The information to determine these results should be provided.

11 Page 3-17, Section 3.1.14, Transportation. We note that the transportation impacts are increased for the *flexible design* over the draft EIS design. These increased impacts, as well as those noted in other areas, should be incorporated into the final EIS analysis.

12 Page 3-20, Section 3.2.2. Following Table 3-12 is a statement that the integrating software for the Total System Performance Assessment has changed from that used for the original DEIS to GoldSim®, and that "GoldSim® incorporates much the same performance assessment calculational approach, but with substantial improvements in the user interface and data handling." The final EIS should provide support for this statement because changing the software which integrates the many programs which are used in the Total System Performance Assessment (TSPA) introduces uncertainty into the comparison of previous results.

13 Page 3-21, Table 3-13. This table lists a change in the "Unsaturated zone flow" as "Coupling between thermal, hydrologic, and chemical effects." What is the status of the modeling and research on these coupled processes?

14 Page 22 of the Executive Summary of the Yucca Mountain Science and Engineering Report. Under Performance Confirmation and Monitoring is stated, "Performance confirmation and monitoring activities would continue throughout the preclosure period, which could extend up to 300 years." Does DOE have confidence in such a long performance-monitoring period particularly in light of the statement on page 2-31 of the Supplement about "uncertain funding" for even the relatively shorter term construction of the disposal system and transporting of the waste?

4

RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10231)

1. The Final EIS includes this Comment-Response Document, which identifies and addresses each of the comments received on both the Draft EIS and the Supplement to the Draft EIS. In response to public comments, DOE modified the Final EIS in a variety of ways, including clarifications or changes to the text, updating information, and modifying analyses. The Department considered comments on the Draft EIS in preparation of the Supplement to the Draft EIS (which were appropriately carried forward to the Final EIS). In part, for example, the comments received on the Draft EIS influenced DOE's description of the Science and Engineering Report design elements presented in the Supplement. The Supplement was limited in scope to "aspects of the design that have changed since DOE issued the Draft EIS" (which did not include transportation).

   Consistent with Council and Environmental Quality and DOE regulations, the Department did not release the Comment-Response Document before issuing this Final EIS or hold hearings on the Comment-Response Document or this Final EIS.

2. In response to public comments, DOE modified the Final EIS in a variety of ways, including incorporation of the flexible design (introduced in the Yucca Mountain Science and Engineering Report and the Supplement to the Draft EIS), clarifications or changes to the text, updating information, and modifying analyses. DOE believes that the environmental impacts presented in the Final EIS for the flexible design (and its associated operating modes) bound reasonably foreseeable actions.

   In June 2001, DOE conducted three public hearings on the Supplement to the Draft EIS to provide the public with opportunities to comment on the Project's latest plans for design and operation. In September and October 2001, the Project conducted hearings on key documents that were released in advance of a potential Site Recommendation [*theYucca Mountain Science and Engineering Report* (DIRS 153849-DOE 2001) and the *Preliminary Site Suitability Evaluation* (DIRS 155734-DOE 2001)].

   Upon issuance of the Final EIS, the public will have the opportunity to examine the Comment-Response Document and the Department's response to the public's comments. This approach is consistent with regulations issued by the Council on Environmental Quality and DOE's implementation procedures at 10 CFR 1021.

   Should the Secretary of Energy recommend Yucca Mountain to the President, however, the recommendation would be accompanied by several supporting documents including the Final EIS and its Comment-Response Document. In the event Yucca Mountain was authorized and the project moved forward, DOE would submit a License Application to the Nuclear Regulatory Commission. The Nuclear Regulatory Commission's licensing process would afford the public additional opportunities to review and comment on the specific design elements of the Yucca Mountain repository. In the event that DOE incorporated additional design modifications subsequent to the submittal of a License Application, the Nuclear Regulatory Commission's licensing process would provide additional opportunities for the public to comment on the repository.

3. After DOE issued the Supplement to the Draft EIS in May 2001, both the Environmental Protection Agency standards at 40 CFR Part 197 and the Nuclear Regulatory Commission licensing criteria at 10 CFR Part 63 were promulgated. In addition, in 2001 DOE promulgated its 10 CFR Part 963 guidelines to be consistent with the adopted EPA standards and the NRC licensing criteria. The estimated impacts presented in the Final EIS fully consider, and provide comparisons with, the final standards as promulgated. DOE has modified Chapter 11 of the EIS to include the final regulations.

4. A postclosure monitoring program is required by 10 CFR Part 63. This program would include the monitoring activities that would be conducted around the repository after the facility was closed and sealed. The regulations require that a license amendment be submitted for permanent closure of the repository [10 CFR 63.51(a)(1) and (2)]. This amendment must specifically provide an update of the assessment for the

repository's performance for the period after permanent closure, as well as a description of the program for postclosure monitoring. This program would include continued oversight to prevent any activity at the site that posed an unreasonable risk of breaching the geologic repository's engineered barriers; or increasing the exposure of individual members of the public to radiation beyond allowable limits. The details of this program would be defined during the processing of the license amendment application for permanent closure. Deferring a description of this program until the closure period would allow for the identification of appropriate technology including technology that could become available in the future.

5. The description in the Supplement to the Draft EIS should have read: Other support facilities planned for the North Portal Operations Area include basic facilities for personnel support, warehousing, security, and transportation (motor pool). Section 2.1.2.1.1 of the Final EIS reflects this clarification.

6. To avoid compromise, details of physical security plans are typically not made available to the public. However, DOE believes that security for the spent nuclear fuel surface aging facility would be similar to that required for existing commercial Independent Spent Nuclear Storage Facilities currently licensed by the Nuclear Regulatory Commission. At a minimum, security controls would include positive control on ingress and egress at the facility, as well as periodic surveillance by security personnel. Detailed security requirements for all areas of the proposed repository, including the fuel aging facility, would be included in the construction and operating license approved and issued by the Nuclear Regulatory Commission.

7. The flexible design does include monitoring of the exhaust air and the ability to filter the exhaust stream if radioactive contamination was detected. The design would comply with applicable health and safety requirements.

8. The Final EIS is based on the flexible design described in detail in the Science and Engineering Report (DIRS 153849-DOE 2001). Thermal management of the proposed repository would involve complex, nonlinear relationships among many parameters of the repository system [see the Science and Engineering Report (DIRS 153849-DOE 2001) for further discussion]. The major determinants of the peak temperatures are the age of the fuel at emplacement, the linear heat load along each drift, and the ventilation period after emplacement. By keeping the drift spacing constant, the overall feasibility of the various repository operating modes can be evaluated. The analysis presented in the Science and Engineering Report supports the environmental impact conclusions in the EIS. The Science and Engineering Report recognizes that the thermal load or areal mass loading can be varied also by the liner thermal load (which was done in the Science and Engineering Report), the drift spacing (which was not done in the Science and Engineering Report), or both. By varying the fuel age, waste package spacing, and ventilation, DOE has considered the major factors that would affect temperature variations in the repository. As noted in both the Science and Engineering Report and the Supplement to the Draft EIS, future studies could include variations in drift spacing. At present, DOE does not expect the conclusions drawn from the analysis in the Final EIS to change substantially as a result of variations in drift spacing versus waste package spacing.

9. As mentioned in Section 2.4 of the Supplement to the Draft EIS, uncertainties in future funding or the order of waste shipments might require the repository to be developed in a sequential manner, such as constructing the surface and subsurface facilities in portions or "modules." This approach would incorporate "lessons learned" from initial work into subsequent modules, reduce the initial construction costs and investment risk, and potentially increase confidence in meeting the schedule for waste receipt and emplacement. The intent of this discussion was not to imply that uncertain funding would increase confidence.

10. The information and analyses used to estimate the reasonably maximally exposed individual doses are provided in Appendix H. National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) are applicable only to routine or permitted releases. They do not apply to accidents. Since publication of the Draft EIS, the Environmental Protection Agency promulgated *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada*, at 40 CFR Part 197, which included an annual dose limit to a member of the public of 15 millirem (40 CFR 197.4). In accordance with requirements of the Energy Policy Act, the Nuclear Regulatory Commission subsequently promulgated Yucca Mountain licensing criteria, which includes a Preclosure Public Health and Environmental Standard at 10 CFR 63.204 of 15 millirem per year to a member

of the public. The appropriate sections of the EIS (including those mentioned in Chapter 8) have been updated to reflect a comparison to the recently promulgated standard of 15 millirem.

11. The flexible design presented in the Supplement to the Draft EIS was carried forward to the Final EIS analyses.

12. Golder Associates, Inc., developed both GoldSim (the integrating software used for the Supplement to the Draft EIS and Final EIS) and RIP (the software used for the Draft EIS). GoldSim is a new generation of the RIP program, not an entirely different program. The differences have more to do with user interface convenience and the mechanics of data handling than with the actual modeling. Nevertheless, as part of the production, delivery, and documentation of GoldSim, Golder Associates validated that program against RIP by running similar cases in both. Thus, differences in the integrating software caused no differences between the Draft EIS, the Supplement to the Draft EIS, and the Final EIS.

13. The modeling for the Supplement and the Final EIS for long-term performance analysis includes improved coupling of these processes over the essentially uncoupled versions used for the Draft EIS. Section I.2.3 of the Final EIS and the documents referenced in that chapter discuss these models.

14. As reported in *Nuclear Waste Fund Fee Adequacy: An Assessment* (DIRS 153257-DOE 2001), the nuclear waste fund investments had a market value of $8.5 billion as of September 30, 1999. The analysis in the report found that the current fee of 1 mil (one tenth of 1 cent) per kilowatt hour charged to generators of commercial spent nuclear fuel was adequate to cover projected disposal expenses (including costs associated with packaging and transportation) and recommended that the fee remain unchanged.

    Section 302 of the Nuclear Waste Policy Act of 1982 specifies that funding for disposal of commercial spent nuclear fuel is provided by payment of fees to the Secretary of Energy by the generators of electricity from nuclear power plants. Equivalent amounts are paid by the Federal Government to cover similar costs associated with disposal of spent nuclear fuel or high-level radioactive waste generated or owned by the United States. Utility fees and Federal appropriations are required to be sufficient to offset expenditures associated with repository studies; transportation; and operations and closure of a repository, as determined by an annual review by the Secretary of Energy. In the event that future generations decide that the potential repository should remain open for an extended period (up to 300 years or more), the fee structure could require modification. The statement, about "uncertain funding," was intended to be in the context of funding requirements for those activities (in the relative near-term leading up to the ability to receive and emplace waste (if the site was recommended and approved), and was not intended to reflect doubt about funding once the facility, if approved, became operational.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

RECEIVED
MAR 0 1 2000

February 22, 2000

Dr. Ivan Itkin, Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy, Headquarters
1000 Independence Avenue, S.W.
Washington, DC 20585

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE U.S. DEPARTMENT OF ENERGY DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A GEOLOGIC REPOSITORY FOR THE DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA

Dear Dr. Itkin:

On August 13, 1999, the U.S. Department of Energy (DOE) published a notice of availability in the Federal Register of its draft environmental impact statement (DEIS) for a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nye County, Nevada. In the context of the Nuclear Waste Policy Act, as amended, DOE is the lead agency for considering the environmental impacts for the proposed repository, and the U.S. Nuclear Regulatory Commission (NRC) is to adopt the DOE Final Environmental Impact Statement (FEIS) to the extent practicable as part of NRC's licensing actions for the repository. Consistent with its responsibilities, the NRC has promulgated, in 10 CFR Part 51, criteria it will use to adopt the FEIS. With respect to the DEIS, the NRC is a commenting agency. The NRC comments are enclosed.

In reviewing the DEIS, the NRC based its comments on its judgment regarding environmental issues, guided by: 1) the Council on Environmental Quality (CEQ) regulations (40 CFR Part 1500) implementing the National Environmental Policy Act; 2) guidance prepared by CEQ and the U.S. Environmental Protection Agency; and 3) NRC's criteria in 10 CFR Part 51 for adopting the FEIS.

The enclosed staff comments are organized into three categories. The first category is comprised of four comments that the NRC believes should be addressed by DOE to make the FEIS complete. These four comments concern broad issues in the DEIS, specifically: integration of the Proposed Action, cumulative impacts, transportation, and mitigative measures. When DOE submits an application for a license for the repository, the FEIS should contain sufficient information to allow a reasonable evaluation of the environmental impacts of that Proposed Action.

The remaining comments apply to more specific topical areas within the DEIS. The second category of comments (comments 5 through 8) also addresses issues related to completeness, albeit less directly than those in the first category. Those four comments have less significance than the first four comments, but DOE should address all eight comments to make the FEIS

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1 complete. The final five comments (9 through 13) are offered for DOE's consideration. In preparing the FEIS, NRC also requests that DOE consider relevant technical comments previously submitted by the NRC. The NRC has provided such technical comments in reports on specific technical issues and in comments on DOE's Viability Assessment in June 1999.

The comments on the Viability Assessment also address the issue of quality assurance (QA). DOE's application of a rigorous and effective QA program is crucial to its ability to demonstrate the validity of its findings and analyses in any license application. The NRC staff will continue to evaluate DOE's efforts to implement an effective QA program.

We are available to meet with your staff to discuss our comments and recommendations. Please contact Charlotte Abrams, Team Leader, Environmental Review Team, if you have any questions regarding this letter or the enclosure. Ms. Abrams can be reached at (301) 415-7293.

Sincerely,

William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure: U.S. NRC's Comments on U.S. DOE's
Draft Environmental Impact Statement for
a Geologic Repository for the Disposal of
Spent Nuclear Fuel and High-Level Radioactive
Waste at Yucca Mountain, Nye County, Nevada

cc w/encl: See attached list

Wendy R. Dixon, EIS Project Manager
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Office of Civilian Radioactive Waste Management
U.S. Department of Energy
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Letter to Ivan Itkin, U.S. DOE dated: 2/22/2000

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cc: R. Loux, State of Nevada
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S. Hanauer, DOE/Wash, DC
C. Einberg, DOE/Wash, DC
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L. Bradshaw, Nye County, NV
M. Murphy, Nye County, NV
J. McKnight, Nye County, NV
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D. Kolkman, White Pine County, NV
D. Weigel, GAO
W. Barnard, NWTRB
R. Holden, NCAI
D. Morgan, NIEC
R. Arnold, Pahrump County, NV
J. Lyznicky, AMA
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R. Anderson, NEI
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S. Kraft, NEI
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G. McKnight, Pahrump, NV
R. Wallace, USGS
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**U.S. Nuclear Regulatory Commission's Comments on
U.S. Department of Energy's Draft Environmental Impact Statement
for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level
Radioactive Waste at Yucca Mountain, Nye County, Nevada**

This enclosure provides comments by the U.S. Nuclear Regulatory Commission (NRC) staff on the draft environmental impact statement (DEIS) prepared by the U.S. Department of Energy (DOE) for a geologic repository for the disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) at Yucca Mountain, Nye County, Nevada. The DEIS addresses a wide range of possible impacts of this complex project. A significant amount of information, including multiple options for key components of the Proposed Action, is presented in the DEIS.

2 The NRC believes it to be desirable that DOE more clearly define a Proposed Action comprised of a preferred option for each component or a bounding analysis that gives a better understanding of the potential impact of each component. The NRC recognizes the utility of DOE's preserving, to the extent possible, repository design flexibility. Nevertheless, in the interest of improving the focus of its National Environmental Policy Act (NEPA) analysis, the NRC requests DOE to prepare, in the final environmental impact statement (FEIS), an in-depth analysis of a clearly defined Proposed Action, or, at the least, to provide sufficient information and analysis of the various options that it has retained as to demonstrate that the environmental impacts of the repository are bounded. A number of the attached NRC comments relate to the value in defining an integrated Proposed Action.

3 The assessment of long-term radiological impacts is based on the results of site characterization and the development of models describing repository performance. NRC and DOE have had extensive pre-licensing consultations concerning site characterization and NRC staff has provided comments on these matters. Staff's comments in these areas were provided to DOE in reports on specific technical issues (e.g., Issue Resolution Status Reports for Key Technical Issues) and in comments on DOE's viability assessment (VA). These technical comments should be considered during the development of the FEIS.

The enclosed staff comments are organized into three categories. The first category is comprised of four comments that the NRC believes should be addressed by DOE to make the FEIS complete. These four comments concern broad issues in the DEIS, specifically: integration of the Proposed Action, cumulative impacts, transportation, and mitigative measures. When DOE submits an application for a license for the repository, the FEIS should contain sufficient information to allow a reasonable evaluation of the environmental impacts of that Proposed Action.

The remaining comments apply to more specific topical areas within the DEIS. The second category of comments (comments 5 through 8) also addresses issues related to completeness, albeit less directly than those in the first category. Those four comments have less significance than the first four comments, but DOE should address all eight comments to make the FEIS complete. The final five comments (9 through 13) are offered for DOE's consideration. In preparing the FEIS, NRC also requests that DOE consider relevant technical comments previously submitted by the NRC. The NRC has provided such technical comments in reports on specific technical issues and in comments on DOE's Viability Assessment in June 1999.

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COMMENTS

Category 1 -- Comments That Should be Addressed to Ensure the Completeness of the FEIS

INTEGRATION

1. **Comment:**

4... The DEIS discusses five components relating to: 1) construction of the repository and waste handling facilities; 2) preparation of SNF and HLW at 77 sites for transport; 3) transportation of the SNF and HLW to Yucca Mountain by use of a National transportation network and a transportation network in the State of Nevada; 4) repository operations, including packaging, waste emplacement, monitoring and closure; and 5) mitigation and monitoring. The NRC recognizes the utility in DOE preserving, to the maximum extent practicable, design flexibility and therefore understands why DOE has presented a number of options for public consideration for each of these components. However, the DEIS does not identify a preferred option for each component. Further, it does not provide an integrated description of a clearly defined Proposed Action (comprised of the various components) and of the direct, indirect, and cumulative environmental effects of the integrated action. As a result, it is not clear that DOE has bounded the environmental impacts that could arise from the repository. As it prepares the FEIS, we request that DOE prepare an in-depth analysis of a clearly defined Proposed Action, or, at the least, to provide sufficient information and analysis of the various options that it has retained as to demonstrate that the environmental impacts of the repository are bounded.

Basis:

The DEIS describes numerous options for the various components of the repository system. For example, in Appendix F, two potential configurations of waste packaging for shipment were analyzed: uncanistered and canistered. In Chapter 6, two "National-level" transportation scenarios were analyzed (mostly truck and mostly rail) and eleven Nevada transportation alternatives were considered. Additionally, three potential thermal load scenarios and three waste volume options for the repository were considered in Chapters 4 and 5.

Given the number of components and options within those components, the repository system could consist of one of the numerous possible permutations. The DEIS does not select among the various options to identify a single, integrated Proposed Action. Moreover, the DEIS does not present an integrated overall description and impact assessment of any complete combination for the Proposed Action, and it is not clear that the analyses of the various components presented in the DEIS bound the impacts that could result from the Proposed Action, once one is selected. Instead, descriptions and impacts are treated separately, discussed separately, with conclusions drawn separately. Although NRC recognizes the importance of DOE's retaining flexibility to make changes in its design, and of obtaining public input in the selection among the available options, the FEIS should contain sufficient information and analysis of the

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4 cont. various options to cover the Proposed Action that is ultimately selected and to allow a reasonable assessment of the impacts of that Proposed Action.

Concerns identified in this comment are linked to comments on cumulative impacts (see Comment 2), transportation in Nevada (see Comment 3), and mitigation (see Comment 4).

Recommendation:

In the interest of improving its analyses, the NRC recommends that, to the extent choices among options have been refined, DOE identify its Proposed Action in the FEIS. Further, the NRC suggests that DOE use its refined description of the Proposed Action to complete the assessment of the direct, indirect, and cumulative effects of the Proposed Action, making bounding assumptions when necessary or appropriate. At the least, if DOE chooses to retain flexibility in the FEIS, it should show that the indirect, direct and cumulative impacts of the eventual selection have been bounded by the assessments presented in the FEIS.

CUMULATIVE IMPACTS

2. **Comment:**

5... The assessment of cumulative impacts in the DEIS does not fully address the impacts associated with past, present, and reasonably foreseeable future actions relating to groundwater use, land use, and cultural and biological resources.

Basis:

A "cumulative impact" is an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7). A complete cumulative impacts assessment would provide an understanding of whether the Proposed Action (see Comment 1) might push a resource, ecosystem, or human community beyond a critical threshold and preclude sustainability (CEQ, 1997, page 7). Therefore, the FEIS should assess the additional, incremental impacts from the action at hand when added to impacts from past, present, and reasonably foreseeable future actions (40 CFR 1508.7).

Section 4.1.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure — Impact to Hydrology) acknowledges that repository construction and operation will impose water demands on the available supplies at Yucca Mountain and the surrounding area. Similarly, Section 6.3.2.1 (Impacts Common to Nevada Branch Rail Line Implementing Alternatives) acknowledges that water withdrawal will be required to support construction of a branch rail line. These demands could create impacts on water resources, particularly in light of other possible future uses. Creation of a Timbisha Shoshone Tribal Homeland with agricultural water rights is a reasonably foreseeable action that could contribute to exceeding the sustainable yield in the Death Valley National Park region (Buqo, 1999, p. 25). Further, it is foreseeable

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5 cont. that the continued growth of Clark, Nye, and Lincoln Counties and Las Vegas, Pahrump, and Beatty will impact available groundwater resources. An increased cumulative demand for water, particularly when coupled with reduced water supplies resulting from land withdrawal and Federal land acquisition, could lead to aquifer overdrafting, increased pumping costs, and associated socioeconomic impacts. The cumulative impacts on groundwater resources stemming from the Proposed Action and these other actions are not adequately considered in the DEIS.

The cumulative impacts assessment also needs to further evaluate combined impacts to other specific resources (e.g., the desert tortoise, land use, cultural resources). The cumulative impacts of a Proposed Action, coupled with other Federal actions in the area (e.g., activities at NTS, Nellis Air Force Range (AFR)) and impacts from extensive growth in Nye, Lincoln, and Clark Counties, on the ranges and habitats of local fauna, such as the desert tortoise, should be documented. In addition, land withdrawal by DOE in conjunction with Department of Interior limitations on land use in Ash Meadows may result in cumulative impacts related to land use that have not yet been fully assessed. Similarly, the impact that private projects such as the Cortez Gold Mine Pipeline projects and the Apex Bulk Commodities Intermodal Transfer Station have on resources (e.g., biological and cultural resources) may not have been fully considered.

Recommendation:

DOE should complete its analysis of cumulative impacts for resources, ecosystems, and human communities by augmenting analyses already performed for individual components for the proposal. The analysis should consider all past, present, and reasonably foreseeable future actions, both Federal and non-Federal, within appropriate spatial and temporal boundaries.

References:

Buqo, T.S. *Nye County Perspective: Potential Impacts Associated with Long Term Presence of a Nuclear Depository at Yucca Mountain, Nye County, Nevada.* June 1999.

Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act*, CEQ, January 1997.

TRANSPORTATION

3. **Comment:**

6... In the absence of a preferred route and mode of transportation, it is unclear whether the non-radiological impacts related to transportation of SNF and HLW within Nevada, including impacts from construction and operation of intermodal transfer stations and rail lines, have been bounded.

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6 cont. **Basis:**

The DEIS identifies the transportation of SNF and HLW as one of the components necessary for a repository. As such, transportation is a connected action (40 CFR 1508.25(a)(1)) and should be considered an integral part of the Yucca Mountain project. The NRC understands that DOE would like to benefit from public input, through comments on the DEIS, when considering preferred transportation modes and routes. However, an integrated impact assessment that connects transportation to disposal needs to be included as part of any evaluation of the Proposed Action in the FEIS.

The current analysis for transportation within the State of Nevada provides a general discussion of impacts, but does not fully assess the non-radiological impacts. Further, it is not apparent that the transportation analysis in the DEIS bounds the non-radiological impacts (e.g., socioeconomic impacts and impacts to air quality, cultural and biological resources, and land and water use). Moreover, although DOE has identified a number of options, it has not clearly defined which options (e.g., rail line construction, mode of transportation, need for intermodal transfer stations, preferred routing within the State of Nevada, and type of trucks) it will use to support the Proposed Action.

As noted in Comment 1, the FEIS should show that, once decisions on transportation routes and modes are made, no new information or circumstances exist that could result in significant changes to the impacts assessed in the FEIS.

Recommendation:

Transportation impacts (including non-radiological and cumulative impacts) should be discussed in sufficient detail to support selection of a Proposed Action. The FEIS should contain either a complete, integrated assessment of the connected transportation actions or sufficient information and analyses on the various options to show that the impacts of the Proposed Action have been bounded.

MITIGATION OF ACTIONS

4. **Comment:**

7... The DEIS does not include a thorough discussion of mitigative measures or of long-term environmental monitoring to measure the impacts on the environment.

Basis:

As noted in Comment 1, the DEIS does not identify what options will be combined for a Proposed Action. Public comments on the DEIS can be used by DOE to help in the selection of those options that will form the Proposed Action, refine its analysis of environmental impacts, and evaluate the need for particular mitigative measures. In this connection, it is important to ensure that all environmental impacts have been identified or bounded in order to provide a basis for decisions for mitigative measures. Mitigative strategies currently address dust suppression, the desert tortoise, and occupational health and safety. In addition, the FEIS needs to evaluate the need for mitigative

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7 cont. strategies for water use, economic, social, cultural, biological, or public health and safety impacts.

For example, the discussion in Chapter 9 (Management Actions to Mitigate the Potential for Environmental Impacts) of the DEIS does not fully address mitigative measures for Native American interests, including several measures presented by the AIRD (American Indian Writers Subgroup, 1998), such as ways to alleviate the severity of the effects on Native American cultural, religious, subsistence, recreational, ceremonial and associated uses of Yucca Mountain. The suggested mitigation actions in the AIRD include providing emergency preparedness training, establishing emergency medical facilities, and providing controlled access to sacred or ceremonial areas or resources.

Further, it is not apparent that a complete monitoring program for mitigative strategies has been clearly defined. The FEIS should include monitoring as a way of evaluating the effectiveness of any mitigative measures, such as measures to reduce impacts from transportation or waste handling at intermodal or site surface-based facilities (40 CFR 1505.2(c)).

Recommendation:

The FEIS should provide reasonable mitigative strategies to address potentially significant adverse impacts from the Proposed Action. Mitigative measures which comprise these strategies should be implementable and effective in reducing environmental impacts. Moreover, the FEIS should discuss monitoring to assess the environmental impacts and the effectiveness of planned mitigative measures. As appropriate, this monitoring could be integrated with DOE's long-term performance confirmation monitoring.

References

American Indian Writers Subgroup. *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement.* American Indian Resource Document MOL 19980420.0041. Las Vegas, NV: American Indian Writers Subgroup, Consolidated Group of Tribes and Organizations. 1998.

Category 2 -- Additional Comments Related to Completeness

ENVIRONMENTAL JUSTICE

5. **Comment:**

8... The DEIS discussion of the impacts on minority and low income communities is restricted to the Bureau of the Census block group data. The discussion does not provide sufficient specificity with respect to community locations within the relevant census block groups or adequately identify potentially unique community characteristics. This information would facilitate the assessment of any potential for disproportionately

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8 cont high and adverse human health and environmental effects of the Proposed Action upon these communities.

Basis:

The discussion of Environmental Justice in the DEIS does not specifically identify where minority or low-income communities are located within each census block group. This problem is compounded by the relatively large geographic size of the Nevada census block groups analyzed in the DEIS. Determining the specific locations of the potentially affected communities in each relevant census block group would facilitate evaluation of the disproportionate impacts of the Proposed Action. DOE may find that state, local, and tribal governments possess demographic information relevant to the location of these communities.

DOE's conclusion that the Proposed Action will have no significant impact on the general population, and thus no significant impact on minority and low-income communities, appears not to address the possibility that cultural, social, historical, or economic factors associated with minority and low income communities may amplify the effect of the Proposed Action and produce disproportionately high and adverse impacts upon these communities. The FEIS should discuss whether such factors exist and whether the consideration of such factors leads to the identification of significant effects that would otherwise be diluted by examination of the general population. This information could also be useful in identifying appropriate mitigative measures to address any disproportionate impacts resulting from the Proposed Action.

The NRC also notes that Section 3.1.13 (Environmental Justice) of the DEIS identifies Native Americans as having concerns about disproportionate impacts. The NRC's analysis of census data has found that there may also be African American and Hispanic minority groups in the affected area. It is not clear from the analysis in the DEIS whether these other minority groups were considered in determining if the Proposed Action has a potential disproportionate impact upon these communities.

Recommendation:

The FEIS discussion of environmental justice should identify the location and unique characteristics of minority and low income communities with sufficient specificity to enable a complete assessment of any disproportionate impacts upon those communities resulting from the Proposed Action.

WATER USE

6. **Comment:**

9... DOE should correct areas of discrepancy in water use data and provide clarifying information regarding the potential for and impacts from overdrafts of groundwater in the FEIS.

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Basis:

9 cont. Table 3-11 notes that the figures for current water appropriations do not include Federal reserved water rights (FRRs) for the NTS and Nellis AFR. These FRRs should be added to the total appropriations for a more accurate measure of committed resources.

Table 3-11 and DEIS Section 3.1.4.2.1 (Affected Environment - Regional Groundwater) suggest that ample water is available for new appropriations to support the Proposed Action because average annual withdrawals (actual use) are well below the appropriation limits. Although the use of average withdrawals may be appropriate, it is possible that this could be misleading because users are entitled to withdraw or sell their full appropriations.

When discussing the water demands expected during performance confirmation in Section 4.1.3.1 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Hydrology from Performance Confirmation) the DEIS omits mention of NTS and Nellis AFR wells in the area. The pumpage from those wells should be added to that from J-11 and J-12 and the C-well complex in the proposed land withdrawal area for an improved estimate of the water demand. The wide range in the perennial yield figures (880 to 4000 acre-feet for Area 227a) should be explained. The perennial yield and committed resources figures for Area 227a in Nevada Division of Water Planning (1992) do not agree with Table 3-11. DOE should provide additional justification for the perennial yield figures, considering the variance from information in other sources, to support its assessment of potential overdraft in the region.

The discussion of water demand during construction, operation and monitoring, and closure in Section 4.1.3.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Groundwater from Construction, Operation and Monitoring, and Closure) of the DEIS also should be clarified. This discussion should make clear where the water will be obtained to meet the combined water demand for the repository, the NTS, and Nellis AFR. Under one scenario, the perennial yield of Area 227a would be exceeded. The text should be clarified to explain the impacts of any possible overdraft.

The discussion in DEIS Section 4.1.3.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Groundwater from Construction, Operation and Monitoring, and Closure) includes at least one scenario where the Jackass Flats basin would be in overdraft status. In addition, Table 3-11 presents the Amargosa Desert Area 230 in a potential overdraft situation. DOE (1996) confirms that historic data show that DOE withdrawals at Yucca Flats have annually exceeded the perennial yield. The potential impacts of these overdrafts should be discussed.

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Recommendation:

9 cont. DOE should correct discrepancies in water-use discussions and data in the FEIS. The evaluation of groundwater use during construction, operation, and monitoring should include a discussion of the potential for overdrafts.

References:

Nevada Division of Water Planning. *Nevada Water Facts, 1992.* 241353. Carson City, NV: Nevada Division of Water Planning. 1992.

U. S. Department of Energy. *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada.* DOE/EIS-0243-F,239895. Las Vegas, NV: U. S. Department of Energy. 1996.

LAND USE

7. **Comment:**

10 Although flexibility exists in the amount of land that is to be withdrawn for the geologic repository operations area and the post-closure controlled area, the extent of the land withdrawal influences the type and magnitude of impacts that should be considered in the impact statement. The DEIS does not provide a clear basis for determining the extent of the proposed land withdrawal nor does it assess the full range of impacts associated with the land withdrawal (e.g., socioeconomic, water use, cultural).

Basis:

According to DEIS Section 1.4.1 (Purpose and Need for Agency Action—Yucca Mountain Site), the area needed for development of the surface repository is approximately 3.5 km^2 with up to approximately another 600 km^2 set aside as a buffer zone. However, the severity of impacts is dependent on the area to be withdrawn.

The FEIS should include an assessment of the potential impacts of removing a large area (e.g., 600 km^2 is used as the size of the potential land withdrawal on pages 2-1 and 2-2 of the DEIS) from other possible uses. The withdrawal would preclude or limit use of the land at any time for other purposes by the public or by Native Americans. Development of water resources on this land by private individuals, businesses, industry, or the State of Nevada might also be prohibited. These impacts are not fully assessed in the DEIS.

Recommendation:

The impacts associated with the land withdrawal should be discussed systematically in the FEIS, including impacts on cultural resources and land use.

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BIOLOGICAL RESOURCES

8. **Comment:**

11 The DEIS may not adequately bound the uncertainty in the predictions of heat generated from radioactive decay during long-term repository performance and the potential effects of this heat generation on fauna.

Basis:

Although most vertebrate species have genetically fixed sex determination, it is now known that chelonians (tortoises and turtles) undergo temperature dependent sex determination (TSD). Spotila (1994) shows that the desert tortoise (*Gopherus agassizii*), a federally listed threatened species of the Mojave Desert, is subject to this effect. Research shows that the temperature that produces a 50:50 sex ratio is 31.8 °C. Desert tortoise eggs have good hatching success between 28 and 33 °C, but suffer high mortality at temperatures below 26 or above 35.3 °C. Temperatures between 26.0 and 30.6 °C produce mostly males (temperatures 28 °C and below produce 100 percent males) and temperatures between 32.8 and 35.3 °C produce mostly females (temperatures above 33 °C produce 100 percent females) (Spotila et al., 1998). Lewis-Winokur and Winokur (1995) confirm that the pivotal temperature is between 31 and 32 °C and indicated that a lowering of 1.6 °C (from 31 to 29.4 °C) resulted in all male hatchlings.

The modeling of surface soil temperature for the proposed site produces uncertain results. TRW Environmental Safety Systems, Inc. (1999, page 44) states "...current predictions are somewhat uncertain due to uncertainties in the thermal properties of the soil, particularly thermal conductivity and, hence, thermal diffusivity." This source further states that "analyses based on conventional soil heat-conduction models indicate that the original time scale of the measurements collected at the site (weekly to monthly) could not be used to accurately estimate the soil thermal conductivity for the sampling depths chosen (15, 30 and 45 cm)." However, substantial temperature effects on desert tortoise sex determination have been shown to occur within a range of plus or minus 3 °C. Therefore, it is important for the FEIS to clarify the range of soil temperatures associated with the geologic repository and discuss impacts, if any, on protected or endangered species.

Recommendation:

The assessment of the contribution of thermal loading on increased soil temperature should be refined in the FEIS. Soil temperature modeling should take into account the substantial uncertainties in thermal conductivity in Yucca Mountain soils thereby enabling an assessment of the potential impacts to the desert tortoise from increased soil temperatures.

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11...

References:

Lewis-Winokur,V., and R.M. Winokur. *Incubation temperature affects sexual differentiation, incubation time, and posthatching survival in desert tortoises [Gopherus agassizi (sic)]. Canadian Journal of Zoology* 73(11): 2091–2097. 1995.

Spotilla, J.R., L.C. Zimmerman, C.A. Binckley, J.S. Grumbles, D.C. Rostal, A. List, Jr., E.C. Beyer, K.M. Philips, and S.J. Kemp. *Effects of incubation conditions on sex determination, hatching success, and growth of hatchling desert tortoise, Gopherus agassizii. Herpetological Monographs* 8: 103–116. 1994.

TRW Environmental Safety Systems, Inc. *Impact of Radioactive Waste Heat on Soil Temperatures.* BA0000000–01717–5700–00030. Revision 0. Las Vegas, NV: TRW Environmental Safety Systems, Inc.: 37–44. 1999.

Category 3 -- Less significant Issues

DOCUMENTATION OF QUALITATIVE JUDGMENTS ON IMPACTS AND INCONSISTENCIES

9. **Comment:**

intro for 12, 13, 14, 15

Additional documentation or analysis should be provided in the FEIS to support the characterization of impacts and the description of environmental parameters in some areas of the FEIS.

Basis:

Additional documentation or analyses would be useful in the following areas:

12

- The DEIS assessments of impacts on faunal resources in Section 4.1.4 (Environmental Consequences of Repository Construction Operation and Monitoring and Closure—Impacts to Biological Resources and Soils) that are classified as "low," "very small," or "minimal and largely undetectable" are not supported by quantitative data. Individuals of a population that occur near the edge of its range (e.g., desert tortoises in the vicinity of Yucca Mountain) are living in marginal conditions, and therefore environmental stressors caused by the Proposed Action might have amplified effects in these edge areas.

13...

- Section 4.1.6.2.1 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Impacts to Employment), page 4-41 states "[i]f the present economic growth continued in the region of influence, it could absorb declines in the repository workforce." To assess the adequacy of this statement, the assumptions used to generate the Regional Economic Models, Inc. (REMI) (Treyz et al., 1992) baseline results should be provided. The conclusion appears to require the assumption that the skills of displaced workers are compatible with the employment growth and needs of other sectors.

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14 • Section 6.3.2.2.1 (Environmental Impacts of Transportation—Caliente Rail Corridor Implementing Alternative—Socioeconomics) states "[t]he projected length of the corridor—513 kilometers—is the most important factor for determining the number of workers (560) that would be required." This statement is repeated for all corridors, but more specific information is needed to support this conclusion. Terrain and other factors might have significant impact, because productivity per worker (km/worker) varies considerably by route (e.g., 1.04 km/worker on the Carlin route, 0.53 km/worker on the Jean route).

15... • Section H.2.1.3 (Potential Repository Accident Scenarios: Analytical Methods and Results—External Events) of the DEIS concludes that 3 cm is the maximum thickness of volcanic tephra that could be deposited on repository facilities from a basaltic volcano that erupts within the area around the proposed repository site. The basis for this conclusion is a statement (DOE, 1998) that 3 cm of volcanic tephra is the worst-case event being considered. The conclusion appears not to be supported by data or analyses.

Recommendation:

The FEIS should improve the documentation and support for qualitative conclusions or assumptions related to impacts, as appropriate.

13 cont. **References:**

Treyz, G.I., D.S. Rickman, and G. Shao. The REMI economic-demographic forecasting and simulation model. *International Regional Science Review* 14(3): 221–253. 1992.

15 cont. U. S. Department of Energy. Viability assessment of a repository at Yucca Mountain. *Volume 2: Preliminary Design Concept for the Repository and Waste Package*. DOE/RW–0508. Washington, DC: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. 1998.

CULTURAL RESOURCES

10. **Comment:**

16... Documentation and analyses for the assessment of impacts to cultural resources are incomplete.

Basis:

Some DEIS conclusions regarding cultural resource impacts lack supporting analyses or reference material. Moreover, methods used to conduct the analyses and reach conclusions are not presented. The following are examples:

• Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) states that a field survey of a 44-km^2 (11,000 acres) parcel was conducted.

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16 cont.

Clarifying information needs to be provided, including (i) the type of survey (e.g., walk-over); (ii) the percentage of coverage for the 44-km^2 area; (iii) the relationship of the survey area to the entire land withdrawal area; (iv) the relationship of this survey to the "additional archaeological surveys" conducted in Midway Valley, Yucca Wash, and lower Fortymile Canyon; (v) the extent and techniques used for these additional surveys; (vi) specification of the total survey area; and (vii) the extent to which sites have been identified for the complete land withdrawal area.

- Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) of the DEIS states that "826 archeological sites have been discovered in the analyzed land withdrawal area." This statement requires clarification. It is not clear whether the entire 600 km^2 parcel has been surveyed or whether the number of sites is on a smaller parcel of land. It is difficult to assess site density and cultural resources impacts without knowing the extent of the land area that has been surveyed.

- Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) states that limited test excavations were conducted at 29 sites. Clarification is required regarding the criteria used to select sites for testing and the representativeness of these sites for the potentially affected area.

- The Western Shoshone occupied the Yucca Mountain region into historic times and were engaged in mining, ranching, and other activities. The DEIS is unclear whether any of the historic sites are associated with the Western Shoshone or Paiute peoples or whether these sites are considered to be related only to non-Native American occupation activities.

Recommendation:

The FEIS should provide additional data and descriptions of methods used to assess impacts on cultural resources, including a description of the area of study used in assessing the distribution and types of cultural resources. If the entire land withdrawal area or the entire potential disturbed area was not surveyed for cultural resources, the rationale for not doing so should be presented.

LONG-TERM REPOSITORY PERFORMANCE

11. **Comment:**

17...

The methodology for estimating the environmental impacts from the release and transport of toxic materials should be well documented in the FEIS. The estimates should incorporate the current waste package materials and design.

Basis:

The release and transport of toxic materials (chromium (Cr) and molybdenum (Mo)) from waste package corrosion to a receptor group was modeled using the EQ6

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17 cont. geochemical speciation code (Figure I-1). It is unclear how this code was used to estimate the corrosion products or the corrosion rate for toxic materials.

The assumed dissolution rates and mineral formation kinetics are critical to substantiating the claim that release and eventual exposure of a receptor group to the potentially toxic waste package corrosion products (e.g., chromate, molybdate) is minimal as stated in Section 5.6 (Environmental Consequences from Long-Term Repository Performance—Consequences from Chemically Toxic Materials).

We understand that DOE is expected to select Enhanced Design Alternative II (EDA-II) for the potential license application in the near term (TRW, 1999). EDA-II includes an outer overpack of 5 cm thick Alloy-22. The DEIS design includes a 2 cm thick inner overpack of Alloy-22, so the quantities of Alloy-22 will more than double, even assuming constant numbers of waste packages, if the EDA-II design is used. Because Alloy-22 is approximately 56 percent Ni by weight, the volume of Ni present in the repository is considerably more than the amount of Cr and Mo present. In addition, nickel (Ni) will also likely dissolve at roughly the same rate as Cr and Mo during corrosion. The FEIS should document that Ni does not pose a health risk.

Recommendation:

The discussion of toxic materials should be consistent with the current waste package design at the time of the FEIS. DOE should provide the technical basis for waste package corrosion rates, and should provide technical support for claims that exposure to potentially toxic materials released by waste package corrosion is minimal.

Reference

TRW Environmental Safety Systems, Inc. *License Application Design Selection Report.* B00000000-01717-4600-00123. Revision 01. Las Vegas, NV: TRW Environmental Safety Systems Inc. May 28, 1999.

REPOSITORY CONSTRUCTION, OPERATION AND MONITORING, AND CLOSURE

12. **Comment:**

18... Inconsistencies concerning the appropriate range for ^{222}Rn concentration should be remedied and impacts of thermal loading on radon release and worker safety should be explained in the FEIS.

Basis:

The median and range of ^{222}Rn concentrations used for radiological impact calculations are not consistent throughout the DEIS. Sections 3.1.8.2 (Affected Environment—Radiation Environment in the Yucca Mountain region) and F.1.1.6 (Human Health Impacts Primer and Details for Estimating Health Impacts to Workers from Yucca Mountain Repository Operations—Exposures from Naturally Occurring Radionuclides in the Subsurface Environment) of the DEIS report that radon

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18 cont. concentrations in the Exploratory Studies Facility (ESF) during working hours (with active ventilation) range from 0.22 to 72 pCi/L, with a median concentration of 6.5 pCi/L. Sections 4.1.2.2.2 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Radiological Impacts to Air quality from Construction) and G.2.3.1 (Air Quality—Release of Radon-222 and Radon Decay Products from the Subsurface Facility) of the DEIS report that radon concentrations in the ESF during working hours with the ventilation system on range from 0.65 to 163 pCi/L, with a median concentration of 24 pCi/L. The difference is a factor of 2-3 in the range and a factor of approximately 4 for the median.

Section 4.1.7.3.1 [Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Occupational Impacts (Involved and Non-Involved Workers)] of the DEIS states that "radiological health impacts to surface workers would be independent of the thermal load scenarios." However, it is not apparent whether there was any consideration of higher heat loadings increasing the radon release rate from the wall surfaces. Table G-48 of the DEIS reports that the annual average radon releases during the 24-yr operation period are expected to be 880 Ci, 1000 Ci, and 1900 Ci for the high, intermediate, and low thermal loads. It also appears that these source terms did not take into account the relative volume of the repository under each heat loading alternative.

Recommendation:

The FEIS should explain or address inconsistencies related to the appropriate range for ^{222}Rn concentration. The FEIS should also discuss the effects of the various heat loading scenarios on total radon release and provide a technical basis for the conclusion that radiological health impacts are independent of thermal load scenarios.

19... **NO ACTION ALTERNATIVE**

13. **Comment:**

The DEIS presents two scenarios, both of which DOE recognizes as unlikely, as a baseline to address the uncertainty associated with the management of SNF and HLW in the absence of a Yucca Mountain repository. Scenario 1 is a status quo of maintaining storage facilities continuously for the next 10,000 years. Scenario 2 proposes that these storage facilities would be maintained for 100 years, after which the 77 sites would be left without further management. Scenario 2 is not reasonable and, therefore, DOE should explain that it includes this scenario only to allow comparison with the analysis of the postclosure performance of the potential repository, which similarly is based on the highly unlikely and unreasonable assumption that institutional controls will be maintained only for 100 years.

Basis:

Scenario 2 assumes that, after a 100 year period, the Federal Government would permit SNF and HLW to be abandoned. This is not a reasonable assumption. The Federal

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19 cont. Government would continue to control licensed material and HLW under its authority for as long as necessary for public health and safety considerations.

Recommendation:

DOE should explain the basis for its identification of Scenario 2 as a potential no-action alternative.

16 19

RESPONSES TO U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE DRAFT EIS (Comment Document 1898)

1. DOE has an ongoing program to address Nuclear Regulatory Commission comments on the Viability Assessment and other technical issues, largely as they have been translated into its comprehensive listing of scientific modeling issues in the Commission's Issue Resolution Status Reports (see, for example, DIRS 135160-Bell 1996; DIRS 154605-NRC 2000). Not all technical issues raised by the Commission are closed, but DOE has made and will continue to make a good faith effort to address each issue to the extent practicable. As reported in the Final EIS, the Department has made a number of modifications to the design of the repository and to the Total System Performance Assessment model that address Commission concerns. As of September 2001, the Key Technical Issues have all been declared "Closed-Pending" by the Commission.

   DOE has made a similar best effort to address the status of model validation and data quality assurance. The Department recognizes that it needs to apply a rigorous and effective quality assurance program, and that doing so will be crucial to demonstrating the validity of findings and analyses in any License Application. In response to previous Nuclear Regulatory Commission comments in this area, DOE has established a schedule for achieving quality assurance goals by the time of the License Application, if Yucca Mountain is found suitable and approved for development of a repository. DOE has met interim quality assurance goals for the Site Recommendation phase.

   In the September 6, 2001, Quarterly Meeting with the Nuclear Regulatory Commission, DOE outlined the transition plans for the respective quality assurance programs which would support becoming a licensee. The Commission indicated further evaluation of implementation of these plans would take place in approximately 6 months.

2. In the Final EIS, DOE has identified and analyzed a higher-temperature operating mode and a range of lower-temperature operating modes. Chapter 2 and other related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the operating mode are package spacing, drift temperatures, length of active ventilation, and age of the fuel being emplaced. The range of variances in these parameters basically determine the extent of the repository design that will be utilized for the emplacement of the 70,000 metric tons of waste and fuel; the higher-temperature operating mode would require only the main central segment of the repository; several of the lower-temperature operating modes would use that segment and the western extension, while the "ultra" low-temperature operating modes would require use of the entire planned initial design. In this way, DOE has focused its analysis on a more clearly defined proposal, and demonstrated that the environmental impacts of the construction and operation of the proposed repository would not be likely to exceed the upper range of the estimated impacts. Tables in Chapter 2 of the EIS demonstrate the bounding nature of the flexible operating modes within construct of a fixed design.

3. The Final EIS addresses the relevant technical issues DOE received in comments from the Nuclear Regulatory Commission relative to specific technical issues and the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998).

4. In the Draft EIS and the Supplement to the Draft EIS, DOE analyzed a variety of scenarios that offer a range of options for implementing the Proposed Action to construct, operate (including transportation) and monitor, and eventually close a repository at Yucca Mountain. These scenarios, which reflect potential design considerations, waste packaging approaches, and modes for transporting spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site, considered the range of the environmental impacts likely to result from the Proposed Action.

   In the Final EIS, DOE has identified and analyzed a range of operating modes from higher- to lower-temperature. The lower-temperature analytical scenario considered six cases. Chapter 2 of the EIS and other

related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the flexible operating modes are package spacing, drift temperatures, length of active ventilation, and age of the fuel being emplaced. The range of variances in these parameters basically determine the extent of the repository design that will be utilized for emplacement of 70,000 metric tons of heavy metal of spent nuclear fuel and high-level radioactive waste; the higher-temperature operating mode would require only the main central segment of the repository; the lower-temperature operating mode could use that segment and the western extension, and could possibly require use of the entire available emplacement area. DOE has focused its analysis on a more clearly defined proposal, and demonstrated that the environmental impacts of the construction and operation of the proposed repository would not be likely to exceed the upper range of the estimated impacts.

DOE believes that the information in the EIS on the potential direct, indirect, and cumulative impacts that could result from the Proposed Action is sufficient. This belief is based on the level of information and analysis, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts that could occur, and the use of "bounding assumptions" if information is incomplete or unavailable and if uncertainties exist.

For the same reasons, DOE believes that the EIS provides the information necessary to make decisions on the basic approaches to transporting spent nuclear fuel and high-level radioactive waste (such as mostly rail or mostly truck shipments), as well as the choice between alternative rail corridors in Nevada. However, follow-up implementing decisions, such as the selection of a specific alignment in a corridor, the specific location of an intermodal transfer station, or the need to upgrade heavy-haul truck routes, would require field surveys, State and local government consultations, environmental and engineering analyses, and National Environmental Policy Act reviews.

5. Since the issuance of the Draft EIS, the Department has continued to evaluate actions in the region of influence that could pose a potential cumulative impact. As a result of these reviews, the Department identified several new actions for which information was not available for the Draft EIS. These actions come from several agencies and private companies. For instance, Section 8.1.2.2 of the Final EIS contains an expanded discussion of the Timbisha Shoshone Homeland Act, along with possible implications to groundwater rights. Chapter 8 also contains discussions of other actions by the Bureau of Land Management (e.g., the Ivanpah Cargo Airport, the Moapa Paiute Energy Center); these actions were considered when evaluating the cumulative impacts for the technical discipline areas.

   As part of the updated analyses, the Department has expanded the land-use discussion in Chapter 8 to address specifically the known actions that have been identified since the publication of the Draft EIS. Where possible, the Department has identified changes in land use along with estimates of area to be disturbed and possible impacts with other actions in the area. In addition, all discipline areas (for example, biological resources and cultural resources) were reviewed to ensure that the appropriate level of discussion was included to address the potential cumulative impacts of all the actions. However, not all actions could be evaluated to the same level of detail because information was not always available to allow an in-depth evaluation.

6. DOE believes that the EIS adequately analyzes the environmental impacts that could result from the Proposed Action. This belief is based on the level of information and analysis, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts, and the use of bounding assumptions where information is incomplete or unavailable, or where uncertainties exist. The use of widely accepted analytical tools, latest reasonably available information, and cautious but reasonable assumptions offer the most appropriate means to arrive at conservative estimates of transportation-related impacts.

   For the reasons discussed above, DOE believes that the EIS provides the environmental impact information necessary to make certain broad transportation-related decisions, namely the choice of a national mode of transportation outside Nevada (mostly rail or mostly legal-weight truck), the choice among alternative transportation modes in Nevada (mostly rail, mostly legal-weight truck, or heavy-haul truck with use of an associated intermodal transfer station), and the choice among alternative rail corridors or heavy-haul truck

routes with use of an associated intermodal transfer station in Nevada. DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada.

If the Yucca Mountain site was approved, DOE would issue at some future date, a Record of Decision to select a mode of transportation. If, for example, mostly rail was selected (both nationally and in Nevada), DOE would identify a preference for one of the rail corridors in consultation with affected stakeholders, particularly the State of Nevada. In this example, DOE would announce a preferred corridor in the *Federal Register* and other media. No sooner than 30 days after the announcement of a preference, DOE would publish its selection of a rail corridor in a Record of Decision. A similar process would occur in the event that DOE selected heavy-haul truck as its mode of transportation in Nevada. Other transportation decisions, such as the selection of a specific rail alignment within a corridor, would require additional field surveys, State and local government and Native American tribal consultations, environmental and engineering analyses, and appropriate National Environmental Policy Act reviews.

In this EIS, DOE has used computer models it has used in previous EISs and other studies. These models are widely accepted by the national and international scientific and regulatory communities. For instance, DOE selected the RADTRAN 5 computer program to estimate radiological impacts to populations from incident-free transportation and from accidents. RADTRAN, which was originally developed by Sandia National Laboratories in the late 1970s, has been used in many other previous DOE EISs, and it has undergone periodic review and revision. In 1995, an independent validation review of RADTRAN 4 (immediate predecessor to RADTRAN 5) demonstrated that it yielded acceptable results when compared to "hand" calculations. More recently, an independent review found that RADTRAN 5 overestimates the measured radiation dose to an individual from moving radiation sources.

To ensure that the EIS analyses reflect the best latest reasonably available information, DOE has either incorporated information that has become available since the publication of the Draft EIS or modified existing information to accommodate conditions likely to be encountered over the life of the Proposed Action. For example, the analysis in the Draft EIS relies on population information from the 1990 Census. In this Final EIS, DOE has scaled impacts upward to reflect the relative state-by-state population growth to 2035, using 2000 Census data.

Although the EIS analyses are based on the best latest reasonably available information and state-of-the-art analytical tools, not all aspects of incident-free transportation or accident conditions can be known with absolute certainty. In such instances, DOE has relied on conservative assumptions that tend to overestimate impacts. For instance, DOE assumed that the radiation dose external to each vehicle carrying a cask during routine transportation would be the maximum allowed by U.S. Department of Transportation regulations. Similarly, DOE assumed that an individual, the "maximally exposed individual," would be a resident living 30 meters (100 feet) from a point where all truck shipments, or 200 meters (660 feet) from a point where all rail shipments would pass. Under these circumstances, the maximally exposed individual would receive a dose of about 6 millirem from exposure to all truck shipments, and a dose of about 2 millirem from exposure to all rail shipments (6 millirem represents an increased probability of contracting a fatal cancer of 3 in 1 million). Although it can be argued that individuals could live closer to these shipments, it is highly unlikely that an individual would be exposed to all shipments over the 24-year period of shipments to the repository, even though DOE incorporated this highly conservative assumption in the analysis.

7. At present, DOE does not have definitive information on specific tracts of land or community elements that the Proposed Action could affect, so it is premature to identify specific mitigation measures categorically. If the repository was approved, however, DOE would have discussions with potentially affected units of local government and consider appropriate support and mitigation measures. DOE would also continue its ongoing interactions with Native American tribes. In addition, specific mitigation measures could be part of a Mitigation Action Plan or similar plan, such as terms and conditions to Biological Opinions from the U.S. Fish and Wildlife Service and Nuclear Regulatory Commission licensing conditions. DOE, in submitting an application to construct and operate a repository, would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of any licensing process. At this time, DOE has not decided whether to

prepare a Mitigation Action Plan. As described in Chapter 9 of the EIS, DOE intends to commit to reasonable management actions required to mitigate potential adverse environmental impacts. The Department would develop mitigation actions in cooperation with potentially affected units of local government

Section 116(c)(2)(A)(i) and (ii) of the NWPA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government…to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS. This section also allows payments to the State of Nevada and to any affected unit of local government equal to taxes they would have received if the activity was performed by a non-Federal entity.

Under the NWPA, the Section 116 impact assistance review process and the Yucca Mountain Repository EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not be limited either by the impacts identified in this EIS or by its findings on such impacts. A decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. Similarly, Section 180(c) of the NWPA requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste.

Mitigation measures discussed in the EIS include those for water use (Sections 9.2.3 and 9.3.3), cultural resources (Sections 9.2.5 and 9.3.5), biological resources (Sections 9.2.4 and 9.3.4); and public health and safety (Sections 9.2.6 and 9.3.6). Chapter 9 discusses impacts in addition to the areas mentioned in this comment. Conversely, DOE has generally not proposed mitigation measures in areas where analyses did not identify consequential impacts. In some instances, an analysis might reveal impacts for which there would be no practical mitigation measures. Decisionmakers would consider the unmitigated consequences in weighing the need for the project against the potential for adverse consequences.

With regard to this comment's example of mitigative measures for Native American interests, DOE supported the preparation of the American Indian Writers Subgroup document (DIRS 102043-AIWS 1998) and used it as a primary reference to the EIS (see Sections 3.1.6.2.2 and 4.1.13.4). DOE would include avoidance of significant archaeological sites as a mitigative action where feasible. If avoidance was not feasible, a data recovery effort would preserve the archaeological data. In addition, DOE would implement Section 180(c) of the NWPA, which requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of government and Native American tribes through whose jurisdictions transportation of spent nuclear fuel and high-level radioactive waste would occur. The training would cover procedures for safe routine transportation and for dealing with emergency response situations.

Since issuing the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and would improve operational safety and efficiency. The result of the design evolution process was the development of the flexible design (which the Supplement to the Draft EIS called the Science and Engineering Report Flexible Design). Although this design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass loading) the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain remain unchanged.

DOE would monitor impacts during the construction and operation of the repository. A postclosure monitoring program, required by 10 CFR Part 63, would include monitoring activities around the repository after closure. The regulation requires submittal of a license amendment for permanent closure of the repository [10 CFR 63.51(a)(1) and (2)]. This amendment must provide an update of the assessment for repository performance for the period after permanent closure, as well as a description of the program for postclosure monitoring. This

program would include continued oversight to prevent any activity at the site that posed an unreasonable risk of breaching the repository's engineered barriers or increasing the exposure of individual members of the public to radiation beyond allowable limits. The details of this program would be defined during the processing of the license amendment for permanent closure. Deferring final development of this program until the closure period would enable a more complete understanding of the circumstances of the repository at closure and incorporation and use of new technologies that could become available by closure.

8. DOE determined that it is not necessary to examine the composition of the general population residing along existing spent nuclear fuel and high-level radioactive waste transportation corridors before DOE can reasonably conclude that there would be no disproportionately high and adverse impacts to minority and low-income populations from the transportation of radioactive materials. In addition, as described in Chapter 6 of the EIS, incident-free transportation and the risks from transportation accidents (the maximum reasonably foreseeable accident scenario would have 2.3 chances in 10 million of occurring per year would not present a large health and safety risk to the population as a whole, or to workers or individuals along national transportation routes. The low effect on the population as a whole also would be likely for any segment of the population, including minorities, low-income groups, and members of Native American tribes.

   In response to comments, DOE also considered locations at which individuals could reside nearer to the candidate rail corridors and heavy-haul truck routes in Nevada as a way of representing conditions that could exist anywhere in potentially affected communities. For purposes of analysis, DOE assumed that a maximally exposed individual could reside or work as close as 4.9 meters (16 feet) to a potential heavy-haul truck route and 30 meters (98 feet) to a rail corridor. During the 24-year period of repository operations, if every shipment of spent nuclear fuel and high-level radioactive waste passed by these maximally exposed individuals, the would receive an estimated dose ranging from about 2 millirem (increased fatal cancer probability of 1 in 1 million) for rail shipment to about 29 millirem (increased fatal cancer probability of 2 in 100,000) for heavy-haul shipments.

   These exposures would be well below those received from natural background radiation, would not be discernible even if corresponding doses could be measured, and would not add measurably to other impacts that an individual could incur. For comparison, the lifetime likelihood of an individual incurring a fatal cancer from all other causes is about 1 in 4.

   However, the Final EIS examines the composition of the population along candidate rail corridors in Nevada. Selecting among alternative new routes may offer opportunities to avoid high and adverse impacts that would fall disproportionately on low-income or minority populations relative to the general population that would not be present when considering existing transportation corridors. Therefore, even though the health effects from exposure to radioactive materials from transportation activities would not implicate environmental justice concerns in selecting new routes, other factors such as the impacts of the construction and use of a newly created route on land use, socioeconomics, noise, air quality, and esthetics may vary by location. In response to comments, DOE has updated and refined information germane to the environmental justice analysis. For example, the EIS now includes additional and more detailed mapping and information that describes the proximity of tribal lands to rail corridors in Nevada. Section 6.3.4 of the Final EIS presents the analysis of environmental justice impacts in Nevada.

9. Federal Reserve Water Rights are noted in the footnote to Table 3-11, but are not quantified because they are not directly comparable to water appropriations authorized by the State of Nevada. As stated in the *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996), the Federal Reserve Water Rights position is that the Nevada Test Site is "…entitled to withdraw the quantity of water necessary to support the NTS missions." The Nevada Test Site EIS does not quantify or limit these rights, except for their purpose, and the repository EIS concurs with this view. With respect to identifying committed water resources, the repository EIS is obligated to identify cumulative impacts of other Federal and non-Federal actions. Chapter 8 discusses the past, present, and foreseeable future actions and associated water demands. In this manner, the EIS does indirectly identify quantities of water expected to be associated with reserved water rights (that is, if their impacts would be cumulative with those of the Proposed Action).

The purpose of Table 3-11 of the Draft EIS and its associated text is not to suggest that ample water is available. The intent is only to describe existing groundwater resources and use in the region of Yucca Mountain. DOE agrees that average withdrawals do not tell the entire story when looking at groundwater resources and their availability. This is the reason that both water appropriations and estimates of perennial yield are also shown in the table. In addition, DOE understands, though not expressed in the EIS, that the State Engineer must consider factors in addition to those shown in the table when considering requests for water appropriations.

Chapter 8 of the EIS describes the cumulative impacts of groundwater use by the Nevada Test Site, Nellis Air Force Range, and the proposed repository. Additional text has been added to Section 8.2.3.2 to better address other uses of groundwater in the area. As identified in Section 4.1.3.3, the peak projected annual water demand for the proposed action [360,000 cubic meters (290 acre-feet)], when combined with projected demand from the Nevada Test Site [350,000 cubic meters (280 acre-feet)], would approach, but would not exceed, the lowest estimate of perennial yield for the western two-thirds of the Jackass Flats hydrographic area [720,000 cubic meters (580 acre-feet)]. The corresponding discussion in Section 4.1.3.1 of the EIS (impacts from performance confirmation) is intentionally brief because of the relatively small annual water demand projected for that phase of the project. The evaluation in this section compares projected water demand to the perennial yield estimates and shows them to be minor. The addition of the Nevada Test Site demand would still put projected water withdrawals well below the lowest estimates of perennial yield, which were not mentioned.

With respect to the wide range of perennial yield figures identified for hydrographic area 227a, an explanation of the origin and basis for each of these numbers is beyond the scope of the EIS. A partial answer is that estimates of recharge are difficult and vary widely in this area where evapotranspiration is high and quantities of surface water are low. An order of magnitude difference between recharge estimates for the same study area is not unusual in the literature. The source of the perennial yield information presented in Table 3-11 of the Draft EIS is in a footnote to the table. The cited source identifies the studies from which the perennial yield values are taken and discusses those studies. The EIS recognizes that the Nevada Division of Water Planning uses an estimate of perennial yield that is not totally consistent with those listed in Table 3-11. Tables 3-35 and 3-43 of the Draft EIS both include a footnote indicating that the Nevada Division of Water Planning uses a combined perennial yield of 30 million cubic meters (24,000 acre-feet) for hydrographic areas 225 through 230. This estimate was not used in the tables because it has not been divided into the individual areas. DOE thought it important to give estimates and discuss perennial yield based on these smaller areas, so it used the best available data (on an individual hydrographic area basis). DOE believes that the EIS considers a wide range of perennial yield values, particularly for hydrographic area 227a (Jackass Flats), and that this is appropriate and conservative. The fact that the Nevada Division of Water Planing uses different values for some of the committed resources is due to the use of a more recent reference in the EIS (DIRS 103406-NDWP 1992).

As indicated above, Chapter 8 of the EIS discusses other (nonrepository) water demands in the Yucca Mountain region. However, Section 4.1.3.3 does clearly indicate that there would be an ongoing Nevada Test Site water demand from the same hydrographic area from which the Yucca Mountain Site Characterization Project would be withdrawing water. This section does not mention water demands for the Nellis Air Force Range because there are no demands in this hydrographic area. It does discuss the potential for overdraft of this hydrographic area. This hydrographic area (227a – Jackass Flats) is not an isolated basin. It receives water both from the surface (recharge from precipitation) and as underflow from upgradient areas. It also loses water as underflow to downgradient areas. As described in the EIS, withdrawing only slightly more water than the low estimate of perennial yield (which is based solely on recharge from local precipitation) would be unlikely to cause a depletion of the reservoir because of the higher quantities estimated to be moving through as underflow. However, it would probably result in a minor shifting of the general groundwater flow patterns to compensate. Since the publication of the Draft EIS, two groundwater modeling efforts have been completed to simulate the effects of the projected water demands by the repository on the groundwater flow system. The Final EIS has been modified to discuss the results of these efforts, which are consistent with the general impacts discussed above.

As indicated above, effects of overdrafting within Jackass Flats are discussed in this EIS and modifications have been added to the Final EIS to address the results of applicable modeling efforts. With respect to the Amargosa Desert, Section 4.1.3.3 of the EIS states that water demand associated with the proposed repository would have only a small impact on water availability in Amargosa Desert. That is, actual or potential overdrafting of

groundwater in the Amargosa Desert would be attributed predominantly to pumping in that area and would not be substantially affected by the amount of water needed to support the repository. Accordingly, possible impacts from overdrafting in Amargosa Desert are not discussed in the EIS. Overdrafting at Yucca Flat is not described in the EIS because it does not have a direct connection to the Proposed Action. Figure 3-13 of the Draft EIS shows that Yucca Flat is within the Ash Meadows Groundwater Basin and the direction of groundwater flow from there is toward Frenchman Flat and eventually to the Ash Meadows area and, if remaining as underflow, to the Amargosa Desert. This is consistent with the State of Nevada report *Water for Nevada* (DIRS 103016-State of Nevada 1971), which shows no groundwater inflow to this hydrographic area (area 159 – Yucca Flat), but does show its groundwater outflow going to Frenchman Flat, which also receives underflow from adjacent areas. The Nevada Test Site withdraws water from Frenchman Flat (hydrographic area 160), but at quantities far below its perennial yield (DIRS 101811-DOE 1996). Based on this picture of groundwater flow conditions, overdrafting at Yucca Flat would be expected to result in very localized conditions, probably not even extending far into Frenchman Flat because the combined water use for these two areas (Yucca and Frenchman Flats) is only a small fraction of their combined perennial yield [1.8 million cubic meters (1,400 acre-feet) of peak annual water demand versus 16,350 acre-feet of perennial yield (DIRS 101811-DOE 1996)]. Any affects on the groundwater flow from Yucca Flat overdrafting would surely be lost by the time groundwater flow reaches the southern end of the Amargosa Desert where impacts could be cumulative with those of the Proposed Action. Accordingly, Chapter 8 discusses impacts of the total water demand and cumulative impacts from the Nevada Test Site and the Proposed Action and does not address noncumulative issues that are internal to the Test Site.

10. The EIS identified a land withdrawal area in Section 3.1.1.3 to comply with regulations issued by the Nuclear Regulatory Commission concerning land ownership and control for a repository at Yucca Mountain (10 CFR Part 63). The safety of the repository requires DOE to demonstrate with a reasonable expectation that the long-term performance of the repository can meet the environmental radiation-protection standards established by the Environmental Protection Agency (40 CFR Part 197). Essentially all of the land identified for withdrawal (that is, about 229 out of 230 square miles) is Federal land. About 1 square kilometer at the southern end is private land. There is no State land or tribal land within the withdrawal area. If Congress withdrew the land for a repository as discussed in Section 4.1.1.1 of the EIS, it could specify conditions for other land uses as part of the withdrawal. The land withdrawal could eliminate currently existing opportunities for multiple use, including recreation, mineral exploration and mining. Because the lands within the withdrawal area do not have unique characteristics that have historically attracted the public, and because large tracts of public land occur nearby, DOE believes that the impacts to people who use this land would be negligible. DOE acknowledges in the EIS that Native Americans consider the intrusive nature of the repository to be an adverse impact to all elements of the natural and physical environment.

11. The statement in the Draft EIS on page 5-47, “There is considerable uncertainty in the estimates of soil temperature increases due to uncertainties in the thermal properties of the soil…” is misleading. There are some uncertainties in the thermal properties of the soil but these do not cause “considerable uncertainty” in the estimates of soil temperature increase. DOE has revised the text of the EIS to reflect this. While the Department acknowledges that some uncertainties exist in thermal properties of Yucca Mountain soils, the EIS modeling effort used the best available information for predicting average soil temperature increases. The model did not use the weekly to monthly soil temperatures to which the commenter refers because the time scale “could not be used to accurately estimate the soil thermal conductivity” (DIRS 103618-CRWMS M&O 1999). Rather, it used only hourly soil temperature measurements, which allowed the use of diurnal fluctuations to estimate the thermal diffusivity of the soil and provided a calibration for the thermal diffusivities modeled for wet, dry, and nominal soils. The thermal diffusivity obtained from the hourly soil temperature measurements was similar to that estimated for soils under wet conditions. Therefore, the thermal diffusivity estimated for dry soil represents a conservative value on predicted soil temperature increase, and the “available data suggest very modest temperature rises due to repository heat effects” (DIRS 103618-CRWMS M&O 1999). DOE has revised the EIS to clarify the reasons why dry soil thermal conductivity provides a conservative prediction of soil temperature increase. Temperature changes used to evaluate impacts were based on dry soils, and therefore cover the range of possible effects of soil warming on desert tortoises and other biological resources.

As described in Section 5.9 of the EIS, based on these conservative calculations, the predicted increase in soil temperature at the shallow depth at which tortoises lay eggs would be very small compared to the range of natural variation in soil temperatures at Yucca Mountain (DIRS 105031-CRWMS M&O 1999) and the range of temperatures at which desert tortoise eggs have been successfully incubated. This small change in temperature, therefore, should have no adverse affect on tortoise eggs. Because of this and the small size of the affected area [about 3 square kilometers (740 acres)], DOE believes that impacts to the desert tortoise from heat generated by the proposed repository would be minimal.

12. DOE does not believe that quantitative analysis is either missing or required to conclude that the Proposed Action would have little effect on biological resources at Yucca Mountain. As stated in Section 4.1.4 of the EIS, the most important impacts of repository construction and operation on desert plants and animals would be the disturbance of about 3 to 7 square kilometers (about 800 to 1,700 acres) of land and the continuation of traffic and human presence. These activities would occur in a region with few other disturbances and would affect species that are common and widespread throughout the region. DOE based the conclusion that the Proposed Action would have little effect on desert tortoises on detailed site-specific research on the tortoise populations at Yucca Mountain during site characterization. That research confirmed that activities similar to those proposed have little effect on adjacent populations. DOE has modified Sections 4.1.4.1 and 4.1.4.2 of the EIS to better explain its conclusions about impacts to desert tortoises.

    The withdrawal of land surrounding the repository would protect a substantial area near the edge of the range of the tortoise from potential stressors that could occur if the land in the withdrawal area was developed for other uses.

13. The Final EIS presents the baseline information for economic measures to 2035. The intent of the cited statement in Section 4.1.6.2.1 is that there would not be a significant decline in the economy due to the closure of the repository. It does not indicate that individual workers might not be absorbed into the local economy fully using their "repository skills." This would be no different than the closure of any workplace, such as a manufacturing facility, where displaced employees might have to change occupations or move, although the impacts to the local economy might be small.

14. This comment takes issue with Section 6.3.2.2.1 of the EIS, which indicates "[t]he projected length of the corridor – 513 kilometers (319 miles) – is the most important factor for determining the number of workers [560] that would be required." Because DOE based the identification of the alternative corridors on a range of factors including land ownership, engineering, and terrain or steepness of grade, the length of the corridor inherently reflects of the weighing and balancing of these other factors. As a consequence, the length of a branch rail line would influence the number of workers required and worker productivity because of the engineering requirements and possible routing constraints in the initial layout of the corridor.

    With regard to the socioeconomic analyses in which the cited statement appears, the number of workers is the fundamental parameter for estimating other potential changes to the economy such as Gross Regional Product, disposable income, and State and local spending.

15. The EIS evaluated potential impacts from a regional volcanic eruption. Section H.2.1.3 of the EIS concludes that 3 centimeters (about 1.2 inches) is the maximum thickness of tephra (solid material; ash) from a "regional volcanic eruption, which is more likely," that could be deposited on repository facilities. Analyses to date indicate that such an event would not affect structures such as the Waste Handling Building, where DOE would process casks.

    The EIS analysis used a thickness-versus-distance curve from Miller et al. (DIRS 152166-1982). This curve shows that ash from the Long Valley Caldera/Mono-Inyo Volcanic area [about 250 kilometers (155 miles) west of Yucca Mountain] would deposit about 1 centimeter (0.4 inch) of ash at the proposed repository. The same volume of material from an eruption in the closer Coso Volcanic Field [about 150 kilometers (93 miles) southeast of Yucca Mountain] would deposit 2 to 3 centimeters (0.8 to 1.2 inches) of volcanic ash at the repository (DIRS 102889-Perry and Crow 1990).

16. Supporting analyses or references related to issues in this comment are available in the *Environmental Baseline File: Archaeological Resources* (DIRS 104997-CRWMS M&O 1999). That document includes a bibliography of cultural resource reports that contain specific details requested by the commenter. These documents are available from the Yucca Mountain Project Public Reading Room. DOE believes the level of information provided in the EIS is sufficient for decisionmakers to understand the issues and potential for impacts on archaeological and cultural resources.

    Archaeological field studies in support of the Yucca Mountain Project have been conducted since 1982 by the staff of the Desert Research Institute. Based on project needs during this period, several methodologies have been employed to characterize and protect archaeological sites and data. These include (1) use of existing archaeological data from previous projects, (2) intensive archaeological field surveys and limited subsurface testing, (3) preactivity surveys at areas ahead of planned ground-disturbing activities for areas lying outside of the acreage surveyed under the previous category, (4) data recovery, (5) random sample unit surveys for larger tracts outside the withdrawal area, and (6) archaeological site monitoring to assess changes to significant sites over time.

    Specific field methods and techniques employed at Yucca Mountain are outlined in the following documents:

    1. *Programmatic Agreement Among the United States Department of Energy, The Advisory Council on Historic Preservation and the Nevada State Historic Preservation Officer for the First Nuclear Waste Deep Geologic Repository Program, Yucca Mountain, Nevada*. (DIRS 157145-Gertz 1988)

    2. *Research Design and Data Recovery Plan for Yucca Mountain Site Characterization Project* (DIRS 103196-DOE 1990)

    3. *Environmental Field Activity Plan for Archaeological Resources* (DIRS 103198-YMP 1992)

    4. *Branch Technical Procedures: Field Archaeology* (DIRS 157150-DRI 1990)

    In addition to these generic documents, several project-specific individual research designs have been prepared for individual field survey, testing, and data recovery efforts undertaken by the Desert Research Institute. Copies of these documents are available from the Desert Research Institute, DOE, and the State Historic Preservation Officer.

    DOE used the combined information derived from implementation of the methods noted above to provide the summarization for the EIS. While precise figures (number of acres) have not been compiled for the entire land withdrawal area, all areas associated with the repository site that have either been disturbed by past site characterization activities or that are proposed for disturbance during repository construction and operation have been inventoried for archaeological resources. Archaeological data for other parts of the larger withdrawal area have received varying levels of archaeological study, ranging from random sample unit surveys to intensive coverage associated with preactivity activities away from the repository site. In some instances, known archaeological site data also are derived from surveys conducted by other agencies and/or projects (for example, Bureau of Land Management, Nellis Air Force Base, and the Nevada Test Site) on lands not currently managed by the Yucca Mountain Project.

    All of the historic sites discussed in Section 3.1.6 of the EIS are associated with non-Native American occupation and use of the area. Section 3.1.6.2.2 discusses historic-period Native American sites, which are documented in the Native American resource document prepared by the Consolidated Group of Tribes and Organizations' American Indian Writers Subgroup (DIRS 102043-AIWS 1998).

17. The Draft EIS methodology for estimating source concentrations was detailed in Appendix I on pages I-15 to I-18 (Section I.3.2.3.1). This section describes in detail how the values in Tables I-11 and I-12 were developed using the EQ3/6 software. The values in Tables I-11 and I-12 were then used to develop the screening information in Table I-13 as explained in section I.3.2.3.2 (pages I-18 to I-19). This screening process determined which elements required more rigorous analysis (taking into account many other mitigating processes). Chemicals eliminated in the screening process demonstrated such low potential concentrations, in

these calculations, that more rigorous analysis (which would account for additional mitigating processes) was unnecessary to establish there would be no significant impacts. In the screening analysis, EQ6 simulations of the reaction of the solution resulting from corrosion with the host rock demonstrated that nearly all the dissolved nickel would precipitate (resulting in a concentration of only about 0.0001 milligram per liter) upon contact with the crushed tuff invert (see Draft EIS Table I-12 and accompanying discussion). For this reason, nickel was not considered further in the impact analyses. Detailed analysis for those chemicals not screened out are described in Section I.6 of the Draft EIS. This material was referred to in Chapter 5 of the Draft EIS on page 5-39.

The Final EIS analyzes the new waste package design (Alloy-22 outer shell with stainless-steel sleeve). The new analysis conservatively assumes the nickel reaction with tuff would not take place. As detailed in Section I.6 of the Final EIS, bounding calculations (not taking into account many mitigating processes) still indicate a nickel concentration producing only a small fraction of the oral reference dose for nickel.

18. These sections differed because some addressed exposure of workers during working hours, while others addressed the continuous exposure of members of the public. Sections 3.1.8.2 and F.1.1.6 are specifically concerned with the potential exposure of workers. Radon concentrations at points of exposure within the repository and several kilometers from repository ventilation exhaust are considerably different. The use in the Draft EIS was consistent and appropriate.

    The Final EIS uses more recent repository radon flux information that has become available since the Draft EIS was published. This new information has replaced much of the information used as the basis of estimates in the Draft EIS. Dose estimates to subsurface workers from radon decay products now use Working Level estimates made for the flexible design (DIRS 154176-CRWMS M&O 2000). Section F.1.1.6 of the Final EIS describes these dose estimates. Working Level estimates can be converted to estimates of dose using a published conversion factor (DIRS 103279-ICRP 1994). Dose estimates for members of the public are also based on new estimates of radon release from the repository, which take advantage of new analyses of ventilation and radon flux from the repository walls (DIRS 150246-CRWMS M&O 2000; DIRS 154176-CRWMS M&O 2000). Section 4.1.2 reports revised dose estimates for the public from radon.

    Information was not available for the Draft EIS to take into account the effect of heating of the emplacement drift walls by the waste packages. The analyses noted above have addressed the effect of heating (DIRS 154176-CRWMS M&O 2000), and the Final EIS takes this factor into account. All analysis scenarios for the Draft and Final EIS account for the effects of different repository sizes or volumes. A larger repository has a correspondingly larger radon release. However, the radon flux from repository walls and total radon release is not directly proportional to the total repository volume. Radon flux and release depend on the specific characteristics of the repository, including the relative quantity of larger-diameter excavations such as access mains, 5.5-meter (18-foot)-diameter excavations such as emplacement drifts, and smaller excavations such as ventilation raises. Radon release also depends upon the project phase, and whether or not a specific excavation would have a concrete liner (which would reduce radon flux).

    The statement in Section 4.1.7.3.1 of the Draft EIS that radiological health impacts in the “surface” facilities are independent of thermal load scenarios is unrelated to subsurface radon release. The bulk of dose to surface workers is due to handling of spent nuclear fuel, which depends on the facility throughput, (that is, 63,000 metric tons of heavy metal for the Proposed Action). The dose contribution from radon released from the subsurface is negligible. These statements remain correct for the Flexible Design evaluated in the Final EIS. Additional clarification on the contribution of subsurface radon to workers doses has been added.

    Sections G.2 and F.1.1.6 have been extensively revised in the Final EIS to present the new information noted above, as have the corresponding impacts in Sections 4.1.2 and 4.1.7.

19. DOE recognizes that neither No-Action scenario is likely to occur (see Section 2.2 and the introduction to Chapter 7 of the EIS). However, they were identified to provide a basis for comparison to the Proposed Action and because they reflect a range of potential impacts that could occur from the continued storage of material at these sites. For example, the impacts associated with the first 100 years of effective institutional control (either Scenario 1 or Scenario 2 of the No-Action Alternative) enable a direct comparison to the impacts of the

Proposed Action during the first 100 years after closure of the repository. For purposes of analysis and to be consistent with the Proposed Action, Scenario 2 does not assume credit for institutional control after approximately 100 years. Under this scenario storage facilities and spent nuclear fuel and high-level radioactive waste would degrade, and radioactive material would eventually enter the accessible environment. This assumption is based upon a review of generally applicable Environmental Protection Agency regulations for the disposal of spent nuclear fuel and high-level radioactive waste (40 CFR Part 191) and the National Academy of Sciences review of standards for the proposed Yucca Mountain Repository (DIRS 100018-National Research Council 1995). Each of these references generally discounts the consideration of institutional control for longer periods of performance assessments for geologic repositories.

Section K.4.1.1 of the EIS discusses the uncertainties associated with changes in societal values that could lead to the loss of institutional controls. Although these conditions might be difficult to imagine happening in the United States, they are not unlike what has occurred recently in the former Soviet Union and Germany prior to the end of World War II. The evaluation of Scenario 2 was not included in the EIS as a scare tactic. In fact, DOE took extreme care to avoid overestimating any impact from the No-Action Alternative. By intentionally using a realistic best estimate modeling approach (see Section K.1) and by not including all potential human exposure pathways (see Section K.3.1), DOE concludes that the impacts of such a scenario might have been underestimated by several orders of magnitude (Section K.4).

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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June 29, 2001

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Mr. Lake H. Barrett, Acting Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy, Headquarters
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Mr. Barrett:

As you know, the U.S. Department of Energy (DOE) published a notice of availability, in the Federal Register on May 4, 2001, of a supplement to its draft environmental impact statement (DEIS) (hereafter referred to as the SDEIS), for a proposed geologic repository for the disposal of spent nuclear fuel and other high-level radioactive waste (HLW) at Yucca Mountain in Nevada. In the context of the Nuclear Waste Policy Act (NWPA), as amended, DOE is the lead agency for developing the proposed repository and considering potential environmental impacts. For its part, NRC is to adopt DOE's final environmental impact statement (FEIS), to the extent practicable, as part of any potential NRC licensing action related to the repository.

Consistent with its NWPA responsibilities and its role as a DEIS commenting agency, the NRC provided comments to DOE on its DEIS in a letter dated February 22, 2000. NRC's comments on the recently published SDEIS are enclosed. The enclosed comments and NRC's February 2000 comments on the DEIS are provided to ensure that the FEIS is more complete.

Please contact Charlotte E. Abrams, of my staff, if you have any questions about this letter or the enclosure. Ms. Abrams can be reached at (301) 415-7293.

Sincerely,

Martin J. Virgilio, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure:
"U.S. NRC's Comments on U.S. DOE's Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada"

cc: Dr. Jane R. Summerson

See attached list

Letter to L.H. Barrett from M. Virgilio dated: June 29, 2001 **010248**

cc:

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A. Brownstein, DOE/Washington, DC	A. Funk, Mineral County, NV
S. Hanauer, DOE/Washington, DC	J. Shankle, Mineral County, NV
C. Einberg, DOE/Washington, DC	L. Bradshaw, Nye County, NV
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L. Desell, DOE/Washington, DC	B. Price, Nevada Legislative Committee
E. Turner, DOE/Washington, DC	D. Weigel, GAO
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J. Curtiss, Winston & Strawn	D. Duncan, USGS
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A. Kalt, Churchill County, NV	W. Booth, Engineering Svcs, LTD
G. McCorkell, Esmeralda County, NV	N. Rice, NV Congressional Delegation
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A. Johnson, Eureka County, NV	J. Reynoldson, NV Congressional Delegation

2

A. Remus, Inyo County, CA
M. Yarbro, Lander County, NV
S. Joya, NV Congressional Delegation
J. Pegues, City of Las Vegas, NV

2001-04-09

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U.S. NUCLEAR REGULATORY COMMISSION'S COMMENTS ON THE U.S. DEPARTMENT OF ENERGY'S "SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A GEOLOGIC REPOSITORY FOR THE DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA"

This enclosure provides comments, by the U.S. Nuclear Regulatory Commission (NRC) staff, on the May 2001 supplement to the draft environmental impact statement (DEIS) (hereafter referred to as the SDEIS) prepared by the U.S. Department of Energy (DOE) for a proposed geologic repository for the disposal of spent nuclear fuel (SNF) and other high-level radioactive waste (HLW) at Yucca Mountain (Nye County), Nevada.

In its review of the SDEIS, NRC has four comments, as noted below, that address the following areas: identification of a Proposed Action; impacts from the design options; new or modified facilities associated with the Science and Engineering Report (S&ER) flexible design; and the assessment of radiological impacts associated with the S&ER flexible design.

Comment No. 1

1 Consistent with its February 2000 comments on the DEIS, the NRC staff believes that DOE's final environmental impact statement (FEIS) should more clearly define a Proposed Action for each component of the proposed activity.

Basis:

The environmental impact statement development process is intended to address a wide range of possible impacts of this complex geotechnical project. A significant amount of information, including multiple options for key components of the Proposed Action, was presented in the August 1999 DEIS (U.S. Department of Energy, 1999). However, as noted in its February 2000 comments on the DEIS, the NRC staff continues to believe that DOE's final environmental impact statement (FEIS) should more clearly define a Proposed Action comprised of: (i) a preferred option for each component; or (ii) a bounding analysis that provides a better understanding of the potential impact of each component, as well as their combined impacts. NRC recognizes the utility of DOE's preserving, to the extent possible, repository design flexibility, as outlined recently in the S&ER supporting the DEIS and the SDEIS. However, the DEIS did not identify a preferred option for each component of a possible geologic repository and the SDEIS does not define a preferred option for the design of a repository. Consequently, it is not clear that environmental impacts that could arise from a repository have been bounded.

Recommendation

In the interest of improving the focus of its National Environmental Policy Act analysis in its FEIS, DOE should prepare an appropriate analysis of a clearly defined Proposed Action, or provide sufficient information and analysis of the various operational approaches to demonstrate that the environmental impacts of the proposed repository are bounded.

Enclosure

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Comment No. 2

2... The SDEIS provides several new design and operational features proposed to meet thermal criteria. DOE should ensure that sufficient information is provided to enable assessment of the direct, indirect, and cumulative impacts.

Basis

In the SDEIS, DOE describes two thermal operational approaches to control temperature at the drift pillars and the waste package surface. For the high-temperature operation mode, at least some portion of the drift pillars would have temperatures above the boiling point of water. The low-temperature operating mode is designed to ensure temperatures below the boiling point at all times and waste package surface temperatures below 85 degrees Centigrade. To achieve either temperature scenario, DOE describes five potential operational approaches: increased drift spacing, increased preclosure ventilation, surface aging of commercial fuel, fuel blending, and variable line loading. Depending on the approaches selected, the operational and monitoring period may extend beyond 300 years, with as long as 50 years allowed for waste emplacement.

NRC recognizes the value of maintaining flexibility in selecting operational approaches to enhance repository performance. However, many combinations of the operational approaches are likely to achieve the overall thermal goals, and each combination is likely to have a different set of impacts. For example, lower rates of ventilation may require larger spacing between waste packages, which may, in turn, lead to a larger repository with a greater volume of excavated rock and an expansion of the repository closer to key features such as the high ground-water gradient area to the north and across an additional fault zone. Similarly, the flexible pre-closure ventilation design could increase radon release through the use of forced ventilation. Without a clear description of the preferred option or without estimating impacts explicitly for each option, there is no basis for concluding that the full range of impacts has been presented in the DOE analyses.

Several of the flexible design operational approaches include new features not considered in the DEIS. In some instances, the SDEIS analyses multiply DEIS impacts by a proportionality constant to obtain impacts associated with the S&ER flexible design. Because many of the impacts cited in the SDEIS are the result of new design features (e.g., surface-aging facility, titanium drip shields) and altered time frames in the various flexible operational approaches, an adequate technical basis is required for use of the proportionality constants. For example, it is not clear that the thermal effects imposed by the flexible design would be linear and therefore amenable to quantification based on a proportionality constant. Similarly, impacts from constructing and operating the surface-aging facility may be spread over as many as 50 years, and include the construction of concrete pads covering 200 acres, and fabricating and placing up to 4500 dry-storage canisters and casks on these pads (Mattsson, 2000; U.S. Department of Energy, 2001a, Table 3-11). These new features are substantive modifications of the DEIS design and individual and cumulative impacts may not scale in a linear fashion .

The full range of impacts of the new operational approaches are not addressed. Waste package emplacement is discussed in detail in the SDEIS (Section 2.3.3.3), but certain potential activities are not discussed. They include, for example: (i) loading dry storage canisters and casks for the SNF aging facility; (ii) removing pallets and waste packages for repair and re-emplacement; (iii) maintaining drifts, waste packages, and other engineered barriers; (iv) moving waste packages to adjust thermal load; (v) retrieving waste packages; (vi) installing and maintaining drip shields; and (vii) constructing and using performance-confirmation drifts. It is also not clear whether the impact assessments include off-normal

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2 cont. events, accidents, or other events outside of the base case. For example, the impacts from manufacturing and shipping as much as 60,000 metric tons of fabricated titanium drip shields are not fully addressed, nor is the potential for worker injury or exposure during drip-shield emplacement. The drip shield is a new design feature and is not addressed in the offsite impact analyses included in the DEIS.

Recommendation
The FEIS should include an analysis of impacts associated with all potential operational activities related to a preferred design option. As an alternative, the FEIS could estimate impacts separately for a suite of proposed operational approaches. The specific environmental concerns associated with each primary impact indicator should be identified. The FEIS should also provide a technical basis to demonstrate that the full range of direct, indirect, and cumulative impacts has been included in the analyses. In addition, the FEIS should improve the technical justification for the use of linear thermal load proportionality factors.

3 **Comment No. 3**
The S&ER flexible design includes new or modified facilities, land uses, and changes in infrastructure. Environmental impacts from construction and operation of these repository features are not included in the SDEIS. A more thorough impact assessment is necessary for major changes incorporated in the S&ER flexible design.

Basis
The SDEIS (Table S-2) indicates that environmental impacts associated with the S&ER flexible design include potentially significant changes in ground use, radon release, peak electrical power requirements, fossil fuel requirements, construction and demolition debris, and waste generation. Although the SDEIS provides a relatively thorough description of the different approaches to the potential design and operating bounds of the proposed S&ER flexible design, a detailed description of these new facilities and analyses of their environmental impacts has not been included.

Foremost among the new facilities is the proposed separate, at-surface fuel-aging area. As part of the lower-temperature, flexible-design operating mode, DOE has proposed placing younger fuel in a surface-aging area, to allow heat dissipation before underground disposal, as a method of controlling repository temperatures (U.S. Department of Energy, 2001a, p. 2-8). This facility would age as much as 40,000 MTHM (metric tons of heavy metal) of SNF (or about 60 percent of repository-destined waste) over a 50-year period (Id.). Aging time is directly related to potential impacts associated with surface storage of SNF; however, only limited impact analysis of this new design feature has been provided in either the SDEIS or the S&ER. There is a similar concern regarding the proposed blending pool in the waste-handling building with a proposed design capacity of 5000 MTHM (p. 2-15). It is not apparent that DOE has prepared an impact analysis of this major new design feature.

Other examples of new design features that lack adequate descriptions and impact assessments (i.e., land and water use, impact on ground-water quality) include the solar power generating facility, and the wind farm. The environmental impacts of all features of a proposed design, as well as alternatives, need to be identified and evaluated.

Recommendation
DOE should expand the description and environmental impact analyses for major new features of the S&ER flexible design in the FEIS.

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Comment No. 4

4 Estimates of the radiological impacts of the flexible design require additional technical basis.

Basis

The SDEIS (U.S. Department of Energy, 2001a, Section 3.1.7) states that "[e]xposed workers include both radiation workers and some general employees.... DOE used the total number of exposed worker-years to estimate potential impacts from the radiation dose received from this exposure, namely the number of latent cancer fatalities...." The SDEIS does not define the number of general employees, the lengths of their exposures, or the exposure levels associated with different phases of operation that were applied in estimating latent cancer fatalities.

In addition, the lower-temperature design option may require preclosure ventilation for a period beyond 300 years. Ensuring that the emplacement drifts remain clear and unobstructed from rockfall or drift collapse during this period is therefore important. The SDEIS does not appear to address the impacts of drift support system maintenance on worker exposure.

Recommendation

The FEIS should provide a more complete assessment of the radiological impacts of the flexible design, including maintenance activities associated with an extended preclosure period.

References

Mattsson, C.G., "Repository Surface Design Engineering Files Letter Report – Non-Boiling Repository Surface Facilities Conceptual Design," Letter from C.G. Mattsson (Civilian Radioactive Waste Management System Management and Operating Contractor) to K.J. Skipper (DOE/Yucca Mountain Site Characterization Office), July 21, 2000.

U.S. Department of Energy, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS–0250D, North Las Vegas, NV: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 1999.

U.S. Department of Energy, "Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS–0250D–S. North Las Vegas, NV: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 2001a.

U.S. Department of Energy, "Yucca Mountain Science and Engineering Report: Technical Information Supporting Site Recommendation Consideration. DOE/RW–0539. Washington, DC: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 2001b.

U.S. Nuclear Regulatory Commission, "U.S. Nuclear Regulatory Commission's Comments on U.S. Department of Energy's Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-level Radioactive Waste at Yucca Mountain, Nye County, Nevada," Washington, DC: U.S. Nuclear Regulatory Commission, 1999.

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RESPONSES TO U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10248)

1. In the Draft EIS and the Supplement to the Draft EIS, DOE analyzed a variety of scenarios and implementing alternatives that it could deploy to construct, operate and monitor, and eventually close a repository at Yucca Mountain. The purpose of these scenarios and implementing alternatives, which reflect potential design considerations, waste packaging approaches, and modes for transporting spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site, was to: (1) provide the full range of potential environmental impacts of the Proposed Action and No-Action Alternative; (2) reflect potential decisions, such as the mode of transport, that the EIS would support; and (3) retain flexibility in the design of the repository to maintain the ability to reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The design and operation enhancements presented in the Supplement have been carried forward to the Final EIS.

   Many of the issues relating to how a repository would be operated and how the spent nuclear fuel and high-level radioactive waste would be packaged would be resolved only in the context of developing the detailed design for a possible license application. DOE cannot predict with certainty how it would eventually resolve these issues. However, to enable an improved understanding of the potential environmental impacts from a more specifically defined Proposed Action, DOE has identified its preferred alternatives, simplified aspects of the Proposed Action, and modified its analyses and presentation of information to illustrate the full range of potential environmental impacts likely to occur under any foreseeable mode of transportation, or repository design and operating mode. Thus, for example, DOE has identified rail as its preferred mode of transport both nationally and in Nevada, and demonstrated through analysis that the mostly truck and mostly rail national transportation scenarios provide the full range of environmental impacts.

   In the Final EIS, DOE has identified and analyzed a range of operating modes from higher- to lower-temperature. Chapter 2 of the EIS and other related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the flexible operating modes are waste package spacing, length of active ventilation, and waste package loading (principally the age of the fuel being emplaced). The range of variances in these parameters basically determine the extent of the repository design that will be utilized for emplacement of 70,000 metric tons of waste and fuel; the higher-temperature operating mode would require only the main central segment of the repository, several of the lower-temperature operating modes would use that segment and the western extension, while the “ultra” low-temperature operating mode would require use of the entire planned initial design.

2. In the Draft EIS, DOE evaluated a preliminary design based on the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) that focused on the amount of spent nuclear fuel (and associated thermal output) that DOE would emplace per unit area of the repository (called areal mass loading). Areal mass loading was represented for analytical purposes in the Draft EIS by three thermal load scenarios: a high thermal load of 85 metric tons of heavy metal (MTHM) per acre, an intermediate thermal load of 60 MTHM per acre, and a low thermal load of 25 MTHM per acre. DOE selected these analytical scenarios to represent the range of foreseeable design features and operating modes, and to ensure that it considered the associated range of potential environmental impacts within the framework of a design the central feature of which was areal mass loading.

   Since DOE issued the Draft EIS, it has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The result of the design evolution process was the development of the flexible design that was evaluated in the Supplement to the Draft EIS and is evaluated in this Final EIS. This design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass

loading) by varying other parameters such as the heat output per unit length of the emplacement drift and the distances between waste packages. Within this design framework of controlling the temperature of the rock, DOE selected these lower- and higher-temperature operating modes to represent the range of foreseeable design features and operating modes, and to ensure that it considered the associated range of potential environmental impacts (DOE recognizes that many of the short-term impacts tended to increase over those discussed in the Draft EIS).

In this Final EIS, DOE varied design parameters to create scenarios to illustrate lower- and higher-temperature operating modes in such a way as to provide the range of potential environmental impacts. Furthermore, to not underestimate the environmental impacts that could result from implementing any of the lower- or higher-temperature operating modes, DOE has relied on conservative, yet realistic, assumptions when uncertainties remain.

3. In this Final EIS, DOE has updated and expanded the description of the flexible design and associated facilities, as well as performed a complete analysis to describe the range of potential environmental impacts that could occur under the Proposed Action. The tables in Section 2.4 of the Final EIS demonstrate the bounding nature of the flexible operating modes within the construct of a fixed design.

4. In the Supplement to the Draft EIS total worker years are used as a primary impact indicator for occupational health and safety impacts. As noted on page 3-1, "The Department used the ratio of primary impact indicators to specific impacts in the Draft EIS to determine the Supplement impact estimates." Therefore, in the analysis the base ratio of involved (including radiation workers) workers to noninvolved (including general employees) workers was the kept the same as for the Draft EIS. The exposure [dose] levels used were the same as described in Appendix F of the Draft EIS. The total dose to each of these worker populations was changed accordingly for the total length flexible design being considered as compared to the Draft EIS high thermal load scenario. The additional time needed for repository monitoring and maintenance was included in the Supplement estimates. A complete analysis of worker impacts under the flexible design operating modes is presented in Section 4.1.7 of the Final EIS. Section 4.1.7.5 shows that over the duration of the project construction, operation and monitoring, and closure phases the dose to the maximally exposed worker is about the same as shown for the thermal load scenarios in the Draft EIS.

CONVERSIONS

METRIC TO ENGLISH			ENGLISH TO METRIC		
Multiply	**by**	**To get**	**Multiply**	**by**	**To get**
Area					
Square meters	10.764	Square feet	Square feet	0.092903	Square meters
Square kilometers	247.1	Acres	Acres	0.0040469	Square kilometers
Square kilometers	0.3861	Square miles	Square miles	2.59	Square kilometers
Concentration					
Kilograms/sq. meter	0.16667	Tons/acre	Tons/acre	0.5999	Kilograms/sq. meter
Milligrams/liter	1[a]	Parts/million	Parts/million	1[a]	Milligrams/liter
Micrograms/liter	1[a]	Parts/billion	Parts/billion	1[a]	Micrograms/liter
Micrograms/cu. meter	1[a]	Parts/trillion	Parts/trillion	1[a]	Micrograms/cu. meter
Density					
Grams/cu. cm	62.428	Pounds/cu. ft.	Pounds/cu. ft.	0.016018	Grams/cu. cm
Grams/cu. meter	0.0000624	Pounds/cu. ft.	Pounds/cu. ft.	16,025.6	Grams/cu. meter
Length					
Centimeters	0.3937	Inches	Inches	2.54	Centimeters
Meters	3.2808	Feet	Feet	0.3048	Meters
Kilometers	0.62137	Miles	Miles	1.6093	Kilometers
Temperature					
Absolute					
Degrees C + 17.78	1.8	Degrees F	Degrees F – 32	0.55556	Degrees C
Relative					
Degrees C	1.8	Degrees F	Degrees F	0.55556	Degrees C
Velocity/Rate					
Cu. meters/second	2118.9	Cu. feet/minute	Cu. feet/minute	0.00047195	Cu. meters/second
Grams/second	7.9366	Pounds/hour	Pounds/hour	0.126	Grams/second
Meters/second	2.237	Miles/hour	Miles/hour	0.44704	Meters/second
Volume					
Liters	0.26418	Gallons	Gallons	3.78533	Liters
Liters	0.035316	Cubic feet	Cubic feet	28.316	Liters
Liters	0.001308	Cubic yards	Cubic yards	764.54	Liters
Cubic meters	264.17	Gallons	Gallons	0.0037854	Cubic meters
Cubic meters	35.314	Cubic feet	Cubic feet	0.028317	Cubic meters
Cubic meters	1.3079	Cubic yards	Cubic yards	0.76456	Cubic meters
Cubic meters	0.0008107	Acre-feet	Acre-feet	1233.49	Cubic meters
Weight/Mass					
Grams	0.035274	Ounces	Ounces	28.35	Grams
Kilograms	2.2046	Pounds	Pounds	0.45359	Kilograms
Kilograms	0.0011023	Tons (short)	Tons (short)	907.18	Kilograms
Metric tons	1.1023	Tons (short)	Tons (short)	0.90718	Metric tons
ENGLISH TO ENGLISH					
Acre-feet	325,850.7	Gallons	Gallons	0.000003046	Acre-feet
Acres	43,560	Square feet	Square feet	0.000022957	Acres
Square miles	640	Acres	Acres	0.0015625	Square miles

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

METRIC PREFIXES

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

Table CR-1. Index to comments by organizations.

Commenter	Comment Document	Location of Comments/Responses
Action for a Clean Environment		
Kushner, Adele	EIS001658	8.3 (149), 8.3 (161), 8.10.2 (114), 8.8.3 (171), 3.1 (15)
Alabama, State of, Public Service Commission		
Hanes, Eugene G.	EIS000279	5.2 (26), 4.5 (99), 8.3 (149), 8.3 (60)
	EIS001962	4.5 (99), 3.2 (64), 5.2 (26), 8.3 (149), 8.3.2 (136)
Alkor Technologies Co.		
Koshemchuk, Sergey K.	010404	No comments
Alliance for Nuclear Accountability		
Eldredge, Maureen	EIS000443	3.2 (80), 4.2 (1872), 1.2 (77), 3.2 (64), 7.5.6 (130), 8.8.1 (196), 8.4 (115), 8.10.2 (114), 11.1 (1877), 8.1 (170), 8.3 (161), 7.3 (1880), 2 (100)
	EIS001922	5.1 (27), 3.2 (80), 3.2 (64), 7.5.3.2 (8927), 4.2 (8931), 7.3 (71), 7.1 (8935), 4.3 (129), 7.5.2 (8940), 8.8.1 (8946), 8.10.2 (114), 3.9 (109), 8.3 (161), 7.5.11.2 (181), 3.2 (90), 7.3 (256), 3.3 (8990)
Gordon, Susan	010316	3.6 (257), 3.5 (204), 3.2 (55), 4.2 (11453), 7.4 (125), 9.1 (250), 7.5.11.2 (181)
Alliance of Atomic Veterans		
Hilfenhaus, Charles	EIS000150	6.1 (49), 7.3.1 (611), 4.5 (217), 5.3 (164)
American Nuclear Society		
Bradley, Harry	EIS001314	5.2 (26)
	EIS001592	5.2 (26)
American Nuclear Society, Savannah River Section	EIS000300	5.2 (26), 3.2 (80), 4.5 (107), 13 (5)
Dewes, John		
Americans for Clean Responsible Energy		
Wolfe, Bertram	EIS002243	7.5.7 (66), 8 (158), 1.2 (78), 5.2 (26)
	EIS002266	13 (5)
	EIS002293	8.11.7 (11679), 5.2 (26)
Aon Consulting		
Garasky, Maybeth	010233	8.1 (170)
Aquarius Engineering		
Baker, Donald L.	EIS000029	7.5.3.2 (12517)
	010382	7.5.3.2 (11737)
Arizona Safe Energy Coalition		
Schroeder, Betty	EIS001096	5.1 (27), 4.5 (92), 4.3 (70), 5.5 (183)
Arizona, State of, Radiation Regulatory Agency		
Godwin, Aubrey V.	EIS001975	1.2 (81), 8.3.1 (20)
Ashtabula, Ohio, City Council		
Misener, Jill	EIS001545	8.7 (6971)
Association of American Railroads		
Fronczak, Robert E.	EIS001201	8.6.1 (223)
Augusta Metro Chamber of Commerce		
West, James F.	EIS000218	2 (828), 5.2 (26)
Augusta/Richmond County, Georgia	EIS000220	5.2 (26)
Young, Bob	EIS000298	5.2 (26), 8 (158), 4.5 (99)

Commenter	Comment Document	Location of Comments/Responses
Ban Burning Fossil Fuel Forms		
Byram, Roy	010111	5.2 (26)
Battle Mountain Band of the Te-Moak Tribe of Western Shoshone		
Johnson, Lydia	EIS001864	7.5.11.2 (152), 5.1 (27)
Beowawe Crescent Valley Nuclear Waste Awareness Committee		
Carruthers, Joseph P.	EIS000623	1.2 (79), 7.5.3.1 (11001), 3.1 (21), 8.1 (259), 13 (5)
	EIS000642	5.1 (27), 8.11.6 (3145), 8.1 (3146), 8.11.6 (3147), 13 (5)
Big Pine Paiute Tribe of the Owens Valley		
Moose, Bertha	EIS002083	3.3 (163)
Big Pine Paiute Tribes		
Zucco, Marino	010338	7.5.11.2 (240), 3.6 (257), 3.7 (58)
Bishop Owens Valley Paiute Tribe		
Moose, Gayleen	010340	3.6 (257), 11.1 (1473), 5.1 (27)
Bishop Paiute Tribal Council		
Bengochia, Monty	EIS001862	5.3 (164), 7.5.5.2 (237), 7.5.3.2 (3281), 7.5.3.2 (228), 3.9 (109), 8.1 (170), 8.3 (161), 8.10.2 (212), 7.5.11 (7243), 7.5.3.2 (11935)
Williams, Harry C.	EIS000367	7.3.2 (216), 7.5.3 (1846), 7.5.4.2 (1847), 3.9 (109)
Blue Ridge Environmental Defense League		
Zeller, Janet Marsh	EIS000217	2 (100), 7.3.2 (1090), 6.0 (1091), 5.3 (164), 4.5 (99), 13 (35)
	EIS000296	5.1 (27), 5.3 (164), 4.5 (99), 13 (35), 2 (100), 7.1 (1220), 6.1 (1221), 12 (139), 5.4 (219)
Zeller, Louis A.	EIS000166	8.10.2 (114), 3.2 (90), 8.3 (149), 8.8.3 (171), 7.5.11.2 (240), 7.5.1 (106), 7.5.11.2 (181), 3.2 (64)
	EIS000295	8.10.2 (114), 8.1 (11677), 7.5.11.2 (181)
	010102	6.1 (116), 5.1 (27), 5.3 (164), 5.4 (219), 6.1 (46), 7.5.3.1 (234), 7.5.11.2 (181)
Brotherhood of Maintenance of Way Employees		
Morrissey, Spencer W.	EIS001168	8.7 (144), 4.1 (82), 8.8.3 (205), 8.4 (25), 8.7 (142), 8.9 (193)
	EIS001335	8.7 (142), 8.4 (6925), 8.7 (144), 8.8.3 (205), 4.1 (82), 8.1 (170)
Caliente, Nevada, City of		
Phillips, Kevin J.	EIS000038	
	EIS000226	3.2 (84), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.3.2 (136), 3.2 (80), 8.1 (170), 3.2 (84), 8.3.2 (136), 3.2 (1299), 11.2 (108), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069)
	EIS000650	3.2 (84), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.3.2 (136), 3.2 (80), 8.1 (170), 3.2 (84), 8.3.2 (136), 3.2 (1299), 11.2 (108), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069)
	EIS000718	3.9 (109), 8.8.3 (7789), 8.10.2 (203)
	EIS002093	3.9 (109), 8.8.3 (7789)

Commenter	Comment Document	Location of Comments/Responses
Caliente, Nevada, City of		
Phillips, Kevin J. (continued)	010096	3.5 (204), 4.5 (214), 4.5 (217), 3.5 (12025), 8.12 (224), 3.1 (11450), 11.1 (11451), 8.10.2 (114), 4.5 (63), 11.1 (45), 7.3 (220), 8 (12273), 7.5.7 (235), 7.5.9 (175), 7.5.9 (11246), 7.5.7 (2867)
Wallis, Stan	EIS000235	3.2 (995), 11.2 (996), 8.5.1 (997), 8.11.6 (44), 8.8.2 (179), 8.10.2 (999), 8.11.6 (1000), 7.4.2 (11982), 8.1 (170)
	EIS000670	8.11.6 (44)
California Communities Against Toxics		
Williams, Jane	EIS000365	5.1 (27), 7.5.11.2 (3702), 7.5.3.2 (2), 3.2 (51), 3.2 (1844)
California, State of, California State Assembly		
Longville, John	EIS001097	3.3 (50)
California, State of, Energy Commission		
Laurie, Robert A.	EIS000536	3.3 (50)
	EIS001622	3.2 (80), 3.2 (5793), 3.2 (64), 3.3 (50), 8.3 (149), 8.7 (153), 8.3.1 (5799), 8.3 (213), 8.3 (201), 8.8.1 (12577), 7.5.10 (5868), 7.5.3.2 (5874), 7.5.3.2 (8), 7.5.3.2 (5887), 7.3.1 (185), 7.3.2 (216), 8.11.4 (5905), 8.3 (161), 8.1 (5912), 3.2 (51), 3.1 (16), 7.3 (222), 7.5.3.2 (230), 7.5.3.2 (5932), 7.5.3.1 (12175), 7.5.3.2 (2), 7.5.3.2 (5935), 7.5.3.2 (5937), 7.5.3.2 (5938), 7.5.3.2 (5939), 7.5.3.2 (5940), 7.5.10 (5941), 7.3 (5942), 7.5.3.2 (5944), 7.5.3.2 (5943), 8.11.4 (5946), 7.5.4.2 (39), 8.8.1 (5949), 7.1.1 (5948), 7.5.4 (5951), 7.3 (232), 7.5.3.2 (5955), 3.2 (59), 7.5.3.2 (5961), 7.5.3.2 (5962), 7.5.3.2 (5956), 8.3.3 (11810)
	EIS002236	3.2 (80)
	EIS002299	3.2 (59), 8.3 (149), 7.5.3.2 (11745), 3.2 (80), 8.3.1 (11748), 7.5.3.2 (12406), 8.11.4 (11749)
	010390	7.5.3.2 (13534), 7.5.3 (12556), 7.3.1 (185)
California, State of, Governor's Office of Planning and Research		
Roberts, Terry	EIS001412	3.10 (4)
	010399	
Campaign for a Prosperous Georgia		
Kilpatrick, Rita	EIS000312	4.5 (1797), 8.10 (1798), 7.1 (33), 1.1 (124), 5.5 (183)
Carolina Power & Light Company		
Caves, John R.	EIS001260	3.3 (3575), 5.2 (26)
Hinnant, C .S.	010103	3.1 (12)
Center for Environmental Arts and Humanities and the Great Basin Institute		
Lewis, Corey	EIS000570	3.10 (2041), 1.2 (2042)
Chemehuevi Indian Tribe		
Chavez, David	EIS001452	5.1 (27), 7.5.3 (4602)
	EIS002088	3.3 (163)
King, Darryl	EIS002089	3.3 (163)
Chicago Greens		
Harris, Karen	EIS001501	5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Churchill County, Nevada, Office of the Churchill County Commissioners		
Regan, James	EIS001653	7.3 (7), 3.2 (7798), 3.2 (64), 7.3.2 (7801), 10 (258), 8.3 (149), 10 (7805), 11.1 (48), 3.2 (80), 7.3.1 (185), 7.1.1 (7425), 7.1.1 (7814), 8.3 (213), 8.3.3 (7822), 8.3 (7823), 3.7 (53), 3.2 (55), 7.3 (7826), 5.4 (7452), 4.5 (7836), 5.4 (7840), 3.2 (7842), 1.2 (7843), 3.2 (69), 7.5.11.2 (181), 8.1 (259), 7.5.3.2 (7854), 7.5.3.2 (9398), 7.5.3 (7859), 7.5.3.2 (7861), 7.5.3.2 (7306), 7.5.6 (7875), 7.5.11.1 (7876), 3.2 (7888), 8.8.2 (7521), 7.5.2 (7894), 8.3.2 (136), 3.2 (7898), 8.11.3 (7901), 8.11.4.2 (7532), 7.5.6 (7910), 7.5.7 (105), 8.9 (193), 7.3 (12071), 5.4 (8076), 7.5.1 (106), 7.5.2 (8081), 3.2 (8084), 7.5.7 (8085), 4.5 (8087), 3.2 (8090), 7.3.2 (216), 3.2 (8110), 7.3 (8111), 10 (8113), 8.3 (201), 3.1 (8121), 8.11.7 (8123), 8.3 (8126), 8.11.1 (7625), 8.11.1 (8128), 8.8.1 (192), 3.8 (65), 8.8.1 (8139), 8.11.9 (8141), 8.3 (161), 8.11.6 (8144), 8.11.1 (8145), 8.10 (145), 8.3.1 (195), 8.10 (8154), 8.6.2 (186), 8.5.3 (7653), 9.1 (7647), 8.8.1 (8171), 10 (8176), 10 (7629), 10 (3), 10 (91), 11.1 (8182), 11.1 (8187), 11.1 (8188), 11.1 (8190), 2 (8196), 7.3 (11829), 7.1 (7576)
Churchill County, Nevada, Office of the Churchill County Manager		
Selinder, Bjorn P.	010371	3.6 (257), 7.3 (210), 7.0 (12594), 3.5 (204), 4.3 (129)
Citizens Action Coalition of Indiana		
Williams, Chris	010155	8.1 (170)
Voelker, Roger	550003	8.3 (149)
Citizen Alert		
Backlund, Kaitlin	EIS000594	6.0 (2289), 3.2 (51), 3.2 (64), 5.4 (219), 1.2 (77), 1.2 (243), 3.3 (50)
Cvetkovic, Judy	EIS001673	8.1 (170)
Hadder, John E.	EIS000554	3.3 (50), 3.3 (1649)
	EIS000599	3.2 (75), 8.7 (2066), 8.4 (25), 7.3.2 (216), 7.5.11.2 (181), 3.3 (50), 7.5.7 (98)
	EIS001469	1.1 (34), 9.1 (6076), 8.4 (115), 3.1 (19), 7.5.7 (6082), 7.5.7 (66), 7.5.7 (6088), 7.5.7 (98)
	EIS001481	12 (139), 1.2 (243)
	EIS001924	3.2 (51), 3.2 (64), 8.3 (161), 8.7 (147), 8.4 (25), 7.5.7 (98), 2 (100), 3.1 (9176), 7.3.2 (216), 7.3 (110), 7.5.11.2 (181), 3.3 (50), 3.1 (19), 3.1 (9193), 7.3 (220), 3.0 (9195), 3.1 (9196), 3.2 (59), 3.2 (80)
	EIS002149	3.1 (19), 8.10 (9722), 8.4 (25), 4.3 (249), 3.2 (90), 9.1 (9386)
	EIS002195	2 (100), 3.3 (50), 7.3 (7)
	EIS002224	3.3 (50)
	EIS002256	3.3 (50), 3.3 (8532), 3.2 (8548), 3.2 (51), 3.2 (64)
	EIS002284	13 (5), 3.2 (75), 3.3 (50), 3.2 (11392), 3.1 (19), 7.3 (220)
	010147	1.2 (243), 3.1 (15), 3.6 (257), 3.6 (245)
	010165	3.4 (11853), 7.5.6 (255), 3.4 (12330), 7.3 (220), 7.4 (12332), 7.5.11.2 (240)
	010262	3.6 (257), 3.5 (12849), 4.2 (12850), 4.4 (244), 7.3 (208), 4.5 (12853), 7.4 (125), 9.1 (250), 7.4 (241), 7.4 (67), 7.0 (12858), 7.5.9 (175), 7.5.3.1 (234), 7.5.1 (106), 3.6 (245)

Commenter	Comment Document	Location of Comments/Responses
Citizen Alert (continued)		
Mason, Sara P.	EIS000705	5.1 (27), 12 (139)
Tilges, Kalynda	010122	3.6 (257), 7.3.2 (216), 4.4 (244), 7.5.3 (11037), 7.5.9 (175), 7.5.3.1 (234), 3.5 (233), 3.5 (204), 7.3 (253)
	010138	13 (12298)
	010148	3.6 (257), 3.5 (233), 3.0 (11326), 7.4 (241), 7.5.9 (175)
	010327	3.6 (257), 7.5.3 (12159), 7.3.1 (185), 3.5 (204), 3.5 (233), 7.3.2 (216), 7.5.1 (106)
	010331	4.4 (244), 3.6 (12789)
	010332	5.4 (219)
Citizen's Advisory Council/Esmeralda County Repository Oversight Program		
Hoffman, Marsha	EIS000197	8.11.5.1 (254), 8.11.6 (795), 7.5.2 (796)
	EIS000202	8.4 (25)
Citizens Action Coalition of Indiana		
Voelker, Roger	EIS001191	3.2 (64), 8.1 (170), 8.10.2 (212), 8.3 (4341), 8.8.3 (171), 3.2 (90), 7.5.3.2 (4344), 2 (100), 1.2 (243), 3.2 (80)
	EIS001233	3.2 (64), 8.1 (170), 8.10.2 (212), 8.3 (4341), 8.8.3 (171), 3.2 (90), 7.5.3.2 (4344), 2 (100), 1.2 (243), 3.2 (80)
	EIS001590	13 (5), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.11.6 (6380), 8.11.11 (6382)
	EIS001633	8.1 (170), 8.10.2 (200)
Citizens Advisory Board, Idaho National Engineering and Environmental Laboratory		
Rice, Charles M.	EIS001230	3.2 (59), 6.1 (4707), 4.5 (96), 3.2 (4709), 5.2 (26), 3.1 (4711)
	EIS001805	3.2 (80), 6.1 (5306), 5.2 (26), 3.1 (4711)
Citizens Awareness Network		
Katz, Deborah	EIS002176	4.3 (249), 7.5.3.2 (10349), 3.2 (64), 7.5.11.2 (181), 8.3 (149), 3.3 (50), 1.2 (77)
	010307	3.5 (36), 3.5 (204), 4.3 (129), 7.5.11.2 (181), 7.5.1 (106), 7.5.9 (175), 3.6 (257), 7.4 (12842), 7.4 (241), 7.4 (125), 7.5.3.1 (234), 9.1 (250), 7.5.6 (130)
	010308	3.6 (257)
Citizens for Alternatives to Radioactive Dumping		
Greenwald, Janet	EIS000507	12 (139)
	EIS000512	7.3 (110), 8.4 (25), 8.3 (11765)
Citizens for Nuclear Technology Awareness		
Buckner, Mel	EIS000168	5.2 (26), 4.5 (217), 8 (158), 5.5 (29), 4.5 (709), 4.5 (11122)
	EIS000304	5.2 (26), 4.5 (217), 8 (158), 5.5 (29), 4.5 (709), 4.5 (11122)
Citizens' Advisory Panel of the Oak Ridge Reservation Local Oversight Committee, Inc.		
Mulvenon, Norman A.	EIS001450	5.2 (26), 4.3 (129), 3.2 (80), 4.5 (217), 3.7 (4744), 5.4 (4745), 7.3.1 (185), 3.2 (55), 10 (4749)
	EIS001505	5.2 (26), 4.3 (129), 3.2 (80), 4.5 (217), 3.7 (4744), 5.4 (4745), 7.3.1 (185), 3.2 (55), 10 (4749)
	010175	3.5 (204), 6.1 (46), 4.5 (63), 3.2 (55), 3.4 (10163), 4.4 (244), 3.5 (36)

Commenter	Comment Document	Location of Comments/Responses
Clark County, Nevada, Board of County Commissioners		
Herrera, Dario	010243	3.5 (233), 2 (100), 4.5 (92), 3.2 (80), 5.4 (219), 3.5 (36), 3.5 (204), 7.3 (253), 7.3 (253), 3.0 (13168), 7.5.3.2 (5767), 7.3 (13170), 7.3 (13171), 7.0 (13172), 7.5.6 (13173), 3.9 (109), 7.0 (13175), 7.4.1 (13176), 7.4 (13177), 10 (3), 8.3.1 (13181), 8.12 (224), 7.0 (13184), 8.12 (251), 8.11.2 (13187), 3.6 (257), 3.5 (13190)
Williams, Myrna	EIS000706	8.8.2 (121), 3.9 (109), 8.3 (161), 8.8.3 (171), 10 (3092), 7.5.6 (130), 3.7 (53), 3.2 (80), 3.5 (233)
	EIS002129	8.8.2 (121), 3.9 (109), 8.3 (161), 8.8.3 (171), 10 (3092), 3.7 (53), 7.5.6 (130), 3.2 (80), 4.3 (128)
Woodbury, Bruce L.	EIS001888	3.2 (80), 3.9 (109), 8.3 (149), 3.5 (233), 8.1 (259), 3.7 (53), 3.3 (1), 3.2 (75), 3.2 (84), 3.2 (9291), 3.2 (64), 7.5.6 (130), 10 (3), 7.3.1 (185), 6.1 (18), 4.2 (9298), 7.5.3.2 (8), 11.1 (102), 8.3 (213), 8.8.1 (9303), 3.2 (9305), 3.2 (9230), 11.2 (9306), 11.1 (9309), 3.7 (9310), 3.2 (51), 11.1 (9315), 8.3 (161), 9.1 (9321), 5.4 (9337), 7.5.6 (9339), 3.3 (9340), 7.5.11 (9341), 8.11.11 (9342), 7.5.11 (9345), 1.1 (124), 7.5.5 (9348), 7.5.11 (52), 10 (9353), 10 (9354), 10 (9355), 10 (9356), 10 (9357), 2 (9368), 7.5.4.2 (9373), 7.4 (41), 6.1 (9376), 7.1 (33), 7.3 (9382), 7.3 (1436), 7.3 (7), 7.3 (12439), 7.3.2 (216), 7.3 (239), 7.1.4 (9391), 7.3 (9392), 8.8.1 (9401), 3.2 (9387), 8.3 (9403), 8.8.1 (9406), 8.4 (9407), 3.1 (9410), 8.1 (9411), 8.7 (153), 8.3 (201), 8.2 (9417), 8.5.3 (190), 8.8.3 (9424), 8.5.3 (9425), 8.8.3 (205), 8.10 (148), 8.10.2 (9434), 8.10 (155), 6.0 (9442), 8.7 (247), 8.10.1 (167), 8.10.2 (9457), 8.3.3 (24), 8.3 (60), 8.7 (142), 10 (9467), 8.10.3 (9468), 8.9 (193), 8.8.3 (173), 8.8.3 (171), 8.11.11 (9475), 3.3 (88), 7.5.11.2 (240), 3.2 (9479), 12 (139), 1.2 (9483), 10 (9485), 8.9 (9489), 8.1 (9495), 7.5.6 (9498), 7.5.6 (9499), 3.3 (9500), 7.5.11 (9502), 8.11.1 (134), 8.11.1 (9505), 11.2 (108), 11.2 (6142), 5.3 (164), 5.5 (29), 8.1 (170), 3.3 (50), 7.5.7 (98), 7.5.7 (9518), 7.4.1 (61), 7.5.3.2 (228), 1.2 (77), 8.4 (226), 8.4 (115), 4.1 (9533), 8.10 (9538), 8.2 (9540), 8.3.1 (20), 8.7 (141), 8.7 (140), 8.10.2 (114), 1.2 (12743), 8.11.4.2 (9478), 2 (100), 8.8.1 (9552), 8.3 (9553), 8.8.1 (9554), 8.1 (9557), 8.5.1 (9560), 8.10.1 (9566), 8.11.2 (9568), 8.8.3 (174), 8.8.1 (9572), 8.3 (9576), 8.10 (54), 8.10 (9580), 8.4 (9582), 8.8.1 (12265), 8.8.1 (9585), 8.4 (9587), 8.8.1 (9589), 8.4 (9590), 7.2 (9591), 8.1 (9594), 8.10.2 (9595), 8.8.1 (9596), 8.10.1 (9597), 8.7 (9598), 8.6.2 (9601), 8.5.1 (9600), 8.9 (9602), 8.5.1 (9604), 8.8.2 (9607), 8.3.2 (136), 8.3.1 (9611), 8.8.1 (9612), 8.8.1 (9613), 8.3.3 (23), 8.11.7 (9625), 8.8.1 (9630), 8.10.1 (9631), 8.10.1 (9633), 8.10.1 (9634), 8.10.1 (9635), 8.10.1 (9636), 8.11.2 (9644), 8.11.1 (9646), 8.8.3 (9649), 8.8.1 (187), 8.11.11 (9652), 8.10.2 (212), 10 (9660), 10 (9663), 3.2 (9737), 7.5.11.2 (9739), 10 (9740), 3.2 (9741), 7.5.11.2 (9744), 7.5.11.2 (181), 7.5.11.2 (9745), 7.5.11 (9746), 8.11.5.2 (9747), 8.11.5.2 (9748), 10 (9749), 7.5.7 (12407), 10 (9752), 4.5 (9753), 4.5 (9755), 4.1 (9754), 9.1 (9756), 6.1 (46), 8.10.1 (9758), 6.1 (9759), 3.2 (55), 3.2 (9761), 3.2 (9762), 3.2 (9), 2 (1244), 4.5 (9764), 3.3 (9765), 7.3 (206),

Commenter	Comment Document	Location of Comments/Responses
Clark County, Nevada, Board of County Commissioners (continued)		
Woodbury, Bruce L. (continued)	EIS001888	3.2 (9768), 7.1.1 (11436), 8.7 (9770), 3.2 (9773), 3.2 (9775), 8.10.2 (203), 7.4.2 (9779), 8.10.2 (218), 8.7 (144), 7.5.3.2 (9787), 7.2 (9788), 8.6.2 (186), 7.5.3.2 (9791), 7.5.3.3 (12405), 7.5.3.5 (9793), 8.11.3 (9794), 7.5.3.2 (111), 7.5.3.2 (9796), 7.5.3.1 (234), 7.5.2 (11705), 4.2 (9798), 7.5.4 (9799), 7.5.3 (9800), 7.5.4.2 (9801), 8.11.4 (42), 10 (12381), 8.11.3 (9803), 3.8 (65), 4.5 (9805), 8.11.9 (9807), 8.11.2 (9808), 8.11.8 (10), 7.3 (9811), 8.11.11.1 (10655), 8.11.11.1 (9826), 13 (9827), 8.10.2 (9831), 3.2 (12288), 5.4 (219), 7.4 (9850), 8.11.1 (9851), 7.5.1 (12192), 7.5.1 (9852), 7.5.6 (9853), 8.3 (9854), 1.2 (243), 1.2 (79), 1.1 (9858), 5.1 (27), 5.2 (26), 7.4 (9881), 7.5.3.2 (9882), 7.5.3.4 (12413), 7.3 (9883), 7.1 (12744), 7.3.2 (9885), 7.3 (9886), 10 (9887), 7.3 (12199), 7.3 (12382), 2 (9889), 4.3 (129), 3.3 (9896), 3.1 (9898), 2 (9899), 8.7 (9902), 3.2 (9904), 3.3 (9750), 3.3 (9906), 3.3 (9907), 3.3 (9909), 4.1 (9912), 4.3 (9913), 4.3 (6799), 1.2 (78), 4.5 (9916), 7.5.6 (9935), 11.2 (9938), 3.7 (9940), 7.5.6 (9941), 3.9 (11433), 7.4.2 (9948), 7.5.6 (9950), 4.1 (9953), 7.5.6 (9954), 1.2 (9956), 3.9 (9957), 8.8.1 (9978), 3.2 (12753), 1.1 (101), 4.5 (9980), 4.5 (9982), 2 (9983), 7.5.6 (12416), 8.11.6 (9986), 11.2 (9989), 4.5 (12191), 11.2 (9990), 5.4 (9991), 7.5.6 (9992), 7.5.6 (9995), 7.5.6 (9996), 10 (10006), 11.2 (6144), 4.5 (217), 1.2 (10010), 7.1.1 (11437), 8.10.1 (10021), 8.10 (10022), 8.8.1 (10023), 4.1 (5473), 8.8.1 (10025), 8.8.1 (10034), 8.8.1 (10035), 8.10 (68), 8.11.6 (10037), 8.11.6 (10038), 8.1 (10039), 8.7 (2311), 8.7 (147), 8.10 (10055), 6.1 (10059), 8.8.1 (10060), 8.4 (199), 8.4 (25), 8.2 (10072), 8.8.1 (10075), 8.10 (157), 8.8.1 (10077), 8.10.1 (133), 8.10 (12419), 8.10 (145), 8.11.4 (10189), 8.11.6 (10194), 8.3 (10196), 8.7 (197), 1.1 (10216), 4.5 (10217), 3.2 (10220), 8.11.11 (10236), 8.3 (10237), 7.5.6 (10239), 5.4 (10240), 8.10.2 (200), 7.5.3 (10242), 5.5 (30), 3.1 (11807), 3.1 (11809), 3.2 (12198), 8.10 (12262)
Clark County, Nevada, Department of Comprehensive Planning, Environmental Division		
Truelove, Cynthia J.	EIS001206	7.5.4.2 (4146), 8.11.4.2 (4147), 8.11.4.2 (4148)
Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division		
diBartolo, Russell	EIS000543	3.2 (51), 3.2 (80), 3.2 (84), 3.9 (109), 8.3 (161), 3.3 (5477)
	EIS000586	3.2 (11714), 3.2 (2284), 3.9 (109), 3.2 (84)
	EIS002119	8.8.3 (174), 3.2 (84), 3.2 (80), 8.3 (149), 8.8.1 (8717), 7.5.6 (130), 7.5.11 (52), 8.10.2 (212), 10 (8724), 8.8.2 (8725)
	EIS002267	3.7 (53), 8.1 (170), 11.1 (11329), 3.2 (11330)
Dilger, Fred	EIS000228	8.3 (149), 3.9 (109), 8.8.1 (1259), 11.1 (102), 8.10 (1261), 7.4.2 (1262), 8.8.1 (1264)
	EIS000392	3.2 (80), 10 (1777), 7.5.11 (52), 8.3 (1779), 3.9 (109), 3.2 (59)

Commenter	Comment Document	Location of Comments/Responses
Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division (continued)		
Dilger, Fred (continued)	EIS000653	8.8.1 (2404), 7.4.2 (2405), 3.9 (109)
Kelman, Harry	EIS000143	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
	EIS000347	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
	EIS000351	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
Navis, Irene	010027	3.6 (257), 3.5 (204), 3.5 (233), 3.5 (36), 10 (91), 10 (3), 7.3 (7), 7.3 (253), 4.5 (5766), 7.5.3.2 (5767)
	010118	3.6 (257), 3.5 (233), 8.3 (149), 4.5 (92), 10 (258), 7.3 (253)
Tiesenhausen, Engelbrecht von	EIS000360	3.2 (80), 8.5.3 (190), 8.10 (12193), 7.5.3.2 (8)
	010323	7.3 (253), 1.2 (243), 3.6 (257)
Clark County, Nevada, Local Emergency Planning Committee		
Andrews, Bob	EIS000968	8.10.2 (5276), 8.7 (5278), 8.10 (68), 8.3 (149), 8.7 (28), 7.5.6 (5285), 8.5.3 (5286), 8.8.1 (5291), 8.10.2 (114), 8.10.1 (5293), 8.10 (5294), 8.10.2 (212), 3.2 (80)
Clean Water Action Alliance of Minnesota		
McKeown, Diana S.	EIS001847	5.3 (164), 3.3 (50), 3.1 (15), 8.3 (149), 8.5.3 (7048), 8.3 (161), 8.10.2 (114), 7.5.11 (52), 1.2 (77), 7.5.3.2 (111), 7.5.3 (7081), 7.5.3.2 (229), 3.2 (80), 8.10.2 (200)
	010286	3.6 (257), 7.5.3.2 (228), 4.4 (12925), 7.5.11.2 (240), 7.5.1 (106)
Cleveland Peace Action		
Chiappa, Francis	EIS001287	13 (3921), 7.3 (12544), 8.1 (170), 8.10 (3926), 8.4 (25), 7.5.11.2 (181), 3.2 (64), 5.5 (183), 5.3 (164)
	EIS001547	13 (3962), 7.3 (12544), 7.5.11.2 (181)
Edguer, Marji	EIS001558	8.1 (170), 8.4 (25), 8.10 (3926), 3.2 (64), 5.5 (183), 5.3 (164), 5.5 (29)
Cleveland, Ohio, City of		
Appolito-Jackson, Collette	EIS001282	3.3 (50), 8.10.3 (12543), 8 (3801)
	EIS001544	3.3 (50), 8.10.3 (12543), 8 (3801)
Coalition 21		
Tanner, John E.	EIS001329	4.5 (3936), 6.1 (13), 4.5 (107)
Colorado People's Environmental and Economic Network		
Muñoz, Melissa	EIS000253	7.5.11.2 (240), 8.1 (518), 8.8.3 (171), 7.5.11 (52)
	EIS000503	7.5.11.2 (240), 8.1 (518), 8.8.3 (171), 7.5.11 (52)
Colorado Public Interest Research Group		
Pogue, Stacey	EIS000518	1.2 (77), 1.2 (243), 7.5.3.2 (111), 8.8.3 (171), 8.3 (149)
Colorado River Indian Tribes		
Cornelius, Betty L.	EIS002085	3.3 (163), 7.5.11 (8861)
	010342	7.5.11.2 (240)
Laffron, Lawanda	EIS002086	3.3 (163), 7.5.5 (225), 7.3 (8874), 4.5 (8875)
	010343	3.3 (163), 3.7 (57), 3.5 (204), 7.5.5 (12879), 3.6 (257)
Committee to Bridge the Gap		
Magavern, Bill	EIS000390	3.2 (80), 3.2 (64), 8 (6949), 8.3 (161), 8.10.2 (114), 7.5.11.2 (240), 3.9 (109)
	EIS000539	12 (139), 3.2 (64), 7.5.7 (3038), 8.3 (161), 3.9 (109), 7.5.11.2 (240), 3.2 (80)

Commenter	Comment Document	Location of Comments/Responses
Common Cause Nevada		
Hulse, James	EIS000545	1.1 (2275)
Confederated Tribes and Bands of the Yakama Nation		
Palmer, Carroll E.	EIS001909	6.1 (7497), 3.7 (57), 10 (7582), 4.2 (7586), 6.1 (46), 6.1 (7590), 6.1 (7595), 6.1 (7600)
	EIS001964	6.1 (7497), 3.7 (57), 10 (7582), 4.2 (7586), 6.1 (46), 6.1 (7590), 6.1 (7595), 6.1 (7600)
Connecticut Coalition Against Millstone		
Burton, Nancy	EIS001900	3.2 (80), 3.3 (50), 8.10 (5882)
Consolidated Group of Tribes and Organizations		
Arnold, Richard	EIS002074	5.3 (164), 7.5.11.2 (152), 7.5.5.2 (38), 7.5.11 (9638), 8.8.3 (171), 8.11.5.2 (9650), 8 (9662), 8.8.2 (9664), 8.11.5 (9665), 3.7 (57), 7.5.5.2 (9667), 8.10.2 (114), 8.8.2 (9671), 7.5.3.2 (230), 8.7 (144)
	EIS002087	3.1 (8847), 3.1 (8850), 8.11.11 (8853)
	010334	3.6 (257), 3.6 (245), 3.7 (57), 7.5.11.2 (240), 8.10.2 (114), 11.1 (13010), 3.4 (13011), 11.1 (13012), 3.6 (13013), 7.5.1 (13014)
Consumers Energy		
Broschak, John P.	EIS000993	5.2 (26), 8.7 (143), 7.1.4 (10279)
	EIS001730	5.2 (26), 8.7 (143), 7.1.4 (10279)
Cotter Corporation		
Landau, Steve	EIS000495	5.2 (26), 8 (158), 4.5 (107)
Council for Citizens Against Government Waste		
Schatz, Tom	EIS000451	5.2 (26), 4.5 (1534), 5.4 (10891)
Crescent Valley Historical Society		
Scott, Laura Mae	EIS001242	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.3 (161), 3.9 (109), 4.1 (3361), 8.7 (141), 7.4 (3363), 8.6.3 (3364), 5.3 (164)
DC Statehood Green Party		
Colburn, Michelle	EIS000468	5.1 (27), 8.1 (170), 7.5.11.2 (240), 5.5 (29)
Death Valley Unified School District		
Kenny, June	EIS001273	8.3.1 (6026)
	EIS001961	8.3.1 (8911), 8.10.2 (203)
	EIS002191	8.3.1 (6026)
Denver, Colorado, City and County of, Department of Environmental Health		
Donahue, Theresa M.	EIS001539	8.3 (149), 8.7 (184), 8.1 (170), 8.11.2 (6901), 8.11.6 (6903), 8.7 (6905), 8.3 (201), 8.11.7 (6908), 6.1 (18)
	EIS001875	8.3 (149), 8.7 (184), 8.1 (170), 8.11.2 (6901), 8.11.6 (6903), 8.7 (6905), 8.3 (201), 8.11.7 (6908), 6.1 (18)
Denver, Colorado, City Council		
Ortega, Deborah	EIS000506	1.2 (78), 8.3 (149), 8.8.3 (171)
Desert Citizens Against Pollution		
Talbot, Lyle	EIS000366	8.10.2 (1745)
	EIS000368	5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Desert Survivors		
deBellis, Tony	EIS000715	3.1 (3592), 7.5.4.2 (10717), 7.5.3.1 (8888), 3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230), 7.3 (3599)
District of Columbia Department of Health		
Walks, Ivan C. A.	EIS000065	3.10 (4)
Downwinders		
Erickson, Steve	EIS001464	13 (211), 5.1 (27), 8.1 (170), 1.1 (4492)
Duckwater Shoshone Tribe		
Blackeye, Henry	EIS001848	3.3 (50)
Duke Energy Corporation		
Jones, David	EIS000280	4.5 (99), 5.2 (26), 3.2 (64), 4.5 (107), 5.4 (10813), 7.5.7 (10814), 7.5.7 (10816), 8.4 (226)
Earth Challenge		
Alzner, Susan	EIS000289	8.1 (170), 5.1 (27), 5.3 (164), 3.3 (50), 8.10 (54), 8.10 (148), 8.4 (1061), 13 (5), 1.1 (10915)
	EIS000309	13 (11083)
	EIS000326	7.3 (208), 7.5.8 (11166)
Lytle, Leigh	EIS000322	8.1 (170), 7.5.3 (1212), 7.5.11.2 (181), 7.5.3.2 (228), 5.1 (27), 7.3 (206)
Earth Day Coalition		
Trepal, Chris	EIS001286	5.1 (27), 8.3 (149), 8.1 (170), 8.10.2 (114), 3.9 (109), 8.8.1 (3896), 8 (3897), 8.10 (168), 8.10 (148)
	EIS001548	3.3 (50), 8.1 (170), 8.8.1 (3896), 8 (3897), 8.10 (148), 8.10 (168)
East St. Louis Community Action Network		
Andria, Kathy	EIS001775	3.3 (50), 8.1 (7485), 8.10 (145), 8.10.2 (12604), 5.3 (164), 12 (14)
Economic Development Partnership		
Chaput, Ernest S.	EIS000171	5.2 (26), 4.5 (987), 5.5 (29)
	EIS000308	11.1 (11914), 5.2 (26), 4.5 (987)
Edlow International Company		
Owens, Janice	EIS000450	8 (158)
Educational Directions		
Telfer, Richard G.	EIS000180	5.2 (26), 1.2 (78), 13 (5), 4.5 (217)
Elko County, Nevada, Board of County Commissioners		
Voos, Charles J.	EIS001904	8.8.2 (6221), 1.2 (81), 3.9 (109), 7.5.1 (106), 3.2 (80)
Ely Shoshone Tribe		
Charles, Jerry	EIS002080	5.1 (27), 2 (132), 8.8.3 (171)
Charmer, Jerry	010346	7.5.11.2 (240), 5.1 (27)
Kaamasee, Arthur	EIS001441	3.2 (80), 7.5.11.2 (181), 7.5.11 (4999), 3.7 (57), 3.3 (88), 11.1 (97), 8.3 (201), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 8.8.3 (171), 3.2 (64), 3.2 (51), 10 (4206), 7.1.3 (4209), 4.5 (4210), 8.3.1 (4211), 8.8.1 (4212), 8.8.1 (4205), 8.8.1 (4207), 8.8.1 (4208), 8.10.2 (200), 8.8.2 (179), 8.8.1 (4215), 8.11.6 (4216), 8.3.1 (4219), 11.1 (102), 3.2 (4224), 3.9 (109), 7.5.5 (4227), 8.8.2 (7043), 7.5.5.1 (4229), 8.7 (4231), 8.3.1 (4232), 8.3 (4233), 7.3 (4234), 8.4 (226), 8.3 (161), 3.2 (4238), 7.5.6 (130), 8.3.1 (4240), 8.10.2 (5067), 6.1 (4249), 7.1.5 (1547), 13 (1548), 6.1 (1549),

Commenter	Comment Document	Location of Comments/Responses
Ely Shoshone Tribe (continued)		
Kaamasee, Arthur (continued)	EIS001441	6.1 (4253), 8.7 (6631), 1.1 (40), 6.1 (1551), 7.5.1 (106), 8.11.1 (1553), 6.1 (46), 3.7 (57), 9.1 (4260), 3.2 (4271), 9.1 (4272), 1.2 (81), 8.3.3 (178), 8.8.1 (6638), 8.8.1 (4282), 8.10 (54), 7.5.5.1 (1557), 8.7 (143), 8.7 (153), 8.8.2 (4286), 7.5.5.1 (12385), 7.4 (4289), 7.3 (8320), 8.11.5.1 (4294), 8.8.3 (173), 8.10 (4296), 8.10 (156), 8.3.1 (4298), 8.8.1 (4299), 8.8.2 (4300), 7.5.5 (1560), 8.10 (4302), 8.8.1 (192), 8.1 (170), 8.11.1 (4306), 7.5.5.2 (237), 3.1 (4308), 8.11.4 (42), 8.7 (4310), 7.5.5.1 (12385), 4.2 (5136), 7.5.5.2 (150), 7.5.11.2 (5139), 8.8.2 (9771), 6.1 (18), 6.1 (1552), 8.7 (3427), 8.8.3 (3428), 8.7 (3430), 11.1 (2410)
Energy Resources International		
Supko, Eileen	EIS000290	3.2 (10815), 9.1 (138), 8.8.1 (172), 4.5 (107), 8 (158), 3.3 (88)
	EIS000359	5.2 (26), 8.1 (1656), 8.8.1 (172), 8.3 (149), 4.5 (10850), 8.11.1 (10851)
	EIS001458	8.3 (149), 8.8.2 (4125)
	EIS001835	1.2 (78), 2 (10473), 3.2 (90)
Entergy Services, Inc.		
Rives, Frank B.	EIS001196	3.2 (80), 5.2 (26)
	010273	5.2 (26)
Escalante Wilderness Project		
Woodard, Victoria	EIS001936	5.3 (164), 7.5.11.2 (240), 7.5.3.3 (9073), 7.3 (94), 7.3 (209)
	010288	3.5 (233), 5.3 (164), 4.4 (244), 3.5 (36), 3.6 (13491), 7.3.2 (216), 7.4 (125), 9.1 (250), 7.0 (13495), 7.4 (241), 7.5.9 (175), 7.5.7 (235), 7.5.1 (106), 3.6 (257)
Esmeralda County, Nevada, Board of County Commissioners		
Ealey, Harriet	EIS000192	8.1 (259), 11.1 (655), 8.11.8 (10), 7.5.6 (119)
	EIS002043	11.1 (102), 3.3 (10801), 11.1 (10802), 8.8.2 (135), 8.5.3 (1267), 8.5.3 (10804), 11.2 (10805), 8.10.2 (203), 7.5.6 (119), 8.11.5.1 (254), 8.5.3 (190), 3.9 (109), 8.11.8 (10)
Viljoen, Benjamin	EIS000154	7.5.6 (119), 11.1 (514)
	010230	8.10.2 (203), 11.1 (102), 3.5 (204), 3.5 (36), 7.5.6 (13079), 8.12 (13080), 7.5.6 (13081), 8.12 (13082)
Eureka County Yucca Mountain Information Office		
Fiorenzi, Leonard J.	010392	3.6 (257), 3.5 (233), 3.5 (204), 8.3 (161), 3.5 (13523), 3.5 (13524), 4.5 (92), 8.12 (224), 10 (13527), 8.3 (149), 3.2 (64), 3.8 (13530)
Eureka County, Nevada		
Johnson, Abigail C.	EIS000618	8.3.1 (195)
	010373	3.6 (257)
Eureka County, Nevada, Board of County Commissioners		
Goicoechea, Pete	EIS000630	3.3 (50), 8.3 (149), 8.8.3 (176), 8.11.1 (12530), 8.10.2 (212), 8.3.1 (195), 7.5.7 (105), 8.10 (145), 10 (1792), 3.2 (80), 8.9 (193)

Commenter	Comment Document	Location of Comments/Responses
Eureka County, Nevada, Board of County Commissioners	EIS001878	3.3 (6595), 1.2 (81), 3.2 (84), 8.3 (149), 8.3 (161), 8.10.2 (200), 8.10.2 (194), 7.5.11 (6603), 9.1 (2043),
Goicoechea, Pete (continued)		9.1 (5445), 3.8 (65), 11.2 (56), 3.7 (53), 1.2 (243), 4.3 (5454), 3.1 (5455), 5.5 (29), 3.9 (109), 3.2 (6617), 3.2 (90), 3.1 (6620), 8.8.2 (135), 8.7 (142), 3.1 (21), 8.8.1 (6634), 7.3.2 (216), 3.3 (6640), 4.5 (6643), 8.1 (170), 8.11.1 (6645), 7.5.6 (6646), 8.10.2 (200), 1.2 (77), 8.7 (141), 7.5.4.1 (118), 7.5.6 (6662), 7.5.2 (6663), 7.5.6 (6664), 7.5.4.1 (6665), 7.5.4.3 (6667), 7.5.6 (6670), 7.5.9 (95), 7.5.6 (130), 8.11.1 (6679), 8.11.2 (6669), 8.11.5.1 (6671), 8.11.6 (6675), 8.11.11.1 (6677)8.7 (28), 8.11.4 (42), 8.11.6 (6687), 8.11.6 (6689), 8.11.1 (6691), 8.11.6 (6692), 8.11.6 (6694), 8.10.2 (6697), 8.10 (6700), 8.11.6 (6701), 8.10.2 (212), 8.11.6 (6705), 8.11.1 (6702), 8.11.9 (11937), 8.11.4.3 (6706), 8.11.10 (112), 8.8.2 (6708), 8.11.3 (5539), 8.11.4.2 (6717), 9.1 (6724), 9.1 (5546), 10 (6727), 3.2 (80), 11.1 (6744), 11.1 (6771), 7.5.7 (105), 4.2 (6777), 8.6.2 (11896), 11.2 (12501)
Green, Sandy	EIS000619	3.3 (50), 3.9 (109), 8.8.3 (176), 3.1 (3064), 7.5.6 (130), 8.11.1 (3066), 3.2 (59), 8.8.2 (3067)
Eureka County, Nevada, Local Emergency Planning Committee		
Rebaleati, Mike	EIS000950	8.10.2 (212)
Eureka County, Nevada, Planning Commission		
Rankin, Ronald	EIS000631	8.1 (259), 3.9 (109), 8.10.2 (203)
Federal Emergency Management Agency		
Amaglio, Sandro	010021	7.5.3 (13470)
Fenton, Missouri, City of, Board of Aldermen		
Pyne, Claire	EIS001091	8.1 (170)
FirstEnergy Corporation		
Castaznacci, Albert	EIS001556	5.2 (26), 8.10 (68), 8 (158), 8.4 (25), 8.7 (143), 8.10.2 (212), 1.2 (78)
Higaki, Vernon	EIS001289	5.2 (26), 8.7 (143), 8.7 (144), 1.2 (78)
	EIS001552	5.2 (26), 8.7 (143), 8.7 (144), 1.2 (78)
FirstEnergy Nuclear Operating Company		
Myers, Theodore	EIS001553	4.5 (12045), 5.2 (26), 8 (158), 3.3 (50)
Florida Power & Light Company		
Stall, J. A.	EIS001518	5.2 (26)
Florida, State of, Department of Health		
Passetti, William A.	EIS000026	3.1 (12), 8.3 (213), 9.1 (292)
Florida, State of, Department of Community Affairs, Coastal Management Program		
Cantral, Ralph	EIS000146	3.10 (4)
Florida, State of, Office of the Governor		
Cooper, Clarke	EIS000465	4.5 (92)

Commenter	Comment Document	Location of Comments/Responses
Florida, State of, Public Service Commission		
Clark, Susan F.	EIS000216	5.2 (26), 4.5 (92), 3.2 (64), 4.5 (99), 3.2 (80), 12 (8838), 8 (158)
	EIS000276	5.2 (26), 4.5 (99)
Miller, Cynthia B.	EIS001824	4.5 (99), 5.2 (26), 8 (158), 3.2 (80), 4.5 (9125)
	EIS001897	5.2 (26), 4.5 (99), 4.1 (10552), 8 (158), 1.2 (78)
Fort Independence Indian Tribe		
Miller, Vernon	EIS002084	3.3 (163)
Fort Mojave Indian Tribe		
Helton, Nora	EIS002071	3.3 (50)
	EIS002167	3.3 (50)
Friendly Planet, The		
Caldwell, Crystal	EIS000772	3.3 (50), 8.3 (149), 8.4 (25), 3.2 (51), 7.3 (2527), 3.2 (64)
Friends of Tecopa Hot Springs, Inc.		
Kenny, Clifford A.	010267	7.0 (9324), 7.5.3.1 (234), 7.5.3.2 (228), 7.3.2 (216)
Future Growth Technologies Concepts, Inc.		
Rodriquez, Jose	EIS000693	1.1 (101), 1.2 (79), 3.9 (109)
GE Stockholders' Alliance for a Sustainable Nuclear-Free Future		
Birnie, Patricia	EIS001095	5.1 (27), 4.3 (70), 5.5 (183)
	010174	5.1 (27), 7.5.11.2 (181), 7.5.9 (175), 7.4 (125), 3.6 (2755), 7.1 (191), 7.4 (12568), 3.3 (50), 9.1 (250), 3.6 (257), 3.5 (204), 5.5 (183)
GPU Nuclear, Inc.		
Vincent, John A.	EIS000764	3.2 (2504), 8 (158), 8.8.3 (11861)
	EIS001460	3.2 (2504), 8 (158), 8.8.3 (11861)
GREEN Party of California		
Schumann, Klaus	EIS000722	13 (5), 3.2 (80), 4.5 (3467), 3.3 (50), 8.3 (149), 3.9 (109), 7.5.11.2 (240), 7.3 (3472), 3.2 (64), 5.3 (164)
	EIS002100	13 (5), 3.2 (80), 4.5 (3467), 3.3 (50), 8.3 (149), 3.9 (109), 7.5.11.2 (240), 7.3 (3472), 3.2 (64), 5.3 (164)
Garfield County, Colorado, Board of County Commissioners		
Martin, John	EIS000809	8.10.2 (212), 8.10.2 (114), 6.1 (89), 8.10.1 (10033), 3.3 (50)
Gas Technology Institute		
Villaire, Louis A.	010430	5.1 (27), 13 (5)
Gateway Green Alliance		
Romano, Daniel R.	EIS001535	8.1 (170), 3.2 (4799), 8.7 (141), 13 (4801), 7.5.7 (98), 5.5 (183)
General Atomics		
Noren, Robert C.	EIS001831	3.1 (12), 9.1 (138), 5.5 (29)
Georgia, State of, Department of Natural Resources		
Hardeman, Jim	EIS000282	5.2 (26), 8.1 (2265), 8.10 (2266)
	EIS000394	5.2 (26), 8.1 (2265), 8.10 (2266)
Georgia, State of, House of Representatives		
Orrock, Nan Grogan	EIS000272	8.10.3 (182), 13 (1205), 6.1 (1206), 7.5.3.2 (228), 8.1 (170), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Georgia, State of, Public Service Commission		
McDonald, Lauren	EIS000163	4.5 (99), 5.2 (26)
	EIS000277	4.5 (99), 5.2 (26)
Georgians Against Nuclear Energy		
Carroll, Glenn	EIS000297	7.5.3.2 (229)
	010151	3.6 (257), 7.3.1 (185), 8.12 (224), 7.4 (9086), 7.3 (220), 6.1 (116), 5.3 (164), 5.1 (27)
Georgians for Clean Energy		
Barczak, Sara	010260	5.5 (183), 13 (37), 4.5 (13479), 6.1 (116), 13 (35), 7.1 (191), 7.5.7 (13484), 10 (258), 7.5.5 (13486)
	010352	5.5 (183), 13 (37), 4.5 (13479), 6.1 (116), 13 (35), 7.1 (191), 7.5.7 (13484), 10 (258), 7.5.5 (13486)
Goldfield, Nevada, Fire Department		
Anderson, Mike	EIS000195	8.1 (259), 8.10 (738), 8.5.3 (190), 8.11.6 (740)
Gray Panthers		
Weiss, Giudi	EIS001319	3.3 (50), 8.3 (161), 8.8.3 (174), 8.10 (68), 5.5 (183), 3.2 (80)
	EIS001607	3.3 (50), 8.3 (161), 8.8.3 (174), 8.10 (68), 5.5 (183), 3.2 (80)
Greater Las Vegas Association of REALTORS		
Coles, Gary	EIS000721	5.1 (27), 7.5.6 (130), 8.11.1 (3526), 3.9 (109), 8.10.2 (114), 8.5.3 (190)
	EIS002107	5.1 (27), 3.9 (109), 8.10.2 (114), 11.2 (56)
Green Party of San Bernardino County		
Goude, Learner	EIS002263	7.4 (12203)
Green Party of St. Louis		
Chicherio, Barbara	EIS000987	4.3 (129), 5.1 (27), 8.1 (170), 13 (5)
	010228	5.3 (164)
Healing Ourselves & Mother Earth	010170	3.5 (11068), 3.5 (36), 7.5.11.2 (181), 7.5.9 (175), 3.6 (257), 7.4 (241), 7.4 (125), 7.5.11.2 (11827), 7.5.3.1 (234), 9.1 (250), 7.3.2 (216), 3.5 (204), 5.2 (26), 5.4 (12342), 7.3 (222)
Viereck, Jennifer Olaranna		
Hafen & Hafen Realty Co.		
Alexander, Bill	EIS000759	5.2 (26)
Henderson, Nevada, City of		
Speight, Philip D.	EIS001896	3.2 (80), 8.1 (259), 8.5.3 (190), 8.5.3 (11007), 8.11.2 (11008), 8.11.2 (11009), 8.8.1 (11010), 8.5.1 (180), 8.8.1 (11012), 8.8.1 (196), 7.5.6 (11014), 3.8 (65), 7.5.9 (11016), 8.5.3 (11017), 8.10.2 (212), 7.5.2 (11020), 7.5.3.2 (11021), 7.5.6 (11022), 7.4 (11023), 7.5.9 (1100)
Hopi Tribe		
Quotchytewa, Phillip R.	EIS001451	5.3 (164), 5.1 (27), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139)
Howard Hughes Corporation		
Warden, Tom	EIS002112	3.9 (109)
Human Rights Action Service		
Ramsey, Bill	EIS000976	4.5 (3734)
Idaho, State of, House of Representatives		
Barraclough, Jack T.	EIS000244	6.1 (1176), 8 (158), 5.2 (26), 3.2 (80), 13 (10920), 6.1 (49), 7.5.3.1 (10923), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Idaho, State of, INEEL Oversight Program		
Dold, Anne	EIS000251	4.2 (86), 6.1 (13)
Trever, Kathleen E.	EIS001903	4.2 (12727), 6.1 (13), 4.5 (96), 3.1 (7933), 3.1 (11), 3.1 (7935), 3.1 (7939), 8.5.3 (7941), 4.2 (86), 3.1 (7946), 6.1 (7947), 8.8.1 (7948), 8.11.7 (7950), 3.1 (7952), 8.8.1 (187), 8.10 (7955)
Illinois Peace Action		
Balch, Jeff	EIS001674	13 (5)
Illinois, State of, Commerce Commission		
Mathias, Richard L.	EIS001375	5.2 (26), 8.3 (149), 9.1 (4101), 3.2 (64), 3.2 (80), 4.5 (107)
	EIS001442	5.2 (26), 8.3 (149), 9.1 (4101), 3.2 (64), 3.2 (80), 4.5 (107)
Illinois, State of, Department of Nuclear Safety		
Appel, Gordon	EIS001597	8 (158), 8.9 (193), 8.3 (60), 8.8.1 (11700), 8.3.1 (20)
	EIS001726	8.1 (170), 8.3 (149), 8.3 (201), 8.7 (153)
Ortciger, Thomas W.	EIS001511	8.2 (4408), 8.3 (149), 8.3 (201), 8.3 (161)
Institute for Energy and Environmental Research		
Makhijani, Arjun	EIS001886	7.5.3 (10748), 3.2 (1031), 7.3 (12438), 7.3 (71), 7.5.7 (10749), 7.5.3.2 (229), 7.5.11.2 (240), 4.3 (10753), 7.5.3.2 (10756), 7.5.3 (10757), 4.3 (8290)
Institute for New Energy		
Vesperman, Gary C.	EIS001842	5.5 (29), 5.4 (8133)
	010124	3.4 (5712)
	010137	1.1 (124)
International Association of Fire Chiefs		
Veerman, Gordon L.	EIS000991	5.2 (26), 4.5 (92), 8.10.2 (1325), 8.10.2 (114), 8 (158)
	EIS001728	5.2 (26), 8.10.2 (5824), 8.4 (5825)
International Brotherhood of Electrical Workers		
Dushaw, James L.	EIS000207	5.2 (26), 7.5.6 (11128), 8 (158), 5.4 (219)
	EIS000448	13 (5), 5.2 (26), 8 (158)
King, Clarence J.	EIS001167	5.2 (26), 8 (158)
Parker, Stanley	EIS000283	4.5 (99), 8 (158), 5.2 (26)
International Brotherhood of Electrical Workers Local 15		
Citta, Nick	EIS001582	13 (5), 5.2 (26), 8 (158)
Inyo County, California, Planning Department		
Thistlethwaite, Charles S.	EIS000261	3.2 (1152), 8.10.2 (203), 8.3.1 (1155)
	EIS000374	3.2 (1152), 8.10.2 (203), 8.3.1 (11092)
Inyo County, California, Board of Supervisors		
Bear, Julie	010181	3.5 (204), 7.4 (241), 3.1 (12), 4.5 (214)
Dorame, Michael A.	EIS000262	8.3 (149), 8.3.1 (1006), 8.8.1 (1007), 12 (139), 8.3 (1009)
	EIS000370	8.3 (149), 8.3.1 (1006), 8.8.1 (1007), 12 (139), 8.3 (1009)
	EIS000381	4.3 (128)
	EIS001443	8.1 (170), 2 (100), 11.1 (6), 3.2 (5175), 3.2 (80), 3.2 (64), 3.2 (51), 3.2 (75), 3.2 (5185), 10 (5186), 10 (5187), 8.3 (161), 8.3 (201), 8.8.1 (187), 8.8.1 (5192), 8.3.1 (5193), 8.3.1 (5194),

Commenter	Comment Document	Location of Comments/Responses
Inyo County, California, Board of Supervisors (continued)		
Dorame, Michael A. (continued)	EIS001443	8.3 (213), 8.3.2 (136), 8.3 (149), 7.5.3.2 (5199), 7.3.1 (185), 3.2 (59), 11.1 (5204), 8.4 (5205), 4.5 (5206), 7.5.3 (5207), 7.5.6 (5208), 3.9 (109)
	EIS001954	3.7 (53), 11.1 (97), 3.2 (80)
Remus, Andrew	EIS002270	8.3 (161), 8.3 (213), 8.3.2 (136), 3.2 (64), 3.2 (59)
	EIS002297	8.3 (161), 8.3 (213), 8.3.2 (136), 3.2 (64), 3.2 (59)
	010181	3.5 (204), 7.4 (241), 3.1 (12), 4.5 (214)
Inyo County, California, Environmental Review Board		
Sisson, Ray	EIS000259	7.5.3.2 (949), 7.3.1 (185), 7.3 (951)
	EIS000372	7.5.3.2 (949), 7.3.1 (185), 7.3 (209), 4.5 (11165)
Inyo County, California, Southeast Area Citizen Advisory Committee		
Remus, Andrew	010381	3.5 (36), 3.5 (204), 3.6 (257), 9.1 (250), 1.2 (243), 7.4 (241), 7.3 (222), 7.5.3.2 (2), 7.4 (12656), 5.3 (164)
Southeast Area Citizen's Advisory Committee to the Inyo County, California, Board of Supervisors	010325	7.3.1 (185), 3.2 (80), 3.6 (257), 3.5 (204), 7.4 (241), 9.1 (250), 4.5 (9323), 7.0 (12226), 7.3 (209), 7.5.3.1 (234)
Viereck, Jennifer Olaranna		
John P. Gnaedinger Research Corp.		
Gnaedinger, John P.	EIS001315	5.4 (219)
	EIS001594	5.3 (164), 13 (5)
	EIS001820	3.3 (50), 5.5 (29), 5.1 (27), 5.4 (219)
Kaibab Band of Southern Paiutes		
Jake, Vivienne Caron	EIS002075	8.10.2 (9614)
Savala, Gevene E.	EIS002079	3.3 (163), 8.3 (213), 6.1 (49)
Kentucky, Commonwealth of, Department for Environmental Protection		
Barber, Alex	EIS000066	8.3 (577), 8.7 (144), 8.10.2 (579)
Kirkwood, Missouri, City Council		
Swoboda, Mike	010287	8.3 (60), 8.10.2 (212), 8.7 (142)
	010351	8.3 (60), 8.10.2 (212), 8.7 (142)
Kirkwood, Missouri, City of		
Schramm, Marjorie B.	EIS001819	8.1 (170), 8.10.2 (6428)
Lakewood, Ohio, City of		
Skindell, Michael J.	EIS001284	3.3 (50), 8.1 (170), 8.10.2 (114), 8.7 (144), 1.1 (124), 8.8.1 (9055), 1.2 (81)
	EIS001549	3.3 (50), 8.1 (170), 8.10.2 (114), 8.7 (144), 1.1 (124)
Lander County, Nevada		
Duke, Bonnie	EIS001912	7.3 (7), 7.1 (191), 3.2 (10903), 3.2 (64), 7.3.2 (7801), 10 (258), 8.3 (149), 10 (7413), 11.1 (48), 11.1 (7415), 8.11.1 (7416), 7.3.1 (185), 7.3.1 (185), 7.1.1 (7425), 3.2 (90), 3.2 (80), 3.2 (7420), 7.1.1 (7814), 3.2 (7426), 8.3 (213), 8.3.3 (7822), 8.3 (7823), 3.7 (53), 8.3 (149), 5.4 (7452), 3.2 (64), 3.2 (7456), 5.4 (7840), 8.8.1 (7459), 3.2 (7842), 1.2 (7843), 3.2 (69), 7.5.11.2 (7475), 8.3 (161), 7.5.3.2 (7854), 7.5.3.2 (9398),

Commenter	Comment Document	Location of Comments/Responses
Lander County, Nevada (continued)		
Duke, Bonnie (continued)	EIS001912	7.5.3 (7859), 7.5.3.2 (2498), 7.5.6 (7875), 7.5.11 (7512), 8.11.1 (7518), 8.8.2 (7521), 7.5.2 (7894), 8.3.2 (136), 3.1 (7525), 3.1 (22), 8.11.4.2 (7532), 7.5.6 (7534), 7.5.7 (105), 8.9 (193), 7.2 (7542), 7.5.1 (106), 7.5.2 (8081), 3.2 (8084), 7.4 (7561), 7.2 (7572), 7.3.2 (216), 7.1 (7576), 7.3 (7580), 7.3 (8111), 10 (7594), 7.3 (11829), 7.3 (7603), 8.3 (201), 3.1 (7617), 8.11.7 (7620), 8.3 (7623), 8.11.1 (7625), 8.11.1 (8128), 8.8.1 (192), 8.11.6 (7633), 8.8.1 (8139), 8.11.9 (8141), 8.3 (161), 8.11.6 (8144), 8.11.1 (8145), 8.10 (145), 8.3.1 (195), 8.10 (8154), 8.6.2 (186), 8.5.3 (7653), 9.1 (7647), 8.8.1 (7643), 10 (8176), 10 (7629), 10 (3), 10 (91), 11.1 (8182), 7.3 (1153), 7.3 (7618), 3.9 (109), 8.10.2 (114), 8.7 (184), 8.7 (153), 7.3 (12071)
Lander County, Nevada, Board of Commissioners		
Yarbro, Mickey	010372	3.6 (257), 7.0 (13472), 7.0 (13473), 7.3 (13474), 7.3 (13475), 3.5 (204)
Lander County, Nevada, Board of County Commissioners		
Elquist, Bill	EIS000406	8.3 (2304), 3.7 (53), 8.3 (149), 8.3 (8073), 8.1 (259), 7.5.6 (231), 3.2 (8083), 10 (258), 3.9 (109), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (134), 8.7 (28), 8.10.2 (203), 8.11.1 (8100), 3.7 (8102), 8.8.2 (135)
	EIS000612	8.3 (2304), 3.7 (53), 8.3 (149), 8.3 (8073), 8.1 (259), 7.5.6 (231), 3.2 (8083), 10 (258), 3.9 (109), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (134), 8.7 (28), 8.10.2 (203), 8.11.1 (8100), 3.7 (8102), 8.8.2 (135)
Manzini, Tammy	EIS000614	8.3 (2304), 8.3 (149), 8.3 (8073), 8.1 (259), 7.3 (7), 3.2 (80), 10 (258), 7.5.6 (231), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (2324), 8.7 (28), 8.10.2 (203), 10 (2330), 8.8.2 (135)
Las Vegas Indian Center		
Cloquet, Donald J.	EIS002081	5.3 (164), 5.1 (27), 5.5 (30)
	EIS002210	8.1 (170)
	EIS002213	8.10.1 (166)
Las Vegas, Nevada, City of		
Cummings, Peter	EIS000735	5.3 (164), 2 (100), 8.1 (259), 7.5.6 (130), 8.3 (149), 3.9 (109), 8.5.1 (180), 8.5.1 (3080), 3.2 (64), 3.2 (3083), 8.11.11 (3084), 3.2 (3085)
Goodman, Oscar B.	010244	3.6 (257), 3.2 (55), 3.5 (113), 7.4 (241), 7.4 (125), 5.3 (164), 3.5 (204), 7.5.9 (13209), 7.5.10 (13210), 11.1 (13211), 8.12 (251), 8.12 (224), 7.1.2 (13218), 7.1.2.2 (13219), 7.5.3.4 (13220), 7.5.6 (255), 11.1 (13222), 7.1.2 (13224), 8.12 (13225), 5.4 (219), 3.5 (36), 7.3 (13229), 7.3 (13230), 7.5.1 (106), 7.3 (256), 4.5 (92), 7.1.2.2 (13234), 7.5.7 (13235), 7.1.2 (13236), 2 (13237), 7.5.4 (12015), 3.5 (13238)
Pegues, Jim	EIS002212	5.1 (27)
	010131	5.1 (27), 3.6 (257)
Laughlin, Nevada, Town of, Advisory Board		
Haywood, Lorraine	EIS000699	5.1 (27)
	EIS000803	5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
League of Women Voters		
Johnson, Betty	EIS001586	13 (5), 7.5.7 (6359), 13 (37), 3.3 (50)
League of Women Voters of Ashtabula County		
Blevins, Esther	EIS001290	8.1 (170), 5.2 (26), 8.7 (9033), 8.10.2 (212)
	EIS001554	8.1 (170), 5.2 (26), 8.7 (9033), 8.10.2 (212)
Lincoln County, Nevada, Board of County Commissioners		
Donohue, Paul	EIS000677	5.1 (27), 1.2 (243), 3.3 (50), 11.2 (108), 8.3.2 (136)
Frehner, Dan	EIS000236	3.2 (84), 3.2 (84), 8.3.2 (136), 3.2 (80), 3.2 (1299), 11.2 (108), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.1 (170), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069), 3.2 (1242), 8.3.2 (136)
	EIS000676	3.2 (84), 3.2 (84), 8.3.2 (136), 3.2 (80), 3.2 (1299), 11.2 (108), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.1 (170), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069), 3.2 (1242), 8.3.2 (136)
	EIS001337	3.2 (7030), 3.2 (84), 5.4 (248), 3.2 (51), 8.3.3 (178), 7.1.1 (7045), 3.2 (7046), 7.1 (7049), 4.5 (217), 7.1.1 (10453), 2 (132), 8.8.2 (135), 8.6.2 (186), 8.7 (7061), 8.10.2 (212), 8.3.1 (7063), 8.8.1 (7066), 8.5.2 (7069), 8.5.1 (7073), 8.5.1 (7076), 3.2 (59), 8.11.2 (7082), 8.11.3 (12453), 8.11.4.3 (7089), 8.11.4 (42), 8.11.8 (10), 8.11.9 (7139), 8.8.2 (179), 8.8.2 (7141), 8.11.5.1 (7142), 7.5.6 (7143), 3.9 (109), 7.5.6 (7145), 3.2 (7146), 8.10.2 (200), 8.1 (7148), 7.5.7 (105), 8.11.1 (7150), 7.5.6 (7151), 10 (7152), 7.5.6 (7154), 7.5.6 (7155), 8.8.1 (7157), 3.2 (7163), 11.1 (102), 3.7 (7165), 11.1 (97), 1.1 (7168), 1.2 (81), 8.10.1 (62), 1.1 (40), 6.1 (13), 7.1.1 (7173), 3.2 (7174), 8.3 (201), 3.1 (7179), 4.5 (7181), 8.7 (7176), 8.6.1 (223), 8.1 (259), 11.1 (7182), 8.7 (142), 8.5.1 (7184), 8.5.3 (7187), 8.3 (7185), 5.4 (7188), 3.1 (7189), 5.4 (7190), 7.1.1 (754), 11.2 (7191), 9.1 (7192), 9.1 (12711), 8.8.1 (7209), 7.5.2 (7210), 8.11.6 (7205), 8.3 (7208), 8.11.1 (7212), 8.11.4.2 (7213), 8.11.5 (7216), 3.1 (7218), 8.11.9 (7221), 8.11.4 (7223), 8.11.3 (7225), 8.11.5.1 (7214), 8.11.8 (7217), 8.10 (145), 3.2 (7222), 7.2 (7224), 3.1 (7226), 7.5.2 (7227), 7.5.11 (7228), 8.8.3 (7230), 7.3 (7232), 7.5.6 (7240), 7.4.2 (7241), 8.5.3 (190), 8.11.5.1 (254), 8.8.1 (189), 8.11.6 (7242), 3.2 (64), 8.11.1 (7237), 11.2 (7233), 8.11.4.2 (7231), 11.1 (7229), 7.4 (11261), 6.0 (11499), 8.5.2 (7186)
Lincoln County, Nevada, Regional Development Authority		
Gilpatrick, Victoria	EIS000684	8.11.6 (44)
Longstreet Inn		
Marsh, Jim	EIS000864	5.2 (26), 3.9 (109)
Mankato Area Environmentalists		
Kathy Wortel	550006	8.3 (149)
Meadows Homeowners Association at Elkhorn Springs		
Lefkowitz, Todd E.	EIS000952	5.1 (27), 8.1 (259)

Commenter	Comment Document	Location of Comments/Responses
Mendocino Environmental Center		
Oldham, Vicki	EIS000955	2 (126), 7.5.11.2 (240), 7.3 (2827), 5.3 (164)
Mescalero Apache Tribe		
McFadden, Donna	EIS000030	3.10 (4)
Mesquite Area Chamber of Commerce		
Unsigned	EIS000040	8.1 (259), 8.3 (377)
Mesquite, Nevada, City of		
Fessenden, Alice	EIS002110	8.1 (259)
Horne, Charles	EIS002209	7.5.1 (10221)
	010283	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
Marren, Terrance P.	EIS000039	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
	EIS000042	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
Mesquite, Nevada, City of, Fire Department		
Meacham, Ken	EIS001399	8.1 (259), 8.10.2 (203), 7.5.6 (4388)
Michigan, State of, Public Service Commission		
Strand, John	EIS000444	4.5 (99), 5.2 (26), 11.2 (108)
Mineral County, Nevada, Board of Commissioners		
Funk, Arlo	010182	3.5 (36), 3.5 (13353), 4.5 (13354), 3.1 (15), 7.4 (241), 7.4 (125), 9.1 (250), 7.5.11.2 (181), 7.5.1 (13361), 7.3 (13362), 7.3 (13363), 7.3 (13364), 7.3 (13365), 8.4 (199), 7.4 (13369), 7.1.1 (13373), 11.1 (13375), 3.5 (204), 2 (100), 7.5.7 (13379), 11.1 (45), 13 (37), 3.2 (64), 7.5.7 (105), 5.3 (164), 3.5 (13386), 4.5 (63), 7.4 (13390), 8.3 (149), 5.2 (26)
Mineral County, Nevada, Board of County Commissioners		
Wallis, Jackie	EIS001660	3.3 (88), 8.3 (149), 8.10.2 (200), 8.10.2 (194), 7.5.11 (5440), 9.1 (2043), 9.1 (5445), 3.7 (53), 11.2 (56), 1.2 (243), 4.3 (5454), 3.1 (5455), 8.3 (161), 8.10.1 (5469), 8.4 (5478), 8.7 (28), 8.11.6 (5483), 7.5.6 (130), 8.1 (170), 8.7 (141), 8.11.1 (5489), 8.11.2 (5497), 8.11.5 (5499), 8.11.6 (5501), 8.11.11 (5502), 8.10 (145), 8.11.1 (5511), 8.11.6 (5513), 8.6.2 (186), 8.10.2 (203), 8.10.2 (5520), 8.10 (154), 8.11.6 (5524), 8.11.1 (134), 8.11.4.3 (5528), 8.8.2 (5529), 7.5.4.1 (118), 8.11.3 (5539), 8.11.4.2 (5540), 8.11.4 (42), 9.1 (5546), 10 (5550), 11.1 (5554), 11.1 (102), 5.4 (5560), 7.5.7 (105), 3.2 (80), 7.5.3.3 (8700), 8.11.1 (11760), 8.3 (146)
Mineral County, Nevada, Nuclear Projects Office		
Shankle, Judith A.	EIS000361	5.5 (29), 5.3 (164), 8.10.2 (203), 5.4 (3102), 7.5.7 (105), 8.1 (170), 8.10.2 (203)
	EIS000383	5.5 (29), 5.3 (164), 8.10.2 (203), 8.10.2 (203), 5.4 (3102)
	EIS000391	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	EIS000400	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)

Commenter	Comment Document	Location of Comments/Responses
Mineral County, Nevada, Nuclear Projects Office	EIS000542	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28),
Shankle, Judith A. (continued)		5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	EIS000593	8.3 (149), 8.10.2 (203), 7.3.2 (216), 8.11.3 (3019), 8.11.3 (3020), 3.2 (64), 10 (3), 8.3 (161), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 7.5.7 (105), 5.5 (29), 8.1 (170)
	EIS000723	8.3 (149), 8.10.2 (203), 7.5.3.1 (8038), 7.5.6 (130), 8.3 (161), 8.11.1 (134), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (5560), 8.8.1 (8059), 5.5 (29)
	EIS002115	3.2 (80), 8.10.2 (10227), 8.11.3 (3019), 7.5.6 (10229), 8.3 (161), 8.1 (259), 8.8.2 (10232), 8.10.2 (114), 8.4 (25), 8.11.2 (10248), 8.7 (28), 5.4 (10251), 5.5 (29), 8.10.1 (166), 7.5.7 (105), 8.3 (149), 8.11.3 (3020)
	EIS002188	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	010232	3.5 (13386), 4.5 (63), 7.4 (13390)
Missouri Coalition for the Environment		
Hengerson, Roy C.	EIS001013	8.1 (170), 7.5.3.2 (228)
	EIS001229	7.5.3.2 (228), 8.1 (170), 7.3 (209), 7.5.3 (4702), 8.10.2 (114), 8.4 (25), 5.3 (164), 4.5 (11438)
Waterston, Pat	EIS000982	8.1 (170), 8.10.2 (212), 4.5 (3241), 1.1 (34)
Wright, Rebecca	EIS001017	8.4 (6215), 8.4 (115), 5.5 (183)
	EIS001752	8.1 (170), 5.1 (27)
	EIS001781	8.4 (6215), 8.4 (115), 5.5 (183)
Missouri, State of		
Carnahan, Mel	EIS000999	8.3 (60), 8.3 (5052)
Missouri, State of, Missouri House of Representatives		
Enz, Catherine S.	EIS001170	8.3 (60)
	EIS001225	8.3 (60)
O'Toole, James P.	EIS001098	8.1 (170)
Missouri, State of, Missouri State Senate		
Clay, William L.	EIS001036	8.1 (170), 1.1 (122)
Thompson, Hank	EIS001758	8.1 (170), 1.2 (8345), 5.3 (164)
Missouri, State of, Office of the Governor		
Lange, Tom	EIS001738	8.3 (60), 8.3 (5052)
Moapa Band of Paiutes		
Meyers, Calvin	EIS002144	8.11.11.2 (10764), 3.7 (58), 3.7 (57), 3.3 (50), 8.11.11.2 (10768), 7.5.11.2 (240), 8.8.2 (10770)
	010119	3.7 (58), 7.5.11 (13315), 3.7 (57), 10 (91)
	010335	3.6 (257), 3.7 (57), 7.5.11.2 (240), 3.9 (109), 8.1 (259)
Mosiac Outdoor Club		
Koplik, Mark A.	010410	5.1 (27)
Mothers For Peace		
von Ruden, June	EIS002109	5.3 (164), 8.3 (146), 7.5.3.2 (228)
Mt. Charleston, Nevada, Town Advisory Board		
Kajkowski, Charles	EIS000413	5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
NAC International		
Palmer, Elizabeth S.	EIS000215	8 (158), 5.2 (26)
	EIS000275	8 (158), 5.2 (26)
National Association of Regulatory Utility Commissioners		
Gray, Charles D.	EIS001654	3.3 (50), 3.1 (15), 3.1 (12), 8.8.1 (172), 8.3 (149), 1.2 (78), 3.2 (64), 5.2 (26), 3.2 (6119), 7.3.1 (185), 8.3 (201),
	EIS001654	8.10.1 (6127), 3.1 (21), 7.5.1 (106), 7.5.3.2 (6135), 7.5.6 (12588), 7.5.7 (6145), 7.4.2 (6149), 8.7 (153), 8.3.2 (136), 9.1 (138), 10 (6159), 11.2 (6143), 7.5.1 (6153), 8.8.1 (6152), 7.5.11.2 (6150), 9.1 (6146), 9.1 (11607), 9.4 (6136), 5.4 (6134), 5.5 (29), 4.5 (6128), 1.2 (6124), 8.5.3 (190), 7.5.6 (6120), 3.1 (16), 4.5 (92), 7.3.2 (216), 4.3 (6108), 7.3 (6106), 4.5 (99)
	010212	5.2 (26), 3.5 (36), 4.4 (244), 7.2 (12780), 7.1.2 (2249), 7.5.9 (5039), 3.5 (6990), 5.4 (248)
O'Connell, Brian	EIS000469	3.1 (12), 3.3 (50), 3.2 (1742)
National Conference of State Legislatures		
Reed, James B.	EIS001328	8.3 (149), 8.10.2 (200), 4.1 (82), 8.10.2 (114), 8.7 (197), 8.7 (6558), 8.3 (213), 8.7 (153), 3.7 (53), 8.4 (6559), 8.4 (6556), 8.6.1 (223), 8.10.2 (218), 8.10.2 (212)
National Congress of American Indians/Nuclear Waste Program		
Holden, Robert	EIS001910	3.3 (50), 3.7 (58), 7.5.11.2 (5165), 7.5.11.2 (240), 10 (5167), 8.11.5.1 (5168), 11.2 (5169), 7.5.5.2 (38)
Nebraska Public Power District		
McClure, John C.	EIS001166	8 (158), 8.4 (115), 8.10.2 (114)
Nebraska, State of		
Johanns, Mike	EIS001045	3.7 (53), 3.3 (8210), 8.3 (149), 8.3 (149), 8.3 (161), 8.7 (147), 8.3 (201), 8.7 (153), 8.3 (146), 8.7 (153), 4.5 (8242), 8.7 (147), 8.7 (12465), 8.7 (247)
Nevada Environmental Coalition Inc.		
Hall, Robert	010128	7.3.2 (216), 1.2 (79), 3.5 (233), 4.1 (82), 12 (139), 7.5.11.2 (240), 3.6 (257), 3.5 (204)
	010396	3.0 (11552), 3.5 (204), 1.2 (79), 3.6 (257)
Nevada Nuclear Waste Task Force, Inc.		
Treichel, Judy	EIS000094	3.3 (50), 7.5.1 (106), 4.5 (768)
	EIS000243	3.3 (50), 6.1 (1040)
	EIS001866	3.2 (80), 3.3 (9037), 3.2 (9039), 8.3 (161), 3.3 (9047), 1.1 (9049), 2 (9052), 4.5 (63), 8.10 (9057), 10 (258), 3.9 (109), 5.1 (27), 1.1 (34)
	EIS002201	3.5 (113)
	010123	3.6 (257), 7.3.1 (185), 4.4 (244), 1.2 (7020), 13 (227), 3.5 (204)
	010304	3.6 (257)
	010387	3.6 (257)

Commenter	Comment Document	Location of Comments/Responses
Nevada Public Health Association Saum, Judith	EIS000540	7.5.3.2 (2267), 8.7 (141), 7.5.3.2 (228), 5.1 (27), 5.5 (29), 4.3 (70), 7.5.3.3 (12035), 7.5.3.2 (111), 7.3 (12037), 8.1 (170), 2 (12021), 1.2 (12039), 8.3 (213), 2 (12042)
Nevada Resort Association Bible, William A.	EIS001893	5.1 (27), 3.9 (109)
Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816	7.5.3.2 (12615), 7.5.3.2 (8678), 10 (8683), 7.5.9 (175), 10 (8690), 10 (12697), 10 (8695), 10 (12589), 10 (8699), 10 (12248), 10 (8741), 7.5.3.2 (8744), 10 (8747), 7.5.11.2 (8750), 7.5.1 (106), 8.3 (149), 8.7 (153), 10 (3), 8.8.3 (173), 8.3 (201), 8.9 (8774), 8.3.2 (136), 7.5.6 (130), 8.3 (161), 8.10.2 (114), 10 (12247)
Nevada, State of, Nevada State Assembly Parnell, Bonnie	EIS000595	5.1 (27), 7.5.3.2 (228)
Nevada, State of, Commission on Nuclear Projects Peirce, Anne	EIS000388	3.2 (84), 8.3 (161), 8.3 (149), 8.1 (259), 7.5.11.2 (240), 5.1 (27)
	EIS000541	3.2 (84), 8.3 (161), 8.3 (149), 8.1 (259), 7.5.11.2 (240), 5.1 (27)
Nevada, State of, Department of Transportation, Roadway System Division Whitaker, John	EIS000544	8.8.3 (171), 8.8.2 (4168), 8.10.1 (7548)
Nevada, State of, Nevada State Senate Jacobsen, Lawrence E.	EIS001725	3.3 (88), 8.1 (259), 7.5.3.2 (228), 7.5.3.2 (230)
Nevada, State of, Office of the Attorney General Adams, Marta	EIS000603	3.3 (50), 2 (100), 3.9 (109), 4.5 (63)
Bishop, Kathleen	EIS000865	7.5.7 (98), 10 (258), 5.1 (27)
Patton, Thomas M.	EIS000717	2 (100), 3.2 (2451), 8.3 (149), 3.9 (109), 7.5.3.2 (229), 3.2 (80)
	EIS002092	4.1 (83), 2 (100), 3.2 (10172), 8.3 (161), 3.9 (109), 7.5.3.2 (229), 3.2 (80)
Nevada, State of, Office of the Governor Cranor, Bud	EIS002091	5.1 (27), 1.2 (77), 2 (100), 8.3 (161), 3.2 (64), 3.2 (80)
Guinn, Kenny C.	EIS000716	5.1 (27), 1.2 (77), 2 (100), 8.3 (161), 3.2 (64), 3.2 (80)
	010104	4.5 (92), 4.4 (12307), 7.5.7 (12781), 7.5.10 (12782), 7.5.10 (12783), 7.5.10 (165)
Nevada, State of, Office of the Governor, Agency for Nuclear Projects Frishman, Steve	EIS000077	3.1 (440)
	EIS000240	4.1 (83)
	010324	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
Halstead, Robert J.	EIS000172	8.3 (161), 8.3 (160), 8.3.3 (23), 8.3 (149), 3.3 (50)
	EIS000209	8.10.1 (62), 8.10.1 (166), 8.10.1 (1028), 8.10.1 (1035)
	EIS000229	8.5.3 (190), 8.8.2 (1170), 8.10 (154), 8.3.1 (1172), 8.5.3 (1173), 8.8.1 (187), 8.9 (5784)

Commenter	Comment Document	Location of Comments/Responses
Nevada, State of, Office of the Governor, Agency for Nuclear Projects (continued)		
Halstead, Robert J. (continued)	EIS000268	6.0 (1327), 8.8.3 (205), 7.5.7 (965)
	EIS000273	5.3 (164), 8.3 (149), 8.3 (161), 8.1 (170), 5.1 (10786)
	EIS000299	8.4 (25)
	EIS000323	8.7 (5425)
	EIS000407	8.3 (2202)
	EIS000408	8.6.2 (137), 8.7 (142), 8.6.2 (186), 8.8.2 (135)
	EIS000440	8.10.1 (2718), 8.10.1 (166), 8.10.1 (62)
	EIS000463	8.10.1 (166), 8.10.1 (62), 8.3 (9967), 8.1 (259), 8.7 (197), 8.6.1 (223), 8.11.6 (10935)
	EIS000470	5.5 (30), 8.8.1 (172), 3.2 (64), 8.3 (161), 3.3 (50)
	EIS000489	6.1 (9063), 6.1 (9064), 3.2 (80), 6.1 (18), 7.5.7 (9211)
	EIS000629	8.6.2 (137), 8.7 (142), 8.6.2 (186), 8.8.2 (135)
	EIS000643	8.10 (156), 8.6.1 (223), 8.7 (142)
	EIS000652	8.5.3 (190)
	EIS000674	8.10 (2398), 8.1 (259), 8.3.1 (2399), 8.10 (154), 8.3.2 (136), 8.8.1 (2403), 5.4 (2406)
	EIS000679	8.8.2 (121), 8.8.3 (2453), 8.3 (2455), 8.4 (2458), 8.4 (25), 8.6.1 (223), 8.7 (153), 8.10.1 (62), 8.7 (197), 8.3 (213), 8.3 (201)
	EIS000990	8.3 (161), 3.3 (50), 8.3 (12752), 8.1 (170)
	EIS001046	8.3 (161), 3.3 (50), 8.1 (170)
	EIS001310	8.3 (161), 8.1 (170), 3.3 (50), 8.3 (160), 6.1 (18), 8.8.1 (10575), 3.9 (109)
	EIS001580	1.2 (243), 8.3 (161), 8.1 (170), 8.8.1 (196), 8.8.1 (6040), 8.10.1 (166), 3.9 (109), 8.7 (147), 8.8.1 (6050), 3.10 (6074)
	EIS001727	3.3 (50), 8.8.1 (172), 8.8.3 (6287), 8.3 (149), 8.3 (161), 8.11.4 (6294), 8.7 (141), 8.10 (156), 8.11.6 (6303), 8.10 (148), 3.9 (109), 7.5.11 (6309)
	EIS002239	8.1 (11621), 8.7 (141), 8.11.7 (3967), 8.10.1 (166), 8.10 (148), 3.9 (109), 8.1 (4121), 8.3 (161), 8.3 (149)
	EIS002272	8.10 (156), 8.4 (25), 8.3 (161), 8.1 (170), 3.3 (50)
	EIS002291	8.3 (149), 3.3 (50)
Loux, Robert R.	EIS000043	3.2 (64), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106), 3.2 (80)
	EIS000054	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 7.3.2 (361), 3.2 (80)
	EIS000059	3.2 (80), 8.8.1 (196)
	EIS000062	3.2 (64), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106), 3.2 (80)
	EIS000096	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000141	3.2 (637), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 7.5.11.2 (240)
	EIS000439	1.2 (243), 3.2 (64), 3.2 (80), 2 (100), 3.2 (7010), 3.2 (7013), 7.3.2 (361)
	EIS000537	1.2 (243), 3.2 (80), 3.2 (64), 2 (100), 3.9 (109)
	EIS001887	3.2 (80), 3.2 (84), 3.2 (5238), 3.3 (50), 3.2 (64), 3.2 (32), 1.2 (5244), 3.7 (53), 2 (100), 8.3 (60), 3.2 (90), 4.5 (215), 3.2 (5260), 7.3.1 (185), 10 (5261), 7.3 (71), 7.3.2 (216), 8.7 (141), 7.5.3.2 (5270), 3.2 (9), 7.5.5 (5272), 7.5.5 (225), 7.5.11 (5274), 8.8.3 (171), 7.5.11.2 (240), 3.7 (57), 3.9 (109),

Commenter	Comment Document	Location of Comments/Responses
Nevada, State of, Office of the Governor, Agency for Nuclear Projects (continued) Loux, Robert R. (continued)	EIS001887	8.3 (149), 8.8.1 (5289), 8.3 (12688), 8.3.1 (195), 8.5.3 (5303), 6.1 (18), 8.8.1 (196), 8.10.1 (5307), 1.1 (124), 4.5 (5311), 1.2 (81), 1.2 (5315), 6.1 (89), 6.1 (5318), 1.1 (5319), 3.1 (5321), 3.1 (5323), 7.2 (5327), 3.1 (5328), 3.2 (75), 3.2 (5331), 6.1 (5332), 3.2 (5333), 6.1 (12394), 6.1 (5338), 7.5.1 (106), 3.2 (5342), 3.2 (5340), 8.3 (5346), 8.8.2 (11277), 7.2 (5352), 3.1 (11), 4.5 (5354), 7.1.1 (5356), 7.5.10 (5360), 7.1.1 (5361), 7.5.9 (95), 7.3.1 (5363), 7.1.1 (5364), 7.1.1 (5365), 7.1 (31), 7.1 (5368), 7.1 (5369), 7.1 (5370), 7.2 (5372), 7.2 (5373), 8.8.1 (5374), 8.11.11.2 (5377), 8.6.1 (223), 8.3.1 (12467), 8.10.1 (167), 8.9 (5389), 8.1 (259), 8.3.1 (5393), 8.11.1 (5394), 8.11.4.2 (5395), 8.11.1 (5396), 8.7 (142), 8.6.2 (186), 8.5.3 (11292), 8.5.3 (5406), 8.5.1 (5407), 8.5.3 (11294), 8.5.3 (190), 8.9 (193), 8.5.2 (5411), 7.3 (209), 7.1.1 (5413), 7.3 (5418), 5.4 (12691), 5.5 (29), 7.2 (5424), 9.1 (5426), 9.1 (5427), 5.4 (5428), 2 (5429), 3.2 (51), 8.3.3 (11299), 3.2 (5437), 5.4 (5439), 7.3 (5444), 8.8.1 (5449), 8.8.2 (7011), 2 (126), 3.2 (59), 3.2 (5466), 3.8 (65), 7.5.1 (5470), 7.5.2 (5471), 7.5.3.4 (5484), 7.1.1 (5485), 7.5.3.4 (5475), 7.5.3.4 (5487), 7.5.3.3 (5490), 7.5.3 (5491), 7.5.3.5 (5492), 7.5.3.5 (5493), 7.5.3.1 (5494), 7.5.3.2 (8), 7.5.3.2 (5496), 7.5.3.2 (12402), 7.5.3.2 (5498), 7.5.3.2 (5503), 7.5.3.2 (5504), 7.5.3.2 (111), 7.5.3.2 (5506), 7.5.3.2 (5508), 7.5.3.2 (5509), 7.5.3.2 (5512), 7.5.3.2 (5514), 7.5.3.2 (5515), 7.5.3.2 (5517), 7.5.3.3 (5521), 7.5.4 (5523), 7.5.5.2 (237), 7.5.11 (5534), 7.5.6 (5548), 10 (5549), 10 (5556), 7.5.10 (165), 8.3 (161), 8.9 (5561), 3.1 (5565), 8.11.10 (112), 8.11.1 (5569), 8.11.4 (5568), 8.11.5 (5572), 8.11.11.2 (5573), 7.5.6 (5574), 8.7 (140), 3.1 (7016), 8.11.5.1 (5576), 3.9 (5577), 7.5.4 (5582), 3.2 (5583), 7.1.1 (5584), 7.1.1 (5588), 7.5.2 (5589), 7.5.3.1 (5590), 7.5.3.1 (5591), 8.8.3 (176), 7.5.2 (5593), 7.5.2 (5594), 7.5.2 (5595), 7.5.2 (9729), 7.5.3 (5596), 7.5.3 (5597), 7.2 (5598), 7.2 (5599), 7.2 (5600), 8.11.3 (5601), 7.5.3.2 (5602), 7.5.3.2 (5603), 7.5.4.1 (5604), 8.11.11.2 (5606), 7.5.11.2 (5607), 7.5.11.2 (181), 7.5.11.2 (5610), 7.5.11.2 (5611), 8.11.6 (5616), 7.5.7 (5618), 7.5.7 (5617), 7.4.1 (61), 8.10.1 (5620), 7.5.9 (5621), 7.1.1 (5624), 7.5.11 (5629), 4.5 (12312), 7.1.1 (5630), 4.5 (217), 3.2 (5637), 7.5.6 (5638), 7.5.7 (5639), 7.4 (207), 4.5 (5640), 3.2 (5647), 7.3 (221), 7.3 (5650), 7.5.3.2 (5651), 7.3 (239), 7.3 (5657), 7.3 (5656), 7.3 (5659), 7.3.2 (5660), 7.3.2 (5661), 7.3 (7), 7.3 (5664), 7.1.1 (5665), 7.3 (5668), 7.3 (5669), 7.3 (5671), 7.1.1 (5673), 7.3 (5672), 7.3 (5674), 7.3 (5675), 7.3 (256), 7.3 (220), 7.3 (5683), 8.3 (5678), 6.1 (5680), 8.7 (5688), 8.3.3 (5690), 8.3 (5687), 8.3 (5689), 8.11.1 (5693), 8.7 (247), 8.11.4.2 (5697), 8.5.2 (11312), 8.11.5.1 (5698), 8.11.9 (5699), 8.11.9 (5700), 8.3 (160), 3.1 (5704), 3.1 (21), 8.10 (156), 8.10 (5708), 8.4 (12573), 8.10 (7383), 8.10 (5713), 8.10.1 (166), 8.11.11.2 (5717), 8.5.2 (5716), 8.10.2 (5718), 8.3.1 (5719), 8.10 (68), 8.6.2 (137), 8.11.1 (5729), 8.5.3 (5730), 8.10 (5731), 8.8.1 (187), 8.9 (5733), 8.11.11.2 (12509), 9.1 (138), 10 (5740), 10 (5741), 10 (5743), 10 (5744), 10 (5745), 10 (5746), 10 (5747), 10 (5748),

Commenter	Comment Document	Location of Comments/Responses
Nevada, State of, Office of the Governor, Agency for Nuclear Projects (continued)		
Loux, Robert R. (continued)	EIS001887	10 (5749), 10 (5750), 7.5.4.2 (5752), 7.5.4.1 (118), 8.7 (5755), 7.3 (5757), 7.5.4 (5756), 8.11.1 (5760), 7.3 (5759), 4.2 (5763), 4.1 (83), 4.2 (5769), 4.2 (5771), 4.2 (5761), 4.2 (5765), 3.1 (5768), 7.4 (5772), 7.3 (232), 7.3 (5775), 7.5.6 (130), 8.9 (5784), 8.10 (154), 9.1 (5785), 4.5 (12098), 7.5.7 (105), 8.11.1 (11873), 8.8.1 (11824), 8.3.1 (1172), 8.5.3 (1173), 8.9 (11877), 8.10 (148), 10 (7123), 3.3 (11251), 12 (12102), 12 (12103), 12 (12104), 4.5 (217), 3.2 (3961), 7.3.2 (12109), 7.5.1 (7348), 3.3 (12110), 7.3.2 (216), 12 (14), 3.2 (12675), 3.2 (7130), 3.2 (12121), 10 (12123), 10 (7374), 7.5.3.2 (9076), 3.2 (12128), 7.5.3.2 (12139), 7.5.3.2 (12132), 8.10 (8420), 8.10.1 (12134), 8.10 (12135), 8.10 (12136), 8.7 (12137), 7.5.3.2 (5809), 3.2 (12196), 12 (7276)
	EIS002192	4.3 (128), 7.5.7 (10390), 6.0 (10392), 7.2 (10394), 7.4 (10399), 8.9 (193), 5.4 (10401), 4.1 (10402), 6.0 (10403), 5.1 (27), 4.3 (70)
	EIS002198	8.10.1 (133)
	010025	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
	010107	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
	010242	3.2 (32), 3.5 (204), 8.3 (161), 3.2 (55), 4.4 (11612), 3.5 (246), 3.5 (36), 3.0 (6065), 4.5 (92), 7.0 (12607), 7.4 (125), 7.0 (12555), 7.0 (12469), 7.4 (241), 3.9 (109), 7.4 (67), 8.12 (224), 7.5.9 (12537), 7.5.3 (8436), 7.0 (12470), 7.0 (12403), 7.5.2 (12404), 7.5.9 (175), 7.5.10 (165), 7.5.10 (12349), 7.3 (12317), 7.3.2 (216), 10 (12319), 3.5 (12303)
Manzini, Tammy	EIS000613	8.3 (2202)
Massey, Rex	EIS000617	8.3 (2202)
Swartz, Ginger	EIS000068	3.2 (64), 3.2 (80), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106)
	EIS000078	3.2 (64), 3.2 (80), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109)
	EIS000101	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 7.3.2 (361), 3.2 (80)
	EIS000115	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 3.2 (80), 7.3.2 (361)
	EIS000148	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000157	11.1 (653)
	EIS000193	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000227	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000269	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000356	3.2 (637), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 7.5.11.2 (240)
	EIS000488	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000510	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000651	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000678	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000762	8.3 (161), 3.3 (50), 8.1 (10887), 8.2 (10888)

Commenter	Comment Document	Location of Comments/Responses
Nevada, State of, Office of the Governor, Agency for Nuclear Projects (continued)		
Swartz, Ginger (continued)	EIS001456	8.3 (161), 3.3 (50), 8.1 (10887), 8.2 (10888)
Zimmerman, Susan	EIS000221	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)
	EIS000258	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)
	EIS000371	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)
New Directions Technologies Inc.		
Czerwonka, Larry	EIS000058	No comments
New England Coalition On Nuclear Pollution		
Shadis, Raymond	010281	3.6 (257), 7.1 (191), 7.3 (208), 7.3 (252), 7.0 (12921), 7.5.4 (12922)
	010349	3.6 (257), 7.1 (191), 7.3 (208), 7.3 (252), 7.0 (12921), 7.5.4 (12922)
New Jersey, State of, Department of Environmental Protection		
Schmidt, Lawrence	EIS001504	8.3.3 (24)
New Mexico, State of, Environment Department		
Cibas, Gedi	EIS000338	6.1 (1317)
New York State Energy Research and Development Authority		
Valentino, F. William	EIS001955	3.10 (12699), 5.2 (26), 4.5 (6290), 4.5 (99), 11.2 (108)
North American Water Office		
Crocker, George	EIS001374	5.1 (27), 3.2 (4091), 5.5 (183), 5.4 (219), 7.5.11.2 (181)
	EIS001514	5.1 (27), 3.2 (4091), 5.5 (183), 5.4 (219), 7.5.11.2 (181)
North Carolina Citizens Research Group Inc.		
Eddleman, Wells	EIS002070	3.3 (50), 3.2 (9738), 7.3 (9809), 1.2 (77)
North Carolina, State of, Department of Administration		
Baggett, Chrys	EIS000330	3.10 (4)
North Dakota, State of, Public Service Commission		
Wefald, Susan E.	EIS001484	5.2 (26)
North Las Vegas, Nevada, City of		
Bell, Jim	EIS002116	8.1 (259), 3.9 (109)
Importuna, Patrick P.	EIS001157	8.3 (12255), 8.8.2 (4357), 3.9 (109), 8.8.3 (171), 7.5.6 (130), 8.1 (259), 8.11.2 (4362), 8.8.1 (4363), 8.5.3 (12548), 8.6.2 (186), 8.8.2 (4365), 4.5 (63), 8.11.11.1 (4367), 8.4 (115), 8.8.2 (4370)
Northern States Power Company		
Kapitz, Jon	EIS000511	3.10 (4), 4.5 (99), 5.2 (26), 8 (158), 5.6 (2420)
Nuclear Energy Information Service		
Kraft, David A.	EIS001320	3.3 (50), 1.2 (77), 12 (139)
	EIS001591	3.3 (50), 1.2 (77), 4.3 (70), 1.2 (243)
	EIS001611	8.9 (6885), 1.1 (6888), 4.5 (99)

Commenter	Comment Document	Location of Comments/Responses
Nuclear Energy Institute		
Jefferson, Robert	EIS000241	8 (158), 8.10.1 (10918)
	EIS000492	8.4 (115)
	EIS001169	8 (158)
	EIS001564	8.4 (115)
	EIS001576	8.4 (25), 8.10 (7496), 8.7 (184), 8 (158)
	EIS001587	8 (158), 8.10.1 (6372)
	EIS002242	8 (158), 8.4 (11360), 8.3 (149), 8.7 (197)
Kraft, Steven P.	EIS000208	5.2 (26), 8.8.1 (172), 4.5 (879)
	EIS000452	5.2 (26), 8.8.1 (172)
	EIS001832	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
	010249	5.2 (26), 7.3 (12949), 1.3 (12953), 3.4 (12954), 3.4 (12955), 3.5 (12956), 3.5 (12957), 1.3 (12958), 7.1.2 (12959), 7.1.2 (12960), 6.1 (46), 3.0 (12962)
	010358	5.2 (26), 7.3 (12949), 1.3 (12953), 3.4 (12954), 3.4 (12955), 3.5 (12956), 3.5 (12957), 1.3 (12958), 7.1.2 (12959), 7.1.2 (12960), 6.1 (46), 3.0 (12962)
Nuclear Free Great Lakes Campaign, Prescott College		
Bulow, Laura A.	EIS001187	1.2 (77)
Nuclear Free Takoma Park Committee		
Levy, Jay J.	EIS000147	7.3 (220)
Nuclear Information and Resource Service		
Kamps, Kevin	EIS000446	1.2 (77)
	EIS000467	3.2 (64), 4.5 (1927), 8.10 (1928), 8.10.1 (133), 7.5.7 (66), 8.1 (170), 13 (227), 13 (10946), 1.2 (79)
	EIS001466	8.8.3 (174), 8.3 (161), 8.8.1 (6855), 6.1 (6857), 7.1 (33), 7.5.3.2 (6860), 7.2 (6862), 7.5.3.3 (6863), 7.5.3.2 (229), 7.5.3.2 (111), 7.5.3.2 (228), 4.3 (129), 7.5.7 (6870)
	EIS001471	13 (4687), 8.8.3 (174), 8.8.1 (196), 8.1 (170), 3.2 (64), 13 (5), 13 (72), 3.3 (50), 7.5.7 (98)
	EIS001474	3.3 (1), 3.3 (50), 1.2 (77), 8.10.1 (4054), 7.5.11.2 (181), 8.10 (4057), 1.2 (78), 13 (5), 12 (139)
	EIS001561	8.4 (226), 3.3 (50), 13 (227), 8.1 (170), 8.10.2 (194)
	EIS001927	3.2 (80), 7.3 (210), 1.2 (77), 8.8.1 (196), 8.3 (161), 8.3 (10348), 8.8.1 (10356), 8.10 (156), 8.10 (168), 8.10.2 (200), 8.3 (149), 7.5.7 (10372), 7.5.7 (98), 8.7 (141), 7.5.4 (10381), 3.3 (50), 3.3 (10398), 8.11.11 (10404), 7.5.11.2 (240), 7.5.11 (52), 7.5.11 (10411), 3.9 (109), 8.10.1 (167), 3.2 (64), 7.5.3 (10420), 7.5.3.4 (10424), 3.2 (10909), 5.4 (10426), 6.1 (46), 4.5 (10429), 9.1 (10431)
	EIS001967	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
	EIS002094	7.5.3.2 (228), 7.5.3 (10284), 1.2 (77), 8.1 (170), 3.3 (50), 3.3 (10301)
	EIS002163	7.1 (191), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Nuclear Information and Resource Service (continued)		
Kamps, Kevin (continued)	010246	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
	010285	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
	010354	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
Olson, Mary	EIS000294	3.2 (1394), 3.2 (64), 1.2 (77), 7.1 (33), 12 (1399), 6.1 (116), 7.5.11.2 (181)
Nuclear Waste Strategy Coalition		
Bradley, Phillip T.	010303	4.5 (12969), 5.2 (26), 4.5 (99), 4.5 (107), 1.2 (78), 5.5 (183), 3.5 (204), 8.3 (12980), 3.9 (109), 8.3 (201)
Minn, Steve	EIS001210	5.2 (26), 5.4 (4319), 5.4 (4320), 8 (158)
Nukewatch		
Miner-Nordstrom, Dan	010208	5.1 (27)
Nye County, Nevada, Board of County Commissioners		
Carver, Dick	EIS001879	3.2 (80), 3.2 (84), 8.7 (5969), 8.3 (149), 8.7 (184), 7.3 (5975), 11.1 (6), 10 (12338), 10 (5980), 7.3 (221), 7.3 (5988), 7.3 (7131), 8.11.1 (5989), 8.9 (5990), 8.10 (145), 8.8.1 (5991), 8.8.3 (5992), 7.5.6 (5993), 3.1 (5994), 7.5.9 (5996), 7.3 (5995), 10 (12271), 11.1 (5999), 7.3 (5997), 6.1 (5998), 10 (6000), 3.1 (6001), 3.1 (6003), 3.2 (80), 7.5.7 (93), 1.1 (1663), 10 (104), 8.8.2 (188), 3.9 (109), 11.2 (108), 3.2 (1516), 5.5 (1517), 9.1 (6016), 3.2 (6017), 3.8 (65), 3.7 (53), 10 (104), 3.7 (5976), 10 (5974), 10 (5972), 10 (5968), 3.8 (65), 10 (5964), 8.10 (12031), 8.10 (12032)
	EIS002237	5.1 (11603), 3.7 (53), 8.10.2 (11605), 8.1 (259)
Davis, Bob H.	EIS000442	3.2 (80), 3.2 (1516), 5.5 (1517), 3.8 (65)
Giampaoli, Mary Ellen	EIS000242	3.2 (80), 10 (981), 11.2 (982), 3.2 (983)
	EIS000245	3.2 (983), 3.2 (80), 8.1 (259), 10 (981), 11.2 (982)
Taguchi, Jeff	EIS000441	3.2 (80), 7.5.7 (93), 1.1 (1663), 10 (104), 8.8.2 (188), 3.9 (109)
Walker, Jamieson S.	EIS000061	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
	EIS000194	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
Nye County, Nevada, Department of Natural Resources and Federal Facilities		
Bradshaw, Les	EIS000069	3.2 (80), 7.3 (208), 11.1 (76), 3.7 (53), 3.3 (50), 6.1 (474), 10 (475), 3.2 (476), 11.1 (6), 3.3 (88), 3.9 (109)
	EIS000079	3.2 (80), 3.1 (15), 7.3 (222), 7.3 (7), 10 (104), 11.1 (76), 3.7 (53), 8.3 (149), 7.3.1 (185), 7.5.1 (106)
	EIS000102	3.2 (80), 3.2 (90), 8.3 (149), 10 (104), 3.2 (544), 10 (3), 7.3 (7)
	EIS000116	3.2 (80), 10 (104), 3.3 (50), 8.7 (905), 3.2 (906)
	EIS000332	3.2 (80), 3.2 (84), 10 (104), 8.3 (201), 8.3.2 (136), 10 (1808), 11.1 (1809), 3.2 (1810), 7.3 (1811), 3.8 (65), 2 (100), 10 (1815)

Commenter	Comment Document	Location of Comments/Responses
Nye County, Nevada, Department of Natural Resources and Federal Facilities (continued)		
Bradshaw, Les (continued)	EIS002238	3.2 (80), 1.2 (79), 8.3 (213), 10 (104), 7.5.3.2 (8), 4.5 (11323), 7.5.6 (130)
	010296	3.2 (80), 3.6 (257), 5.2 (26), 7.1.2.2 (13344), 7.1.2 (13345), 7.3 (13346), 4.5 (217), 7.1.2.2 (13348), 7.5.9 (13349), 5.4 (13350), 7.1.2.2 (13352), 7.1.2.2 (13355), 7.3.2 (216), 4.4 (244), 3.2 (13370), 9.1 (13371), 7.4 (87), 4.5 (92), 7.1.2 (13387), 7.1.2 (13392), 7.1.2 (13397), 7.1.2 (13398), 7.1.2 (13399), 7.1.2 (13400), 7.1.2 (13401), 7.1.2 (13402), 7.1.2 (13403), 7.1.2 (13404), 7.5.9 (13405), 7.5.9 (13406), 7.5.10 (13447), 7.1.2 (13448), 3.2 (13449), 7.5.9 (175),
	010296	7.5.3 (13451), 10 (104), 10 (13452), 7.3 (13453), 7.3 (13454), 7.5.3.5 (13455), 11.1 (13456), 7.3 (13457), 5.5 (29), 7.3 (13459), 4.5 (215)
	010360	3.2 (80), 3.6 (257), 5.2 (26), 7.1.2.2 (13344), 7.1.2 (13345), 7.3 (13346), 4.5 (217), 7.1.2.2 (13348), 7.5.9 (13349), 5.4 (13350), 7.1.2.2 (13352), 7.1.2.2 (13355), 7.3.2 (216), 4.4 (244), 3.2 (13370), 9.1 (13371), 7.4 (87), 4.5 (92), 7.1.2 (13387), 7.1.2 (13392), 7.1.2 (13397), 7.1.2 (13398), 7.1.2 (13399), 7.1.2 (13400), 7.1.2 (13401), 7.1.2 (13402), 7.1.2 (13403), 7.1.2 (13404), 7.5.9 (13405), 7.5.9 (13406), 7.5.10 (13447), 7.1.2 (13448), 3.2 (13449), 7.5.9 (175), 7.5.3 (13451), 10 (104), 10 (13452), 7.3 (13453), 7.3 (13454), 7.5.3.5 (13455), 11.1 (13456), 7.3 (13457), 5.5 (29), 7.3 (13459), 4.5 (215)
Giampaoli, Mary Ellen	EIS000071	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.7 (53), 3.2 (84), 5.5 (30), 3.2 (51), 8.7 (153), 8.3 (149), 8.1 (259), 8.3.2 (136), 8.8.2 (419), 7.5.6 (420), 10 (421)
	EIS000081	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.7 (53), 3.2 (84), 11.1 (76), 8.7 (153), 8.3 (149), 8.1 (259), 8.3.2 (136), 8.8.2 (419), 7.5.6 (420), 10 (421), 3.7 (53)
	EIS000107	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.8 (65), 3.2 (84), 10 (104), 7.5.6 (420), 10 (421)
	EIS000119	3.8 (65), 7.5.7 (93), 3.2 (80), 3.7 (53), 10 (104), 10 (1168)
	EIS000349	3.3 (50), 8.3 (149)
	EIS002120	1.2 (8641), 8.3.2 (136)
	EIS002134	1.2 (8641), 8.3.2 (136)
	010108	3.6 (257), 7.4 (13278), 7.4 (125), 7.5.6 (130), 7.5.9 (175)
Sims, Stan	010143	3.6 (257), 7.4 (13278), 7.4 (125), 7.5.6 (130), 7.5.9 (175)
	010320	3.6 (257), 3.5 (11759), 7.4 (11754), 7.5.6 (130), 7.5.9 (175)
Walker, Jamieson S.	EIS000060	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000149	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
	EIS000151	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000155	3.2 (80), 7.3 (208), 11.1 (76), 10 (104), 3.3 (50)
	EIS000196	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000199	3.2 (80), 7.3 (208), 11.1 (76), 10 (104), 3.3 (50)
Nye County, Nevada, Nuclear Waste Project Office		
Buqo, Thomas S.	EIS000044	7.5.3.2 (11665), 10 (380)
	EIS000053	10 (10878)
	EIS000056	10 (335), 3.2 (336), 11.1 (6)

Commenter	Comment Document	Location of Comments/Responses
Nye County, Nevada, Nuclear Waste Project Office (continued)		
Buqo, Thomas S. (continued)	EIS000070	7.5.3.2 (11665), 10 (380), 1.1 (101)
	EIS000080	7.1.1 (430), 7.1.1 (431), 7.4.2 (432), 11.1 (6), 4.5 (435), 3.2 (436), 10 (437)
	EIS000105	10 (524), 10 (10878)
	EIS000117	10 (335), 3.2 (336), 11.1 (6)
OGD Awareness		
Bullcreek, Margene	EIS001459	13 (72), 3.3 (88), 11.2 (108), 7.5.11 (10677), 7.5.7 (93), 7.5.11.2 (181), 1.1 (101)
	EIS001475	7.3 (206), 7.5.11.2 (4786), 10 (258), 12 (14), 8.4 (25), 3.3 (88), 8.10.2 (4790), 13 (72), 7.5.11 (4793), 1.2 (243)
	EIS002106	4.5 (12647), 13 (211), 7.5.7 (93), 3.7 (58), 7.5.11.2 (152), 13 (72)
Oak Ridge Reservation Local Oversight Committee, Inc.		
Kuhaida, Jerry	EIS002310	5.2 (26), 8.10.2 (12083)
Ohio Citizen Action		
Lauber, Maureen	EIS001568	5.4 (8480), 13 (5), 6.0 (8481)
Ryder, Amy K.	EIS001285	3.3 (50), 8.1 (170), 5.1 (27)
	EIS001546	3.3 (50), 8.1 (170), 5.1 (27)
Ohio Citizens Against a Radioactive Environment		
Kline, Connie	EIS001288	5.2 (26), 8 (158), 13 (37)
	EIS001551	5.2 (26), 13 (37)
Ohio Public Industry Research Group		
Weidner, Maria	EIS001550	1.2 (77), 7.5.3.2 (111), 7.5.3.2 (228), 8.3 (161), 8.4 (25), 8.1 (170), 13 (5), 3.5 (113)
Ohio, State of, Ohio House of Representatives		
Miller, Dale	EIS001280	8.3 (60), 3.3 (50), 8.7 (197), 8.7 (247), 13 (5)
Ohio, State of, Public Utilities Commission		
Agler, Alfred P.	EIS001291	8.7 (153), 8.7 (143), 8.7 (6206), 8.10.2 (114), 3.7 (53)
	EIS001557	3.2 (5481), 8.7 (5866), 8.7 (11192), 8.10.2 (114), 8.7 (143)
	EIS001567	8.7 (10448)
Oregon, State of, Office of Energy		
Blazek, Mary Lou	EIS001215	9.1 (4850), 3.2 (4851), 9.1 (4852), 9.1 (4853), 8.1 (170), 8.3 (161), 8.3 (149)
Owens Valley Indian Water Commission		
Alther, Dorothy	EIS000363	3.3 (50)
Cawelti, Teri	EIS001107	5.1 (27), 7.5.3.2 (3281), 7.5.3.2 (11935), 7.5.3.2 (228), 3.9 (109), 8.1 (170), 8.3 (149), 8.10.2 (212), 7.5.11 (52), 7.5.11.2 (240), 7.5.11.2 (181)
PECO Energy Company		
Hutton, James A.	EIS001517	5.2 (26)
Pacific Gas & Electric		
Stock, Bill	EIS002265	3.2 (80), 5.2 (26)
Pahrump Paiute Tribe		
Jim, Clara Belle	EIS002082	10 (258), 5.1 (27), 8.10 (8822)

Commenter	Comment Document	Location of Comments/Responses
Pahrump, Nevada, Town of, Town Board		
Bishop, Ed	EIS000949	5.2 (26), 8.10.1 (3251), 4.5 (3252)
Paiute Indian Reservation of Owens Valley		
Miller, Vernon J.	010345	5.1 (27), 7.5.11.2 (240), 7.5.5 (11777)
Paiute Tribe of Utah		
Benson, Gloria Bullets	010337	7.5.11.2 (240), 3.7 (57), 3.6 (257), 7.5.5 (12802)
Paul Williams and Associates		
Williams, Paul C.	EIS001294	4.3 (70), 7.5.7 (66), 8 (158)
	EIS001570	4.3 (128), 7.5.7 (66), 8.1 (170), 8.4 (115)
Peace Action		
Aversa, Emily	EIS001683	7.5.11.2 (181), 7.1.5 (7291), 7.5.3.2 (7296)
Peace Education Center		
Harvey, Elise B.	EIS001661	8.1 (170), 5.5 (29)
Pennsylvania, Commonwealth of, Public Utility Commission		
Barth, Lawrence F.	EIS001627	5.2 (26), 5.4 (8351), 13 (8352), 4.5 (8355)
	EIS001652	5.2 (26), 5.4 (8351), 13 (8352), 4.5 (8355)
People Against Radioactive Dumping		
Lopez, Ruth	EIS001837	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)
	EIS001929	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)
	EIS001939	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)
	EIS002248	3.3 (50), 8.3 (11532), 8.1 (11533), 3.5 (113), 4.1 (82), 12 (139)
	010089	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
	010101	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
	010363	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
People's Action for Clean Energy, Inc.		
Friedman, Judi	EIS000969	5.1 (27)
Physicians for Social Responsibility		
Hattis, Ronald P.	EIS001807	8.1 (170), 8.10 (157), 1.1 (6955), 12 (139), 4.3 (128), 7.5.7 (11345)

Commenter	Comment Document	Location of Comments/Responses
Hattis, Ronald P. (continued)	EIS001808	8.10.1 (62)
	EIS002269	8.7 (197), 8.7 (140), 8.10 (157)
Roberts, Kimberly	EIS000205	7.5.3.2 (228), 7.5.7 (677), 7.5.7 (678), 8.4 (115), 8.10.2 (680), 5.3 (164)
	EIS000462	5.3 (164)
Physicians for Social Responsibility, Los Angeles		
Parfrey, Jonathan	EIS000023	3.3 (50), 8.1 (170), 7.5.2 (971), 7.5.3.2 (230)
	EIS000719	8.10 (3489), 8.10 (156), 8.3 (161), 8.10.2 (114), 8.3 (149)
	EIS002095	8.10 (3489), 8.10 (156), 8.3 (161), 8.10.2 (114), 8.3 (149)
Saxon, Richard G.	EIS000720	3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230)
	EIS002096	3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230)
Physicians for Social Responsibility/Atlanta		
Arnold, Ed	010226	5.1 (27), 7.3 (220), 8.1 (170), 5.3 (164), 4.4 (244)
	010276	5.1 (27), 7.3 (220), 8.1 (170), 5.3 (164), 4.4 (244)
Pigeon Spur Spent Fuel Storage Facility		
Peterson, William D.	EIS001477	4.5 (92)
	010291	5.5 (30)
	010301	5.5 (30)
Placer Dome U.S.		
Schoen, Stephen M.	EIS001195	8.11.1 (3164), 8.11.1 (2940), 8.6.2 (3165), 8.11.1 (3166), 11.1 (3167), 8.8.2 (135), 3.3 (50)
Ponca Industrial Corp.		
King, John W.	EIS001086	2 (126)
Positives for Peace and Environmental Justice		
Karch, Gary	EIS001312	12 (14), 13 (5), 7.5.7 (98)
	EIS001588	12 (14), 13 (5), 7.5.7 (98)
Power Resources		
Newton, Fletcher	EIS000494	4.5 (99), 4.5 (1961), 5.2 (26)
Prairie Island Indian Community		
Kohnen, Audrey	EIS001911	3.3 (50), 5.2 (26), 8.8.1 (5145), 8.10.2 (212), 8.11.11 (5147)
Unsigned	EIS000328	13 (37), 4.5 (1730)
White, Byron	EIS000490	5.2 (26), 9.4 (1537), 8.3 (149), 8.8.3 (171), 13 (5)
Prairie Island, Minnesota, City of		
Campbell, Darrell	EIS000456	5.2 (26), 9.4 (1537), 8.10.2 (212), 8.8.3 (171), 13 (5)
Progressive Leadership Alliance of Nevada		
Carrasco, Liz	EIS002114	5.1 (27), 7.5.11.2 (181), 3.9 (109), 1.2 (79)
Fulkerson, Bob	EIS000284	1.1 (101), 7.3 (222), 12 (139), 7.5.11.2 (181), 7.5.3.2 (230)
	EIS000315	7.4 (103), 7.5.3.3 (1045), 8.1 (259), 3.9 (109), 7.3 (222), 5.5 (29), 3.3 (50)
	EIS000564	3.3 (50), 12 (139), 10 (242), 7.5.3.3 (2031), 1.2 (77), 4.3 (70), 8.1 (170), 7.3 (222), 5.1 (27)
Proposition One Committee		
Thomas, Ellen B.	EIS001838	5.3 (164), 3.1 (15), 8.3 (149), 8.3 (161), 8.10.2 (114), 7.5.11 (52), 8.1 (170)
Public Citizen		
Gue, Lisa	010150	5.1 (27), 3.6 (257), 3.6 (245), 7.3.1 (185), 8 (8491), 3.2 (75)

Commenter	Comment Document	Location of Comments/Responses
Public Citizen	010290	7.3.1 (185), 8.3 (161), 3.6 (257), 7.5.3 (1486), 7.4 (125),
Gue, Lisa (continued)		8.1 (170), 7.3.2 (216)
	010350	7.3.1 (185), 8.3 (161), 3.6 (257), 7.5.3 (1486), 7.4 (125),
		8.1 (170), 7.3.2 (216)
Shollenberger, Amy	EIS000724	3.1 (3997), 8.3 (149), 8.1 (170), 3.9 (109), 10 (3990),
		3.2 (3992)
	EIS001834	3.2 (80), 3.3 (50), 3.2 (90), 10 (3), 3.1 (15), 8.3 (149),
		8.3 (161), 8.10 (156), 8.10 (148), 8.10.2 (8831), 3.9 (109),
		7.5.11.2 (240), 7.5.11 (52), 3.7 (53), 7.5.11.2 (181), 10 (8881),
		9.1 (8882), 7.5.4.2 (117), 7.5.4.4 (8884), 7.5.6 (130),
		7.5.7 (98), 7.5.3 (8887), 7.5.3.1 (8888), 10 (8889),
		8.10.1 (166), 8.10.2 (200)
	EIS002117	3.1 (3997), 8.3 (149), 8.1 (170), 3.9 (109), 10 (3990),
		3.2 (3992)
	EIS002130	3.3 (50), 8.8.3 (171), 8.3 (161), 7.5.11.2 (240)
	EIS002166	3.3 (50)
Public Citizen, Critical Mass Energy Project		
Hauter, Wenonah	EIS000211	8.3 (161), 7.1.3 (717), 8.10.2 (114), 3.9 (109), 7.5.3.2 (229),
		3.2 (64), 3.3 (50)
	EIS000455	3.2 (80), 8.3 (149), 8.8.3 (174), 8.4 (115), 3.9 (109), 7.5.7 (98),
		7.5.3 (1894), 12 (14)
	010280	3.6 (257)
	010359	3.6 (257)
	010386	3.6 (257)
Rocky Mountain Peace and Justice Center		
Marshall, Tom	EIS000517	1.1 (101), 7.3 (220), 7.5.11.2 (240), 3.3 (50), 8.3 (149),
		3.2 (69), 8.10.2 (212), 3.9 (109), 8.8.3 (171), 8.8.1 (189),
		3.2 (80)
	EIS001946	5.1 (27), 3.2 (80), 8.3 (161), 10 (3), 8.3 (149), 3.9 (109),
		8.4 (115), 7.5.3.2 (228), 7.5.3.2 (229), 7.5.3.5 (4952), 3.2 (64),
		7.5.11.2 (240), 8.8.3 (171)
Roman Catholic Archdiocese of St. Louis		
Creason, Richard H.	EIS001369	8.1 (170)
Rouse Company, The		
Galen, Richard E.	EIS001861	8.1 (259), 8.3 (201)
Rum Village Neighborhood Association	EIS001633	8.1 (170), 8.10.2 (200)
Voelker, Roger		
Rural Alliance for Military Accountability		
Potorti, Grace	EIS000393	3.2 (80), 3.2 (90), 3.5 (36), 3.2 (32), 3.7 (53)
	EIS000562	3.2 (80), 3.2 (90), 3.5 (36), 3.2 (32), 3.7 (53)
SLO CO Nuclear Waste Management Committee		
Frank, Franklin F.	010009	7.3 (210), 7.5.3.2 (229), 5.3 (164)
STAR Foundation (Standing for Truth About Radiation)		
Cullen, Scott	EIS000204	7.5.11.2 (181), 5.3 (164), 8.10 (168), 8.3 (149), 10 (1119),
		10 (4555), 8.10.2 (114)
	EIS000225	7.5.11.2 (181), 5.3 (164), 8.10 (168), 8.3 (149), 10 (1119),
		10 (4555), 8.10.2 (114)

Commenter	Comment Document	Location of Comments/Responses
STAR Foundation	010238	5.1 (27), 1.2 (77), 3.5 (204), 8.10.2 (114), 8.3 (201), 8.4 (25),
Cullen, Scott (continued)		8.10.1 (133), 8.7 (141), 3.9 (109)
	010356	5.1 (27), 1.2 (77), 3.5 (204), 8.10.2 (114), 8.3 (201), 8.4 (25),
		8.10.1 (133), 8.7 (141), 3.9 (109)
Safe & Healthy Communities		
Pack, Marion	010402	5.1 (27), 7.5.3 (6648), 8.1 (170), 5.3 (164)
Saint Peter Catholic Church		
Feible, Ann Kalitta	EIS001849	8.1 (170), 7.5.3.2 (228), 8.10.2 (212)
San Bernardino County, California		
Brierty, Peter	EIS002235	8.10.2 (114), 8.4 (11579), 8.8.1 (196), 8.10 (11581),
		8.10.2 (11582), 8.1 (170)
Goss, John	EIS002233	3.3 (50), 8.8.1 (12361)
	EIS002300	3.3 (50), 8.8.1 (12361)
Scott, Randy	EIS002234	3.3 (50), 8.3 (149), 3.2 (80), 8.3 (149), 8.3 (161),
		8.8.1 (11424), 8.6.1 (223)
San Bernardino County, California, Board of Supervisors		
Eaves, Jerry	EIS000757	3.3 (50)
Mikels, Jon D.	EIS001865	3.7 (53), 3.3 (50), 8.1 (170), 8.3 (149), 8.3 (161),
		8.10.2 (10135), 8.3.1 (10139), 8.3 (201), 8.8.1 (10142),
		8.6.1 (223)
	EIS002231	3.3 (50), 8.3 (149), 8.10 (68), 8.1 (170)
San Bernardino, California, City of		
Lien, Susan	EIS002282	8.1 (170)
San Diego County, California, Department of Public Works		
Stanton, Timoty N.	EIS001930	8.3 (161), 6.0 (10028)
San Manuel Band of Mission Indians		
Marquez, Deron	EIS001908	8.1 (170)
Sargent & Lundy Engineers		
Erler, Bryan	EIS001581	13 (5), 5.2 (26)
Savannah River Site Citizens Advisory Board		
Goad, Ken	EIS000169	1.2 (78)
	EIS000301	1.2 (78)
Loadholt, Ann	EIS001105	9.1 (3637), 4.5 (3638), 4.5 (63), 8.3 (201), 4.5 (3641)
Patterson, Karen K.	010394	7.3 (7), 5.2 (26), 7.3 (3777), 3.5 (3778)
Sheet Metal Workers International Association		
Panvini, Vincent A.	EIS000449	5.2 (26)
Shoshone-Bannock Tribes		
Thompson, Duane	EIS001928	3.7 (58), 3.3 (50), 9.5 (7631), 4.5 (7636), 3.1 (7638),
		3.1 (7640), 4.5 (7642), 7.5.2 (7644), 7.3.1 (185), 7.5.7 (7652),
		7.5.11 (7654), 8.8.1 (7655), 6.1 (46), 6.2 (7660), 4.5 (96),
		4.2 (7667)
Shundahai Network		
Durham, Michael	EIS001696	7.5.7 (98), 5.5 (183)
Gable, Gregor	EIS002098	7.5.3.2 (229), 7.3 (252)
Harney, Corbin	EIS001275	5.3 (164)
	EIS002240	12 (139), 3.3 (50), 8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Shundahai Network (continued)		
Knutsen, Reinard	EIS000458	7.5.11.2 (181), 12 (139), 5.1 (27), 3.2 (80), 6.1 (46), 4.5 (1754), 3.2 (51), 5.3 (164), 13 (227)
	EIS001465	3.2 (59), 13 (5), 12 (139), 5.1 (27), 3.3 (50), 7.5.3.2 (10082), 7.5.3.2 (10083), 1.2 (78)
	EIS001480	1.1 (122), 13 (5), 12 (139), 13 (35), 5.3 (164), 4.5 (8692), 3.2 (51), 3.3 (50), 7.5.5.2 (8704), 4.1 (83)
	EIS002135	12 (139), 4.5 (11096), 13 (5), 5.4 (11098), 7.3 (208), 3.2 (80), 10 (11101), 7.5.11.2 (240), 7.5.3.2 (11103), 8.10 (148), 5.5 (183), 8.1 (259)
	EIS002204	7.5.3.2 (10264), 7.5.3.2 (228), 5.1 (27), 1.2 (77)
	EIS002252	3.3 (50), 3.2 (59), 12 (139), 6.1 (46), 13 (5), 5.3 (164), 8.4 (25), 10 (11522), 7.5.6 (11523), 7.5.11.2 (240), 3.7 (57), 7.5.11.2 (11529)
Moon-Sparrow, Julia	EIS002151	5.1 (27), 7.5.7 (98), 2 (100), 7.5.11.2 (181), 7.5.3.2 (9715), 10 (9716), 12 (139), 5.3 (164), 3.3 (50)
Scharff, John	EIS002118	7.3 (206), 8.1 (170), 5.3 (164)
	EIS002221	3.5 (113), 7.5.3.2 (10464)
	EIS002251	7.3.2 (11403), 12 (139), 8.10 (11405), 5.4 (11406), 10 (11407), 3.3 (50), 8.10.2 (11409), 8.4 (115), 3.2 (11411), 7.5.3.2 (11412), 7.5.7 (11413), 5.3 (164)
	EIS002278	8.10 (11364), 8.10.2 (11365), 3.2 (11366), 7.5.2 (11367), 5.3 (164)
Snyder, Susi	EIS000459	5.1 (27), 7.5.3 (1899), 6.1 (46), 3.2 (64), 5.5 (183), 7.5.11.2 (240), 8.3 (146)
	EIS000970	3.3 (50)
	EIS001907	3.2 (80), 5.1 (27), 3.2 (64), 8.3 (146), 3.3 (50), 8.1 (170), 8.10 (8746), 8.8.3 (174), 4.5 (8762), 3.2 (90), 7.3 (7), 12 (139), 7.1 (8777), 5.3 (164), 7.5.7 (98), 3.9 (109), 8.8.1 (8786), 8.10.2 (212), 7.5.6 (130), 7.5.7 (8797), 8.11.11 (8799), 7.5.11.2 (181), 4.3 (8803), 7.5.3.2 (8807), 4.2 (8810), 5.5 (183)
	EIS002133	7.5.3 (2512), 13 (5), 3.3 (50), 7.5.11.2 (181), 8.3 (161), 3.9 (109), 5.6 (12712), 3.2 (80)
	EIS002194	3.3 (50), 4.3 (249), 7.5.9 (175), 7.3 (7), 5.1 (27), 7.3 (10432), 7.5.6 (10433), 7.5.7 (98), 7.5.3.2 (111), 1.2 (243), 7.5.3.2 (228), 7.3 (10440), 7.3 (10441)
	EIS002199	13 (5)
	EIS002247	3.3 (50), 7.5.9 (175), 1.2 (11475), 1.1 (11476), 7.5.7 (848), 7.3 (7), 8.4 (11480), 8.3 (201), 8.10.2 (114), 13 (5), 12 (139)
	EIS002285	3.2 (11465), 7.5.7 (66), 8.8.3 (171), 1.1 (101), 3.3 (50), 1.2 (77)
	010114	3.6 (257), 7.3.2 (216), 3.2 (64), 7.5.7 (98), 7.5.7 (236), 5.3 (164), 7.5.3.1 (234), 7.3 (3549), 7.3 (222)
	010139	3.5 (233), 4.2 (12366), 7.1 (191), 13 (12368), 3.6 (257)
	010149	3.6 (257), 7.3.1 (185), 3.5 (204), 7.4 (241), 4.4 (244), 7.3 (220), 7.5.7 (235), 1.1 (124), 3.5 (233)
	010227	7.5.1 (106), 7.5.11.2 (240), 7.5.5.1 (13085), 7.1.2.1 (13086), 7.5.10 (13087), 7.4 (13088), 7.5.10 (13089), 7.5.9 (175), 7.5.7 (235), 4.3 (129), 7.5.7 (236), 4.4 (13094), 7.5.6 (130), 3.5 (36), 7.1.2.2 (13097), 7.5.3 (13098), 7.1.2.4 (13099),
	010227	7.1.2 (13100), 7.1.2 (13101), 7.3 (252), 7.4 (13104), 7.4 (241), 7.0 (13106), 9.1 (13109), 7.5.9 (13110), 4.4 (244), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Shundahai Network (continued)	010322	3.6 (257), 4.4 (244), 7.5.9 (175), 7.4 (10782), 7.3.1 (185),
Snyder, Susie (continued)		6.1 (7198)
	010328	7.5.11.2 (181), 7.3 (13248), 7.3 (256), 4.4 (13250), 7.3 (252)
	010353	7.5.1 (106), 7.5.11.2 (240), 7.5.5.1 (13085), 7.1.2.1 (13086), 7.5.10 (13087), 7.4 (13088), 7.5.10 (13089), 7.5.9 (175), 7.5.7 (235), 4.3 (129), 7.5.7 (236), 4.4 (13094), 7.5.6 (130), 3.5 (36), 7.1.2.2 (13097), 7.5.3 (13098), 7.1.2.4 (13099), 7.1.2 (13100), 7.1.2 (13101), 7.3 (252), 7.4 (13104), 7.4 (241), 7.0 (13106), 9.1 (13109), 7.5.9 (13110), 4.4 (244), 5.3 (164)
Sullivan, Graham S.	EIS001840	3.2 (51), 5.1 (27), 7.1 (191), 7.5.11 (8132), 4.2 (8140), 13 (5), 8.3 (161), 5.3 (164)
	EIS002249	4.3 (129), 5.4 (219), 5.5 (183), 4.5 (6168), 7.3 (210), 12 (139)
	EIS002286	3.3 (50), 5.4 (8543), 1.1 (124), 13 (8244)
Weinberg, Piper	010115	7.3.1 (185), 3.6 (257), 7.5.7 (10495), 7.5.11.2 (240), 7.5.5.2 (38), 7.5.5 (12157), 7.5.4.2 (117), 7.5.3.2 (230)
	010158	3.6 (257), 3.5 (233), 7.5.11.2 (240), 7.5.11.2 (181), 3.5 (204), 8.12 (10971), 6.1 (46), 5.1 (27)
Xenos, Michelle	EIS002099	5.5 (183), 7.5.7 (93), 13 (5), 7.4 (10313), 12 (139)
Sierra Club		
Bettinger, Robert L.	010417	5.1 (27)
Maret, Susan	EIS000270	3.2 (80), 3.2 (1121), 5.1 (27), 8.10 (1123), 10 (3), 7.3.2 (216), 7.3 (220), 7.3 (232), 7.5.7 (93), 7.5.7 (98), 7.5.6 (1130), 7.5.4 (1131), 7.5.7 (688), 7.5.7 (1132), 1.2 (77), 7.5.7 (1133), 3.2 (1134), 10 (1135), 7.5.11.2 (181), 3.3 (50), 3.2 (1137), 13 (1138), 7.5.7 (1139), 8.10.1 (133)
	EIS000505	3.2 (80), 5.1 (27), 8.3 (149), 7.3.2 (216), 7.3 (220), 7.5.7 (98), 7.5.6 (1130), 7.5.4 (1508), 7.5.11.2 (181), 3.3 (50), 5.1 (27), 3.2 (1121)
Sierra Club Sauk-Calumet Group		
Kawaters, Anne	EIS001317	8.10.1 (8733), 4.1 (8738)
	EIS001599	8.10.1 (8733), 4.1 (8738)
Sierra Club, Illinois Chapter		
Darin, Jack	EIS001316	8.1 (170), 5.1 (27)
	EIS001598	8.1 (170)
Sierra Club, Northeast Ohio Group, Great Lakes Water Quality & Wetlands Committee		
Plank, Dennis	EIS001220	8.1 (170), 5.1 (27)
	EIS001569	8.1 (170), 5.1 (27)
Sierra Club, Southern Nevada Group		
Feldman, Jane	EIS002127	5.1 (2953), 1.2 (77), 4.5 (8942), 3.2 (64), 7.5.3.2 (228), 3.2 (51), 3.2 (2959), 8.7 (28), 8.8.3 (171), 8.8.1 (189), 3.9 (109), 8.7 (8970), 8.8.3 (8972), 8.10.3 (182), 8.10.2 (212), 3.3 (1), 3.3 (50), 3.2 (80), 3.7 (57)
Forkos, Marcia	EIS000727	5.1 (2953), 1.2 (77), 4.5 (8942), 3.2 (64), 7.5.3.2 (228), 3.2 (51), 3.2 (2959), 8.7 (28), 8.8.3 (171), 8.8.1 (189), 3.9 (109), 8.4 (25), 11.2 (2968), 8.8.3 (8972), 8.10.3 (182), 3.3 (50), 3.3 (1), 3.7 (57), 3.2 (80), 8.10.2 (212), 8.7 (8970)
	EIS001256	5.1 (27), 7.5.3.2 (8), 7.5.3.2 (8678), 1.2 (77), 7.5.3.3 (8586), 7.5.3.2 (8606), 9.1 (8608), 4.2 (8611), 7.5.7 (8613), 5.4 (2257), 3.2 (69), 8.3 (149), 10 (3), 7.5.6 (8621), 7.5.7 (98), 3.2 (8625), 3.2 (84), 7.5.7 (8637)

Commenter	Comment Document	Location of Comments/Responses
Sierra Club, Toiyabe Chapter		
Smith, Catherine	EIS000567	3.2 (80), 5.1 (27), 8.1 (170)
Sisters of Loretto		
McGivern, Mary Ann	EIS001004	5.1 (27), 5.5 (183), 12 (139)
	EIS001743	5.1 (27), 5.5 (183), 12 (139)
South Carolina, State of		
Hodges, Jim	EIS000479	5.2 (26), 5.2 (10936), 5.4 (10937)
South Carolina, State of, Budget and Control Board		
Burgess, Omeagia	EIS000050	3.10 (4)
	EIS002225	3.10 (4)
South Carolina, State of, Public Service Commission		
Bradley, Philip T.	EIS000162	1.1 (1095), 5.2 (26), 3.2 (64), 2 (1097), 5.4 (219), 4.5 (1101)
	EIS000278	5.2 (26), 9.1 (11152), 4.5 (99), 4.5 (11154), 3.2 (64)
South West Veterans Alliance		
Young, Paul L.	010020	5.3 (164)
Southeast County Citizens Advisory Committee		
Newton, Janice	EIS000260	3.9 (109), 3.2 (940), 7.5.3.2 (2), 8.10.2 (203)
	EIS000373	3.9 (109), 3.2 (940), 7.5.3.2 (2), 8.10.2 (203)
Southeast Valley Coalition of Concerned Citizens		
Ainsworth, Marion	EIS001123	3.2 (3330), 1.1 (101)
Southern Nevada Home Builders Association		
Porter, Irene	EIS001828	1.2 (6421), 3.9 (109), 8.1 (259), 7.5.6 (130), 8.11.6 (6434), 8.1 (170), 8.10 (157)
Southern Nuclear		
Wells, Pete	EIS000219	5.2 (26), 4.5 (217), 4.5 (1338), 2 (1339), 8 (158)
	EIS000302	5.2 (26), 4.5 (217), 4.5 (1338), 2 (1339), 8 (158)
Southern Nuclear Operating Company		
Long, Louis	EIS000274	5.2 (26), 4.5 (99)
Southwest Research and Information Center		
Hancock, Don	010156	5.1 (27), 3.6 (257), 5.4 (219), 7.3.1 (185), 7.3 (253), 3.1 (16), 1.2 (243)
Spring Valley Town Advisory Board		
Shibler, James R.	EIS000796	5.2 (26)
Square Y Consultants		
Yuan, Lynn C.	EIS001085	8.10 (3311), 7.5.7 (3312), 7.5.2 (3313)
	010075	7.5.7 (11753)
St. Clair Superior Neighborhood Development Association		
Smith, Marian J.	EIS001829	8.8.3 (171)
St. Louis Children's Aquarium		
Sonnenschein, Leonard A.	EIS000996	8.10 (11906), 5.3 (164), 5.5 (183), 8.7 (11909)
	EIS001733	8.10 (11906), 5.3 (164), 8.7 (28), 8.7 (184)

Commenter	Comment Document	Location of Comments/Responses
St. Louis Council On Environmental Health and Safety		
Randolph, Bernard C.	EIS001438	3.3 (4697), 5.4 (4698)
	010302	3.10 (4)
St. Louis County, Missouri, Council		
Moore, Richard P.	EIS001044	8.1 (170), 8.7 (144)
	EIS001786	8.1 (170), 8.7 (144)
St. Louis, Missouri, City of		
Harmon, Clarence	EIS002069	8.1 (170)
St. Louis, Missouri, City of, Metropolitan Police Department		
Stehlin, Vincent	EIS000981	8.8.1 (3253), 8.7 (153), 8.2 (3255), 8.10.2 (218), 8.10.2 (114), 8.10.2 (194), 8.10.1 (62)
St. Louis, Missouri, City of, Board of Aldermen		
Steffen, Fred F.	EIS001007	8.1 (170)
	EIS001370	8.1 (170), 8.7 (144)
Sylvania, Ohio, City of		
Rauch, Margaret T.	EIS002313	8.1 (170)
Tennessee Valley Authority		
Burzynski, Mark J.	EIS001190	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
	EIS001224	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
Tennessee, State of, Department of Environment & Conservation		
Leming, Earl C.	EIS001099	6.1 (2866)
Texas Parks & Wildlife		
Boydston, Kathy	010490	8.10.2 (212)
Texas, State of, Office of the Governor		
Adams, T. C.	EIS000037	3.10 (4)
The Hopi Tribe		
Taylor, Wayne	010042	5.3 (164), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139), 5.1 (27)
	010091	5.3 (164), 5.3 (164), 5.1 (27), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139)
Timbisha Shoshone Tribe		
Esteves, Pauline	EIS000263	5.1 (27), 3.2 (80), 7.5.11.2 (240), 3.2 (64), 8.8.1 (196), 3.7 (57), 7.5.11.2 (152), 1.1 (101)
	EIS000376	5.1 (27), 3.2 (80), 7.5.11.2 (240), 3.2 (64), 8.8.1 (196), 3.7 (57), 7.5.11.2 (152), 1.1 (101)
	EIS001863	3.3 (50), 3.7 (57)

Commenter	Comment Document	Location of Comments/Responses
Timbisha Shoshone Tribe	EIS001906	3.3 (50), 3.7 (57), 5.1 (27), 3.2 (80), 3.2 (51), 3.2 (64),
Esteves, Pauline (continued)		3.1 (10627), 7.5.11.2 (181), 7.5.11.2 (240), 4.3 (129),
		8.3 (149), 8.11.11 (10635), 7.3.1 (185)
	EIS002077	3.7 (58), 3.7 (57), 7.5.11.2 (181)
	010146	3.6 (257), 7.5.11.2 (181), 7.5.5.2 (150), 3.7 (57), 7.5.11.2 (240)
Goad, Grace	EIS002078	8.3 (213)
Helmer, Bill	010278	3.6 (257)
	010279	7.5.3.2 (230), 7.5.11 (12633), 7.5.11.2 (181), 8 (12415),
		7.5.5 (12414), 3.6 (257), 3.1 (15), 3.5 (36), 1.2 (243),
		7.5.1 (106), 7.5.11 (1882), 7.4 (241), 3.5 (204), 7.5.9 (175),
		10 (12599)
	010344	3.7 (57), 7.5.11.2 (240), 3.6 (257), 3.6 (245), 3.4 (12703),
		3.1 (16), 4.3 (129)
Watterson, Ken	010336	7.5.11.2 (240)
Toledo Coalition for Safe Energy		
Lodge, Terry	EIS001573	3.5 (113), 8.1 (170), 8.10.1 (166), 13 (7352), 5.5 (183)
Trenergy, Inc.		
Fox, Harold L.	EIS001953	5.5 (29)
Twisted Light Projects		
Viereck, Tim	010275	7.3.2 (216), 5.1 (27)
U.S. Chamber Business		
Kovacs, Bill	EIS000447	5.2 (26), 4.5 (107), 13 (5), 5.4 (10896), 7.5.7 (10897), 8 (158),
		7.5.3.2 (10899)
U.S. Department of Health and Human Services, Public Health Service, CDC		
Holt, Kenneth W.	EIS000775	8.10.2 (194), 8.10.2 (12251)
U.S. Department of the Air Force		
McCall, Thomas W. L.	EIS001047	8.3.2 (136)
U.S. Department of the Interior		
Kolkman, Gene A.	EIS001889	8.3 (161), 8.8.1 (8647), 8.6.2 (186), 8.3 (149), 7.5.5.2 (237),
		7.5.4 (8654), 7.5.4.1 (118)
Taylor, Willie R.	EIS001969	7.5.4 (7438), 7.5.3.2 (7439), 8.11.4 (7441), 10 (7443),
		8.7 (7445), 8.10.1 (7447), 8.10.1 (7449), 7.5.7 (7451),
		8.11.1 (7453), 7.5.3.4 (7455), 7.5.3 (7457), 7.5.3.3 (7460),
		7.5.3.3 (7464), 3.1 (7467), 7.5.3 (7469), 3.1 (7474),
		7.5.3 (7506), 7.5.3.4 (7507), 3.1 (7508), 3.1 (7509),
		7.5.3.1 (7513), 7.5.3 (7514), 7.5.3 (7517), 3.1 (7519),
		7.5.3.3 (7520), 7.5.3.3 (7529), 7.5.3.3 (7536), 7.5.3.3 (7538),
		3.1 (7541), 3.1 (12764), 3.1 (7559), 7.5.3.3 (7573),
		7.5.3.5 (7574), 7.5.3.2 (7578), 7.5.3.2 (7581), 7.5.7 (7584),
		3.7 (7585)
U.S. Department of the Interior, Bureau of Land Management		
Hyde, B. R.	010066	3.10 (610)
Smith, Gerald M.		
	EIS001444	8.11.4.2 (5148), 8.11.1 (5150), 8.11.4.1 (5151),
		8.11.5.1 (5152), 8.11.11.1 (10012), 8.11.5.2 (5153),
		8.11.1 (5154), 3.7 (53), 8.3 (149), 8.3.2 (136), 3.1 (5158),
		8.11.4.2 (5159), 8.11.1 (5160), 7.5.3.2 (5161)

Commenter	Comment Document	Location of Comments/Responses
U.S. Department of the Interior, Death Valley National Park		
Martin, Dick	EIS000375	7.5.3.2 (2), 8.10.2 (114), 7.5.8 (1368)
U.S. Department of the Interior, National Park Service		
Essington, Mel	EIS002258	3.2 (80), 7.5.3.2 (2), 4.3 (129), 7.3 (11560), 7.3 (11561)
U.S. Department of the Interior, National Park Service, Pacific West Region		
Reynolds, John J.	EIS001957	5.1 (7274), 7.5.3.2 (7277), 5.1 (7289), 3.2 (7293), 3.1 (7298), 3.2 (80), 3.0 (7346), 7.5.3.2 (7349), 7.5.3.3 (12328), 7.5.3.2 (7353), 7.3 (232), 3.1 (7365), 7.5.2 (7373), 7.5.3 (7387), 7.5.3.4 (7388), 7.5.3.3 (7389), 7.5.3.1 (7377), 7.5.3.2 (7396), 7.5.3.2 (7399), 7.5.3.2 (7400), 7.3.2 (7402), 7.5.3.2 (2), 7.3 (7404), 7.3 (12603), 8.1 (7405)
U.S. Department of the Interior, U.S. Geological Survey		
Lewis, Barney	EIS001521	3.1 (4517), 3.1 (4518), 3.1 (4519), 3.1 (4520), 3.1 (11), 3.1 (22), 7.5.3.2 (4523), 7.5.3.2 (4524), 7.5.3.2 (3502), 7.5.3.2 (3499), 7.5.3.2 (1477), 3.1 (1478), 7.5.3.2 (4264), 3.1 (4263), 3.1 (4265), 3.1 (1479), 3.1 (12765), 7.3 (1481), 7.5.3.2 (1491), 7.5.3.2 (1482), 7.5.3.2 (1483), 7.5.3.3 (1484), 7.5.3.3 (4267), 7.1.1 (4266), 7.5.3.1 (4268), 7.5.3.1 (4269), 7.5.3.1 (1485), 7.5.3.1 (1490), 7.5.3.1 (1489), 7.5.3.1 (1492),
	EIS001521	7.5.3.2 (1493), 7.5.3.2 (1494), 7.5.3.2 (1495), 7.5.3.2 (1497), 7.5.3.2 (1496), 7.5.3.2 (1498), 7.5.3.2 (4525), 7.5.3.2 (4526), 7.5.3 (4527), 7.5.3 (4528), 7.5.3.2 (4529), 7.5.3.2 (4530), 7.5.3.2 (4531), 7.5.3.2 (4532), 7.5.3.2 (4533), 7.5.3.2 (4534), 7.5.3.4 (4535), 7.5.3.2 (4536), 7.5.3.2 (4537), 7.5.3.2 (4538), 7.5.3.2 (4539), 7.5.3.2 (4540), 7.5.3.2 (4541), 7.5.3.2 (4542), 7.5.3.2 (4543), 7.5.3.2 (4544), 7.5.3.2 (4545), 7.5.3.2 (4546), 7.5.3.2 (4547), 7.5.3.2 (4548), 7.5.3.2 (4549), 7.5.3.2 (12313), 7.5.3.2 (4550), 7.5.3.2 (4551), 7.5.3.2 (4552), 7.5.3.2 (4553), 7.5.3.2 (4554), 7.5.3.2 (4556), 7.5.3.2 (4557), 7.5.3.2 (4558), 7.5.3.2 (4559), 7.5.4.1 (4560), 7.5.3.1 (4561), 7.5.3.1 (4562), 7.5.3.2 (12314), 7.5.9 (4563), 7.1.1 (4564), 3.1 (4565), 7.5.3.2 (4566), 7.5.9 (4568), 7.5.9 (4569), 10 (4570), 11.1 (4571), 7.3 (4572), 3.2 (69), 3.1 (4576), 3.1 (4220), 7.3 (4578), 3.1 (21), 3.1 (16), 7.5.3.2 (4583), 3.1 (12)
U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance		
Miller, Anne Norton	010231	3.5 (13267), 3.5 (13268), 4.4 (13269), 4.5 (13270), 3.5 (13271), 7.1.2 (13272), 7.1.2.2 (13273), 7.1.2 (13274), 7.1.2 (13275), 7.4 (13276), 8.12 (13277), 7.3 (13279), 7.3 (13280), 5.4 (13281)
	010357	3.5 (13267), 3.5 (13268), 4.4 (13269), 4.5 (13270), 3.5 (13271), 7.1.2 (13272), 7.1.2.2 (13273), 7.1.2 (13274), 7.1.2 (13275), 7.4 (13276), 8.12 (13277), 7.3 (13279), 7.3 (13280), 5.4 (13281)

Commenter	Comment Document	Location of Comments/Responses
U.S. Environmental Protection Agency, Office of Federal Activities		
Sanderson, Richard E.	EIS001632	3.1 (6400), 7.3 (6403), 3.2 (6406), 6.1 (12590), 3.2 (10882), 7.3.1 (6414), 7.1.1 (6417), 7.1.1 (6418), 7.2 (6420), 7.1 (6422), 4.5 (6425), 7.5.3 (6427), 4.5 (215), 8.3 (6440), 5.4 (6442), 7.3 (6443), 3.1 (6452), 4.2 (6453), 3.1 (6454), 7.5.3.2 (6456), 7.5.3.2 (6457), 7.3 (12700), 7.5.3.2 (6459), 7.5.3.2 (6461), 7.5.3.2 (6462), 7.5.3.2 (6464), 7.5.3.2 (6465), 7.5.3.1 (6467), 7.5.3.2 (6468), 7.5.6 (6471), 7.5.7 (6473), 9.1 (6474), 8.10 (6476), 7.5.3.1 (6478), 7.5.3.2 (6484), 7.3 (6501), 8.8.1 (6502), 7.5.2 (6504), 7.5.4.2 (6542), 7.5.4.2 (6543), 7.3 (6544), 7.3 (6546), 7.3 (6547), 7.3 (6548), 7.3 (6550), 7.3 (6552), 7.5.3.2 (6553), 7.5.3.2 (6555), 7.5.3.2 (6557), 7.3 (6563), 7.5.3.4 (6564), 8.1 (6565), 8.10.2 (6566), 8.3 (6051), 8.7 (6567), 8.8.3 (6568), 8.8.1 (6569), 8.11.4.2 (6572), 9.1 (6573), 10 (6575), 10 (6578), 10 (6580), 10 (6581), 10 (6583), 10 (6585), 7.3.1 (6593), 3.7 (6619), 8.11.11.2 (6621), 7.5.11.2 (6629), 7.5.11.2 (6632), 4.2 (6635), 7.3 (6637), 4.2 (6651), 4.2 (6656), 4.2 (6658), 4.2 (6661), 4.2 (6666), 4.2 (6668), 4.2 (6672), 4.2 (6674), 3.1 (4480), 9.1 (6680), 9.1 (6683), 7.5.7 (6684), 3.1 (6688), 3.1 (6690), 8.10 (6693), 9.1 (6695), 9.2 (6698), 7.3.1 (6699)
U.S. House of Representatives - California		
Baca, Joe	EIS002230	3.3 (50), 8.1 (259), 8.3 (161), 8.8.3 (171), 8.1 (11384), 5.1 (27), 5.3 (164), 4.5 (11387), 8.10 (155)
	EIS002294	3.3 (50), 8.1 (170), 8.3 (161), 8.1 (11384), 5.1 (27), 5.3 (164), 4.5 (11387)
U.S. House of Representatives - Colorado		
Arend, Chris	EIS000504	8.1 (170), 8.10.2 (114), 4.5 (92)
DeGette, Diana	EIS000266	8.1 (170), 8.10.2 (114), 4.5 (92)
U.S. House of Representatives - Georgia		
McCall, Tom	EIS000271	5.2 (26), 8 (158), 13 (5)
U.S. House of Representatives - Missouri		
Talent, James M.	EIS000986	5.1 (27), 8.1 (170), 8.1 (3297)
U.S. House of Representatives - Nevada		
Rice, Jean	EIS000233	3.2 (80), 3.3 (50), 8.3 (201)
	EIS000667	3.2 (80), 3.3 (50), 8.3 (201)
U.S. House of Representatives - Ohio		
Kucinich, Dennis J.	EIS000476	8.3 (161)
	EIS001543	3.3 (50), 12 (139), 8.1 (170), 8.8.3 (10345)
	EIS001905	12 (139), 4.5 (6789), 8.3 (12596), 8.3 (161), 8.1 (6793), 8.1 (6795), 8.1 (170), 8.10 (157), 8.10.2 (114), 3.2 (64), 3.2 (90), 2 (126), 7.3.2 (216), 7.5.11 (6809), 3.3 (50), 3.2 (80), 3.6 (257), 1.2 (6821), 8.3 (149), 7.5.11.2 (240), 8.8.3 (171)
LaTourette, Steven C.	EIS001083	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)

Commenter	Comment Document	Location of Comments/Responses
U.S. House of Representatives - Ohio	EIS001254	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)
LaTourette, Steven C. (continued)		
	EIS001283	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)
U.S. Nuclear Regulatory Commission		
Kane, William F.	EIS001898	7.3 (6027), 3.2 (12763), 3.7 (6032), 3.2 (6034), 10 (6044), 8.8.1 (12694), 11.1 (6048), 7.5.11 (12695), 7.5.3.2 (6063), 7.5.1 (6067), 7.5.4.2 (6068), 7.5.4 (6046), 7.5.6 (6049), 8.11.6 (6053), 7.5.3.4 (12445), 7.5.5 (6064), 7.3 (7137), 7.5.7 (6071), 3.2 (6073)
Virgilio, Martin J.	010248	3.2 (13069), 3.5 (13070), 3.5 (13071), 7.5.7 (13072)
U.S. Nuclear Waste Technical Review Board		
Cohon, Jared L.	EIS001520	7.3.1 (5034), 3.2 (12347), 8.3 (5035), 8.10 (5036), 7.5.6 (5037), 3.9 (109), 7.3.1 (5038), 9.1 (5040), 2 (5041), 8.3 (5042), 8.10 (5043), 8.3.2 (5044)
	010229	7.3.1 (6147), 7.3 (7109), 7.3 (8236)
U.S. Public Interest Research Group		
Aurilio, Anna	EIS000159	1.2 (10919), 3.2 (629), 3.2 (630), 8.3 (161), 8.10 (632), 4.5 (633)
U.S. Senate - California		
Boxer, Barbara	EIS002292	7.5.3.2 (230), 8.10 (299), 5.1 (27)
	EIS002232	7.5.3.2 (230), 8.10 (299), 5.1 (27)
U.S. Senate - Indiana		
Lugar, Richard G.	EIS002177	3.3 (8068)
U.S. Senate - Nevada		
Bryan, Richard H.	EIS000206	3.2 (59), 8.3 (161), 3.3 (50), 8.8.3 (171), 3.2 (90), 3.2 (64), 3.9 (109), 7.5.3.1 (12668), 7.5.3.4 (1831), 7.5.3.3 (1832), 1.2 (243)
	EIS000437	3.2 (59), 8.3 (161), 3.3 (50), 8.8.3 (171), 3.2 (90), 3.2 (64), 3.9 (109), 7.5.3.1 (12668), 7.5.3.4 (1831), 7.5.3.3 (1832), 1.2 (243)
Reid, Harry	010266	3.5 (36), 3.5 (13242), 7.4 (87), 3.5 (204)
	010355	3.5 (36), 3.5 (13242), 7.4 (87), 3.5 (204)
Union Electric Company dba AmerenUE		
Passwater, Alan C.	EIS000994	5.2 (26)
	EIS001731	5.2 (26)
Ursuline Academy		
O'Hara, Sr. Madonna	EIS000930	8.1 (170)
Ursuline Provincialate		
Brennan, Adele C.	EIS000931	8.1 (170)
Ursuline Sisters of Kirkwood		
Hickey, Julie	EIS001173	8.1 (170), 13 (5)
Utah Peace Test	EIS001476	7.5.11.2 (181), 3.2 (4106), 7.5.3.2 (228), 7.5.7 (4111), 8.4 (25), 8.10.3 (182), 8.7 (141), 5.3 (164), 12 (139), 3.3 (88)
Ofthedesert, Cynthia		
Utah, State of, Department of Environmental Quality		
Nielson, Dianne R.	EIS001376	8.8.3 (177), 8.3 (161), 8.10.1 (133), 9.1 (4482)
	EIS001445	8.8.3 (177), 8.3 (161), 8.10.1 (133), 9.1 (4482)

Commenter	Comment Document	Location of Comments/Responses
Utah, State of, Department of Environmental Quality	EIS001472	3.3 (50), 8.3 (149), 8.8.3 (177), 8.3 (161), 8.5.3 (4419), 8.10.1 (133)
Nielson, Dianne R. (continued)		
Valley Watch, Inc.	EIS001812	5.5 (183), 5.1 (27), 1.2 (79)
John Blair		
	550002	8.3 (149)
Virginia Power		
Musser, Edna H.	EIS000224	5.2 (26)
Virginia, Commonwealth of, Department of Environmental Quality		
Murphy, Michael P.	EIS001209	5.2 (26), 8.10.1 (4331), 4.2 (4332)
Washington, State of, Department of Ecology		
Inman, Rebecca J.	EIS001208	6.1 (46), 9.1 (138), 4.5 (4024), 8.3 (149), 8.10.2 (212), 3.1 (19)
Waste Ideas Network		
Mullarkey, Barbara Alexander	EIS001318	8.1 (170), 13 (5), 7.5.11 (4963), 5.5 (29)
	EIS001601	8.1 (170), 13 (5), 7.5.11 (4963), 5.5 (29)
Webster Groves Nature Study Society		
Homeyer, Yvonne	010070	8.1 (170), 5.1 (27)
	010097	8.1 (170), 5.1 (27)
Webster Groves, Missouri, City of		
Welch, Gerry	EIS001859	8.1 (170), 8.10.2 (114)
	010282	8.1 (170)
Western Interstate Energy Board		
Niles, Ken	EIS001877	8.3 (9958), 3.2 (80), 3.7 (53), 8.3 (201), 8.3 (213), 8.7 (153), 8.4 (25), 8.7 (147), 8.10.1 (10053), 8.3 (149), 3.7 (10089), 5.5 (29), 8.7 (12465), 8.7 (247)
Turner, Allan	EIS000497	3.7 (53), 3.3 (8210), 8.3 (149), 8.3 (161), 8.7 (147), 8.3 (146), 8.7 (153), 4.5 (8242), 8.7 (142), 8.7 (247), 8.7 (12465)
Western Shoshone		
Harney, Corbin	EIS001662	3.3 (50)
	EIS002298	5.1 (11667)
Western Shoshone Defense Project		
Dann, Carrie	EIS001965	5.1 (27), 3.3 (50), 7.5.11.2 (240), 7.5.11.2 (181), 7.3 (220), 7.5.3.2 (230), 13 (5), 8.3 (201), 1.1 (10647), 3.7 (57), 3.2 (51), 7.5.5 (10651), 7.5.5 (10652), 3.7 (58), 3.2 (80)
Sewall, Christopher	EIS000638	7.5.11.2 (181), 1.1 (34), 3.2 (51), 3.2 (2337), 8.8.2 (135), 7.5.11.2 (2340), 3.2 (80)
Western Shoshone National Council		
Zabarte, Ian	EIS002156	7.5.11.2 (181), 3.7 (58), 7.5.1 (10555), 7.5.5.2 (150), 3.7 (57), 7.5.11.2 (240), 7.5.11.2 (152), 10 (258)
	010029	3.6 (257)
	010132	3.6 (257), 7.5.11.2 (181), 3.7 (57), 7.5.11.2 (240)
White Pine County, Nevada	EIS000357	7.5.5 (1542), 8.3.1 (1543), 7.5.5 (1544), 7.5.5 (225), 8.8.1 (1546), 7.1.5 (1547), 13 (1548), 6.1 (1549), 6.1 (1550), 6.1 (1551), 6.1 (1552), 8.11.1 (1553), 6.1 (46), 3.7 (57), 7.5.5.1 (1557), 7.5.5.1 (4287), 8.11.5.1 (4294), 7.5.5 (1560), 7.5.5.2 (237), 7.5.5.1 (12385), 8.7 (10904), 8.10 (10905)
Baughman, Mike		

Commenter	Comment Document	Location of Comments/Responses
White Pine County, Nevada, Board of County Commissioners		
Eldridge, Brent	EIS001160	3.2 (80), 3.3 (88), 3.2 (84), 11.1 (97), 8.3 (201), 8.3.1 (195), 8.3 (149), 8.3.1 (4191), 8.4 (640), 8.3.1 (641), 3.9 (109), 8.11.3 (4197), 8.3.1 (4200), 8.8.3 (171), 3.2 (64), 3.2 (51), 10 (4206), 7.1.3 (4209), 4.5 (4210), 8.3.1 (4211), 8.8.1 (4212), 8.8.1 (4205), 8.8.1 (4207), 8.8.1 (4208), 8.10.2 (200), 8.8.2 (179), 8.8.1 (4215), 8.11.6 (4216), 8.3.1 (4219), 11.1 (102), 3.2 (4224), 7.5.5 (4227), 8.8.2 (7043), 7.5.5.1 (4229), 8.7 (4231), 8.3.1 (4232), 8.3 (4233), 7.3 (4234), 8.4 (226), 8.3 (161), 3.2 (4238), 8.11.6 (4239), 8.3.1 (4240), 10 (258), 8.10.2 (4242), 8.7 (4244), 6.1 (4249), 7.1.5 (1547), 13 (1548), 6.1 (1549), 6.1 (4253), 8.7 (6631), 1.1 (40), 6.1 (1551), 7.5.1 (106), 8.11.1 (1553), 6.1 (46), 3.7 (57), 9.1 (4260), 3.2 (4271), 9.1 (4272), 1.2 (81), 8.3.3 (178), 5.4 (4278), 9.1 (4279), 8.8.1 (6638), 8.8.1 (4282), 8.10 (54), 7.5.5.1 (1557), 8.7 (143), 8.7 (153), 8.8.2 (4286), 7.5.5.1 (4287), 7.5.7 (4288), 7.4 (4289), 8.11.6 (4290), 4.5 (217), 7.4 (4292), 7.3 (8320), 7.3 (256), 8.11.5.1 (4294), 8.8.3 (173), 8.10 (4296), 8.10 (156), 8.3.1 (4298), 8.8.1 (4299), 8.8.2 (4300), 7.5.5 (1560), 8.10 (4302), 8.8.1 (192), 8.1 (170), 8.11.1 (4306), 7.5.5.2 (237), 3.1 (4308), 8.11.4 (42), 8.7 (4310), 7.5.5.1 (12385), 7.4 (3733), 8.8.2 (9771), 8.7 (3427), 8.8.3 (3428), 8.7 (3430), 11.1 (2410), 6.1 (1550), 6.1 (18), 6.1 (1552)
Kirkeby, Kevin S.	EIS000139	8.5.1 (911), 3.3 (875), 3.3 (50), 8.10.2 (114)
	EIS000140	3.2 (84), 8.3.1 (608), 8.8.1 (196), 11.1 (764)
	EIS000142	3.3 (50), 3.7 (53), 3.1 (12), 3.2 (59), 3.2 (84), 8.3.1 (1456), 8.3.1 (12376), 3.9 (109), 11.1 (102), 3.2 (64)
	EIS000346	3.3 (50), 3.2 (84)
	EIS000350	3.2 (84), 3.1 (12), 3.2 (59), 8.3.1 (1456), 8.3.1 (12376), 3.9 (109), 11.1 (102), 3.2 (64), 3.3 (50)
	010073	3.5 (12576), 8.12 (224), 8.4 (199), 3.4 (12379), 7.1.1 (12380), 7.5.10 (7088), 8.12 (251), 7.1.1 (5720), 11.2 (5721), 7.5.7 (235), 7.3.1 (5723), 7.5.6 (255), 11.1 (45), 7.2 (12187), 3.4 (11031), 7.5.9 (175), 7.5.9 (12716), 7.1.2.2 (12717), 3.4 (12759)
Wilderness Society, The		
Miller, Sally	EIS001938	7.5.3 (9212), 7.5.3.2 (9213), 7.5.4.2 (39), 8.8.1 (9215), 7.5.3.2 (2), 3.9 (109), 3.2 (9273), 3.2 (51), 3.2 (80)
Wolf Ranch		
Wolf, Howard W.	EIS001056	8.11.1 (2826), 5.1 (27)
Women Speak Out for Peace and Justice		
Ikuta, Yoshiko	EIS001174	4.3 (70), 8.1 (170), 4.5 (1340)
Women's Action for New Directions Education Fund		
Ortmeyer, Pat	EIS000160	1.2 (77), 7.1 (831), 1.1 (122), 7.5.11.2 (832), 12 (139), 13 (5)
	EIS000292	5.3 (164), 2 (100), 7.1 (831), 12 (139), 7.5.11.2 (832), 13 (5)
Women's International League for Peace and Freedom, St. Louis Branch		
Epstein, Hedy	EIS001005	7.3.2 (216), 8.10.3 (182), 4.5 (92), 8.3 (60), 3.1 (2716)
	EIS001744	7.3.2 (216), 8.10.3 (182), 4.5 (92), 8.3 (60), 3.1 (2716)

Commenter	Comment Document	Location of Comments/Responses
World Community Center		
Logan, Yvonne	EIS001043	8.7 (141), 8.1 (170)
	EIS001780	10 (258), 8.1 (170)
	010189	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Wyoming, State of, Wyoming State Senate		
Peck, Bob	EIS000491	5.2 (26), 5.5 (29), 8 (158)
Yomba Shoshone Tribe		
Brady, Kevin	EIS001724	3.3 (50)
Zero Population Growth		
Carmany, Erin M.	010426	5.1 (27)

Table CR-2. Index to comments by individuals.

Commenter	Comment Document	Location of Comments/Responses
Abbott, Linda	EIS002132	5.2 (26), 8 (158)
Acosta, Al	EIS001979	3.2 (51), 3.2 (64)
Adams, JoAnn M.	EIS000874	8.1 (170), 13 (5), 3.3 (50)
Adams, Marta Nevada, State of, Office of the Attorney General	EIS000603	3.3 (50), 2 (100), 3.9 (109), 4.5 (63)
Adams, Mary	010234	8.1 (170)
Adams, T. C. Texas, State of, Office of the Governor	EIS000037	3.10 (4)
Ælfgifie	EIS001933	7.5.3 (7956), 1.2 (243), 7.5.3 (12141), 7.5.7 (98), 5.3 (164), 12 (139)
Agler, Alfred P. Ohio, State of, Public Utilities Commission	EIS001291	8.7 (153), 8.7 (143), 8.7 (6206), 8.10.2 (114), 3.7 (53)
	EIS001557	3.2 (5481), 8.7 (5866), 8.7 (11192), 8.10.2 (114), 8.7 (143)
	EIS001567	8.7 (10448)
Ainsworth, Marion Southeast Valley Coalition of Concerned Citizens	EIS001123	3.2 (3330), 1.1 (101)
Alan, Howard	EIS001621	5.1 (27)
Alan, Susan	010199	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Aleeary, Letecea Goujaly	EIS000845	5.1 (27)
Alegre, Danielle	010221	5.1 (27)
Alexander, Bill Hafen & Hafen Realty Co.	EIS000759	5.2 (26)
Alexander, Cheryl L.	EIS000255	8.1 (170), 5.1 (27), 8.3.3 (23), 3.3 (50), 13 (5)
Alexander, Sharon	EIS002034	8.10 (157), 5.5 (29), 3.3 (50), 5.1 (27)
Algiere, V. C.	EIS001238	8.1 (170)
Allen, Donald	EIS001159	5.1 (27)
Allen, Harriet	EIS002301	3.3 (50)
Allister, Pam	EIS000249	3.3 (50), 5.5 (183), 12 (11184)
Alther, Dorothy Owens Valley Indian Water Commission	EIS000363	3.3 (50)
Alzner, Susan Earth Challenge	EIS000289	8.1 (170), 5.1 (27), 5.3 (164), 3.3 (50), 8.10 (54), 8.10 (148), 8.4 (1061), 13 (5), 1.1 (10915)
	EIS000309	13 (11083)
	EIS000326	7.3 (208), 7.5.8 (11166)
Amaglio, Sandro Federal Emergency Management Agency	010021	7.5.3 (13470)
Ambrose, Tommy	EIS000247	5.2 (26)
Ames, Melissa M.	EIS000423	7.5.11.2 (181), 4.1 (83), 7.5.3.2 (228), 7.3 (222), 8.1 (170), 5.3 (164), 5.1 (27)
Among, Katy	EIS002023	5.1 (27), 1.1 (101)
Anaya, Cheryl	EIS001894	8.1 (170), 8.7 (184), 11.2 (108)
Anderson, Barbara	EIS000344	8.1 (170)
Anderson, Gloria-Jeanne	010465	5.1 (27), 13 (5)

Commenter	Comment Document	Location of Comments/Responses
Anderson, Lindsay	EIS000560	7.3 (209)
Anderson, Mike Goldfield, Nevada, Fire Department	EIS000195	8.1 (259), 8.10 (738), 8.5.3 (190), 8.11.6 (740)
Anderson, Robert C.	EIS001199	5.1 (27), 7.1 (191), 7.5.3.2 (4145)
	010239	12 (139), 8.1 (170), 8.7 (142), 2 (100), 7.5.3.2 (230), 7.5.3.2 (111)
Andrews, Bob Clark County, Nevada, Local Emergency Planning Committee	EIS000968	8.10.2 (5276), 8.7 (5278), 8.10 (68), 8.3 (149), 8.7 (28), 7.5.6 (5285), 8.5.3 (5286), 8.8.1 (5291), 8.10.2 (114), 8.10.1 (5293), 8.10 (5294), 8.10.2 (212), 3.2 (80)
Andria, Kathy East St. Louis Community Action Network	EIS001775	3.3 (50), 8.1 (7485), 8.10 (145), 8.10.2 (12604), 5.3 (164), 12 (14)
Andrus, Calvin Nielson	EIS001468	3.2 (80), 5.2 (26), 13 (37), 5.5 (29), 1.1 (122)
Andruss, John	EIS002063	7.5.11.2 (181)
Antheaume, Gabrielle	010026	1.1 (123), 7.5.3.2 (228), 7.4 (11833), 7.5.9 (175), 7.5.3.2 (230), 7.5.3.1 (234), 4.4 (244), 3.6 (257), 5.4 (219)
Anonymous	EIS000129	5.3 (164)
	EIS000698	No comments
	EIS000712	3.7 (57), 7.3.2 (216), 4.5 (2643), 8.10.3 (182), 11.2 (108), 3.3 (50)
	EIS000793	5.1 (27), 3.3 (50)
	EIS000794	5.5 (183)
	EIS000876	8.3 (60)
	EIS001064	No comments
	EIS001302	5.1 (27)
	EIS001303	5.5 (29)
	EIS001996	7.5.7 (93), 5.2 (26)
	EIS001998	5.1 (27)
	010168	5.1 (27)
	010259	1.2 (243), 8.7 (144), 7.5.11.2 (240), 8.1 (170), 8.10 (145), 7.5.4 (9360), 7.5.3.2 (228)
	010294	8.10.2 (212), 7.5.3 (9218), 7.4 (9219), 4.5 (217), 7.3 (222), 13 (5), 3.9 (109), 8.8.3 (2499), 5.3 (164), 8.10.1 (62), 4.2 (2502), 1.2 (243), 3.5 (233), 9.1 (250), 5.5 (29), 3.6 (257)
	010388	7.3 (7), 5.2 (26), 7.3 (3777), 3.5 (3778)
	010457	5.5 (29)
Appel, Gordon Illinois, State of, Department of Nuclear Safety	EIS001597	8 (158), 8.9 (193), 8.3 (60), 8.8.1 (11700), 8.3.1 (20)
	EIS001726	8.1 (170), 8.3 (149), 8.3 (201), 8.7 (153)
Appolito-Jackson, Collette Cleveland, Ohio, City of	EIS001282	3.3 (50), 8.10.3 (12543), 8 (3801)
	EIS001544	3.3 (50), 8.10.3 (12543), 8 (3801)
Arbogast, William D.	EIS001920	8.1 (170), 8.3 (60)
Arend, Chris U.S. House of Representatives - Colorado	EIS000504	8.1 (170), 8.10.2 (114), 4.5 (92)
Arendes, Elizabeth	EIS001240	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Armenta, Theodore	EIS000808	8.1 (170)
Armstrong, Grant	010023	
Arnold, Ed	EIS000291	1.2 (243), 6.1 (1727), 5.3 (164), 8.4 (25)
Arnold, Ed Physicians for Social Responsibility/Atlanta	010226	5.1 (27), 7.3 (220), 8.1 (170), 5.3 (164), 4.4 (244)
	010276	5.1 (27), 7.3 (220), 8.1 (170), 5.3 (164), 4.4 (244)
Arnold, Joanne	EIS000872	8.1 (170)
Arnold, Richard Consolidated Group of Tribes and Organizations	EIS002074	5.3 (164), 7.5.11.2 (152), 7.5.5.2 (38), 7.5.11 (9638), 8.8.3 (171), 8.11.5.2 (9650), 8 (9662), 8.8.2 (9664), 8.11.5 (9665), 3.7 (57), 7.5.5.2 (9667), 8.10.2 (114), 8.8.2 (9671), 7.5.3.2 (230), 8.7 (144)
	EIS002087	3.1 (8847), 3.1 (8850), 8.11.11 (8853)
	010334	3.6 (257), 3.6 (245), 3.7 (57), 7.5.11.2 (240), 8.10.2 (114), 11.1 (13010), 3.4 (13011), 11.1 (13012), 3.6 (13013), 7.5.1 (13014)
Aronov, Jacob	EIS001605	8.1 (170), 7.5.3.2 (230), 7.4 (6399), 4.1 (82)
Ashman, Peggy Lynne	EIS000741	5.1 (27), 12 (139)
Ashworth, Michael	EIS001935	8.1 (170)
Aubuchon, Deborah	010172	8.1 (170)
August, Hillary	EIS001385	5.5 (30)
Aurilio, Anna U.S. Public Interest Research Group	EIS000159	1.2 (10919), 3.2 (629), 3.2 (630), 8.3 (161), 8.10 (632), 4.5 (633)
Autry, M.	EIS000006	1.1 (101), 5.5 (29), 1.1 (34)
Aversa, Emily Peace Action	EIS001683	7.5.11.2 (181), 7.1.5 (7291), 7.5.3.2 (7296)
Baca, Joe U.S. House of Representatives - California	EIS002230	3.3 (50), 8.1 (259), 8.3 (161), 8.8.3 (171), 8.1 (11384), 5.1 (27), 5.3 (164), 4.5 (11387), 8.10 (155)
	EIS002294	3.3 (50), 8.1 (170), 8.3 (161), 8.1 (11384), 5.1 (27), 5.3 (164), 4.5 (11387)
Backlund, Kaitlin Citizen Alert	EIS000594	6.0 (2289), 3.2 (51), 3.2 (64), 5.4 (219), 1.2 (77), 1.2 (243), 3.3 (50)
Bacon, Elliott M.	EIS001250	5.2 (26), 8.3 (60), 7.4 (87)
Bacot, Sarah	EIS000558	1.1 (101)
Badley, Robin C.	010087	1.1 (124)
Baer, Ken	EIS002060	1.2 (77), 7.3.1 (185)
Bagaas, Jennifer	EIS002012	1.1 (101)
Baggett, Chrys North Carolina, State of, Department of Administration	EIS000330	3.10 (4)
Baginski, R.J.	EIS001999	7.3 (7785)
Bailey, Chad	EIS001701	3.3 (50)
Bailey, Chris	EIS000432	3.2 (1373), 7.5.2 (1374), 7.5.3.3 (1375), 7.5.3 (1376), 7.5.4.2 (117), 8.1 (1378), 7.5.11.2 (181)
Bailey, Dot	010077	8.1 (170)
Bailey, Gary L.	010463	3.2 (80)
Bailey, John M.	EIS001841	5.1 (27), 1.2 (79), 13 (5)
Bailie, Ana L.	EIS000176	8.1 (170)
Bailie, Andy	EIS000177	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Baker, Donald L. Aquarius Engineering	EIS000029	7.5.3.2 (12517)
	010382	7.5.3.2 (11737)
Baker, Sylvia G.	EIS000355	10 (258), 8.1 (259), 8.4 (115), 8.10.2 (114), 8.11.2 (1410), 3.9 (109), 8.11.4 (1412), 7.5.3.2 (228), 3.3 (50), 3.2 (51)
Balch, Jeff Illinois Peace Action	EIS001674	13 (5)
Balentin, Jerry	EIS000592	3.3 (50), 8.3 (149)
Baltutis, Genelle	010299	3.6 (245), 3.5 (12809), 4.2 (12810), 4.4 (244), 7.3 (208), 7.4 (125), 9.1 (250), 7.4 (241), 7.4 (67), 8.1 (259), 7.0 (12818), 7.5.3.1 (234), 7.5.1 (106), 3.3 (50), 3.6 (257)
Ban, Dee	EIS001237	8.1 (170)
Banks, Bobbie Wrenn	EIS000161	8.1 (170), 5.3 (164), 5.1 (27)
	EIS000293	8.1 (170), 5.3 (164), 5.1 (27)
Barber, Alex Kentucky, Commonwealth of, Department for Environmental Protection	EIS000066	8.3 (577), 8.7 (144), 8.10.2 (579)
Barber, Maggie	EIS001344	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
Barclay, Bonnie T.	010432	5.1 (27), 5.1 (12586), 5.5 (183)
Barczak, Sara Georgians for Clean Energy	010260	5.5 (183), 13 (37), 4.5 (13479), 6.1 (116), 13 (35), 7.1 (191), 7.5.7 (13484), 10 (258), 7.5.5 (13486)
	010352	5.5 (183), 13 (37), 4.5 (13479), 6.1 (116), 13 (35), 7.1 (191), 7.5.7 (13484), 10 (258), 7.5.5 (13486)
Barfield, Ellen	EIS000454	8.10.2 (114), 13 (5), 13 (11509)
Barnes, Arley	EIS002200	3.9 (109), 5.1 (27), 3.3 (50)
Barnes, Judy	EIS001650	7.5.11.2 (181), 1.2 (77), 7.5.3.2 (228), 13 (5), 5.3 (164)
	010060	3.5 (233), 5.1 (27)
Barnes, Kathryn A.	EIS000851	8.1 (170), 7.5.11.2 (240), 5.4 (219), 7.5.4 (11958)
	EIS001624	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
	010209	5.1 (27), 7.5.3.2 (230), 5.5 (30), 5.5 (29), 5.4 (219)
Baron, Judith	EIS001203	5.2 (26)
Barr, Gracia	010434	5.1 (27), 5.1 (27)
Barraclough, Jack T. Idaho, State of, House of Representatives	EIS000244	6.1 (1176), 8 (158), 5.2 (26), 3.2 (80), 13 (10920), 6.1 (49), 7.5.3.1 (10923), 5.1 (27)
Barringer, Judy	010419	5.1 (27)
Barrowes, Steven C.	EIS000927	5.5 (30), 13 (5)
	010284	13 (35)
Barth, Lawrence F. Pennsylvania, Commonwealth of, Public Utility Commission	EIS001627	5.2 (26), 5.4 (8351), 13 (8352), 4.5 (8355)
	EIS001652	5.2 (26), 5.4 (8351), 13 (8352), 4.5 (8355)
Baskin, Sid	EIS000700	5.5 (29)
	EIS000854	5.5 (29)
	EIS001148	5.1 (27), 5.5 (29)
Bastin, Clinton	EIS000815	12 (139), 6.0 (5903), 5.1 (5904), 8 (158), 13 (12583), 5.3 (164), 13 (5917), 13 (5), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Baughman, Mike White Pine County, Nevada	EIS000357	7.5.5 (1542), 8.3.1 (1543), 7.5.5 (1544), 7.5.5 (225), 8.8.1 (1546), 7.1.5 (1547), 13 (1548), 6.1 (1549), 6.1 (1550), 6.1 (1551), 6.1 (1552), 8.11.1 (1553), 6.1 (46), 3.7 (57), 7.5.5.1 (1557), 7.5.5.1 (4287), 8.11.5.1 (4294), 7.5.5 (1560), 7.5.5.2 (237), 7.5.5.1 (12385), 8.7 (10904), 8.10 (10905)
Baughman, Mike	EIS000671	8.3 (149), 8.3.2 (136), 8.10.2 (200), 3.9 (109), 8.10.1 (133)
Baumgartner, Jan	EIS001626	4.3 (70), 5.1 (27)
	EIS001649	4.3 (70), 5.1 (27)
Baxley, Janice	EIS000687	3.3 (88)
Bayne, Luke	EIS000064	5.1 (27), 13 (5)
Bayne, Luke	EIS000577	5.1 (27), 3.3 (50), 13 (5)
Beach, Therese	EIS001603	8.1 (170)
Beaman, Sylvia	EIS002196	7.5.3.2 (230), 7.5.7 (93)
Bear, Julie Inyo County, California, Board of Supervisors	010181	3.5 (204), 7.4 (241), 3.1 (12), 4.5 (214)
Beard-Tittone, Kelly	EIS002302	5.1 (27), 4.3 (11931), 7.5.11.2 (181)
Beatty, Beth	EIS001754	8.1 (170), 5.5 (183)
Becherer, Joyce G.	010190	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Becker, Janet	EIS001012	5.5 (29), 8.10.1 (133)
	010289	8.1 (170), 5.3 (164), 7.5.3.2 (228), 6.1 (49), 5.5 (29)
Beckner, Eric	EIS000828	5.1 (27)
Bedard, Jordan	EIS000818	5.1 (27)
Bedonie, Tom	EIS001755	7.5.11.2 (181), 5.5 (30)
	EIS001773	7.5.11.2 (240), 13 (5)
Beeman, B.	EIS000920	3.3 (50), 5.5 (29)
Belenky, Lisa T.	EIS001814	7.5.1 (106), 3.2 (80), 7.5.3.2 (11268), 7.5.3.2 (11269), 7.5.3.2 (229), 8.10 (11271), 8.10.2 (194), 7.3 (11273), 1.2 (81), 8.8.2 (11277), 8.8.2 (11278), 8.6.1 (223), 8.1 (259), 8.3 (149), 8.11.1 (11282), 8.8.2 (11285), 8.8.2 (11286), 8.8.2 (11287), 8.8.2 (11288), 8.5.3 (11292), 8.8.2 (11293), 8.5.3 (11294), 8.9 (193), 8.8.2 (11296), 5.4 (11297), 8.11.1 (11298), 8.3.3 (11299), 8.8.2 (121), 8.8.2 (11304), 3.8 (65), 7.5.6 (11307), 8.5.3 (190), 8.11.1 (11309), 8.6.2 (186), 8.11.4 (11311), 8.5.2 (11312), 8.3.2 (136)
Bell, Jim North Las Vegas, Nevada, City of	EIS002116	8.1 (259), 3.9 (109)
Beller, Denis E.	EIS000031	3.3 (50)
Benezet, Cordy	EIS000692	8.11.11.1 (2612), 1.1 (101), 8.3 (146), 8.11.1 (2615), 10 (3004), 8.11.3 (11150)
Benezet, Louis	EIS000654	3.2 (3898), 5.1 (27), 7.5.3 (3900), 7.3 (206), 8.10.2 (203), 8.1 (259), 3.9 (109)
	EIS000683	3.1 (15), 3.3 (50), 3.2 (64), 3.2 (75), 5.1 (27), 1.1 (124), 8.3 (149), 8.3.2 (136), 8.5.1 (2431), 8.5.3 (190)

Commenter	Comment Document	Location of Comments/Responses
Benezet, Louis (continued)	EIS001873	3.2 (59), 8.3 (149), 8.5.1 (8097), 8.1 (259), 8.10 (154), 8.10 (8109), 3.9 (109), 8.5.1 (180), 10 (258), 10 (8189), 3.2 (51), 7.3 (8195), 3.2 (64), 5.5 (30), 1.2 (12228), 2 (100), 6.1 (8217), 3.3 (50), 2 (8224), 3.2 (84), 2 (132), 3.2 (90), 7.2 (8233), 8.10.1 (62), 8.6.1 (223), 8.3.3 (178), 8.3 (161), 8.10 (7083), 8.5.3 (190), 1.1 (124), 7.3.2 (216), 7.5.1 (106), 7.5.5.2 (38), 8.11.6 (8300), 7.5.8 (8353), 3.1 (8357), 8.5.1 (8359), 8.11.5.1 (8360), 8.11.9 (8361), 7.5.7 (8363), 7.5.6 (8364), 7.4 (8365), 7.4.1 (61), 7.5.10 (8367), 7.5.11 (12468), 7.5.11.2 (240), 7.2 (8369), 5.4 (8370), 5.4 (248), 7.3 (94), 7.3 (232), 8.10 (12734), 8.8.1 (8376), 8.10 (68), 8.11.5.2 (8379), 8.5.1 (8381), 8.10 (8383), 8.11.6 (8384), 8.11.9 (8387), 8.11.9 (8388), 8.5.3 (8405), 8.1 (170), 3.2 (80), 6.1 (8409), 11.2 (108), 11.1 (102), 8.10 (8414), 11.1 (8416), 11.1 (9087), 8.8.1 (10300), 8.8.2 (121), 8.10.2 (10305), 1.2 (10306)
	EIS002122	3.8 (65), 6.1 (46), 4.3 (10582), 3.2 (59), 3.2 (90), 3.2 (64), 2 (132), 8.5.1 (10594), 10 (258)
	EIS002158	10 (258), 7.5.11.2 (240), 13 (37), 4.5 (9823), 3.9 (109), 7.3 (206), 8.3 (201), 8.6.2 (186), 8.10.1 (133), 8.11.9 (9868)
Bengochia, Monty Bishop Paiute Tribal Council	EIS001862	5.3 (164), 7.5.5.2 (237), 7.5.3.2 (3281), 7.5.3.2 (228), 3.9 (109), 8.1 (170), 8.3 (161), 8.10.2 (212), 7.5.11 (7243), 7.5.3.2 (11935)
Benham, Deborah M.	010423	5.1 (27)
Bennett, Cindy J.	EIS000703	5.1 (27)
	EIS000847	5.1 (27)
Bennion, John	EIS000248	5.2 (26), 7.5.7 (66), 2 (11188)
Benson, Gloria Bullets Paiute Tribe of Utah	010337	7.5.11.2 (240), 3.7 (57), 3.6 (257), 7.5.5 (12802)
Berenson, David	EIS001560	1.1 (6229), 13 (5), 5.4 (6231), 5.4 (219), 8.10 (6233)
Berenson, Elliott	EIS001185	7.1 (3482)
Berg, Daniel	EIS001019	5.3 (164), 5.5 (183)
Berger, Jody	EIS001705	3.2 (51), 3.2 (64), 8.1 (170)
Berkness, Adam	EIS002038	1.1 (101), 8.1 (259)
Bernhard, Adam	010216	5.1 (27)
Bernhard, Alan	010215	5.1 (27)
Bernhard, Dawn	010217	5.1 (27)
Bernhardt, David E.	EIS000763	5.2 (26), 3.2 (2394), 4.3 (2395), 3.1 (11), 3.2 (80)
	EIS001457	5.2 (26), 3.2 (2394), 4.3 (2395), 3.1 (11), 3.2 (80), 8.1 (170)
Bettinger, Robert L. Sierra Club	010417	5.1 (27)
Bianchi, Vince	EIS000929	5.1 (27), 3.2 (51), 1.1 (101), 7.5.3.2 (6182), 8.1 (170), 8.4 (115), 13 (5)
Bible, William A. Nevada Resort Association	EIS001893	5.1 (27), 3.9 (109)
Bieg, Patricia	EIS001212	8.1 (170), 8.10.3 (182), 3.9 (109)
Biesanz, Karen A.	010420	5.1 (27)
Bigrigg, David C.	EIS000947	1.2 (77), 7.3.1 (185), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Bilello, Fred	010039	5.2 (26)
	010092	5.2 (26)
Bilyeu, Sally Alderson	EIS001394	5.5 (30), 1.2 (77), 8.9 (193)
Bingham, Chauncey	EIS000753	5.1 (27), 5.3 (164)
Bingham, Lisa	EIS001694	7.5.7 (98), 13 (5)
Birdsall, Paul E.	EIS001655	8.1 (170)
Birnie, Patricia GE Stockholders' Alliance for a Sustainable Nuclear-Free Future	EIS001095	5.1 (27), 4.3 (70), 5.5 (183)
	010174	5.1 (27), 7.5.11.2 (181), 7.5.9 (175), 7.4 (125), 3.6 (2755), 7.1 (191), 7.4 (12568), 3.3 (50), 9.1 (250), 3.6 (257), 3.5 (204), 5.5 (183)
Bishop, Ed Pahrump, Nevada, Town of, Town Board	EIS000949	5.2 (26), 8.10.1 (3251), 4.5 (3252)
Bishop, Faith	EIS000867	3.3 (50), 1.2 (79)
Bishop, Kathleen Nevada, State of, Office of the Attorney General	EIS000865	7.5.7 (98), 10 (258), 5.1 (27)
Biunno, Patti	EIS000893	8.3 (149), 8.4 (25)
Blackeye, Heidi	EIS000627	3.3 (50), 5.1 (27), 5.3 (164), 1.2 (77), 7.5.11.2 (181), 10 (258)
Blackeye, Henry Duckwater Shoshone Tribe	EIS001848	3.3 (50)
Blair, John Valley Watch, Inc.	EIS001812	5.5 (183), 5.1 (27), 1.2 (79)
	550002	8.3 (149)
Blank, Erika L.	EIS000426	7.5.3.2 (228), 7.1 (191), 8.1 (170), 7.3 (12435), 7.5.11.2 (181), 1.2 (77), 13 (5), 5.3 (164), 3.3 (50), 5.1 (27)
Blazek, Mary Lou Oregon, State of, Office of Energy	EIS001215	9.1 (4850), 3.2 (4851), 9.1 (4852), 9.1 (4853), 8.1 (170), 8.3 (161), 8.3 (149)
Blevins, Esther League of Women Voters of Ashtabula County	EIS001290	8.1 (170), 5.2 (26), 8.7 (9033), 8.10.2 (212)
	EIS001554	8.1 (170), 5.2 (26), 8.7 (9033), 8.10.2 (212)
Block, Jonathan M.	010269	3.6 (257)
	010361	3.6 (257)
Blodgett, Sammy	EIS001995	8.1 (170), 5.1 (27)
Bloomer, Catherine C.	EIS001884	8.3.3 (24)
Bluesky, Willa	EIS001281	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
Boesel, Danielle	EIS001997	5.3 (164)
Bogger, Karen	EIS000552	5.3 (164)
	010295	3.6 (257), 3.5 (12849), 4.2 (12850), 4.4 (244), 7.3 (208), 4.5 (12853), 7.4 (125), 9.1 (250), 7.4 (241), 7.4 (67), 7.0 (12858), 7.5.9 (175), 7.5.3.1 (234), 7.5.1 (106), 3.6 (245)
Bogolub, Rita J.	EIS001226	3.3 (50), 7.1 (33), 1.2 (77), 7.5.11.2 (181), 8.1 (170), 8.8 (4833), 8.8.1 (192), 8.8.1 (11752)

Commenter	Comment Document	Location of Comments/Responses
Bogolub, Rita J. (continued)	EIS001614	3.3 (50), 7.1 (7376), 1.2 (77), 7.5.11.2 (181), 8.3 (161), 4.1 (83), 8.10 (168)
	EIS001846	5.1 (27), 8.1 (170)
Bohlen, Sherry	EIS000100	3.3 (50)
Boles, Sherry	EIS001680	7.5.11.2 (181), 5.1 (27)
Bolger, Sean	EIS001111	7.3.2 (216), 12 (139), 1.1 (34)
Bolognini, Dorothy B.	EIS000022	1.2 (79)
	010015	5.1 (27), 5.3 (164), 5.5 (30)
Bolten, Kim	EIS001131	3.2 (51), 3.2 (64), 13 (5)
Bondi, Anthony	EIS001706	3.2 (51), 3.2 (64)
Boniface, George	EIS001003	12 (139)
	EIS001742	12 (139)
Booth, Howard	EIS001078	3.2 (51), 7.3 (12534), 3.3 (50)
Boren, J.	010449	5.1 (27)
Borges, Dean S.	010454	
Botwinick, Joan	EIS000436	8.1 (170), 7.3 (220), 13 (5)
Boudreau, Dustin	EIS002010	5.1 (27), 1.1 (101), 8.1 (259)
Bourget, Greg A.	EIS000954	2 (126), 7.5.11.2 (240), 7.5.7 (93), 5.3 (164)
Bourgoin, Ron C.	010071	7.0 (13028)
	010084	5.5 (29)
	010166	8.5.3 (190)
Bowman, Kim L.	EIS001982	1.2 (77), 7.3.1 (185), 5.1 (27)
Boxer, Barbara U.S. Senate - California	EIS002292	7.5.3.2 (230), 8.10 (299), 5.1 (27)
	EIS002232	7.5.3.2 (230), 8.10 (299), 5.1 (27)
Boydston, Kathy Texas Parks & Wildlife	010490	8.10.2 (212)
Boykin, Fred	EIS000900	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Boyles, Jean	EIS000063	8.10 (148), 7.5.3.2 (229), 5.3 (164), 3.2 (51)
Bradbury, Audrey	EIS000125	7.5.3.2 (501), 7.5.3.2 (8), 8.1 (170), 7.5.5.2 (503)
	EIS000134	5.3 (164)
	010480	7.5.3 (12689), 7.1.2 (12690)
Bradley, David	EIS001710	2 (100), 5.1 (27)
Bradley, Harry American Nuclear Society	EIS001314	5.2 (26)
	EIS001592	5.2 (26)
Bradley, Marya A.	010024	5.1 (27), 3.6 (257)
Bradley, Philip T. South Carolina, State of, Public Service Commission	EIS000162	1.1 (1095), 5.2 (26), 3.2 (64), 2 (1097), 5.4 (219), 4.5 (1101)
	EIS000278	5.2 (26), 9.1 (11152), 4.5 (99), 4.5 (11154), 3.2 (64)
Bradley, Phillip T. Nuclear Waste Strategy Coalition	010303	4.5 (12969), 5.2 (26), 4.5 (99), 4.5 (107), 1.2 (78), 5.5 (183), 3.5 (204), 8.3 (12980), 3.9 (109), 8.3 (201)
Bradshaw, Les Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000069	3.2 (80), 7.3 (208), 11.1 (76), 3.7 (53), 3.3 (50), 6.1 (474), 10 (475), 3.2 (476), 11.1 (6), 3.3 (88), 3.9 (109)
	EIS000079	3.2 (80), 3.1 (15), 7.3 (222), 7.3 (7), 10 (104), 11.1 (76), 3.7 (53), 8.3 (149), 7.3.1 (185), 7.5.1 (106)

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Bradshaw, Les (continued) Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000102	3.2 (80), 3.2 (90), 8.3 (149), 10 (104), 3.2 (544), 10 (3), 7.3 (7)
	EIS000116	3.2 (80), 10 (104), 3.3 (50), 8.7 (905), 3.2 (906)
	EIS000332	3.2 (80), 3.2 (84), 10 (104), 8.3 (201), 8.3.2 (136), 10 (1808), 11.1 (1809), 3.2 (1810), 7.3 (1811), 3.8 (65), 2 (100), 10 (1815)
	EIS002238	3.2 (80), 1.2 (79), 8.3 (213), 10 (104), 7.5.3.2 (8), 4.5 (11323), 7.5.6 (130)
	010296	3.2 (80), 3.6 (257), 5.2 (26), 7.1.2.2 (13344), 7.1.2 (13345), 7.3 (13346), 4.5 (217), 7.1.2.2 (13348), 7.5.9 (13349), 5.4 (13350), 7.1.2.2 (13352), 7.1.2.2 (13355), 7.3.2 (216), 4.4 (244), 3.2 (13370), 9.1 (13371), 7.4 (87), 4.5 (92), 7.1.2 (13387), 7.1.2 (13392), 7.1.2 (13397), 7.1.2 (13398), 7.1.2 (13399), 7.1.2 (13400), 7.1.2 (13401), 7.1.2 (13402), 7.1.2 (13403), 7.1.2 (13404), 7.5.9 (13405), 7.5.9 (13406), 7.5.10 (13447), 7.1.2 (13448), 3.2 (13449), 7.5.9 (175), 7.5.3 (13451), 10 (104), 10 (13452), 7.3 (13453), 7.3 (13454), 7.5.3.5 (13455), 11.1 (13456), 7.3 (13457), 5.5 (29), 7.3 (13459), 4.5 (215)
	010360	3.2 (80), 3.6 (257), 5.2 (26), 7.1.2.2 (13344), 7.1.2 (13345), 7.3 (13346), 4.5 (217), 7.1.2.2 (13348), 7.5.9 (13349), 5.4 (13350), 7.1.2.2 (13352), 7.1.2.2 (13355), 7.3.2 (216), 4.4 (244), 3.2 (13370), 9.1 (13371), 7.4 (87), 4.5 (92), 7.1.2 (13387), 7.1.2 (13392), 7.1.2 (13397), 7.1.2 (13398), 7.1.2 (13399), 7.1.2 (13400), 7.1.2 (13401), 7.1.2 (13402), 7.1.2 (13403), 7.1.2 (13404), 7.5.9 (13405), 7.5.9 (13406), 7.5.10 (13447), 7.1.2 (13448), 3.2 (13449), 7.5.9 (175), 7.5.3 (13451), 10 (104), 10 (13452), 7.3 (13453), 7.3 (13454), 7.5.3.5 (13455), 11.1 (13456), 7.3 (13457), 5.5 (29), 7.3 (13459), 4.5 (215)
Brady, Kevin Yomba Shoshone Tribe	EIS001724	3.3 (50)
Brakefield, Zac	EIS001304	5.1 (27), 13 (5)
Bramble, Pat	EIS000886	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Branch, Michael P.	EIS000420	3.1 (15), 7.5.11.2 (181), 8.3 (149), 7.3 (222), 1.2 (79), 3.2 (80)
Branch-Dasch, Rob	010438	5.1 (27)
Brandon, Robert A.	EIS001178	8 (158)
Brandum, William A.	EIS001093	5.2 (26)
Bratton, Tara	EIS002160	13 (5), 12 (139), 5.1 (27)
	EIS002218	7.5.11.2 (181), 8.1 (259)
Brechin, Vernon	EIS001227	3.1 (7797), 10 (7803), 3.1 (12650), 10 (7853), 3.1 (7856), 3.2 (7858), 3.2 (7895), 3.7 (53)
	010317	3.1 (11), 3.1 (13298), 3.4 (13299), 3.6 (13309), 10 (13310), 10 (13311), 7.1 (191), 7.1.2 (13329), 3.3 (50), 7.3 (256), 3.4 (7401), 3.4 (12334), 7.1 (31), 1.1 (12336), 5.3 (164), 2 (100)

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Brechin, Vernon (continued)	550012	3.1 (13538), 3.1 (13539)
Brennan, Adele C. Ursuline Provincialate	EIS000931	8.1 (170)
Brennan, Kristyn	EIS001239	8.1 (170), 8.7 (141), 8.10.1 (133), 5.3 (164), 5.4 (219)
Brennan, Michael	EIS001322	13 (5218)
Brenneman, Mary	EIS000422	5.1 (27)
Brensinger, Elizabeth A.	010461	5.1 (27)
Brents, Barb	EIS001993	7.5.11.2 (181), 5.3 (164)
Bresnan, Lori	EIS001751	8.1 (170)
Brett, Frank	EIS000841	5.1 (27)
Brierty, Peter San Bernardino County, California	EIS002235	8.10.2 (114), 8.4 (11579), 8.8.1 (196), 8.10 (11581), 8.10.2 (11582), 8.1 (170)
Broderick, Evert	EIS000546	7.3 (3454)
Broderick, Mary Ellen	EIS001989	2 (100), 5.1 (27)
Broderick, Sarah	EIS001973	5.1 (27), 8.1 (170), 7.5.11.2 (181), 7.5.3.2 (228)
Broschak, John P. Consumers Energy	EIS000993	5.2 (26), 8.7 (143), 7.1.4 (10279)
	EIS001730	5.2 (26), 8.7 (143), 7.1.4 (10279)
Brown, Axll	EIS000897	7.5.3.2 (2760), 10 (2761)
Brown, Josh	EIS000385	5.5 (29)
Brown, William	EIS000108	8.1 (170)
Brugere, Marie Antoinette	EIS000935	8.1 (2819)
	EIS001223	8.3 (60)
Brundage, Robert Scott	EIS001572	4.5 (8322), 8.10 (8325)
Bryan, Richard H. U.S. Senate - Nevada	EIS000206	3.2 (59), 8.3 (161), 3.3 (50), 8.8.3 (171), 3.2 (90), 3.2 (64), 3.9 (109), 7.5.3.1 (12668), 7.5.3.4 (1831), 7.5.3.3 (1832), 1.2 (243)
	EIS000437	3.2 (59), 8.3 (161), 3.3 (50), 8.8.3 (171), 3.2 (90), 3.2 (64), 3.9 (109), 7.5.3.1 (12668), 7.5.3.4 (1831), 7.5.3.3 (1832), 1.2 (243)
Bryant, Sheryl	EIS000601	1.1 (101), 3.3 (50), 11.2 (11716)
Buchheit, Martin	EIS000961	3.3 (50), 5.3 (164)
	EIS001765	8.1 (11811)
Buckner, Mel Citizens for Nuclear Technology Awareness	EIS000168	5.2 (26), 4.5 (217), 8 (158), 5.5 (29), 4.5 (709), 4.5 (11122)
	EIS000304	5.2 (26), 4.5 (217), 8 (158), 5.5 (29), 4.5 (709), 4.5 (11122)
Bulisova, Gabriela	EIS001470	3.3 (50), 5.1 (27)
Bullcreek, Margene OGD Awareness	EIS001459	13 (72), 3.3 (88), 11.2 (108), 7.5.11 (10677), 7.5.7 (93), 7.5.11.2 (181), 1.1 (101)
	EIS001475	7.3 (206), 7.5.11.2 (4786), 10 (258), 12 (14), 8.4 (25), 3.3 (88), 8.10.2 (4790), 13 (72), 7.5.11 (4793), 1.2 (243)
	EIS002106	4.5 (12647), 13 (211), 7.5.7 (93), 3.7 (58), 7.5.11.2 (152), 13 (72)
Bullock, Louise Cassilly	010197	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Bulow, Laura A. Nuclear Free Great Lakes Campaign, Prescott College	EIS001187	1.2 (77)
Buola, Marcel	EIS001379	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)

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Buqo, Thomas S. Nye County, Nevada, Nuclear Waste Project Office	EIS000044	7.5.3.2 (11665), 10 (380)
	EIS000053	10 (10878)
	EIS000056	10 (335), 3.2 (336), 11.1 (6)
	EIS000070	7.5.3.2 (11665), 10 (380), 1.1 (101)
	EIS000080	7.1.1 (430), 7.1.1 (431), 7.4.2 (432), 11.1 (6), 4.5 (435), 3.2 (436), 10 (437)
	EIS000105	10 (524), 10 (10878)
	EIS000117	10 (335), 3.2 (336), 11.1 (6)
Buqo, Thomas S.	EIS000348	8.10 (145)
Burgess, Donald E.	EIS001914	8.1 (170)
Burgess, Omeagia South Carolina, State of, Budget and Control Board	EIS000050	3.10 (4)
	EIS002225	3.10 (4)
Burkhalter, Cheryl	EIS001978	3.2 (51), 3.2 (64)
Burkham, Frances Van Dyke	EIS001094	8.1 (170), 7.5.3.2 (228)
Burns, David	EIS001360	5.1 (27), 13 (5)
Burton, Diane A.	EIS001165	7.5.6 (130), 3.9 (109), 8.10 (155), 8.4 (25), 8.3 (161), 8.10 (157)
Burton, Nancy Connecticut Coalition Against Millstone	EIS001900	3.2 (80), 3.3 (50), 8.10 (5882)
Burzynski, Mark J. Tennessee Valley Authority	EIS001190	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
	EIS001224	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
Bushnell, Martha	EIS002303	5.1 (27), 7.5.11.2 (181), 4.5 (11918), 7.1 (11919)
	010038	5.1 (27), 3.6 (257)
Butler, Faith	EIS000914	3.1 (16), 7.3.2 (216), 7.3 (110)
Butler, Mandy	EIS002019	5.1 (27), 1.1 (101)
Butler, Ora	EIS000788	5.1 (27)
Butler, Robert M.	EIS000740	8.1 (170)
Butterfield, April	EIS000943	7.5.7 (98)
Byram, Roy Ban Burning Fossil Fuel Forms	010111	5.2 (26)
Byrd, Rebecca D.	EIS002187	3.2 (51), 3.2 (64)
Cabezas, Mario	EIS000889	3.3 (50)
Cabezas, Sara	EIS000891	8.3 (149), 8.4 (25)
Cabovich, Jason	EIS001688	8.3 (149), 8.4 (25)
Cadek, John	EIS002274	8.3 (149), 8.3.3 (23)
Cady, Warren	010022	8.3.1 (11538), 3.6 (257)

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Cahall, Diana I.	EIS000475	1.2 (77), 7.3 (12655), 7.5.3.2 (11028), 12 (139), 1.2 (243), 6.1 (116), 1.2 (11044), 4.5 (11050), 1.2 (11053), 13 (11056), 12 (14), 4.5 (11064), 4.2 (12289), 7.4 (41), 7.3 (11075), 4.5 (11076), 4.3 (13535)
	EIS001109	3.3 (50), 8.3 (10980), 8.7 (142), 8.3 (10911), 3.3 (10985)
	EIS001115	3.3 (50), 8.3 (10980), 8.7 (142), 8.3 (10911), 3.3 (10985)
	EIS001207	1.1 (11110), 7.5.7 (11113), 6.1 (116), 7.1 (11115), 6.1 (11116), 5.4 (11118), 3.3 (50), 8.10.1 (11120), 3.3 (12290)
	EIS001424	3.3 (50), 8.3 (10957), 13 (10958)
	EIS001515	12 (139), 4.3 (70), 3.9 (11091)
	EIS001516	3.3 (10840)
	EIS001952	3.5 (113), 8.3 (161), 8.1 (170), 3.3 (50), 8 (10992), 13 (211), 7.5.6 (130), 8.8.3 (10996), 8.10.2 (10997)
Caldwell, Crystal The Friendly Planet	EIS000772	3.3 (50), 8.3 (149), 8.4 (25), 3.2 (51), 7.3 (2527), 3.2 (64)
Caldwell, Juanita	EIS000009	5.1 (27), 8.1 (170)
Calhoun, Emily B.	EIS000797	8.1 (170), 5.3 (164), 5.1 (27)
	EIS001529	8.1 (170), 5.3 (164), 5.1 (27)
Caligiuri, Irene G.	EIS000749	1.1 (122), 13 (5)
Callner, Amy	EIS001609	3.3 (50), 8.8.1 (6326), 8.10 (54), 8.3 (149)
Campa, Alma E.	EIS000823	5.1 (27)
Campanella, JoAnne	EIS002185	7.5.11.2 (181), 13 (5)
Campbell, Darrell Prairie Island, Minnesota, City of	EIS000456	5.2 (26), 9.4 (1537), 8.10.2 (212), 8.8.3 (171), 13 (5)
Campbell, Kristal	EIS002015	8.1 (259), 1.1 (101)
Camte, Sondra	010380	8.1 (170)
Cantral, Ralph Florida, State of, Department of Community Affairs, Coastal Management Program	EIS000146	3.10 (4)
Caraccio, Laura	EIS001687	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27), 13 (5)
Cargas, Millie	010258	8.1 (170)
Carlin, Seth A.	EIS001018	8.1 (170)
	EIS001778	8.1 (170)
Carlson, Joseph	EIS000591	5.5 (30)
Carman, Kevin	EIS002035	1.1 (101), 8.1 (170)
Carman	EIS000405	5.2 (26)
Carmany, Erin M. Zero Population Growth	010426	5.1 (27)
Carnahan, Mel Missouri, State of	EIS000999	8.3 (60), 8.3 (5052)
Caron, Nancy	EIS001663	3.2 (69), 8.3 (161), 8.3 (149), 8.4 (2787)
Carrasco, Liz Progressive Leadership Alliance of Nevada	EIS002114	5.1 (27), 7.5.11.2 (181), 3.9 (109), 1.2 (79)
Carroll, Cynthia	EIS001151	5.1 (27), 7.3 (110), 1.2 (243), 8.3 (149)
Carroll, Glenn Georgians Against Nuclear Energy	EIS000297	7.5.3.2 (229)

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Carroll, Glenn (continued) Georgians Against Nuclear Energy	010151	3.6 (257), 7.3.1 (185), 8.12 (224), 7.4 (9086), 7.3 (220), 6.1 (116), 5.3 (164), 5.1 (27)
Carruthers, Joseph P. Beowawe Crescent Valley Nuclear Waste Awareness Committee	EIS000623	1.2 (79), 7.5.3.1 (11001), 3.1 (21), 8.1 (259), 13 (5)
	EIS000642	5.1 (27), 8.11.6 (3145), 8.1 (3146), 8.11.6 (3147), 13 (5)
Carruthers, Joseph P.	EIS001155	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 5.1 (27), 3.9 (109), 5.5 (29)
	EIS002072	1.2 (77)
Carver, Dick Nye County, Nevada, Board of County Commissioners	EIS001879	3.2 (80), 3.2 (84), 8.7 (5969), 8.3 (149), 8.7 (184), 7.3 (5975), 11.1 (6), 10 (12338), 10 (5980), 7.3 (221), 7.3 (5988), 7.3 (7131), 8.11.1 (5989), 8.9 (5990), 8.10 (145), 8.8.1 (5991), 8.8.3 (5992), 7.5.6 (5993), 3.1 (5994), 7.5.9 (5996), 7.3 (5995), 10 (12271), 11.1 (5999), 7.3 (5997), 6.1 (5998), 10 (6000), 3.1 (6001), 3.1 (6003), 3.2 (80), 7.5.7 (93), 1.1 (1663), 10 (104), 8.8.2 (188), 3.9 (109), 11.2 (108), 3.2 (1516), 5.5 (1517), 9.1 (6016), 3.2 (6017), 3.8 (65), 3.7 (53), 10 (104), 3.7 (5976), 10 (5974), 10 (5972), 10 (5968), 3.8 (65), 10 (5964), 8.10 (12031), 8.10 (12032)
	EIS002237	5.1 (11603), 3.7 (53), 8.10.2 (11605), 8.1 (259)
Casey, David J.	EIS001634	8.1 (170), 3.3 (50)
Casey, Donald B.	EIS000710	7.1 (191)
Cassano, Donna L.	EIS002175	3.1 (15), 8.3 (149), 8.3 (10311), 8.10.2 (114), 7.5.11 (52), 8.3 (161), 8.10.2 (12263)
Cassell-Maxwell, Jodi	EIS001757	8 (158)
Castaznacci, Albert FirstEnergy Corporation	EIS001556	5.2 (26), 8.10 (68), 8 (158), 8.4 (25), 8.7 (143), 8.10.2 (212), 1.2 (78)
Castigline, Jennifer	EIS000916	7.5.11.2 (181), 5.1 (27)
Castro, Carol	EIS001138	7.5.11.2 (181), 5.1 (27)
Castro, Paul	EIS000608	7.5.3.3 (2199), 1.1 (101)
Cather, Jeremiah	010145	5.5 (30)
Caudle, Joe	EIS001301	13 (5), 8.3 (4958)
Caves, John R. Carolina Power & Light Company	EIS001260	3.3 (3575), 5.2 (26)
Cawein, Mary R.	EIS001869	8.1 (170)
Cawelti, Teri Owens Valley Indian Water Commission	EIS001107	5.1 (27), 7.5.3.2 (3281), 7.5.3.2 (11935), 7.5.3.2 (228), 3.9 (109), 8.1 (170), 8.3 (149), 8.10.2 (212), 7.5.11 (52), 7.5.11.2 (240), 7.5.11.2 (181)
Cedergreen, Hilary	EIS000983	8.1 (170), 5.3 (164)
Cermak, Jerome J.	EIS001117	3.3 (50)
Chang, Todd	EIS000473	7.5.3.2 (228), 1.1 (124), 5.5 (30), 7.5.11.2 (240)
Chaput, Ernest S. Economic Development Partnership	EIS000171	5.2 (26), 4.5 (987), 5.5 (29)
	EIS000308	11.1 (11914), 5.2 (26), 4.5 (987)
Charles, Jerry Ely Shoshone Tribe	EIS002080	5.1 (27), 2 (132), 8.8.3 (171)

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Charlton, Bud	EIS000657	12 (139), 8.10.1 (10032), 8.10 (145)
Charmer, Jerry Ely Shoshone Tribe	010346	7.5.11.2 (240), 5.1 (27)
Chastain, E. C.	EIS001068	5.2 (26)
	010002	5.2 (26), 7.5.9 (12236), 7.5.9 (12237), 13 (35)
Chausse, Rhonda	EIS001144	8.3 (149), 8.4 (25), 7.5.3.2 (228)
Chavez, Beau	EIS002065	1.2 (77), 7.3.1 (185), 5.1 (27)
Chavez, David Chemehuevi Indian Tribe	EIS001452	5.1 (27), 7.5.3 (4602)
	EIS002088	3.3 (163)
Chavez, David	EIS002076	7.5.3.2 (10123)
Chavez, Lee	010339	7.5.11.2 (240), 3.6 (257)
	010341	3.7 (57)
Chavis, Karen	EIS000957	5.1 (27), 3.9 (109), 7.3 (3221), 7.3.2 (216)
Chelette, Iona M.	EIS001860	3.1 (12), 5.1 (27), 5.1 (9133), 7.5.5 (225), 8.11.11.1 (9136), 5.3 (164), 5.4 (219), 2 (132), 3.2 (9929), 3.2 (80), 6.1 (9932), 7.5.10 (9934)
	010455	4.5 (12751), 3.5 (233), 5.5 (29), 6.1 (12430), 5.3 (164), 3.6 (257), 5.1 (27)
	010479	4.5 (12751), 3.5 (233), 5.5 (29), 6.1 (12430), 5.3 (164), 3.6 (257), 5.1 (27)
Chiappa, Francis Cleveland Peace Action	EIS001287	13 (3921), 7.3 (12544), 8.1 (170), 8.10 (3926), 8.4 (25), 7.5.11.2 (181), 3.2 (64), 5.5 (183), 5.3 (164)
	EIS001547	13 (3962), 7.3 (12544), 7.5.11.2 (181)
Chiara, Robert E.	EIS000534	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (259)
Chicherio, Barbara Green Party of St. Louis	EIS000987	4.3 (129), 5.1 (27), 8.1 (170), 13 (5)
	010228	5.3 (164)
Chicoineau, Linda	EIS001416	8.1 (170), 5.4 (219)
Chorny, Michael	EIS002180	3.1 (16), 7.3.2 (216), 7.3 (110)
Christensen, Bernie	EIS000341	5.2 (26)
Christie, Iryne	EIS001128	13 (5), 8.1 (170)
Christisen, D. M.	EIS001118	8.3.3 (23)
Chura, Peter	EIS000008	5.1 (27)
Cibas, Gedi New Mexico, State of, Environment Department	EIS000338	6.1 (1317)
Cioni, Alberto	010440	5.1 (27)
Circost, Namaskar	EIS000905	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50), 13 (5)
Cirino, Kerrie	EIS001089	7.5.7 (93)
Citron, Kay	EIS000167	8.7 (247), 8.7 (140), 5.3 (164), 7.5.7 (663), 13 (5), 7.5.7 (93)
	EIS000288	8.7 (247), 8.7 (140), 5.3 (164), 7.5.7 (663), 13 (5), 7.5.7 (93)
Citta, Nick International Brotherhood of Electrical Workers Local 15	EIS001582	13 (5), 5.2 (26), 8 (158)

Commenter	Comment Document	Location of Comments/Responses
Claire, Phillip Nevada Test Site Community Advisory Board	EIS001816	7.5.3.2 (12615), 7.5.3.2 (8678), 10 (8683), 7.5.9 (175), 10 (8690), 10 (12697), 10 (8695), 10 (12589), 10 (8699), 10 (12248), 10 (8741), 7.5.3.2 (8744), 10 (8747), 7.5.11.2 (8750), 7.5.1 (106), 8.3 (149), 8.7 (153), 10 (3), 8.8.3 (173), 8.3 (201), 8.9 (8774), 8.3.2 (136), 7.5.6 (130), 8.3 (161), 8.10.2 (114), 10 (12247)
Clark, Darlyne	EIS001060	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 5.1 (27), 3.2 (2538)
	EIS001495	5.1 (27), 13 (5)
Clark, David W.	EIS000849	5.2 (26)
	010462	5.3 (164)
Clark, Nick	EIS000559	1.1 (101), 7.5.3.3 (2009), 1.1 (34)
Clark, Patricia L.	EIS000098	5.1 (27), 1.2 (243), 8.10 (148), 7.5.3.2 (229), 5.3 (164), 3.2 (51), 5.3 (164)
Clark, Susan F. Florida, State of, Public Service Commission	EIS000216	5.2 (26), 4.5 (92), 3.2 (64), 4.5 (99), 3.2 (80), 12 (8838), 8 (158)
	EIS000276	5.2 (26), 4.5 (99)
Clay, William L. Missouri, State of, Missouri State Senate	EIS001036	8.1 (170), 1.1 (122)
Cleary, Chris	EIS002162	5.1 (27)
Clemency, Brian	EIS001410	5.1 (27), 8.10 (157), 7.4 (4515), 4.5 (4615), 5.3 (164), 7.4.1 (61), 7.4 (87), 1.2 (79)
Clemens, Beatrice Buder	EIS001039	5.1 (27), 7.5.7 (66)
	EIS001772	5.1 (27), 7.5.7 (66)
Clemens, Byron	EIS001040	5.1 (27), 7.5.3.2 (111), 7.5.3.2 (228), 7.3 (239), 8.10 (8956), 8.10 (8957), 5.4 (219), 8.7 (141), 8.7 (147), 8.3 (213), 4.1 (8962), 8.10.2 (114), 8.7 (153), 6.0 (11938), 4.1 (8982), 4.1 (82), 8.8.1 (8975), 8.6.1 (223), 8.7 (143), 2 (126), 3.2 (8984), 8.10.2 (8987), 4.1 (8988), 4.5 (92), 8.9 (8992), 6.0 (8996), 8.4 (115), 3.2 (59), 12 (139), 5.3 (164)
	EIS001774	5.1 (27), 7.5.3.2 (6479), 7.1 (6481), 8.7 (141), 5.4 (219), 8.7 (6488), 8.10.2 (114), 8.3 (6493), 8.3 (213), 4.1 (8982), 8.10.2 (6505), 8.7 (143), 2 (126), 3.2 (6514), 8.10.2 (8987), 12 (139), 6.0 (11938), 8.6.1 (223)
Cleveland, Barbara	EIS000130	5.3 (164)
Cleveland, David	EIS000114	3.1 (21), 3.3 (50), 8.8.3 (176), 7.5.6 (1184), 8.6.2 (186), 8.11.1 (1186), 7.5.6 (1187), 11.1 (1188), 4.1 (82), 11.1 (6), 3.9 (109), 5.3 (164)
Cleveland, El	EIS000912	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Cleveland, Matt	EIS000572	1.2 (79), 7.5.3 (1770), 8.1 (170), 7.5.3.2 (1772)
Cloquet, Donald J. Las Vegas Indian Center	EIS002081	5.3 (164), 5.1 (27), 5.5 (30)
	EIS002210	8.1 (170)
	EIS002213	8.10.1 (166)
Cloyes, Christoffer	EIS000522	7.5.3.2 (230)
Cloyes, Debra	EIS000523	4.3 (1631), 8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Cocke, Marie E.	EIS001943	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 13 (5), 5.5 (183)
Cody, Sharon	EIS001610	3.3 (50), 12 (139), 5.1 (27)
Cohon, Jared L. U.S. Nuclear Waste Technical Review Board	EIS001520	7.3.1 (5034), 3.2 (12347), 8.3 (5035), 8.10 (5036), 7.5.6 (5037), 3.9 (109), 7.3.1 (5038), 9.1 (5040), 2 (5041), 8.3 (5042), 8.10 (5043), 8.3.2 (5044)
	010229	7.3.1 (6147), 7.3 (7109), 7.3 (8236)
Colburn, Michelle DC Statehood Green Party	EIS000468	5.1 (27), 8.1 (170), 7.5.11.2 (240), 5.5 (29)
Colburn, Minucha	EIS000097	5.1 (27), 2 (505)
Coles, Gary Greater Las Vegas Association of REALTORS	EIS000721	5.1 (27), 7.5.6 (130), 8.11.1 (3526), 3.9 (109), 8.10.2 (114), 8.5.3 (190)
	EIS002107	5.1 (27), 3.9 (109), 8.10.2 (114), 11.2 (56)
Collier, Beth A.	EIS001074	8.1 (170)
Collins, Carol L.	010451	5.1 (27)
Collins, Kevin	EIS000324	5.2 (26), 13 (5)
Collins, Ramon	EIS001116	8.1 (170)
Congdon, Lois M.	EIS000173	7.5.3.2 (228), 7.5.3.2 (111), 8.1 (170), 7.5.7 (838), 8.4 (25), 8.4 (840), 8.10.2 (114), 8.10 (843), 5.1 (27), 5.5 (29), 7.5.7 (846), 1.2 (849), 7.5.3.3 (856), 7.3 (256)
	EIS000306	5.5 (29), 7.5.3.2 (111), 8.10 (1202), 8.7 (141), 13 (5), 8.10 (8460)
Conn, Corey J.	EIS001321	5.1 (27), 13 (227)
	EIS001612	5.1 (27), 13 (227)
Conway, Ursula M.	EIS000784	3.2 (80), 5.3 (164), 13 (5), 3.3 (50), 7.5.3.2 (228), 5.1 (27), 1.2 (79)
	EIS002155	4.5 (10105), 1.1 (101), 7.5.3.3 (10114), 7.5.6 (10115), 1.2 (79), 13 (5), 3.3 (50)
Cook, Clara B.	010375	3.6 (257), 3.5 (36), 7.4 (241), 7.5.3.2 (230), 7.5.9 (175), 7.5.7 (235), 7.5.3 (12422), 7.5.6 (12423), 7.5.11.2 (181)
Cook, Michael A.	EIS000565	5.1 (27), 7.3 (206), 12 (139), 5.5 (29)
Cooley, Jackie	EIS002172	8.1 (170)
Cooper, Anne Colleen	EIS001433	3.2 (80), 5.1 (27), 3.2 (64), 7.3 (256), 8.1 (170), 7.3.1 (185), 7.5.7 (4627), 3.3 (50)
Cooper, Clarke Florida, State of, Office of the Governor	EIS000465	4.5 (92)
Corban, Keith A.	EIS000110	7.5.3.2 (229), 5.3 (164), 8.3 (149), 8.3 (675)
	EIS000709	8.3 (149), 7.5.3 (2729), 1.2 (243), 5.3 (164), 8.10.1 (2732), 3.1 (16), 7.5.11 (2734)
Corbett, Jane M.	010198	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Corcoran, David	EIS001136	7.5.11.2 (181)
Corella, Elijah	EIS000704	1.2 (77)
Cornelius, Betty L. Colorado River Indian Tribes	EIS002085	3.3 (163), 7.5.11 (8861)
	010342	7.5.11.2 (240)
Cotton, Keith	EIS001890	5.1 (27), 8.1 (170), 7.5.11.2 (181), 7.5.3.2 (228), 4.5 (10731)
Coutreuas, Steve	EIS001711	2 (100), 5.1 (27)
Cox, Barbara	EIS001217	5.1 (27), 13 (5)

Commenter	Comment Document	Location of Comments/Responses
Cox, Sharon K.	EIS000802	8.1 (170), 7.3 (2598)
	EIS000919	3.3 (50)
Cox, Thomas W.	EIS000410	10 (893), 5.2 (26)
	EIS000578	10 (1723), 5.5 (183)
Craig, Robin	EIS002170	5.3 (164), 8.3 (161), 8.10.2 (114), 8.7 (28), 7.3 (220), 1.1 (10794), 5.5 (30), 13 (10724)
Cramm, Jordan A.	EIS000967	8.1 (170)
Cranor, Bud Nevada, State of, Office of the Governor	EIS002091	5.1 (27), 1.2 (77), 2 (100), 8.3 (161), 3.2 (64), 3.2 (80)
Creason, Richard H. Roman Catholic Archdiocese of St. Louis	EIS001369	8.1 (170)
Criswell, Beverly	010398	3.4 (11551), 5.5 (29)
Crocker, George North American Water Office	EIS001374	5.1 (27), 3.2 (4091), 5.5 (183), 5.4 (219), 7.5.11.2 (181)
	EIS001514	5.1 (27), 3.2 (4091), 5.5 (183), 5.4 (219), 7.5.11.2 (181)
Cuchiarci, Diana	EIS002055	2 (100), 5.1 (27)
Cullen, Scott STAR Foundation (Standing for Truth About Radiation)	EIS000204	7.5.11.2 (181), 5.3 (164), 8.10 (168), 8.3 (149), 10 (1119), 10 (4555), 8.10.2 (114)
	EIS000225	7.5.11.2 (181), 5.3 (164), 8.10 (168), 8.3 (149), 10 (1119), 10 (4555), 8.10.2 (114)
	010238	5.1 (27), 1.2 (77), 3.5 (204), 8.10.2 (114), 8.3 (201), 8.4 (25), 8.10.1 (133), 8.7 (141), 3.9 (109)
	010356	5.1 (27), 1.2 (77), 3.5 (204), 8.10.2 (114), 8.3 (201), 8.4 (25), 8.10.1 (133), 8.7 (141), 3.9 (109)
Cummings, Peter Las Vegas, Nevada, City of	EIS000735	5.3 (164), 2 (100), 8.1 (259), 7.5.6 (130), 8.3 (149), 3.9 (109), 8.5.1 (180), 8.5.1 (3080), 3.2 (64), 3.2 (3083), 8.11.11 (3084), 3.2 (3085)
Curnutt, Minette M.	EIS000527	8.1 (259), 7.5.7 (98), 5.5 (30)
Curtis, Elizabeth Mitchell	EIS000318	8.1 (170)
Curtis, Leslie	EIS001679	8.8.1 (6021)
Curtis, Lucy Mitchell	EIS000174	8.1 (170)
Cvetkovic, Judy Citizen Alert	EIS001673	8.1 (170)
Czerwonka, Larry New Directions Technologies Inc.	EIS000058	No comment
Dallas, Don	EIS002105	12 (139), 13 (211), 3.3 (50), 1.2 (243), 8 (158), 11.2 (10493), 11.1 (10507)
Daly, Connie D.	010415	5.1 (27)
Damel, David F.	EIS001278	5.5 (183), 5.3 (164), 8.4 (25), 8.10.2 (212), 8.10.1 (133), 13 (5)
Damele, Roberta M.	EIS000966	3.2 (64), 7.5.6 (130), 3.2 (59), 1.2 (79)
Damiol	EIS001668	7.5.3.2 (2760), 10 (2761), 2 (6833)
Daniel, Karla	EIS001916	5.1 (27), 7.5.10 (6460), 7.5.3.2 (6463), 7.5.3.2 (111), 8.3 (149), 7.3.2 (216)
Daniel, Tavit	EIS002026	1.1 (101), 7.1 (8056), 1.1 (123), 5.1 (27)
Danks, Don	EIS001707	3.2 (51), 3.2 (64)
Dann, Carrie	EIS000634	5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Dann, Carrie Western Shoshone Defense Project	EIS001965	5.1 (27), 3.3 (50), 7.5.11.2 (240), 7.5.11.2 (181), 7.3 (220), 7.5.3.2 (230), 13 (5), 8.3 (201), 1.1 (10647), 3.7 (57), 3.2 (51), 7.5.5 (10651), 7.5.5 (10652), 3.7 (58), 3.2 (80)
Dann, Richard	EIS000411	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 7.5.11.2 (181)
Danzeisen, Cathy	EIS001181	8.8.1 (4063), 7.3 (4064), 8.10.1 (133), 5.1 (27), 3.3 (50)
Darby, Forrest	EIS002140	4.5 (151), 1.2 (9205), 13 (131), 7.5.6 (9206), 13 (9207), 8 (9209), 5.2 (26)
	010004	5.2 (26), 11.1 (8702)
Darin, Jack Sierra Club, Illinois Chapter	EIS001316	8.1 (170), 5.1 (27)
	EIS001598	8.1 (170)
Davidson, Harriet A.	EIS001213	5.5 (29), 7.3 (7794)
	010072	8.1 (170)
Davidson, John D.	EIS001214	5.1 (27)
Davis, Bob H. Nye County, Nevada, Board of County Commissioners	EIS000442	3.2 (80), 3.2 (1516), 5.5 (1517), 3.8 (65)
Davis, Cathleen	EIS001175	5.3 (164), 4.5 (6985)
Davis, Helen K.	EIS000985	8.1 (170), 5.5 (29)
Davis, Jeff	EIS001417	8.1 (170)
Davis, Lisa	EIS000529	1.1 (101)
Dawn, Joanne	EIS002208	5.1 (27), 4.3 (128)
deBellis, Tony Desert Survivors	EIS000715	3.1 (3592), 7.5.4.2 (10717), 7.5.3.1 (8888), 3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230), 7.3 (3599)
deBottari, Louis	EIS001901	3.3 (50), 8.10.1 (166), 8.8.1 (5889), 5.5 (29)
	EIS000337	7.3 (110), 5.3 (164), 5.4 (4865), 5.5 (29), 7.5.10 (4867), 7.1 (31), 11.1 (4869), 8.10.1 (62), 8.6.1 (223), 7.1 (4872), 7.1.5 (4873), 9.1 (4874), 1.1 (85), 3.2 (80), 7.5.7 (4876), 7.5.7 (4877), 7.3 (94), 7.3.2 (216), 7.3 (208), 7.3 (4881), 7.1.5 (4882), 7.3 (4883), 7.5.3.3 (4884), 7.3 (238), 8.7 (141), 4.1 (82), 8.10 (4888), 8.8.1 (4889), 7.5.7 (93), 8.10 (4891), 8.10.1 (166), 13 (4893), 9.1 (4894), 1.1 (101), 1.2 (243)
	EIS000401	7.3 (110), 5.3 (164), 5.4 (4865), 5.5 (29), 7.5.10 (4867), 7.1 (31), 11.1 (4869), 8.10.1 (62), 8.6.1 (223), 7.1 (4872), 7.1.5 (4873), 9.1 (4874), 1.1 (85), 3.2 (80), 7.5.7 (4876), 7.5.7 (4877), 7.3 (94), 7.3.2 (216), 7.3 (208), 7.3 (4881), 7.1.5 (4882), 7.3 (4883), 7.5.3.3 (4884), 7.3 (238), 8.7 (141), 4.1 (82), 8.10 (4888), 8.8.1 (4889), 7.5.7 (93), 8.10 (4891), 8.10.1 (166), 13 (4893), 9.1 (4894), 1.1 (101), 1.2 (243)
deBottari, Louis	EIS000596	7.3 (110), 5.3 (164), 5.4 (4865), 5.5 (29), 11.1 (4869), 1.1 (85), 7.3.2 (216), 7.1.5 (4882), 7.5.3.3 (4884), 1.2 (243)
	EIS000610	7.5.10 (6104), 7.3.2 (216), 7.1 (31), 8.10.1 (62), 8.6.1 (223), 7.1 (4872), 7.1.5 (4873), 9.1 (4874), 1.1 (85), 3.2 (80), 7.5.7 (4876), 7.5.7 (11049), 7.3 (94), 7.3 (208), 7.3 (4881), 7.3 (4883), 7.3 (238), 8.7 (141), 4.1 (82), 8.10 (11063), 8.8.1 (4889), 7.5.7 (93), 8.10 (11067)

Commenter	Comment Document	Location of Comments/Responses
deBottari, Louis (continued)	EIS000938	3.3 (50), 1.2 (243), 3.2 (75), 6.1 (4810), 6.1 (4811), 3.2 (4812), 4.3 (129), 7.3 (4814), 8.10.1 (166), 8.3 (149), 5.5 (29), 8.10 (6622)
	EIS001110	3.3 (50), 1.2 (243), 3.2 (75), 6.1 (4810), 6.1 (4811), 3.2 (4812), 4.3 (129), 7.3 (4814), 8.10.1 (166), 8.3 (149), 5.5 (29), 8.10 (6622)
	EIS001923	3.3 (50), 7.3 (12440), 8.10.1 (133), 12 (14), 8.7 (11977)
	EIS002121	8.8.3 (174), 4.1 (10519), 12 (139), 8.4 (25)
	EIS002138	3.3 (50), 1.2 (243), 12 (10489), 6.1 (4811), 3.2 (4812), 4.3 (129), 7.5.7 (10501), 7.3 (10502), 8.10.1 (166), 8.8.3 (174), 5.1 (27), 1.1 (122)
	EIS002250	7.3 (12440), 8.10.1 (133), 8.4 (25), 8.7 (12658), 8.7 (147), 12 (14)
	EIS002277	3.1 (11430), 8.4 (25), 8.10 (11432)
	EIS002288	1.2 (11418)
	010116	3.6 (257), 3.1 (15), 7.0 (12773), 7.3 (12774), 7.3 (12775), 7.3 (12776), 4.5 (92), 7.0 (12560), 7.3 (12561), 3.5 (204), 7.3.2 (216), 7.3 (10513)
	010135	7.0 (897), 3.1 (16), 7.0 (899), 7.0 (900), 2 (100), 7.0 (12300), 7.0 (12239), 7.0 (12240), 7.0 (12004)
	010140	7.5.9 (4472), 4.3 (249), 7.3 (10632), 7.3 (5982), 5.5 (29)
DeFelice, Holly	EIS001708	2 (100), 13 (4862)
DeGette, Diana U.S. House of Representatives - Colorado	EIS000266	8.1 (170), 8.10.2 (114), 4.5 (92)
DeLong, Dale	EIS000814	5.3 (164)
DePaoli, Arlene M.	EIS001081	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 1.2 (77), 5.5 (29), 5.1 (27)
DeRosa, David	EIS001618	3.3 (50), 4.1 (82), 8.10 (157), 8.10.1 (9269), 4.5 (92)
DeVries, Shaun	EIS001700	3.3 (50)
Del Vecchio, Joe	EIS002045	3.1 (16), 7.3.2 (216), 7.3 (110)
Delany, Evelyn	EIS000729	8.3 (149)
Delcoure, Sandra	010100	8.1 (170), 5.5 (29), 13 (5642)
Deletto, Ryann	EIS001666	7.5.3.2 (2760), 10 (2761), 5.1 (27)
Delia, Donna	EIS000873	8.7 (184)
Demma, Joe M.	EIS002189	1.2 (79)
Denley, Mike E	010014	5.1 (27)
Denley, Mike	EIS000011	1.1 (101)
Denney, Becky	EIS001029	7.5.3.3 (3751), 7.5.3.2 (228), 7.4 (3755), 7.5.3.2 (111), 7.5.3.2 (229), 2 (100), 3.2 (3764), 1.2 (77), 7.3 (210), 5.3 (164)
	EIS001788	7.5.3.3 (11844), 7.5.3.2 (228), 7.4 (3755), 7.5.3.2 (111), 3.2 (3764), 1.2 (77), 7.3 (210), 5.3 (164), 3.3 (50)
Denning, Bruce E.	EIS000647	8.10.2 (218), 5.3 (164)
	EIS001492	5.3 (164)
Derkovitz, Jane E.	EIS000785	5.1 (27)
Derkovitz, Leslie	EIS000795	5.5 (29), 7.3 (209)
Detraz, Marjorie I.	EIS000238	7.5.7 (93)
	EIS000673	5.1 (27)
	EIS000690	7.5.7 (93)
	EIS000696	No comment

Commenter	Comment Document	Location of Comments/Responses
Detraz, Marjorie I. (continued)	EIS002123	1.1 (101), 13 (9180), 8.10.1 (9184), 1.2 (9189), 1.2 (79)
	EIS002128	13 (211)
	EIS002165	1.2 (79)
	EIS002220	5.1 (27), 1.2 (79), 7.5.11.2 (181), 8.1 (170), 3.3 (50), 1.2 (243), 8.7 (28), 7.3 (210), 8.1 (10625), 5.3 (164)
Deuel, Ruthmary K.	EIS000960	5.1 (27), 5.3 (164)
Devlin, Sally	EIS000103	5.4 (427), 8.9 (425), 8.5.3 (190), 8.10.1 (133), 7.4.2 (807), 4.1 (82), 11.2 (809)
	EIS000113	7.5.3.2 (2), 4.5 (463), 7.5.6 (464), 7.3 (11610)
	EIS000409	4.2 (2639), 12 (139), 4.5 (7153), 8.9 (193), 7.1 (2647), 7.1.1 (2648), 8.10.2 (114), 8.10.1 (133), 7.5.6 (2652), 7.5.7 (2653), 3.2 (80), 5.5 (29), 4.1 (11434), 3.7 (11435)
	EIS002192	4.3 (128), 7.5.7 (10390), 6.0 (10392), 7.2 (10394), 7.4 (10399), 8.9 (193), 5.4 (10401), 4.1 (10402), 6.0 (10403), 5.1 (27), 4.3 (70)
	EIS002198	8.10.1 (133)
	010141	13 (6781), 7.3 (252), 7.3 (208), 10 (91), 6.0 (6778), 6.0 (6779)
	010162	7.5.3 (7199), 13 (7200), 3.2 (75), 7.3 (252), 13 (211)
	010268	3.5 (233), 3.6 (12826), 7.3 (252), 7.0 (12828), 13 (37), 7.5.7 (12830), 7.5.1 (106)
	010305	3.5 (233), 3.6 (12826), 7.3 (252), 7.0 (12828), 13 (37), 7.5.7 (12830), 7.5.1 (106), 7.3 (13536)
Dewes, John American Nuclear Society, Savannah River Section	EIS000300	5.2 (26), 3.2 (80), 4.5 (107), 13 (5)
Dewey, Marilyn K.	EIS000731	8.1 (170)
Dexter, Fred	EIS000708	5.5 (29), 7.3 (2619), 1.2 (243), 8.1 (170), 5.3 (164)
Dias, Michael Anthony	EIS001257	5.1 (27), 3.9 (109), 7.5.7 (2603), 7.3 (10885)
Diaz, Jesus	EIS000819	5.1 (27)
diBartolo, Russell Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000543	3.2 (51), 3.2 (80), 3.2 (84), 3.9 (109), 8.3 (161), 3.3 (5477)
	EIS000586	3.2 (11714), 3.2 (2284), 3.9 (109), 3.2 (84)
	EIS002119	8.8.3 (174), 3.2 (84), 3.2 (80), 8.3 (149), 8.8.1 (8717), 7.5.6 (130), 7.5.11 (52), 8.10.2 (212), 10 (8724), 8.8.2 (8725)
	EIS002267	3.7 (53), 8.1 (170), 11.1 (11329), 3.2 (11330)
Dickens, Billy R.	EIS001528	8.3.3 (24)
	EIS001843	8.3.3 (24)
Diesel, Mary Lee	EIS001880	8.1 (170), 8.1 (170), 7.5.3.2 (228), 8.10.2 (212), 8.3.3 (23), 6.1 (9102), 5.5 (30)
Dilger, Fred Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000228	8.3 (149), 3.9 (109), 8.8.1 (1259), 11.1 (102), 8.10 (1261), 7.4.2 (1262), 8.8.1 (1264)
	EIS000392	3.2 (80), 10 (1777), 7.5.11 (52), 8.3 (1779), 3.9 (109), 3.2 (59)
	EIS000653	8.8.1 (2404), 7.4.2 (2405), 3.9 (109)
Divis, Mary-Jo	EIS001352	5.1 (27), 13 (5)

Commenter	Comment Document	Location of Comments/Responses
Dixon, Earl	EIS002216	10 (10259)
Dockwell, Daniel	EIS002029	8.1 (259)
Doe, Jane	EIS001067	3.2 (3000)
Doe, John I.	EIS000531	12 (139)
Dolan, Michael	EIS000502	5.5 (29), 3.2 (64), 7.5.11.2 (240), 1.2 (243), 3.3 (50)
Dolan, Robert E.	EIS000816	5.3 (164), 8.10.1 (3645), 8.10.2 (203), 8.1 (170), 8.10.1 (133), 6.1 (89), 5.1 (27)
	EIS001120	5.1 (27), 8.10.1 (3645), 8.10.2 (3213), 8.10.1 (133), 6.1 (89), 5.1 (27)
Dold, Anne Idaho, State of, INEEL Oversight Program	EIS000251	4.2 (86), 6.1 (13)
Donahue, Theresa M. Denver, Colorado, City and County of, Department of Environmental Health	EIS001539	8.3 (149), 8.7 (184), 8.1 (170), 8.11.2 (6901), 8.11.6 (6903), 8.7 (6905), 8.3 (201), 8.11.7 (6908), 6.1 (18)
	EIS001875	8.3 (149), 8.7 (184), 8.1 (170), 8.11.2 (6901), 8.11.6 (6903), 8.7 (6905), 8.3 (201), 8.11.7 (6908), 6.1 (18)
Donaldson, Alice	EIS001721	8.1 (170), 1.1 (122)
	010081	8.1 (170)
Donegan, Sherry	EIS000092	5.1 (27)
Donn, Marjory M.	EIS001874	3.2 (80), 8.3 (149), 8.10.2 (114), 8.3.3 (23), 8.1 (170)
Donohue, Paul Lincoln County, Nevada, Board of County Commissioners	EIS000677	5.1 (27), 1.2 (243), 3.3 (50), 11.2 (108), 8.3.2 (136)
Dorame, Michael A. Inyo County, California, Board of Supervisors	EIS000262	8.3 (149), 8.3.1 (1006), 8.8.1 (1007), 12 (139), 8.3 (1009)
	EIS000370	8.3 (149), 8.3.1 (1006), 8.8.1 (1007), 12 (139), 8.3 (1009)
	EIS000381	4.3 (128)
	EIS001443	8.1 (170), 2 (100), 11.1 (6), 3.2 (5175), 3.2 (80), 3.2 (64), 3.2 (51), 3.2 (75), 3.2 (5185), 10 (5186), 10 (5187), 8.3 (161), 8.3 (201), 8.8.1 (187), 8.8.1 (5192), 8.3.1 (5193), 8.3.1 (5194), 8.3 (213), 8.3.2 (136), 8.3 (149), 7.5.3.2 (5199), 7.3.1 (185), 3.2 (59), 11.1 (5204), 8.4 (5205), 4.5 (5206), 7.5.3 (5207), 7.5.6 (5208), 3.9 (109)
	EIS001954	3.7 (53), 11.1 (97), 3.2 (80)
Doran, Doug	EIS001986	8.3 (149), 8.4 (25), 5.3 (164)
Dory, Pat	EIS000607	8.4 (226), 7.5.7 (93)
Doucet, Lisha M.	010474	5.1 (27)
Doyle-Grace, Pat	EIS001821	5.2 (26)
Drake, Dennis	EIS001988	7.5.7 (98), 5.1 (27)
Drey, Kay	EIS001000	5.5 (183), 7.3 (209), 13 (5), 8.4 (115), 4.5 (3318), 4.5 (12301), 7.5.7 (3319)
	EIS001736	5.5 (183), 7.3 (209), 13 (5), 8.4 (115), 4.5 (3318), 4.5 (12301), 7.5.7 (11842)
	EIS001792	5.1 (27), 8.10.2 (114)

Commenter	Comment Document	Location of Comments/Responses
Drey, Kay (continued)	010300	3.5 (204), 8.1 (170), 8.10 (12895), 8.10 (12896), 8.10.1 (133), 3.3 (50), 3.5 (12899), 7.3.2 (216), 7.0 (12902), 8.4 (25), 7.3 (12904), 7.5.7 (235), 7.5.7 (98), 7.5.7 (12907), 5.5 (183)
	010314	3.5 (204), 8.1 (170), 8.10 (12895), 8.10 (12896), 8.10.1 (133), 3.3 (50), 3.5 (12899), 7.3.2 (216), 7.0 (12902), 8.4 (25), 7.3 (12904), 7.5.7 (235), 7.5.7 (98), 7.5.7 (12907), 5.5 (183)
Drummond, Erik	EIS002047	3.2 (51), 3.2 (64)
Dufer, Dale	EIS001798	7.3 (209), 8.7 (141)
Dugan, Barbara	EIS000882	1.1 (101), 8.1 (259), 13 (2790)
Dugan, Kenneth	EIS000940	5.3 (164), 8.11.1 (134)
Duke, Bonnie Lander County, Nevada	EIS001912	7.3 (7), 7.1 (191), 3.2 (10903), 3.2 (64), 7.3.2 (7801), 10 (258), 8.3 (149), 10 (7413), 11.1 (48), 11.1 (7415), 8.11.1 (7416), 7.3.1 (185), 7.3.1 (185), 7.1.1 (7425), 3.2 (90), 3.2 (80), 3.2 (7420), 7.1.1 (7814), 3.2 (7426), 8.3 (213), 8.3.3 (7822), 8.3 (7823), 3.7 (53), 8.3 (149), 5.4 (7452), 3.2 (64), 3.2 (7456), 5.4 (7840), 8.8.1 (7459), 3.2 (7842), 1.2 (7843), 3.2 (69), 7.5.11.2 (7475), 8.3 (161), 7.5.3.2 (7854), 7.5.3.2 (9398), 7.5.3 (7859), 7.5.3.2 (2498), 7.5.6 (7875), 7.5.11 (7512), 8.11.1 (7518), 8.8.2 (7521), 7.5.2 (7894), 8.3.2 (136), 3.1 (7525), 3.1 (22), 8.11.4.2 (7532), 7.5.6 (7534), 7.5.7 (105), 8.9 (193), 7.2 (7542), 7.5.1 (106), 7.5.2 (8081), 3.2 (8084), 7.4 (7561), 7.2 (7572), 7.3.2 (216), 7.1 (7576), 7.3 (7580), 7.3 (8111), 10 (7594), 7.3 (11829), 7.3 (7603), 8.3 (201), 3.1 (7617), 8.11.7 (7620), 8.3 (7623), 8.11.1 (7625), 8.11.1 (8128), 8.8.1 (192), 8.11.6 (7633), 8.8.1 (8139), 8.11.9 (8141), 8.3 (161), 8.11.6 (8144), 8.11.1 (8145), 8.10 (145), 8.3.1 (195), 8.10 (8154), 8.6.2 (186), 8.5.3 (7653), 9.1 (7647), 8.8.1 (7643), 10 (8176), 10 (7629), 10 (3), 10 (91), 11.1 (8182), 7.3 (1153), 7.3 (7618), 3.9 (109), 8.10.2 (114), 8.7 (184), 8.7 (153), 7.3 (12071)
Dumont, Coetta L.	EIS000870	8.1 (170)
Dunham, Marshall	EIS000230	7.5.3.3 (972), 7.5.3.3 (973), 7.5.3.2 (228), 7.5.3.4 (975), 7.5.3.3 (977), 7.3 (220), 3.2 (979)
	EIS000655	7.5.3.3 (972), 7.5.3.3 (973), 7.5.3.2 (228), 7.5.3.4 (975), 7.5.3.3 (977), 7.3 (220), 3.2 (979)
Dunn, Timothy J.	EIS001026	5.1 (27)
	EIS001800	5.1 (27)
Durham, Michael Shundahai Network	EIS001696	7.5.7 (98), 5.5 (183)
Dushaw, James L. International Brotherhood of Electrical Workers	EIS000207	5.2 (26), 7.5.6 (11128), 8 (158), 5.4 (219)
	EIS000448	13 (5), 5.2 (26), 8 (158)
Dwight, Frances	EIS001426	5.1 (27)
Dyer, Genie	EIS000135	5.3 (164)
	EIS000138	3.2 (80)
Dziegiel, Henry T.	010028	3.6 (257), 3.1 (15), 3.5 (204), 13 (227), 3.9 (109), 1.1 (123), 1.1 (765), 9.1 (250), 4.1 (12232)

Commenter	Comment Document	Location of Comments/Responses
Dziegiel, Henry T. (continued)	010117	3.6 (257), 3.5 (204), 3.1 (15), 8.1 (259)
	010256	3.6 (257), 3.5 (204), 8.10.1 (133), 8.3 (161), 8.3 (60)
	010261	8.10.2 (212), 7.5.3 (9218), 7.4 (9219), 4.5 (217), 7.3 (222), 13 (5), 3.9 (109), 8.8.3 (2499), 5.3 (164), 8.10.1 (62), 4.2 (2502), 1.2 (243), 3.5 (233), 9.1 (250), 5.5 (29), 3.6 (257)
	010310	3.6 (257), 3.5 (204), 8.10.1 (133), 8.3 (161), 8.3 (60)
	010311	3.3 (50), 3.4 (13030), 3.6 (257), 3.5 (13033), 3.5 (233), 3.5 (204), 8.3 (161), 8.1 (259), 13 (227), 3.9 (109), 8.10.1 (133), 8.3 (146), 1.2 (243), 4.2 (13046), 9.1 (250), 7.4.1 (61), 4.5 (92), 5.5 (29), 5.5 (30)
Eakins, Patrick	EIS002056	1.2 (77), 7.3.1 (185)
Ealey, Harriet Esmeralda County, Nevada, Board of County Commissioners	EIS000192	8.1 (259), 11.1 (655), 8.11.8 (10), 7.5.6 (119)
	EIS002043	11.1 (102), 3.3 (10801), 11.1 (10802), 8.8.2 (135), 8.5.3 (1267), 8.5.3 (10804), 11.2 (10805), 8.10.2 (203), 7.5.6 (119), 8.11.5.1 (254), 8.5.3 (190), 3.9 (109), 8.11.8 (10)
Eastin, Elizabeth	EIS000190	5.3 (164)
Eastin, John E.	010019	5.2 (26)
Eaves, Jerry San Bernardino County, California, Board of Supervisors	EIS000757	3.3 (50)
Eckhardt, Curtiss L.	EIS000254	8.1 (259), 8.11.9 (47), 5.1 (27), 8.3.1 (1014), 8.11.1 (1015)
	EIS000264	8.1 (259), 8.11.9 (47), 5.1 (27), 8.3.1 (1014), 8.11.1 (1015)
Eddleman, Wells North Carolina Citizens Research Group Inc.	EIS002070	3.3 (50), 3.2 (9738), 7.3 (9809), 1.2 (77)
Edguer, Marji Cleveland Peace Action	EIS001558	8.1 (170), 8.4 (25), 8.10 (3926), 3.2 (64), 5.5 (183), 5.3 (164), 5.5 (29)
Egbe, Justin	010379	7.3 (222), 5.5 (29), 7.5.4 (7162), 3.1 (11736)
Ehling, Becky	EIS001062	3.9 (2495)
Eichler, Esther	EIS002025	7.5.3.2 (230), 1.1 (101)
Eide-Tollefson, Kristen	EIS001971	3.2 (9141), 13 (9145), 3.2 (64), 9.1 (138), 9.1 (9175), 9.1 (9229), 5.2 (26), 2 (169), 9.1 (162), 4.5 (9272), 4.1 (9276), 4.1 (9280), 9.1 (9284), 6.1 (46)
Eiseman, Justine	EIS000435	8.1 (170)
	010313	5.1 (27)
Eldredge, Maureen Alliance for Nuclear Accountability	EIS000443	3.2 (80), 4.2 (1872), 1.2 (77), 3.2 (64), 7.5.6 (130), 8.8.1 (196), 8.4 (115), 8.10.2 (114), 11.1 (1877), 8.1 (170), 8.3 (161), 7.3 (1880), 2 (100)
	EIS001922	5.1 (27), 3.2 (80), 3.2 (64), 7.5.3.2 (8927), 4.2 (8931), 7.3 (71), 7.1 (8935), 4.3 (129), 7.5.2 (8940), 8.8.1 (8946), 8.10.2 (114), 3.9 (109), 8.3 (161), 7.5.11.2 (181), 3.2 (90), 7.3 (256), 3.3 (8990)
Eldridge, Brent White Pine County, Nevada, Board of County Commissioners	EIS001160	3.2 (80), 3.3 (88), 3.2 (84), 11.1 (97), 8.3 (201), 8.3.1 (195), 8.3 (149), 8.3.1 (4191), 8.4 (640), 8.3.1 (641), 3.9 (109), 8.11.3 (4197), 8.3.1 (4200),

Commenter	Comment Document	Location of Comments/Responses
Eldridge, Brent (continued) White Pine County, Nevada, Board of County Commissioners	EIS001160	8.8.3 (171), 3.2 (64), 3.2 (51), 10 (4206), 7.1.3 (4209), 4.5 (4210), 8.3.1 (4211), 8.8.1 (4212), 8.8.1 (4205), 8.8.1 (4207), 8.8.1 (4208), 8.10.2 (200), 8.8.2 (179), 8.8.1 (4215), 8.11.6 (4216), 8.3.1 (4219), 11.1 (102), 3.2 (4224), 7.5.5 (4227), 8.8.2 (7043), 7.5.5.1 (4229), 8.7 (4231), 8.3.1 (4232), 8.3 (4233), 7.3 (4234), 8.4 (226), 8.3 (161), 3.2 (4238), 8.11.6 (4239), 8.3.1 (4240), 10 (258), 8.10.2 (4242), 8.7 (4244), 6.1 (4249), 7.1.5 (1547), 13 (1548), 6.1 (1549), 6.1 (4253), 8.7 (6631), 1.1 (40), 6.1 (1551), 7.5.1 (106), 8.11.1 (1553), 6.1 (46), 3.7 (57), 9.1 (4260), 3.2 (4271), 9.1 (4272), 1.2 (81), 8.3.3 (178), 5.4 (4278), 9.1 (4279), 8.8.1 (6638), 8.8.1 (4282), 8.10 (54), 7.5.5.1 (1557), 8.7 (143), 8.7 (153), 8.8.2 (4286), 7.5.5.1 (4287), 7.5.7 (4288), 7.4 (4289), 8.11.6 (4290), 4.5 (217), 7.4 (4292), 7.3 (8320), 7.3 (256), 8.11.5.1 (4294), 8.8.3 (173), 8.10 (4296), 8.10 (156), 8.3.1 (4298), 8.8.1 (4299), 8.8.2 (4300), 7.5.5 (1560), 8.10 (4302), 8.8.1 (192), 8.1 (170), 8.11.1 (4306), 7.5.5.2 (237), 3.1 (4308), 8.11.4 (42), 8.7 (4310), 7.5.5.1 (12385), 7.4 (3733), 8.8.2 (9771), 8.7 (3427), 8.8.3 (3428), 8.7 (3430), 11.1 (2410), 6.1 (1550), 6.1 (18), 6.1 (1552)
Elegado, Kim M.	EIS000184	7.5.7 (98), 7.5.3.2 (230), 1.2 (243), 5.1 (27), 7.5.7 (93)
Elkins, Bryan	EIS000669	8.10.2 (200), 8.10.2 (2273)
Eller, Frank	010079	8.1 (170)
Ellington, Richard G.	EIS002003	1.2 (79)
Elliot, Harold S.	EIS000001	7.5.7 (93), 3.2 (75)
Ellison, David H.	EIS001295	3.3 (50), 3.1 (10003), 3.2 (64), 9.1 (10124)
	EIS001566	3.3 (50), 3.1 (10003), 3.2 (64)
	EIS001577	8.10 (68), 7.5.11 (7980), 9.1 (7981), 7.5.6 (7984), 9.3 (7985), 9.1 (138)
Elquist, Bill Lander County, Nevada, Board of County Commissioners	EIS000406	8.3 (2304), 3.7 (53), 8.3 (149), 8.3 (8073), 8.1 (259), 7.5.6 (231), 3.2 (8083), 10 (258), 3.9 (109), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (134), 8.7 (28), 8.10.2 (203), 8.11.1 (8100), 3.7 (8102), 8.8.2 (135)
	EIS000612	8.3 (2304), 3.7 (53), 8.3 (149), 8.3 (8073), 8.1 (259), 7.5.6 (231), 3.2 (8083), 10 (258), 3.9 (109), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (134), 8.7 (28), 8.10.2 (203), 8.11.1 (8100), 3.7 (8102), 8.8.2 (135)
Enz, Catherine S. Missouri, State of, Missouri House of Representatives	EIS001170	8.3 (60)
	EIS001225	8.3 (60)
Epstein, Hedy Women's International League for Peace and Freedom, St. Louis Branch	EIS001005	7.3.2 (216), 8.10.3 (182), 4.5 (92), 8.3 (60), 3.1 (2716)
	EIS001744	7.3.2 (216), 8.10.3 (182), 4.5 (92), 8.3 (60), 3.1 (2716)
Epsten, Dagmar	EIS000857	3.3 (50)
Erickson, Steve Downwinders	EIS001464	13 (211), 5.1 (27), 8.1 (170), 1.1 (4492)

Commenter	Comment Document	Location of Comments/Responses
Erler, Bryan Sargent & Lundy Engineers	EIS001581	13 (5), 5.2 (26)
Errett, Janet	EIS000120	12 (139), 3.2 (51), 8.3 (149), 3.2 (90), 7.3 (491), 3.3 (50), 4.1 (490)
	EIS000128	5.3 (164)
	EIS000133	5.3 (164)
Escamilla, Natalie M.	EIS000965	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (259)
Esparza, Mary Alice	EIS002161	
Essington, Mel U.S. Department of the Interior, National Park Service	EIS002258	3.2 (80), 7.5.3.2 (2), 4.3 (129), 7.3 (11560), 7.3 (11561)
Estella, Lucille	EIS001071	8.1 (259), 5.1 (27), 13 (5)
Estes, Cyndi Stearns	EIS000946	1.2 (77), 7.3.1 (185)
Esteves, Pauline Timbisha Shoshone Tribe	EIS000263	5.1 (27), 3.2 (80), 7.5.11.2 (240), 3.2 (64), 8.8.1 (196), 3.7 (57), 7.5.11.2 (152), 1.1 (101)
	EIS000376	5.1 (27), 3.2 (80), 7.5.11.2 (240), 3.2 (64), 8.8.1 (196), 3.7 (57), 7.5.11.2 (152), 1.1 (101)
	EIS001863	3.3 (50), 3.7 (57)
	EIS001906	3.3 (50), 3.7 (57), 5.1 (27), 3.2 (80), 3.2 (51), 3.2 (64), 3.1 (10627), 7.5.11.2 (181), 7.5.11.2 (240), 4.3 (129), 8.3 (149), 8.11.11 (10635), 7.3.1 (185)
	EIS002077	3.7 (58), 3.7 (57), 7.5.11.2 (181)
	010146	3.6 (257), 7.5.11.2 (181), 7.5.5.2 (150), 3.7 (57), 7.5.11.2 (240)
Estreito, Anthony John	EIS000774	5.1 (27), 5.3 (164)
	EIS001132	3.2 (51), 3.2 (64), 13 (5)
Etling, Mark	EIS001526	8.1 (170)
Evans, Jennifer	EIS000782	5.1 (27)
Evans, Maraya T.	010456	5.2 (26)
Evans, Phyllis L.	EIS000984	8.1 (170)
Ewald, Linda	EIS002305	5.1 (27), 7.5.11.2 (181), 8.1 (170), 7.3 (220), 10 (258), 5.4 (219)
Ewing, Charles F.	EIS001977	7.5.11.2 (240), 5.3 (164), 8.1 (170)
Faehl, James D.	EIS000186	5.2 (26)
Falk, Gary	EIS002184	2 (100), 5.1 (27)
Falk, Vera T.	EIS001010	7.5.11.2 (181), 8.1 (170), 8.10.2 (114), 5.1 (27), 5.5 (183)
	EIS001753	7.5.11.2 (181), 8.1 (170), 8.10 (68), 7.5.3.2 (228), 13 (5)
Farmer, Guy W.	EIS000256	5.1 (27), 1.2 (243), 5.3 (164), 3.2 (75)
	EIS000403	5.1 (27), 1.2 (243), 5.3 (164), 3.2 (75)
	010205	5.1 (27)
Farris, Mark	EIS001378	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
Fay, C. W.	EIS001387	4.5 (3385)
	010037	4.5 (217)
Feible, Ann Kalitta Saint Peter Catholic Church	EIS001849	8.1 (170), 7.5.3.2 (228), 8.10.2 (212)
Feinhandler, F. H.	EIS000402	1.2 (79), 7.5.3.3 (7003), 7.5.11.2 (240), 10 (258), 8.8.1 (7009), 5.4 (7012)
	EIS000597	1.2 (79), 7.5.3.3 (7003), 7.5.11.2 (240), 10 (258), 8.8.1 (7009), 5.4 (7012)

Commenter	Comment Document	Location of Comments/Responses
Feldman, Jane Sierra Club, Southern Nevada Group	EIS002127	5.1 (2953), 1.2 (77), 4.5 (8942), 3.2 (64), 7.5.3.2 (228), 3.2 (51), 3.2 (2959), 8.7 (28), 8.8.3 (171), 8.8.1 (189), 3.9 (109), 8.7 (8970), 8.8.3 (8972), 8.10.3 (182), 8.10.2 (212), 3.3 (1), 3.3 (50), 3.2 (80), 3.7 (57)
Feldman, Jane	EIS000726	3.2 (80), 12 (139), 3.2 (64), 3.2 (51), 5.5 (29), 7.5.3.2 (228), 8.7 (28), 8.8.1 (3114), 3.9 (109), 8.8.1 (189), 8.8.1 (196), 7.5.6 (130), 8.9 (3121), 8.5.3 (190), 11.2 (3123), 8.4 (25), 11.2 (3125), 8.10.2 (212), 7.5.11.2 (181), 8.8.3 (171), 3.3 (1), 7.5.7 (3130)
Felkner, Larry	EIS000979	13 (5), 8.3 (60), 5.3 (164)
Ferguson, Mary M.	010441	5.1 (27)
Ferreira, Mateo	EIS002101	5.1 (27), 12 (139), 7.3 (10742), 6.1 (6614), 7.4 (41), 7.4 (10744), 8.4 (115), 8.10 (10746), 8.10.2 (10747), 4.5 (92), 7.3 (206), 7.5.10 (1030), 8.4 (11980)
Ferreira, Matteo	EIS000089 EIS000093	5.3 (164), 3.2 (64), 7.5.3.2 (914), 10 (91), 7.5.7 (916)
Fessenden, Alice Mesquite, Nevada, City of	EIS002110	8.1 (259)
Fields, Carrie E.	010476	5.1 (27)
Fifield, Virginia L.	EIS001856	5.1 (27), 8.1 (259)
Filippini, Billie	EIS000480	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.3.3 (23), 1.2 (79), 3.9 (11179)
Filippini, John	EIS000482	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 1.1 (101)
Fine, Jeff	EIS000890	8.3 (149), 8.4 (25)
Fiorenzi, Leonard J. Eureka County Yucca Mountain Information Office	010392	3.6 (257), 3.5 (233), 3.5 (204), 8.3 (161), 3.5 (13523), 3.5 (13524), 4.5 (92), 8.12 (224), 10 (13527), 8.3 (149), 3.2 (64), 3.8 (13530)
Fischer, Fred	EIS001917	5.1 (27)
Fish, Faith	EIS000020	13 (5), 1.2 (243), 8.3.1 (20), 1.2 (77)
Fisher, Frederic A.	EIS000412	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (170)
Fitzgerald, Brenna	EIS001146	8.3 (149), 8.4 (25)
	EIS001693	7.5.7 (98), 5.3 (164)
Fitzgerald, Keba	EIS001372	5.1 (27), 7.5.3.2 (228), 1.2 (77), 4.5 (217), 7.5.3.2 (111), 8.1 (4663), 8.10.2 (114), 8.10 (168), 3.2 (80), 1.1 (4667), 5.3 (164)
Fitzgibbon, Jewel	EIS001228	8.1 (170)
Fitzpatrick, Conor	EIS000743	5.1 (27)
Foley, Barbara	010193	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Folsom, Therese	EIS001647	5.1 (27), 8.1 (170), 5.3 (164), 13 (5)
Ford, Peter B.	EIS001252	5.3 (164)
Foreman, Lindsay	EIS001613	5.1 (27), 8.10 (6332), 3.2 (6333)
Forkos, Marcia Sierra Club, Southern Nevada Group	EIS000727	5.1 (2953), 1.2 (77), 4.5 (8942), 3.2 (64), 7.5.3.2 (228), 3.2 (51), 3.2 (2959), 8.7 (28), 8.8.3 (171), 8.8.1 (189), 3.9 (109), 8.4 (25), 11.2 (2968), 8.8.3 (8972), 8.10.3 (182), 3.3 (50), 3.3 (1), 3.7 (57), 3.2 (80), 8.10.2 (212), 8.7 (8970)

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Forkos, Marcia (continued) Sierra Club, Southern Nevada Group	EIS001256	5.1 (27), 7.5.3.2 (8), 7.5.3.2 (8678), 1.2 (77), 7.5.3.3 (8586), 7.5.3.2 (8606), 9.1 (8608), 4.2 (8611), 7.5.7 (8613), 5.4 (2257), 3.2 (69), 8.3 (149), 10 (3), 7.5.6 (8621), 7.5.7 (98), 3.2 (8625), 3.2 (84), 7.5.7 (8637)
Forsberg, Charles	EIS000483	6.1 (1955), 6.1 (10874)
	010169	7.0 (6780)
Fortner, Angela	EIS001298	8.1 (170)
Fowler, Deb	EIS001090	8.3 (60)
Fox, Harold L. Trenergy, Inc.	EIS001953	5.5 (29)
Foxworth, Margaret	EIS000321	8.1 (170), 13 (5)
Fragosa, William	EIS001147	8.3 (149), 8.4 (25), 5.3 (164)
	EIS002255	7.5.11.2 (9961), 7.5.11.2 (11462)
	010125	1.1 (124), 3.6 (257)
	010136	5.4 (219), 3.6 (257)
	010153	5.4 (219), 3.6 (257), 5.5 (183), 5.3 (164)
	010163	3.6 (257), 5.5 (29), 5.5 (183), 5.3 (164)
Frame, David	EIS002207	5.2 (26)
Franco, Paige	010431	5.1 (27)
Frank, Erica	EIS000164	8.1 (170), 8.10.1 (133), 3.9 (109), 8.11.7 (801)
	EIS000285	8.1 (170), 8.10.1 (133), 3.9 (109), 8.11.7 (801)
Frank, Franklin F. SLO CO Nuclear Waste Management Committee	010009	7.3 (210), 7.5.3.2 (229), 5.3 (164)
Frankel, Helene	EIS001002	8.1 (170), 8.4 (115), 8.7 (3323), 7.3 (208), 7.5.3.2 (228), 7.5.3.2 (111), 4.5 (3327), 4.5 (3328), 7.3.2 (216)
	EIS001741	8.1 (170), 8.4 (115), 8.7 (3323), 7.3 (208), 7.5.3.2 (228), 7.5.3.2 (111), 4.5 (3327), 4.5 (3328), 7.3.2 (216)
Franklin, Joseph P.	EIS001135	3.1 (16), 7.3.2 (216), 7.3 (110)
Franks, Michael	EIS000894	1.2 (77), 7.3.1 (185)
Frederberg, Brian	EIS000833	5.1 (27)
Frehner, Dan Lincoln County, Nevada, Board of County Commissioners	EIS000236	3.2 (84), 3.2 (84), 8.3.2 (136), 3.2 (80), 3.2 (1299), 11.2 (108), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.1 (170), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069), 3.2 (1242), 8.3.2 (136)
	EIS000676	3.2 (84), 3.2 (84), 8.3.2 (136), 3.2 (80), 3.2 (1299), 11.2 (108), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.1 (170), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069), 3.2 (1242), 8.3.2 (136)
	EIS001337	3.2 (7030), 3.2 (84), 5.4 (248), 3.2 (51), 8.3.3 (178), 7.1.1 (7045), 3.2 (7046), 7.1 (7049), 4.5 (217), 7.1.1 (10453), 2 (132), 8.8.2 (135), 8.6.2 (186), 8.7 (7061), 8.10.2 (212), 8.3.1 (7063), 8.8.1 (7066), 8.5.2 (7069), 8.5.1 (7073), 8.5.1 (7076), 3.2 (59), 8.11.2 (7082), 8.11.3 (12453), 8.11.4.3 (7089),
	EIS001337	8.11.4 (42), 8.11.8 (10), 8.11.9 (7139), 8.8.2 (179), 8.8.2 (7141), 8.11.5.1 (7142), 7.5.6 (7143), 3.9 (109), 7.5.6 (7145), 3.2 (7146), 8.10.2 (200), 8.1 (7148), 7.5.7 (105), 8.11.1 (7150), 7.5.6 (7151), 10 (7152), 7.5.6 (7154), 7.5.6 (7155), 8.8.1 (7157), 3.2 (7163), 11.1 (102), 3.7 (7165), 11.1 (97), 1.1 (7168), 1.2 (81),

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Frehner, Dan (continued) Lincoln County, Nevada, Board of County Commissioners	EIS001337	8.10.1 (62), 1.1 (40), 6.1 (13), 7.1.1 (7173), 3.2 (7174), 8.3 (201), 3.1 (7179), 4.5 (7181), 8.7 (7176), 8.6.1 (223), 8.1 (259), 11.1 (7182), 8.7 (142), 8.5.1 (7184), 8.5.3 (7187), 8.3 (7185), 5.4 (7188), 3.1 (7189), 5.4 (7190), 7.1.1 (754), 11.2 (7191), 9.1 (7192), 9.1 (12711), 8.8.1 (7209), 7.5.2 (7210), 8.11.6 (7205), 8.3 (7208), 8.11.1 (7212), 8.11.4.2 (7213), 8.11.5 (7216), 3.1 (7218), 8.11.9 (7221), 8.11.4 (7223), 8.11.3 (7225), 8.11.5.1 (7214), 8.11.8 (7217), 8.10 (145), 3.2 (7222), 7.2 (7224), 3.1 (7226), 7.5.2 (7227), 7.5.11 (7228), 8.8.3 (7230), 7.3 (7232), 7.5.6 (7240), 7.4.2 (7241), 8.5.3 (190), 8.11.5.1 (254), 8.8.1 (189), 8.11.6 (7242), 3.2 (64), 8.11.1 (7237), 11.2 (7233), 8.11.4.2 (7231), 11.1 (7229), 7.4 (11261), 6.0 (11499), 8.5.2 (7186)
Friedman, Judi People's Action for Clean Energy, Inc.	EIS000969	5.1 (27)
Friedman, Maurice B.	EIS002179	13 (131), 13 (5)
Frishman, Steve Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000077	3.1 (440)
	EIS000240	4.1 (83)
	010324	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
Frith, Kristin	EIS001525	5.1 (27), 5.3 (164)
Fritz, Edward J.	EIS001293	7.2 (10913), 13 (5)
	EIS001562	7.3.1 (185), 13 (5)
	010257	7.1.2.2 (12935), 5.5 (183)
Fronczak, Robert E. Association of American Railroads	EIS001201	8.6.1 (223)
Frost	EIS001811	3.1 (15), 8.3 (149), 8.3 (161), 8.10.2 (114), 7.5.11 (52)
Fuhr, Gertrude	EIS000014	5.1 (27)
Fulkerson, Bob Progressive Leadership Alliance of Nevada	EIS000284	1.1 (101), 7.3 (222), 12 (139), 7.5.11.2 (181), 7.5.3.2 (230)
	EIS000315	7.4 (103), 7.5.3.3 (1045), 8.1 (259), 3.9 (109), 7.3 (222), 5.5 (29), 3.3 (50)
	EIS000564	3.3 (50), 12 (139), 10 (242), 7.5.3.3 (2031), 1.2 (77), 4.3 (70), 8.1 (170), 7.3 (222), 5.1 (27)
Fulton, Kathryn	010035	5.1 (27)
Funk, Arlo Mineral County, Nevada, Board of Commissioners	010182	3.5 (36), 3.5 (13353), 4.5 (13354), 3.1 (15), 7.4 (241), 7.4 (125), 9.1 (250), 7.5.11.2 (181), 7.5.1 (13361), 7.3 (13362), 7.3 (13363), 7.3 (13364), 7.3 (13365), 8.4 (199), 7.4 (13369), 7.1.1 (13373), 11.1 (13375),
	010182	3.5 (204), 2 (100), 7.5.7 (13379), 11.1 (45), 13 (37), 3.2 (64), 7.5.7 (105), 5.3 (164), 3.5 (13386), 4.5 (63), 7.4 (13390), 8.3 (149), 5.2 (26)
Furman, Savannah	010063	8.1 (170)
Fye, Susan A.	EIS001156	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 3.2 (80), 3.2 (64)

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Fye, Susan A. (continued)	EIS002073	1.2 (77)
Gable, Gregor Shundahai Network	EIS002098	7.5.3.2 (229), 7.3 (252)
Gagnon, Rose	EIS000746	5.5 (29), 5.1 (27)
Gale, Sean	EIS000509	5.5 (183)
Galen, Richard E. Rouse Company, The	EIS001861	8.1 (259), 8.3 (201)
Gallagher, Patrick	EIS001615	7.1 (8283)
Gallegos, Oscar	EIS000561	8.1 (170)
Gann, Dawn	EIS001348	5.1 (27), 13 (5)
Gannis, Steve	EIS001555	1.1 (34), 5.5 (183), 13 (5), 9.1 (4407)
Garasky, Maybeth Aon Consulting	010233	8.1 (170)
Gardner, Joan Baker	EIS002181	3.2 (64), 3.2 (59), 3.9 (109), 1.2 (77), 7.5.7 (98), 1.2 (79)
Garfield, Melodie	EIS000811	3.3 (50), 3.2 (51), 1.1 (101), 7.5.3.2 (2), 8.8.3 (174), 8.4 (115), 5.1 (27)
Garner, Louis H.	010403	
Gascon, Angela D.	EIS000835	5.1 (27)
Gaskill, Margaret	EIS001645	8.1 (170)
Gateley, Jenifer	EIS000415	5.1 (27), 7.3 (220), 1.1 (101), 8.1 (170), 4.5 (1525)
Gates, John H.	EIS000852	5.1 (27)
Geary, Alice	EIS001657	8.1 (170), 5.1 (27)
	EIS001759	5.5 (183), 8.1 (170), 5.3 (164), 5.1 (27)
Geary, Barbara	EIS000099	3.3 (50)
	010292	7.5.3.2 (228), 7.3 (209), 8.10.2 (203), 8.10 (148), 8.10.2 (114), 8.4 (25), 8.3 (161), 8.1 (170), 7.5.9 (13002), 7.3 (210)
Geary, C.	EIS000826	5.1 (27)
Gehr, Patricia	EIS001101	3.2 (51), 8.8.1 (3621), 7.5.11 (3622), 3.9 (109), 7.5.1 (106), 13 (5)
Genge, Michael F.	EIS001373	3.2 (9325), 3.2 (9351), 7.5.6 (130), 7.5.6 (9364), 4.5 (9365), 1.2 (243), 4.5 (9367)
	EIS001541	7.5.3 (3971)
George, Russ	EIS001970	8.1 (170)
Gerrard, Ron	EIS001129	4.3 (70)
Gerth, Amy	EIS001498	8.1 (170)
Gerth, Jacqueline	EIS001419	8.1 (170)
Gerth, John R.	EIS001414	8.1 (170), 5.3 (164)
Gestrich, John M.	EIS001015	5.3 (164)
Getty, Greg	010142	7.5.3.2 (228), 7.5.7 (93)
	010161	7.3 (94), 13 (13340)
Giamanco, Patricia L.	EIS000530	1.1 (11773), 5.1 (27)
Giampaoli, Mary Ellen Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000071	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.7 (53), 3.2 (84), 5.5 (30), 3.2 (51), 8.7 (153), 8.3 (149), 8.1 (259), 8.3.2 (136), 8.8.2 (419), 7.5.6 (420), 10 (421)
	EIS000081	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.7 (53), 3.2 (84), 11.1 (76), 8.7 (153), 8.3 (149), 8.1 (259), 8.3.2 (136), 8.8.2 (419), 7.5.6 (420), 10 (421), 3.7 (53)

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Giampaoli, Mary Ellen (continued) Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000107	3.8 (65), 10 (104), 7.5.7 (93), 3.2 (80), 3.8 (65), 3.2 (84), 10 (104), 7.5.6 (420), 10 (421)
	EIS000119	3.8 (65), 7.5.7 (93), 3.2 (80), 3.7 (53), 10 (104), 10 (1168)
	EIS000349	3.3 (50), 8.3 (149)
	EIS002120	1.2 (8641), 8.3.2 (136)
	EIS002134	1.2 (8641), 8.3.2 (136)
	010108	3.6 (257), 7.4 (13278), 7.4 (125), 7.5.6 (130), 7.5.9 (175)
Giampaoli, Mary Ellen Nye County, Nevada, Board of County Commissioners	EIS000242	3.2 (80), 10 (981), 11.2 (982), 3.2 (983)
	EIS000245	3.2 (983), 3.2 (80), 8.1 (259), 10 (981), 11.2 (982)
Gibbons, Marie	EIS001500	5.1 (27)
Gielow, Joyce	EIS000188	5.3 (164)
Giese, Mark M.	EIS000336	8.1 (170)
Gilbert, Jan	EIS000553	3.3 (50), 8.3 (161), 7.5.10 (3134)
	EIS001061	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.3 (146), 1.2 (77), 3.9 (109)
Gilleo, Margaret P.	EIS001393	8.1 (170), 13 (5), 8.3 (3402), 8.10 (157), 1.1 (3405)
	010185	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Gillium, Rita	EIS000201	5.1 (27), 8.6.2 (804), 8.7 (247)
Gilmore, Margery	EIS000829	5.1 (27)
Gilpatrick, Victoria Lincoln County, Nevada, Regional Development Authority	EIS000684	8.11.6 (44)
Gilson, Doug	EIS002039	7.5.7 (93), 5.5 (29), 8.1 (170)
Gimsky, Ken	EIS001357	5.1 (27), 13 (5)
Girard, Ryan	010218	5.1 (27)
Gladson, Linda	EIS001802	5.3 (164), 8.7 (5817), 8.7 (28)
Gleason, Mary H.	EIS002307	3.2 (9), 7.5.4.1 (12085), 8.10.1 (133), 8 (12090), 8.8 (12091), 10 (12092), 8.10 (12093), 8.10 (156)
Gleason, Patricia	EIS001264	3.2 (51), 3.2 (64), 7.5.11.2 (3785)
Gledhill, Elizabeth	EIS000419	1.1 (1314), 13 (5)
Gloeckner, Kena L.	EIS001331	5.1 (27), 8.1 (170)
Gloeckner, Patrick J.	EIS001333	5.1 (27), 8.1 (170)
Gnaedinger, John P. John P. Gnaedinger Research Corp.	EIS001315	5.4 (219)
	EIS001594	5.3 (164), 13 (5)
	EIS001820	3.3 (50), 5.5 (29), 5.1 (27), 5.4 (219)
Gneia, Kristie D.	EIS000799	5.1 (27)
Gneia, Tom J.	EIS000800	5.1 (27)
Goad, Grace Timbisha Shoshone Tribe	EIS002078	8.3 (213)
Goad, Ken Savannah River Site Citizens Advisory Board	EIS000169	1.2 (78)
	EIS000301	1.2 (78)
Goad, Ken	EIS000320	13 (11149)

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Goans, Brad	EIS000127	3.1 (584), 1.2 (243), 3.2 (69), 3.2 (64), 1.2 (588), 7.5.3.2 (589), 7.3.1 (185), 10 (91), 3.2 (592), 4.1 (83), 7.3.2 (216), 7.5.3.3 (596), 3.1 (15), 7.3 (209), 7.3 (600), 7.5.2 (601), 3.2 (80), 7.5.6 (603), 7.5.7 (604), 4.3 (129), 7.5.6 (606)
Godet-Calogeras, J. F.	EIS001057	5.5 (183), 5.1 (27), 8.1 (170)
Godwin, Aubrey V. Arizona, State of, Radiation Regulatory Agency	EIS001975	1.2 (81), 8.3.1 (20)
Goeden, Verla	010425	5.1 (27)
Goedhart, Ed	EIS000084	7.5.6 (479), 7.5.6 (480), 7.5.3.2 (2), 5.1 (27), 5.3 (164), 7.5.3 (2625)
Goicoechea, Pete Eureka County, Nevada, Board of County Commissioners	EIS000630	3.3 (50), 8.3 (149), 8.8.3 (176), 8.11.1 (12530), 8.10.2 (212), 8.3.1 (195), 7.5.7 (105), 8.10 (145), 10 (1792), 3.2 (80), 8.9 (193)
	EIS001878	3.3 (6595), 1.2 (81), 3.2 (84), 8.3 (149), 8.3 (161), 8.10.2 (200), 8.10.2 (194), 7.5.11 (6603), 9.1 (2043), 9.1 (5445), 3.8 (65), 11.2 (56), 3.7 (53), 1.2 (243), 4.3 (5454), 3.1 (5455), 5.5 (29), 3.9 (109), 3.2 (6617), 3.2 (90), 3.1 (6620), 8.8.2 (135), 8.7 (142), 3.1 (21), 8.8.1 (6634), 7.3.2 (216), 3.3 (6640), 4.5 (6643), 8.1 (170), 8.11.1 (6645), 7.5.6 (6646), 8.10.2 (200), 1.2 (77), 8.7 (141), 7.5.4.1 (118), 7.5.6 (6662), 7.5.2 (6663), 7.5.6 (6664), 7.5.4.1 (6665), 7.5.4.3 (6667), 7.5.6 (6670), 7.5.9 (95), 7.5.6 (130), 8.11.1 (6679), 8.11.2 (6669), 8.11.5.1 (6671), 8.11.6 (6675), 8.11.11.1 (6677), 8.7 (28), 8.11.4 (42), 8.11.6 (6687), 8.11.6 (6689), 8.11.1 (6691), 8.11.6 (6692), 8.11.6 (6694), 8.10.2 (6697), 8.10 (6700), 8.11.6 (6701), 8.10.2 (212), 8.11.6 (6705), 8.11.1 (6702), 8.11.9 (11937), 8.11.4.3 (6706), 8.11.10 (112), 8.8.2 (6708), 8.11.3 (5539), 8.11.4.2 (6717), 9.1 (6724), 9.1 (5546), 10 (6727), 3.2 (80), 11.1 (6744), 11.1 (6771), 7.5.7 (105), 4.2 (6777), 8.6.2 (11896), 11.2 (12501)
Goitein, Ernest	EIS001845	8.10.2 (200), 8.10.2 (218), 8.5.3 (190), 8.7 (142), 3.1 (15), 11.2 (5844)
Goldberg, Leah	EIS000396	13 (5), 8.1 (170)
Goldberg, Steve	EIS000170	8.1 (170), 5.4 (219)
	EIS000316	8.1 (170), 5.4 (219)
Goldsley, Jeffrey	EIS002057	1.2 (77), 7.3.1 (185)
Goldstein, Gay	EIS000002	1.1 (101), 7.5.3.2 (315), 8.1 (170), 8.3 (161), 5.5 (29), 12 (139), 7.5.7 (93), 3.2 (51)
Gomez, Jorge	EIS001384	5.1 (27), 8.1 (170), 4.3 (70)
	EIS001636	5.1 (27), 8.1 (170), 4.3 (70)
Gondzur, Andrew	EIS001080	3.3 (50), 13 (5), 8.1 (170), 5.3 (164)
Gonzales, Delia	EIS000820	5.1 (27)
Gonzalez, Chalio	EIS002036	8.1 (259), 8.3.3 (23)
Good, David	EIS000742	7.3 (2242)
Goodman, Kelly	EIS000602	8.1 (170), 3.2 (3270), 3.9 (109), 8.7 (247), 7.5.3 (3265), 7.5.3.2 (228), 7.3.2 (216), 7.5.11.2 (240), 5.5 (29)

Commenter	Comment Document	Location of Comments/Responses
Goodman, Oscar B. Las Vegas, Nevada, City of	010244	3.6 (257), 3.2 (55), 3.5 (113), 7.4 (241), 7.4 (125), 5.3 (164), 3.5 (204), 7.5.9 (13209), 7.5.10 (13210), 11.1 (13211), 8.12 (251), 8.12 (224), 7.1.2 (13218), 7.1.2.2 (13219), 7.5.3.4 (13220), 7.5.6 (255), 11.1 (13222), 7.1.2 (13224), 8.12 (13225), 5.4 (219), 3.5 (36), 7.3 (13229), 7.3 (13230), 7.5.1 (106), 7.3 (256), 4.5 (92), 7.1.2.2 (13234), 7.5.7 (13235), 7.1.2 (13236), 2 (13237), 7.5.4 (12015), 3.5 (13238)
Goodwin, Shirley	EIS002264	
Goodyear, Betty	EIS000875	8.1 (170), 5.5 (29)
Gordon, Lenore	EIS001496	5.1 (27), 13 (5)
Gordon, Susan Alliance for Nuclear Accountability	010316	3.6 (257), 3.5 (204), 3.2 (55), 4.2 (11453), 7.4 (125), 9.1 (250), 7.5.11.2 (181)
Gordon, William D.	EIS001345	5.1 (27), 13 (5)
Goss, John San Bernardino County, California	EIS002233	3.3 (50), 8.8.1 (12361)
	EIS002300	3.3 (50), 8.8.1 (12361)
Goude, Learner Green Party of San Bernardino County	EIS002263	7.4 (12203)
Grace, Ana	EIS001791	13 (5), 8.10 (7966), 3.3 (50), 5.5 (29)
Grago, Thomas D.	EIS000203	7.5.3.2 (228), 7.5.3.2 (230), 5.3 (164)
	010206	5.1 (27), 5.3 (164)
Graham, Lois C.	EIS000041	5.2 (26), 5.5 (30)
Gratrix, Bob	EIS002159	12 (139), 1.1 (10528), 13 (5)
Gray, Charles D. National Association of Regulatory Utility Commissioners	EIS001654	3.3 (50), 3.1 (15), 3.1 (12), 8.8.1 (172), 8.3 (149), 1.2 (78), 3.2 (64), 5.2 (26), 3.2 (6119), 7.3.1 (185), 8.3 (201), 8.10.1 (6127), 3.1 (21), 7.5.1 (106), 7.5.3.2 (6135), 7.5.6 (12588), 7.5.7 (6145), 7.4.2 (6149), 8.7 (153), 8.3.2 (136), 9.1 (138), 10 (6159), 11.2 (6143), 7.5.1 (6153), 8.8.1 (6152), 7.5.11.2 (6150), 9.1 (6146), 9.1 (11607), 9.4 (6136), 5.4 (6134), 5.5 (29), 4.5 (6128), 1.2 (6124), 8.5.3 (190), 7.5.6 (6120), 3.1 (16), 4.5 (92), 7.3.2 (216), 4.3 (6108), 7.3 (6106), 4.5 (99)
	010212	5.2 (26), 3.5 (36), 4.4 (244), 7.2 (12780), 7.1.2 (2249), 7.5.9 (5039), 3.5 (6990), 5.4 (248)
Gray, Peter L.	EIS000331	4.5 (99), 4.5 (1839), 4.5 (12002)
	EIS000334	4.5 (99), 4.5 (1839), 4.5 (12002)
Grazier, Bill D.	010032	13 (11735)
	010086	13 (5)
Green, Francis	EIS001643	8.1 (170), 5.5 (29)
	010045	8.1 (170)
Green, Jeffery S.	EIS001976	5.3 (164), 5.5 (183), 5.1 (27)
Green, Lewis C.	EIS000998	5.1 (27), 7.3 (3234), 1.1 (122), 5.3 (164), 5.5 (30)
	EIS001735	5.1 (27), 7.3 (3234), 1.1 (122), 5.3 (164), 5.5 (30)
Green, Louise	EIS001028	8.1 (8925), 8.4 (159), 8.10.2 (212), 5.4 (219), 5.3 (164)
	EIS001797	8.1 (8925), 8.4 (159), 8.10.2 (212), 5.4 (219), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Green, Sandy Eureka County, Nevada, Board of County Commissioners	EIS000619	3.3 (50), 3.9 (109), 8.8.3 (176), 3.1 (3064), 7.5.6 (130), 8.11.1 (3066), 3.2 (59), 8.8.2 (3067)
Greene, Andrea D.	010319	5.5 (183), 5.3 (164), 7.5.1 (106), 3.5 (204), 7.5.3.2 (230), 7.5.3.1 (234), 7.5.3.2 (228), 7.3 (210), 4.4 (244), 7.3 (239), 7.0 (12164), 7.4 (241), 7.5.9 (12167), 3.2 (51), 3.6 (257), 1.2 (78)
	010384	3.6 (257)
Greene, C. Eric	EIS001533	5.1 (27)
Greene, Eileen	EIS001479	3.3 (50), 7.5.11.2 (181), 8.1 (170), 8.3 (161), 7.5.7 (98), 4.3 (128), 7.5.3.2 (228), 7.5.11.2 (240), 3.2 (10208)
	EIS001531	7.5.3.2 (228), 5.5 (30)
Greene, Michael F.	010362	5.1 (27), 3.2 (80), 5.5 (29)
	010383	3.6 (257)
Greene, Nancy	EIS000751	8.1 (170), 1.1 (122)
Greenwald, Janet Citizens for Alternatives to Radioactive Dumping	EIS000507	12 (139)
	EIS000512	7.3 (110), 8.4 (25), 8.3 (11765)
Grey, Marty	EIS001202	8.3.3 (23), 7.3.2 (216), 7.5.7 (4603), 5.1 (4335), 13 (211), 8.1 (170), 13 (4337)
Grieshaber, Larry D.	EIS001651	8.1 (170)
Griffeth, Carolyn	EIS001667	7.5.3.2 (2760), 10 (2761), 13 (5), 1.2 (79)
	EIS001685	3.1 (16), 7.3.2 (216), 7.3 (110), 1.2 (79), 13 (5)
Griswald, Diane	EIS001368	5.1 (27), 13 (5)
Grondahl, James H.	EIS001537	3.2 (51), 3.2 (64), 7.5.11.2 (240), 8.1 (170)
Grossman, Zach	EIS001249	8.3 (60), 7.4 (87), 8.1 (170)
Grubaugh, Jessica	EIS001142	7.5.7 (98), 8.1 (170)
Gruening, Jamie	EIS000626	7.5.11.2 (181), 3.2 (64)
	EIS000632	8.7 (141), 11.2 (202), 3.2 (75), 8.6.2 (186)
Gruening, V. M.	EIS001241	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 11.2 (202), 8.6.2 (186), 8.6.2 (6496), 8.7 (141), 3.10 (6503), 8.10 (68), 8.8.1 (6511), 7.5.11.2 (181), 3.2 (64), 1.1 (6517)
Grumman, Helen B.	EIS001891	3.2 (80), 8.3 (149), 8.10.2 (212), 8.3 (161)
Gudgell, J. Dallas	EIS000252	5.3 (164), 2 (868), 7.5.11.2 (181), 7.5.3.2 (870), 5.1 (11185), 5.5 (29)
Gue, Lisa Public Citizen	010150	5.1 (27), 3.6 (257), 3.6 (245), 7.3.1 (185), 8 (8491), 3.2 (75)
	010290	7.3.1 (185), 8.3 (161), 3.6 (257), 7.5.3 (1486), 7.4 (125), 8.1 (170), 7.3.2 (216)
	010350	7.3.1 (185), 8.3 (161), 3.6 (257), 7.5.3 (1486), 7.4 (125), 8.1 (170), 7.3.2 (216)
Guenther, Charles J.	EIS001440	8.1 (170), 13 (5), 5.3 (164), 7.3 (210)
Guest, Brenda Leigh Rainbolt	EIS000850	No comment
Guinn, Kenny C. Nevada, State of, Office of the Governor	EIS000716	5.1 (27), 1.2 (77), 2 (100), 8.3 (161), 3.2 (64), 3.2 (80)
	010104	4.5 (92), 4.4 (12307), 7.5.7 (12781), 7.5.10 (12782), 7.5.10 (12783), 7.5.10 (165)
Gunter, Keith	EIS001381	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Gustafson, J.	EIS001112	8.1 (170)
Guthrie, Sheral S.	EIS001635	5.3 (164), 8.9 (193), 8.4 (25), 5.1 (27)
	010489	5.1 (27), 5.3 (164), 8.10.1 (12359)
Gutwein, Roberta	EIS001014	7.3 (94)
Guy, Peggy	EIS000515	8.4 (25), 3.2 (1985), 8.10.1 (62), 8.10.2 (212), 1.2 (1988), 8.8.1 (192), 5.3 (164)
H., Jeff	EIS000911	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Hackert, David C.	EIS000073	5.5 (30)
	EIS001583	5.5 (30)
	010144	5.5 (30), 13 (4980)
Hadder, John E. Citizen Alert	EIS000554	3.3 (50), 3.3 (1649)
	EIS000599	3.2 (75), 8.7 (2066), 8.4 (25), 7.3.2 (216), 7.5.11.2 (181), 3.3 (50), 7.5.7 (98)
	EIS001469	1.1 (34), 9.1 (6076), 8.4 (115), 3.1 (19), 7.5.7 (6082), 7.5.7 (66), 7.5.7 (6088), 7.5.7 (98)
	EIS001481	12 (139), 1.2 (243)
	EIS001924	3.2 (51), 3.2 (64), 8.3 (161), 8.7 (147), 8.4 (25), 7.5.7 (98), 2 (100), 3.1 (9176), 7.3.2 (216), 7.3 (110), 7.5.11.2 (181), 3.3 (50), 3.1 (19), 3.1 (9193), 7.3 (220), 3.0 (9195), 3.1 (9196), 3.2 (59), 3.2 (80)
	EIS002149	3.1 (19), 8.10 (9722), 8.4 (25), 4.3 (249), 3.2 (90), 9.1 (9386)
	EIS002195	2 (100), 3.3 (50), 7.3 (7)
	EIS002224	3.3 (50)
	EIS002256	3.3 (50), 3.3 (8532), 3.2 (8548), 3.2 (51), 3.2 (64)
	EIS002284	13 (5), 3.2 (75), 3.3 (50), 3.2 (11392), 3.1 (19), 7.3 (220)
	010147	1.2 (243), 3.1 (15), 3.6 (257), 3.6 (245)
	010165	3.4 (11853), 7.5.6 (255), 3.4 (12330), 7.3 (220), 7.4 (12332), 7.5.11.2 (240)
	010262	3.6 (257), 3.5 (12849), 4.2 (12850), 4.4 (244), 7.3 (208), 4.5 (12853), 7.4 (125), 9.1 (250), 7.4 (241), 7.4 (67), 7.0 (12858), 7.5.9 (175), 7.5.3.1 (234), 7.5.1 (106), 3.6 (245)
Hafer, Mark C.	010105	1.2 (243), 8.3 (60)
Hahn, Heather	EIS000948	1.2 (77), 7.3.1 (185)
Haines, Eldon	EIS001251	7.5.3 (6957)
Hales, Mary	EIS000027	1.1 (293), 8.4 (226), 1.1 (101)
	EIS000231	8.10.1 (133), 1.2 (79)
	EIS000658	8.10.1 (133), 1.2 (79)
Hall, Naomi	EIS001704	3.3 (50)
Hall, Robert Nevada Environmental Coalition Inc.	010128	7.3.2 (216), 1.2 (79), 3.5 (233), 4.1 (82), 12 (139), 7.5.11.2 (240), 3.6 (257), 3.5 (204)
	010396	3.0 (11552), 3.5 (204), 1.2 (79), 3.6 (257)
Halstead, Robert J. Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000172	8.3 (161), 8.3 (160), 8.3.3 (23), 8.3 (149), 3.3 (50)

Commenter	Comment Document	Location of Comments/Responses
Halstead, Robert J. (continued) Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000209	8.10.1 (62), 8.10.1 (166), 8.10.1 (1028), 8.10.1 (1035)
	EIS000229	8.5.3 (190), 8.8.2 (1170), 8.10 (154), 8.3.1 (1172), 8.5.3 (1173), 8.8.1 (187), 8.9 (5784)
	EIS000268	6.0 (1327), 8.8.3 (205), 7.5.7 (965)
	EIS000273	5.3 (164), 8.3 (149), 8.3 (161), 8.1 (170), 5.1 (10786)
	EIS000299	8.4 (25)
	EIS000323	8.7 (5425)
	EIS000407	8.3 (2202)
	EIS000408	8.6.2 (137), 8.7 (142), 8.6.2 (186), 8.8.2 (135)
	EIS000440	8.10.1 (2718), 8.10.1 (166), 8.10.1 (62)
	EIS000463	8.10.1 (166), 8.10.1 (62), 8.3 (9967), 8.1 (259), 8.7 (197), 8.6.1 (223), 8.11.6 (10935)
	EIS000470	5.5 (30), 8.8.1 (172), 3.2 (64), 8.3 (161), 3.3 (50)
	EIS000489	6.1 (9063), 6.1 (9064), 3.2 (80), 6.1 (18), 7.5.7 (9211)
	EIS000629	8.6.2 (137), 8.7 (142), 8.6.2 (186), 8.8.2 (135)
	EIS000643	8.10 (156), 8.6.1 (223), 8.7 (142)
	EIS000652	8.5.3 (190)
	EIS000674	8.10 (2398), 8.1 (259), 8.3.1 (2399), 8.10 (154), 8.3.2 (136), 8.8.1 (2403), 5.4 (2406)
	EIS000679	8.8.2 (121), 8.8.3 (2453), 8.3 (2455), 8.4 (2458), 8.4 (25), 8.6.1 (223), 8.7 (153), 8.10.1 (62), 8.7 (197), 8.3 (213), 8.3 (201)
	EIS000990	8.3 (161), 3.3 (50), 8.3 (12752), 8.1 (170)
	EIS001046	8.3 (161), 3.3 (50), 8.1 (170)
	EIS001310	8.3 (161), 8.1 (170), 3.3 (50), 8.3 (160), 6.1 (18), 8.8.1 (10575), 3.9 (109)
	EIS001580	1.2 (243), 8.3 (161), 8.1 (170), 8.8.1 (196), 8.8.1 (6040), 8.10.1 (166), 3.9 (109), 8.7 (147), 8.8.1 (6050), 3.10 (6074)
	EIS001727	3.3 (50), 8.8.1 (172), 8.8.3 (6287), 8.3 (149), 8.3 (161), 8.11.4 (6294), 8.7 (141), 8.10 (156), 8.11.6 (6303), 8.10 (148), 3.9 (109), 7.5.11 (6309)
	EIS002239	8.1 (11621), 8.7 (141), 8.11.7 (3967), 8.10.1 (166), 8.10 (148), 3.9 (109), 8.1 (4121), 8.3 (161), 8.3 (149)
	EIS002272	8.10 (156), 8.4 (25), 8.3 (161), 8.1 (170), 3.3 (50)
	EIS002291	8.3 (149), 3.3 (50)
Halt, Joanne G.	EIS000767	7.5.11.2 (181), 7.5.11.2 (240)
Hancock, Don Southwest Research and Information Center	010156	5.1 (27), 3.6 (257), 5.4 (219), 7.3.1 (185), 7.3 (253), 3.1 (16), 1.2 (243)
Handley, Vance W.	010416	7.3.2 (216)
Hanes, Eugene G. Alabama, State of, Public Service Commission	EIS000279	5.2 (26), 4.5 (99), 8.3 (149), 8.3 (60)
	EIS001962	4.5 (99), 3.2 (64), 5.2 (26), 8.3 (149), 8.3.2 (136)
Haney, Nick	EIS000589	8.10 (154), 5.1 (27)
Hansard, Thierry C.	010450	5.1 (27)
Hanson, Jo	EIS001509	5.1 (27), 13 (37)

Commenter	Comment Document	Location of Comments/Responses
Harbin, April	EIS000880	3.2 (69), 8.3 (161), 8.3 (149), 8.4 (2787)
	EIS000921	3.3 (50)
	EIS000922	8.3 (149), 8.4 (25)
	EIS000923	7.5.7 (98)
Hardeman, Jim Georgia, State of, Department of Natural Resources	EIS000282	5.2 (26), 8.1 (2265), 8.10 (2266)
	EIS000394	5.2 (26), 8.1 (2265), 8.10 (2266)
Hardy, David	EIS001150	8.4 (25), 7.5.3.2 (3522), 7.5.3.3 (3523)
Harkins, Hugh P.	010436	5.1 (27)
Harmon, Amber	EIS000571	1.1 (101), 8.1 (2315), 7.3 (220), 7.5.3.2 (228), 7.3 (2321), 5.3 (164), 7.5.7 (66), 7.5.7 (93), 12 (139)
Harmon, Clarence St. Louis, Missouri, City of	EIS002069	8.1 (170)
Harney, Corbin	EIS000088	12 (139), 8.6.1 (402), 7.5.11.2 (181), 7.5.3.2 (10711), 7.5.7 (93)
	EIS000624	8.1 (170), 7.2 (1704), 6.1 (46), 5.1 (27), 3.7 (57)
	EIS001463	7.5.11.2 (9088)
	EIS001483	12 (139), 1.1 (124), 5.1 (27)
	EIS002097	7.5.11.2 (181), 12 (139), 7.5.7 (93), 7.5.11.2 (4120), 7.5.11.2 (10271)
	EIS002202	7.5.11.2 (10290), 7.5.11.2 (240), 5.1 (27)
	EIS002206	7.5.11.2 (181), 7.5.3.2 (230)
	EIS002273	7.5.11.2 (181), 7.5.11.2 (240), 7.5.3.2 (11088)
	010113	5.1 (27), 8.1 (170)
	010154	7.5.11.2 (181), 1.1 (124)
Harney, Corbin Shundahai Network	EIS001275	5.3 (164)
	EIS002240	12 (139), 3.3 (50), 8.1 (170)
Harney, Corbin Western Shoshone	EIS001662	3.3 (50)
	EIS002298	5.1 (11667)
Harper, Charles R.	EIS000644	7.5.3.2 (111), 1.2 (2351)
	EIS001502	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 5.1 (27), 1.1 (101)
Harris, Joshua	EIS002064	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27)
Harris, Karen Chicago Greens	EIS001501	5.1 (27)
Harris, Laura	EIS001102	8.1 (170), 5.3 (164)
Harris, Phyllis	EIS000748	5.1 (27)
Harris, R.	EIS001338	8.1 (170)
Harris, Virginia	EIS001027	8.1 (170), 7.5.7 (8916), 8.8.1 (189)
	EIS001796	8.1 (170), 7.5.7 (8916), 8.8.1 (189)
	010211	8.1 (170), 8.7 (144), 8.10.1 (133), 9.1 (250), 5.5 (29)
Hartgrove, Thomas	EIS001715	2 (100), 5.1 (27)
Hartrich, Catherine	010192	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Hartzog, Helen	EIS001623	8.1 (170)
	EIS001642	7.5.3.2 (228), 8.10.2 (212), 8.3.3 (23), 6.1 (9102), 5.5 (30), 8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Harvey, Elise B. Peace Education Center	EIS001661	8.1 (170), 5.5 (29)
Harvey, Rebecca	EIS000786	5.1 (27)
Hasegawa, Mayumi	EIS000580	5.1 (27)
Hatfield, Matt	EIS000903	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Hatfield, Scott	EIS000500	4.5 (1971), 1.2 (243), 13 (5), 8.10 (145), 8.1 (170), 4.5 (1976), 5.1 (27), 3.2 (64)
Hathaway, Wanda A.	EIS000010	5.4 (219), 1.1 (101), 12 (139), 5.1 (27)
Hattis, Ronald P. Physicians for Social Responsibility	EIS001807	8.1 (170), 8.10 (157), 1.1 (6955), 12 (139), 4.3 (128), 7.5.7 (11345)
	EIS001808	8.10.1 (62)
	EIS002269	8.7 (197), 8.7 (140), 8.10 (157)
Hatz, Diane	EIS001119	5.1 (27)
Hauf, Louise	EIS001648	8.1 (170), 5.1 (27)
	010006	8.1 (170), 6.1 (49)
Hauser, Lenore	EIS001431	5.5 (29), 13 (5)
	EIS001617	8.1 (170)
Hauter, Wenonah Public Citizen, Critical Mass Energy Project	EIS000211	8.3 (161), 7.1.3 (717), 8.10.2 (114), 3.9 (109), 7.5.3.2 (229), 3.2 (64), 3.3 (50)
	EIS000455	3.2 (80), 8.3 (149), 8.8.3 (174), 8.4 (115), 3.9 (109), 7.5.7 (98), 7.5.3 (1894), 12 (14)
	010280	3.6 (257)
	010359	3.6 (257)
	010386	3.6 (257)
Hawksley, Ally	EIS001033	5.3 (164)
	EIS001771	5.3 (164)
Hawksley, Caity	EIS001034	5.1 (27), 5.5 (183), 5.3 (164)
	EIS001770	5.1 (27), 5.5 (183), 5.3 (164)
Hawksley, Emma Theresa	EIS001035	5.1 (27)
	EIS001769	5.1 (27)
Haywood, Lorraine Laughlin, Nevada, Town of, Advisory Board	EIS000699	5.1 (27)
	EIS000803	5.1 (27)
Healy, Gretchen	EIS000951	13 (131), 7.5.11.2 (240), 10 (258)
Healy, Shannon	EIS000427	5.1 (27)
Heard, Erline	EIS000137	5.3 (164)
Heath, Roy	EIS002145	12 (10754), 11.2 (10755), 5.2 (26), 8.1 (259)
Hebert, Donna M.	EIS000526	8.10 (54), 8.3 (149), 8.8.1 (198), 7.3 (2003), 13 (5)
Hedin, Carrie E.	EIS001524	5.1 (27), 7.3 (4042), 4.3 (129), 7.5.3.2 (4044), 7.3 (256), 7.3 (220)
	EIS001823	5.1 (27), 7.3 (4042), 4.3 (129), 7.5.3.2 (4044), 7.3 (256), 7.3 (220)
Heilig, Kurt	EIS000913	3.2 (51), 3.2 (64), 8.1 (170)
Heim, Wesley	EIS002013	1.1 (101), 5.1 (27), 8.1 (259), 5.3 (164)
Heinrich, Thomas	EIS001122	8.1 (170)
Heiple, Matthew	010306	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Heizer, Michael	EIS001817	8.11.1 (134)
Heller, Malea	EIS001259	8.1 (170)
Hellgeth, Jeanette	EIS000956	3.3 (50), 5.1 (27), 13 (5), 7.3 (209), 7.5.3.3 (2701), 4.3 (128), 4.3 (2707), 8.1 (170), 8.4 (25), 8.10.3 (182)
Helmer, Bill Timbisha Shoshone Tribe	010278	3.6 (257)
	010279	7.5.3.2 (230), 7.5.11 (12633), 7.5.11.2 (181), 8 (12415), 7.5.5 (12414), 3.6 (257), 3.1 (15), 3.5 (36), 1.2 (243), 7.5.1 (106), 7.5.11 (1882), 7.4 (241), 3.5 (204), 7.5.9 (175), 10 (12599)
	010344	3.7 (57), 7.5.11.2 (240), 3.6 (257), 3.6 (245), 3.4 (12703), 3.1 (16), 4.3 (129)
Helton, Nora Fort Mojave Indian Tribe	EIS002071	3.3 (50)
	EIS002167	3.3 (50)
Henard, Tim	EIS002143	5.2 (26)
Henderson, Brittanie	EIS002030	8.1 (170), 1.1 (101), 5.1 (27)
Henderson, Ivana	EIS000837	5.1 (27)
Hendricks, Karen	EIS001350	5.1 (27), 13 (5)
Hengerson, Roy C. Missouri Coalition for the Environment	EIS001013	8.1 (170), 7.5.3.2 (228)
	EIS001229	7.5.3.2 (228), 8.1 (170), 7.3 (209), 7.5.3 (4702), 8.10.2 (114), 8.4 (25), 5.3 (164), 4.5 (11438)
Hengerson, Roy C.	010241	8.1 (170), 5.3 (164), 1.1 (122)
Henning, Tyler	010160	5.1 (27)
Henry, Cletus	010078	8.1 (170)
Henson, Kathleen	EIS000901	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50), 5.1 (27)
Henze, Walter	EIS001389	8.1 (170), 5.1 (27), 7.4 (87), 5.3 (164), 5.4 (219), 13 (5), 6.1 (49)
	EIS001858	8.1 (170), 13 (5), 7.3 (222), 5.3 (164), 5.4 (219), 6.1 (49)
	010318	5.1 (27), 7.4 (13321), 5.3 (164), 5.4 (219), 5.5 (183)
Hepburn, Paul D.	EIS001630	1.1 (101), 12 (139)
Hepworth, Brentwood	EIS000028	5.1 (27), 8.1 (259), 8.5.1 (328)
Hermes, Margaret	EIS001009	5.4 (219), 7.3 (2907), 5.5 (29)
	EIS001747	5.4 (219), 7.3 (2907), 5.5 (29)
Herrera, Dario Clark County, Nevada, Board of County Commissioners	010243	3.5 (233), 2 (100), 4.5 (92), 3.2 (80), 5.4 (219), 3.5 (36), 3.5 (204), 7.3 (253), 7.3 (253), 3.0 (13168), 7.5.3.2 (5767), 7.3 (13170), 7.3 (13171), 7.0 (13172), 7.5.6 (13173), 3.9 (109), 7.0 (13175), 7.4.1 (13176), 7.4 (13177), 10 (3), 8.3.1 (13181), 8.12 (224), 7.0 (13184), 8.12 (251), 8.11.2 (13187), 3.6 (257), 3.5 (13190)
Herrera, Helen	EIS002254	7.5.11 (11488), 3.7 (57), 10 (11490), 1.2 (77), 1.1 (124), 8.10 (11493), 1.2 (11494), 4.1 (82), 3.9 (109), 3.3 (50)
	EIS002295	1.1 (124), 3.7 (57), 1.2 (77), 8.4 (226), 7.5.3 (11673), 8.10.3 (182), 3.9 (109)
Hess, Louise	EIS000773	4.2 (2029)
	010177	5.1 (27)
Hetzler, Alissa K.	010263	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Hiatt, Kathy C.	EIS000012	5.1 (27)
Hickey, Julie Ursuline Sisters of Kirkwood	EIS001173	8.1 (170), 13 (5)
Hickman, Judith	EIS000860	12 (139), 5.1 (27), 5.3 (164), 4.3 (249), 7.5.11.2 (181)
Higaki, Vernon FirstEnergy Corporation	EIS001289	5.2 (26), 8.7 (143), 8.7 (144), 1.2 (78)
	EIS001552	5.2 (26), 8.7 (143), 8.7 (144), 1.2 (78)
Hilfenhaus, Charles Alliance of Atomic Veterans	EIS000150	6.1 (49), 7.3.1 (611), 4.5 (217), 5.3 (164)
Hinkle, William	EIS001980	2 (100), 1.1 (122)
Hinnant, C. S. Carolina Power & Light	010103	3.1 (12)
Hirt, Alice H.	EIS001813	7.5.3 (6506), 7.5.7 (98), 7.5.6 (130), 7.5.3.2 (6521), 5.1 (27)
	EIS001918	7.5.3 (6506), 7.5.7 (98), 7.5.6 (130), 7.5.3.2 (6521), 5.1 (27)
Hixon, Angela	EIS001272	5.5 (183), 8.4 (25), 8.10.2 (212), 8.10.1 (62), 3.2 (51), 8.7 (3796)
Hixon, Duane R.	EIS001421	5.5 (183), 5.3 (164), 8.4 (25), 8.10.2 (212), 8.10.1 (133)
Hlywak, Stephanie	EIS001619	3.3 (50), 3.3 (1), 3.2 (51), 7.5.4 (5916), 7.5.3.3 (5919), 8.3 (161), 1.1 (124), 5.4 (5926), 1.1 (101), 3.1 (15)
Hoag, Charlene	EIS001638	3.2 (80)
	EIS001895	5.1 (27)
Hoagland, Eryn	EIS000433	7.5.11.2 (1304)
Hobbs, Janna	EIS000902	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 7.5.7 (93), 3.3 (50)
Hodges, Jim South Carolina, State of	EIS000479	5.2 (26), 5.2 (10936), 5.4 (10937)
Hoffman, Ed	EIS000307	4.5 (107)
Hoffman, Marsha Citizen's Advisory Council/Esmeralda County Repository Oversight Program	EIS000197	8.11.5.1 (254), 8.11.6 (795), 7.5.2 (796)
	EIS000202	8.4 (25)
Hoffman, R. J.	EIS001461	3.2 (80), 8 (158), 5.2 (26)
Holden, Robert National Congress of American Indians/Nuclear Waste Program	EIS001910	3.3 (50), 3.7 (58), 7.5.11.2 (5165), 7.5.11.2 (240), 10 (5167), 8.11.5.1 (5168), 11.2 (5169), 7.5.5.2 (38)
Holek, Stan L.	EIS000525	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 1.1 (101), 3.9 (109)
	EIS001359	5.1 (27), 13 (5)
Hollander, Karon M.	EIS001103	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.10 (68), 8.8.2 (135), 1.2 (77), 8.1 (170)
Holly, Linda	EIS001186	8.1 (170), 5.3 (164)
Holt, Kenneth W. U.S. Department of Health and Human Services, Public Health Service, CDC	EIS000775	8.10.2 (194), 8.10.2 (12251)
Holtman, Allen P.	EIS001255	8 (158)

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Homeyer, Yvonne Webster Groves Nature Study Society	010070	8.1 (170), 5.1 (27)
	010097	8.1 (170), 5.1 (27)
Hoopes, Mary	EIS001510	5.1 (27), 8.10 (157), 8.9 (4918), 7.5.3.2 (230), 8.10.1 (133), 8.10.1 (166), 3.2 (4922)
Hopkins, Steve	EIS000250	2 (100), 5.3 (164), 1.1 (101), 3.2 (51), 6.1 (1111), 4.5 (96), 13 (35), 12 (139), 5.4 (219), 13 (10777)
Hopper, Heidi	EIS001428	5.1 (27), 13 (5)
Horne, Charles Mesquite, Nevada, City of	EIS002209	7.5.1 (10221)
	010283	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
Horne, Tami	EIS002048	3.2 (51), 3.2 (64)
Horsley, George M.	EIS000805	4.3 (129), 5.3 (164)
Hosler, Pamela	EIS000421	5.3 (164), 7.5.3.2 (228), 1.1 (6370)
Howland, Charles A.	EIS000200	8.3 (149)
Hoyt, Becky A.	EIS002053	7.5.7 (98), 13 (37), 5.1 (27)
Hudon, Travis	EIS000340	7.5.3.2 (230), 1.1 (101), 8.8.1 (1320), 6.1 (46), 5.5 (183)
Hueil, Diana	EIS001436	8.1 (170), 5.4 (219), 1.2 (77), 7.5.11.2 (181), 5.5 (183)
Hughes, Pam	010188	8.1 (170)
Hughes, Thomas	EIS000848	5.1 (27)
Hulse, Frank	EIS000234	3.3 (88)
	EIS000668	3.3 (88)
Hulse, James Common Cause Nevada	EIS000545	1.1 (2275)
Hulsey, Maribeth	010385	3.6 (257)
Hunter, Meredith Bollmeier	EIS001371	8.1 (170), 12 (10354), 8.7 (184), 8.7 (142), 8.7 (197), 8.1 (10374), 8.4 (25), 8.7 (28), 8.10 (10385)
Huntsman, Christy	EIS000521	4.3 (1633), 8.3.1 (20), 5.1 (27)
Hurwitz, Matt	EIS001689	8.3 (149), 8.4 (25)
Hutton, James A. PECO Energy Company	EIS001517	5.2 (26)
Hutton, Marie	EIS001192	5.1 (27), 5.5 (30)
Huxtable, Robert L.	EIS000019	5.2 (26), 3.3 (50)
Hyde, B. R. U.S. Department of the Interior, Bureau of Land Management	010066	3.10 (610)
Hyder, Skip	EIS000267	5.1 (27), 5.3 (164)
Ikuta, Yoshiko Women Speak Out for Peace and Justice	EIS001174	4.3 (70), 8.1 (170), 4.5 (1340)
Illegible, Cheryl P.	EIS000839	5.1 (27)
Illegible, Garry M.	EIS001367	5.1 (27), 13 (5)
Illegible, Patricia	EIS001356	5.1 (27), 13 (5)
Illegible, Raymond	EIS000791	5.1 (27)
Illegible, S.	EIS000843	5.1 (27)
Illegible	EIS002312	7.1.1 (11703)
Illegible	EIS000701	5.1 (27)
Illegible	EIS000761	5.1 (27)
Illegible	EIS000798	5.1 (27)

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Illegible	EIS000941	8.3 (149), 8.4 (25), 5.1 (27)
Illegible	EIS001300	5.1 (27)
Illegible	EIS001346	5.1 (27), 13 (5)
Illegible	EIS001364	5.1 (27), 13 (5)
Illegible	EIS001403	8.1 (170)
Illegible	EIS001404	8.1 (170)
Illegible	EIS001405	8.1 (170)
Illegible	EIS001487	5.1 (27), 13 (5)
Illegible	EIS001491	5.1 (27), 13 (5)
Illegible	EIS001990	1.2 (77), 7.3.1 (185)
Illegible	EIS002006	1.2 (79), 5.5 (29), 13 (5)
Importuna, Patrick P. North Las Vegas, Nevada, City of	EIS001157	8.3 (12255), 8.8.2 (4357), 3.9 (109), 8.8.3 (171), 7.5.6 (130), 8.1 (259), 8.11.2 (4362), 8.8.1 (4363), 8.5.3 (12548), 8.6.2 (186), 8.8.2 (4365), 4.5 (63), 8.11.11.1 (4367), 8.4 (115), 8.8.2 (4370)
Inman, Rebecca J. Washington, State of, Department of Ecology	EIS001208	6.1 (46), 9.1 (138), 4.5 (4024), 8.3 (149), 8.10.2 (212), 3.1 (19)
Jackson, Kevin L.	EIS000649	8.10.2 (194)
Jacobs, Barry	EIS000755	5.1 (27)
Jacobs, Peggy	EIS000486	5.1 (27), 4.3 (128)
Jacobsen, Lawrence E. Nevada, State of, Nevada State Senate	EIS001725	3.3 (88), 8.1 (259), 7.5.3.2 (228), 7.5.3.2 (230)
Jacobson, Joan G.	EIS001084	8.1 (170), 5.1 (27), 3.9 (109), 13 (5)
Jacques, Alyssia	EIS001806	3.3 (50), 5.1 (27), 5.3 (164)
	EIS002262	3.3 (50), 5.3 (164)
Jadwin, David	EIS001809	5.2 (26)
Jake, Vivienne Caron Kaibab Band of Southern Paiutes	EIS002075	8.10.2 (9614)
Jakimczyk, Juliann	010191	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Jakovac, Nancy L.	010018	8.7 (197)
James, Brian	EIS001853	8.3 (60)
	010179	8.1 (170)
Jamriska, Jerry	EIS002275	3.3 (50), 5.5 (30)
Janson, Jeanne A.	010433	5.1 (27)
Jaroszewski, Jake	EIS002046	3.2 (51), 3.2 (64)
Jaroszewski, Lynn	EIS002067	3.2 (51), 3.2 (64)
Jefferson, Robert Nuclear Energy Institute	EIS000241	8 (158), 8.10.1 (10918)
	EIS000492	8.4 (115)
	EIS001169	8 (158)
	EIS001564	8.4 (115)
	EIS001576	8.4 (25), 8.10 (7496), 8.7 (184), 8 (158)
	EIS001587	8 (158), 8.10.1 (6372)
	EIS002242	8 (158), 8.4 (11360), 8.3 (149), 8.7 (197)
Jenkins, Barbara	EIS001415	5.1 (27), 8.1 (170), 3.3 (50), 4.5 (63)
Jennings, Jeff	EIS000109	
Jenree, Marcus	EIS002033	1.1 (101)
Jensen, Alyssa	EIS000587	8.1 (170)

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Jerge, Kari F.	EIS001512	5.1 (27), 7.3.2 (216), 7.5.3.2 (229), 7.3 (4156), 7.1 (191), 7.3 (4158), 7.3 (4159)
	EIS001830	7.3.2 (216), 7.5.3.2 (229), 7.3 (4156), 7.1 (191), 7.3 (4158), 7.3 (4159)
	EIS002306	5.1 (27), 7.3.2 (216), 7.5.3.2 (229), 7.3 (4156), 7.1 (191), 7.3 (4158), 7.3 (4159)
Jim, Clara Belle Pahrump Paiute Tribe	EIS002082	10 (258), 5.1 (27), 8.10 (8822)
Johanns, Mike Nebraska, State of	EIS001045	3.7 (53), 3.3 (8210), 8.3 (149), 8.3 (149), 8.3 (161), 8.7 (147), 8.3 (201), 8.7 (153), 8.3 (146), 8.7 (153), 4.5 (8242), 8.7 (147), 8.7 (12465), 8.7 (247)
John, Bill	EIS002227	8.1 (170)
Johnson, Abby	EIS000648	8.1 (170), 8.3 (12671)
	EIS001104	3.3 (11704)
Johnson, Abigail C. Eureka County, Nevada	EIS000618	8.3.1 (195)
	010373	3.6 (257)
Johnson, Betty League of Women Voters	EIS001586	13 (5), 7.5.7 (6359), 13 (37), 3.3 (50)
Johnson, Carletta	EIS001139	2 (100), 5.1 (27)
Johnson, Homer	EIS002113	7.5.7 (93), 5.3 (164), 5.1 (27), 7.5.3.2 (230), 8.1 (170)
Johnson, Jordan Michelle	EIS001183	3.3 (50), 8.1 (170)
Johnson, Josh	EIS002042	1.1 (101), 8.1 (170)
Johnson, Kendra	EIS002020	7.5.3.2 (230)
Johnson, Lydia Battle Mountain Band of the Te-Moak Tribe of Western Shoshone	EIS001864	7.5.11.2 (152), 5.1 (27)
Johnson, Margaret	010194	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Johnson, Michael	010126	8.1 (170)
Johnson, Nicole	EIS000611	5.1 (27)
Johnson, Reginald V.	EIS001114	8.10.2 (6405)
Johnson, Vera	EIS000842	5.1 (27)
Johnson Family, The	EIS001931	5.1 (27)
Johnston, Art	EIS000389	5.2 (26), 13 (5)
	EIS000538	5.2 (26), 13 (5)
	EIS001059	13 (5)
Johnston, Orla	EIS000664	8.4 (226), 1.1 (2377)
Johnston, Robert E.	010483	5.1 (27)
Jones, Andrew	010473	5.1 (27)
Jones, Clinton L.	EIS000871	8.10 (2849)
Jones, David Duke Energy Corporation	EIS000280	4.5 (99), 5.2 (26), 3.2 (64), 4.5 (107), 5.4 (10813), 7.5.7 (10814), 7.5.7 (10816), 8.4 (226)
Jones, Donna K.	EIS000660	8.4 (115)
Jones, Robert H.	EIS000992	8 (158), 8.10.1 (4427)
	EIS001729	8 (158), 8.10.1 (11220)
	EIS002108	7.5.7 (11196), 8 (158)
Jones, Terry D.	EIS000528	13 (2004), 5.1 (2005)
Jones, Thomas Frank	010214	5.1 (27)
Jordan, Susan	EIS001439	8.1 (170), 5.1 (27), 13 (5)
Jose, Joshua	EIS001675	13 (5), 5.1 (27)

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Joyner, Delores	010376	3.6 (257)
Jutaz, Deborah E.	010466	5.1 (27)
Kaamasee, Arthur Ely Shoshone Tribe	EIS001441	3.2 (80), 7.5.11.2 (181), 7.5.11 (4999), 3.7 (57), 3.3 (88), 11.1 (97), 8.3 (201), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 8.8.3 (171), 3.2 (64), 3.2 (51), 10 (4206), 7.1.3 (4209), 4.5 (4210), 8.3.1 (4211), 8.8.1 (4212), 8.8.1 (4205), 8.8.1 (4207), 8.8.1 (4208), 8.10.2 (200), 8.8.2 (179), 8.8.1 (4215), 8.11.6 (4216), 8.3.1 (4219), 11.1 (102), 3.2 (4224), 3.9 (109), 7.5.5 (4227), 8.8.2 (7043), 7.5.5.1 (4229), 8.7 (4231), 8.3.1 (4232), 8.3 (4233), 7.3 (4234), 8.4 (226), 8.3 (161), 3.2 (4238), 7.5.6 (130), 8.3.1 (4240), 8.10.2 (5067), 6.1 (4249), 7.1.5 (1547), 13 (1548), 6.1 (1549), 6.1 (4253), 8.7 (6631), 1.1 (40), 6.1 (1551), 7.5.1 (106), 8.11.1 (1553), 6.1 (46), 3.7 (57), 9.1 (4260), 3.2 (4271), 9.1 (4272), 1.2 (81), 8.3.3 (178), 8.8.1 (6638), 8.8.1 (4282), 8.10 (54), 7.5.5.1 (1557), 8.7 (143), 8.7 (153), 8.8.2 (4286), 7.5.5.1 (12385), 7.4 (4289), 7.3 (8320), 8.11.5.1 (4294), 8.8.3 (173), 8.10 (4296), 8.10 (156), 8.3.1 (4298), 8.8.1 (4299), 8.8.2 (4300), 7.5.5 (1560), 8.10 (4302), 8.8.1 (192), 8.1 (170), 8.11.1 (4306), 7.5.5.2 (237), 3.1 (4308), 8.11.4 (42), 8.7 (4310), 7.5.5.1 (12385), 4.2 (5136), 7.5.5.2 (150), 7.5.11.2 (5139), 8.8.2 (9771), 6.1 (18), 6.1 (1552), 8.7 (3427), 8.8.3 (3428), 8.7 (3430), 11.1 (2410)
Kajkowski, Charles Mt. Charleston, Nevada, Town Advisory Board	EIS000413	5.1 (27)
Kakishita, Lori A.	EIS000257	5.1 (27), 5.5 (30)
Kalina, Charles P.	EIS001188	5.1 (27)
Kalish, Stephen	EIS000362	7.5.3.3 (2256), 7.5.3 (2261), 8.1 (170), 5.5 (29)
Kaminski, James	EIS000498	7.3.1 (1623)
Kamm, G. G.	EIS001177	5.2 (26), 8.1 (170)
Kamps, Kevin Nuclear Information and Resource Service	EIS000446	1.2 (77)
	EIS000467	3.2 (64), 4.5 (1927), 8.10 (1928), 8.10.1 (133), 7.5.7 (66), 8.1 (170), 13 (227), 13 (10946), 1.2 (79)
	EIS001466	8.8.3 (174), 8.3 (161), 8.8.1 (6855), 6.1 (6857), 7.1 (33), 7.5.3.2 (6860), 7.2 (6862), 7.5.3.3 (6863), 7.5.3.2 (229), 7.5.3.2 (111), 7.5.3.2 (228), 4.3 (129), 7.5.7 (6870)
	EIS001471	13 (4687), 8.8.3 (174), 8.8.1 (196), 8.1 (170), 3.2 (64), 13 (5), 13 (72), 3.3 (50), 7.5.7 (98)
	EIS001474	3.3 (1), 3.3 (50), 1.2 (77), 8.10.1 (4054), 7.5.11.2 (181), 8.10 (4057), 1.2 (78), 13 (5), 12 (139)
	EIS001561	8.4 (226), 3.3 (50), 13 (227), 8.1 (170), 8.10.2 (194)

Commenter	Comment Document	Location of Comments/Responses
Kamps, Kevin (continued) Nuclear Information and Resource Service	EIS001927	3.2 (80), 7.3 (210), 1.2 (77), 8.8.1 (196), 8.3 (161), 8.3 (10348), 8.8.1 (10356), 8.10 (156), 8.10 (168), 8.10.2 (200), 8.3 (149), 7.5.7 (10372), 7.5.7 (98), 8.7 (141), 7.5.4 (10381), 3.3 (50), 3.3 (10398), 8.11.11 (10404), 7.5.11.2 (240), 7.5.11 (52), 7.5.11 (10411), 3.9 (109), 8.10.1 (167), 3.2 (64), 7.5.3 (10420), 7.5.3.4 (10424), 3.2 (10909), 5.4 (10426), 6.1 (46), 4.5 (10429), 9.1 (10431)
	EIS001967	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
	EIS002094	7.5.3.2 (228), 7.5.3 (10284), 1.2 (77), 8.1 (170), 3.3 (50), 3.3 (10301)
	EIS002163	7.1 (191), 5.1 (27)
	010246	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
	010285	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
	010354	3.5 (13192), 7.4 (125), 7.4 (241), 7.5.9 (175), 7.3.2 (216), 7.3 (222), 1.1 (124), 7.5.7 (235), 13 (13200), 8.3 (149), 8.10 (148), 8.1 (170), 3.6 (11922), 3.6 (257)
Kamps, Kevin	EIS001297	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
Kane, William F. U.S. Nuclear Regulatory Commission	EIS001898	7.3 (6027), 3.2 (12763), 3.7 (6032), 3.2 (6034), 10 (6044), 8.8.1 (12694), 11.1 (6048), 7.5.11 (12695), 7.5.3.2 (6063), 7.5.1 (6067), 7.5.4.2 (6068), 7.5.4 (6046), 7.5.6 (6049), 8.11.6 (6053), 7.5.3.4 (12445), 7.5.5 (6064), 7.3 (7137), 7.5.7 (6071), 3.2 (6073)
Kapitz, Jon Northern States Power Company	EIS000511	3.10 (4), 4.5 (99), 5.2 (26), 8 (158), 5.6 (2420)
Kaplan, Davene	EIS000568	5.1 (27), 1.2 (77), 7.5.3.2 (2301), 3.3 (50)
Kaplan, Ed	EIS000598	5.5 (30), 12 (139)
	010007	3.6 (257)
Karch, Gary Positives for Peace and Environmental Justice	EIS001312	12 (14), 13 (5), 7.5.7 (98)
	EIS001588	12 (14), 13 (5), 7.5.7 (98)
Katselas, Dana	EIS002182	3.2 (51), 3.2 (64), 5.1 (27)
Katz, Deborah Citizens Awareness Network	EIS002176	4.3 (249), 7.5.3.2 (10349), 3.2 (64), 7.5.11.2 (181), 8.3 (149), 3.3 (50), 1.2 (77)
	010307	3.5 (36), 3.5 (204), 4.3 (129), 7.5.11.2 (181), 7.5.1 (106), 7.5.9 (175), 3.6 (257), 7.4 (12842), 7.4 (241), 7.4 (125), 7.5.3.1 (234), 9.1 (250), 7.5.6 (130)
	010308	3.6 (257)
Kawaters, Alan	EIS001600	8.7 (7014)
Kawaters, Anne Sierra Club Sauk-Calumet Group	EIS001317	8.10.1 (8733), 4.1 (8738)
	EIS001599	8.10.1 (8733), 4.1 (8738)
Kean, Beth	EIS001409	8.1 (170), 8.4 (115), 8.11.7 (4486), 13 (5), 5.3 (164), 5.5 (30)
Keaton, Hal	EIS000656	8.10.2 (203), 10 (258), 5.1 (27), 8.3.2 (136)
	EIS000680	8.10.2 (114), 12 (139), 5.1 (27), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Keenan, Deborah L.	EIS000953	5.1 (27)
Keep, Savannah	EIS002032	1.1 (101)
Kehr, James	EIS001684	3.1 (16), 7.3.2 (216), 7.3 (110), 7.5.3.3 (9248), 1.1 (122), 5.3 (164)
Kehr, Judy	EIS001162	3.1 (16), 7.3.2 (216), 7.3 (110)
Keller, Lindsey	EIS000910	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Kelley, Marylia	EIS001665	1.2 (77), 7.3.1 (185), 7.5.11.2 (181), 1.1 (4859), 1.1 (122)
Kelman, Harry Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000143	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
	EIS000347	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
	EIS000351	8.1 (259), 3.9 (109), 3.7 (53), 3.2 (84), 3.2 (80)
Kelso, Larry	EIS002147	4.5 (151), 5.1 (27), 7.5.3.2 (10595), 7.4.1 (61), 5.2 (26)
	EIS002203	5.2 (26), 7.3 (206), 11.2 (10278)
	EIS002205	7.2 (10415)
Kempf, Joann	EIS002171	8.1 (170)
Kendrick, Bonnie	EIS000460	
Kennell, Wilma	EIS000973	8.10.1 (3437), 5.3 (164)
Kenny, Clifford A.	EIS001274	8.7 (197)
	EIS002193	8.7 (197)
Kenny, Clifford A. Friends of Tecopa Hot Springs, Inc.	010267	7.0 (9324), 7.5.3.1 (234), 7.5.3.2 (228), 7.3.2 (216)
Kenny, June Death Valley Unified School District	EIS001273	8.3.1 (6026)
	EIS001961	8.3.1 (8911), 8.10.2 (203)
	EIS002191	8.3.1 (6026)
Khalsa, Mha Atma S.	EIS001857	3.1 (15), 8.3 (149), 8.3 (161), 8.10.2 (114), 8.10.2 (200)
Khan, Mushtaq A.	EIS001124	8.7 (8404)
Kidd, Larry C.	EIS000214	5.2 (26)
Killebrew, Kate	010477	5.1 (27)
Kilpatrick, Rita Campaign for a Prosperous Georgia	EIS000312	4.5 (1797), 8.10 (1798), 7.1 (33), 1.1 (124), 5.5 (183)
Kimmich, Mary	EIS001180	8.1 (170)
Kinder, Daniel	EIS001163	1.1 (124)
Kindler, Kate M.	EIS000812	5.1 (27), 8.10.2 (114), 3.2 (51), 7.3 (6947), 7.5.3.1 (234), 5.3 (164)
King, Bill	010159	1.2 (243), 3.6 (257), 5.1 (27), 3.2 (75)
King, Clarence J. International Brotherhood of Electrical Workers	EIS001167	5.2 (26), 8 (158)
King, Darryl Chemehuevi Indian Tribe	EIS002089	3.3 (163)
King, Jeanne	EIS000971	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 1.2 (79)
King, Joan O.	EIS000158	5.1 (27), 12 (139)
	EIS000179	1.2 (243), 5.5 (183)

Commenter	Comment Document	Location of Comments/Responses
King, Joan O. (continued)	EIS001844	1.2 (243)
	010012	1.2 (243), 13 (35)
King, John W. Ponca Industrial Corp.	EIS001086	2 (126)
Kinsey, Robert A.	550004	8.3 (149)
Kintzer, Hailey	EIS002001	1.1 (101), 5.4 (8048), 8.10 (8050), 7.5.4 (8057)
Kipp, Joseph	EIS000477	7.3 (1921), 8.10.1 (1922), 7.5.11.2 (181), 3.2 (1924), 1.2 (78)
Kirkeby, Kevin S. White Pine County, Nevada, Board of County Commissioners	EIS000139	8.5.1 (911), 3.3 (875), 3.3 (50), 8.10.2 (114)
	EIS000140	3.2 (84), 8.3.1 (608), 8.8.1 (196), 11.1 (764)
	EIS000142	3.3 (50), 3.7 (53), 3.1 (12), 3.2 (59), 3.2 (84), 8.3.1 (1456), 8.3.1 (12376), 3.9 (109), 11.1 (102), 3.2 (64)
	EIS000346	3.3 (50), 3.2 (84)
	EIS000350	3.2 (84), 3.1 (12), 3.2 (59), 8.3.1 (1456), 8.3.1 (12376), 3.9 (109), 11.1 (102), 3.2 (64), 3.3 (50)
	010073	3.5 (12576), 8.12 (224), 8.4 (199), 3.4 (12379), 7.1.1 (12380), 7.5.10 (7088), 8.12 (251), 7.1.1 (5720), 11.2 (5721), 7.5.7 (235), 7.3.1 (5723), 7.5.6 (255), 11.1 (45), 7.2 (12187), 3.4 (11031), 7.5.9 (175), 7.5.9 (12716), 7.1.2.2 (12717), 3.4 (12759)
Kirkman, James	EIS001850	8.1 (170), 5.3 (164)
Kirkman, Janet	010074	8.1 (170)
Kirts, Michael	EIS000917	7.5.11.2 (181), 5.1 (27)
Klee, Ed	EIS001678	7.5.11.2 (181)
Kleiber, Roberta	EIS000844	5.1 (27)
Klennschmidt, Rebecca	EIS002061	2 (100), 5.1 (27)
Kline, Connie Ohio Citizens Against a Radioactive Environment	EIS001288	5.2 (26), 8 (158), 13 (37)
	EIS001551	5.2 (26), 13 (37)
Klomp, Steven W.	EIS000665	5.2 (26)
Klotz, Themis A.	EIS001584	12 (139), 8.10.1 (9422)
	EIS001606	12 (139), 7.3 (8402), 4.1 (82)
	EIS001608	7.5.7 (6894), 1.1 (122), 7.5.7 (6899)
Knepper, Ralph	EIS001418	8.1 (170)
Knight, Tiffany	EIS001717	5.1 (27)
Knopick, Suellen	EIS000575	3.2 (51), 8.4 (115), 8.1 (170), 8.8.1 (196)
Knutsen, Reinard Shundahai Network	EIS000458	7.5.11.2 (181), 12 (139), 5.1 (27), 3.2 (80), 6.1 (46), 4.5 (1754), 3.2 (51), 5.3 (164), 13 (227)
	EIS001465	3.2 (59), 13 (5), 12 (139), 5.1 (27), 3.3 (50), 7.5.3.2 (10082), 7.5.3.2 (10083), 1.2 (78)
	EIS001480	1.1 (122), 13 (5), 12 (139), 13 (35), 5.3 (164), 4.5 (8692), 3.2 (51), 3.3 (50), 7.5.5.2 (8704), 4.1 (83)
	EIS002135	12 (139), 4.5 (11096), 13 (5), 5.4 (11098), 7.3 (208), 3.2 (80), 10 (11101), 7.5.11.2 (240), 7.5.3.2 (11103), 8.10 (148), 5.5 (183), 8.1 (259)
	EIS002204	7.5.3.2 (10264), 7.5.3.2 (228), 5.1 (27), 1.2 (77)

Commenter	Comment Document	Location of Comments/Responses
Knutsen, Reinard (continued) Shundahai Network	EIS002252	3.3 (50), 3.2 (59), 12 (139), 6.1 (46), 13 (5), 5.3 (164), 8.4 (25), 10 (11522), 7.5.6 (11523), 7.5.11.2 (240), 3.7 (57), 7.5.11.2 (11529)
Kohnen, Audrey Prairie Island Indian Community	EIS001911	3.3 (50), 5.2 (26), 8.8.1 (5145), 8.10.2 (212), 8.11.11 (5147)
Koivisto, Ellen J.	010470	5.1 (27)
Kolkman, Gene A. U.S. Department of the Interior	EIS001889	8.3 (161), 8.8.1 (8647), 8.6.2 (186), 8.3 (149), 7.5.5.2 (237), 7.5.4 (8654), 7.5.4.1 (118)
Komer, Jaymark	EIS000732	5.1 (27)
	010033	5.1 (27)
Kopczynski, Helen	EIS001833	3.2 (2379), 1.2 (79)
Koplik, Mark A. Mosiac Outdoor Club	010410	5.1 (27)
Koshemchuk, Sergey K. Alkor Technologies Co.	010404	No comment
Kostelaz, Rick	EIS001639	1.1 (101), 11.1 (6), 7.3 (6275), 7.3 (221), 7.3 (6278), 7.5.6 (130), 7.5.3.2 (6282), 3.9 (109), 8.10 (145)
Kott, Candice	EIS002022	7.5.7 (93), 8.1 (170), 5.1 (27)
Kovacs, Bill U.S. Chamber Business	EIS000447	5.2 (26), 4.5 (107), 13 (5), 5.4 (10896), 7.5.7 (10897), 8 (158), 7.5.3.2 (10899)
Kovner, Patricia	EIS000057	5.1 (27)
Kraft, David A. Nuclear Energy Information Service	EIS001320	3.3 (50), 1.2 (77), 12 (139)
	EIS001591	3.3 (50), 1.2 (77), 4.3 (70), 1.2 (243)
	EIS001611	8.9 (6885), 1.1 (6888), 4.5 (99)
Kraft, Janet L.	EIS000485	1.1 (1472), 4.3 (70), 7.5.3.3 (1475), 5.3 (164)
Kraft, Steven P. Nuclear Energy Institute	EIS000208	5.2 (26), 8.8.1 (172), 4.5 (879)
	EIS000452	5.2 (26), 8.8.1 (172)
	EIS001832	5.2 (26), 3.1 (7248), 1.1 (12227), 3.1 (7257), 3.2 (7258), 12 (7259), 3.1 (15), 3.2 (51), 3.3 (50), 9.1 (7379), 3.2 (7263), 3.2 (80), 8.10 (7265), 7.4 (7266), 7.5.7 (7267), 3.2 (7268), 3.2 (90), 7.3.1 (185), 8.3 (149), 8.10 (7273), 8.8.1 (172), 8.4 (115), 8 (158), 8.3 (7290), 1.1 (7292), 7.1.1 (7297), 8.10.1 (7295), 8.10 (156)
	010249	5.2 (26), 7.3 (12949), 1.3 (12953), 3.4 (12954), 3.4 (12955), 3.5 (12956), 3.5 (12957), 1.3 (12958), 7.1.2 (12959), 7.1.2 (12960), 6.1 (46), 3.0 (12962)
	010358	5.2 (26), 7.3 (12949), 1.3 (12953), 3.4 (12954), 3.4 (12955), 3.5 (12956), 3.5 (12957), 1.3 (12958), 7.1.2 (12959), 7.1.2 (12960), 6.1 (46), 3.0 (12962)
Krahenbuhl, Melinda	EIS001462	3.2 (4650), 8.8.1 (4651), 5.2 (26)
Kramer, Ken	EIS000574	3.2 (80), 7.5.11.2 (181), 1.1 (11768)
Krapfl, Constance M.	010401	8.1 (170)
Krause, Rudolph E.	EIS000662	5.1 (27)
Kring, Bernice	EIS001448	5.1 (27), 13 (5), 5.3 (164), 8.8.3 (174), 12 (139), 5.5 (183)
Kruse, Eileen S.	EIS001720	8.1 (170), 5.3 (164), 8.10 (148)
Kubinski, Heather	EIS002018	8.10.3 (7724), 1.1 (101), 8.4 (25), 7.3 (7729)
Kuchuris, Christopher	010112	3.5 (36), 5.2 (26), 5.5 (183), 13 (5)

Commenter	Comment Document	Location of Comments/Responses
Kuciejczyk-Kernan, Madonna	010202	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Kucinich, Dennis J. U.S. House of Representatives - Ohio	EIS000476	8.3 (161)
	EIS001543	3.3 (50), 12 (139), 8.1 (170), 8.8.3 (10345)
	EIS001905	12 (139), 4.5 (6789), 8.3 (12596), 8.3 (161), 8.1 (6793), 8.1 (6795), 8.1 (170), 8.10 (157), 8.10.2 (114), 3.2 (64), 3.2 (90), 2 (126), 7.3.2 (216), 7.5.11 (6809), 3.3 (50), 3.2 (80), 3.6 (257), 1.2 (6821), 8.3 (149), 7.5.11.2 (240), 8.8.3 (171)
Kuck, Kay	EIS000317	13 (5)
Kuhaida, Jerry Oak Ridge Reservation Local Oversight Committee, Inc.	EIS002310	5.2 (26), 8.10.2 (12083)
Kuharik, Shannon	EIS001534	5.5 (183), 5.3 (164), 8.1 (170)
Kuhn, Rachel	EIS000583	5.1 (27)
Kulick, Larry E.	EIS001219	7.5.11.2 (181), 5.4 (219), 8.1 (170), 8.10.1 (133), 7.3 (4316)
Kulkin, Harley	EIS000126	1.2 (11238), 8.8.2 (135), 8.1 (259)
Kunkel, Michael J.	010458	5.1 (27), 13 (5)
Kuntz, Felix C.	EIS001126	3.2 (69), 8.3 (161), 8.3 (149), 8.4 (2787), 13 (131)
Kunze, Jay F.	EIS000246	4.5 (217), 7.5.7 (66), 4.5 (99), 5.2 (26), 4.5 (10763)
Kurnos, Amanda	EIS000438	8.1 (170), 8.3 (149), 3.9 (109)
	EIS001423	8.1 (170), 8.3 (149), 3.9 (109)
Kushner, Adele Action for a Clean Environment	EIS001658	8.3 (149), 8.3 (161), 8.10.2 (114), 8.8.3 (171), 3.1 (15)
Kwo, Steve	EIS000915	7.5.11.2 (181), 3.2 (51)
LaMonica, Richard	EIS000988	5.3 (164), 4.5 (2934), 8.4 (226), 4.5 (92), 7.3 (209), 7.5.3.2 (228), 7.3 (239), 7.3 (94), 1.1 (2941)
	EIS001793	5.1 (27), 4.3 (129), 7.5.3 (6348), 7.3 (6349), 7.3 (94), 5.5 (29), 3.3 (88)
LaTourette, Steven C. U.S. House of Representatives - Ohio	EIS001083	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)
	EIS001254	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)
	EIS001283	3.3 (50), 8.1 (170), 8.7 (184), 8.10.2 (114), 8.4 (226), 7.5.7 (6318)
Ladnier, Steve	EIS000556	8.1 (259)
Laffron, Lawanda Colorado River Indian Tribes	EIS002086	3.3 (163), 7.5.5 (225), 7.3 (8874), 4.5 (8875)
	010343	3.3 (163), 3.7 (57), 3.5 (204), 7.5.5 (12879), 3.6 (257)
Lalo, Bernice	EIS000640	7.5.7 (1707), 7.5.11.2 (1708), 8.1 (170), 7.3.2 (216)
Lamb, Emily	EIS002016	8.10 (145), 7.5.4.2 (7741)
Lamb, Kris	EIS002028	8.1 (259), 1.1 (101)
Lamotho, Lynda	EIS000885	3.3 (50), 1.1 (101)
Landau, Steve Cotter Corporation	EIS000495	5.2 (26), 8 (158), 4.5 (107)
Landerman, June H.	EIS000016	1.1 (101)
Landin, M.	EIS000481	5.1 (27)
Lange, Patrick	EIS000962	8.7 (141)

Commenter	Comment Document	Location of Comments/Responses
Lange, Tom Missouri, State of, Office of the Governor	EIS001738	8.3 (60), 8.3 (5052)
Langer, Clarice	EIS000132	5.3 (164)
Lara, Araceli	EIS002009	5.1 (27), 1.1 (101)
Larko, Sherry	010488	8.1 (170)
Larson, Donovan	EIS001801	5.1 (27), 5.3 (164), 8.1 (170)
Laswell, Fred	EIS002027	7.4 (7610), 7.1 (7611), 7.3 (7616), 5.5 (29), 7.3 (206)
Latimer, Patricia	EIS001563	No comment
Laub, Janet S.	010265	8.1 (170)
Lauber, Maureen Ohio Citizen Action	EIS001568	5.4 (8480), 13 (5), 6.0 (8481)
Lauer, Brenda	EIS001826	8.1 (170)
Laune, G.Clare	010095	8.1 (170), 5.1 (27), 5.5 (29)
Laurente, Theresa D.	EIS000430	1.2 (79), 5.1 (27)
Laurie, Robert A. California, State of, Energy Commission	EIS000536	3.3 (50)
	EIS001622	3.2 (80), 3.2 (5793), 3.2 (64), 3.3 (50), 8.3 (149), 8.7 (153), 8.3.1 (5799), 8.3 (213), 8.3 (201), 8.8.1 (12577), 7.5.10 (5868), 7.5.3.2 (5874), 7.5.3.2 (8), 7.5.3.2 (5887), 7.3.1 (185), 7.3.2 (216), 8.11.4 (5905), 8.3 (161), 8.1 (5912), 3.2 (51), 3.1 (16), 7.3 (222), 7.5.3.2 (230), 7.5.3.2 (5932), 7.5.3.1 (12175), 7.5.3.2 (2), 7.5.3.2 (5935), 7.5.3.2 (5937), 7.5.3.2 (5938), 7.5.3.2 (5939), 7.5.3.2 (5940), 7.5.10 (5941), 7.3 (5942), 7.5.3.2 (5944), 7.5.3.2 (5943), 8.11.4 (5946), 7.5.4.2 (39), 8.8.1 (5949), 7.1.1 (5948), 7.5.4 (5951), 7.3 (232), 7.5.3.2 (5955), 3.2 (59), 7.5.3.2 (5961), 7.5.3.2 (5962), 7.5.3.2 (5956), 8.3.3 (11810)
	EIS002236	3.2 (80)
	EIS002299	3.2 (59), 8.3 (149), 7.5.3.2 (11745), 3.2 (80), 8.3.1 (11748), 7.5.3.2 (12406), 8.11.4 (11749)
	010390	7.5.3.2 (13534), 7.5.3 (12556), 7.3.1 (185)
Law, Martha	EIS000466	3.2 (64), 8.3 (161), 3.2 (90), 8.3 (149), 3.9 (109), 7.5.1 (106), 7.5.11.2 (240), 7.3 (209), 8.1 (259), 10 (11178)
	EIS001949	3.3 (50)
	EIS001950	1.1 (8257), 4.3 (8258), 7.5.7 (8260), 5.3 (164), 13 (8265), 8.10.2 (114), 5.5 (29)
	EIS001968	3.2 (69), 8.3 (161), 8.3 (149), 8.4 (2787), 7.5.1 (106), 7.5.11.2 (240), 7.5.11 (7742), 7.5.5 (7743)
Lawrence, Susan R.	EIS000675	8.10.2 (114)
Leake, Mary E.	EIS001827	8.1 (170)
Leclercq, Carol Jene	EIS000563	3.9 (109), 13 (5), 5.1 (27)
Leder, David	EIS002217	7.5.7 (10395), 7.5.7 (10396)
	EIS002223	No comment
Lee, Denise	EIS001485	8.3 (161), 3.3 (50), 8.10.2 (114), 3.2 (80)
Lee, Mary	EIS001072	7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 7.5.3.2 (228), 8.1 (170), 1.2 (79)

Commenter	Comment Document	Location of Comments/Responses
Leeds, Todd	010237	5.1 (27), 7.5.3.2 (2), 7.1.2.3 (13134), 7.3 (13135), 8.1 (170), 3.5 (36), 7.1.2.1 (13138), 7.3.2 (216)
Leeper, Linda	EIS000884	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Lefkowitz, Todd E. Meadows Homeowners Association at Elkhorn Springs	EIS000952	5.1 (27), 8.1 (259)
Legere, Josh D.	010469	5.1 (27)
Lehman, Dale	EIS001596	1.2 (8535), 12 (139)
Leichty, Doris J.	010487	5.3 (164)
Leming, Earl C. Tennessee, State of, Department of Environment and Conservation	EIS001099	6.1 (2866)
Lempart, Ted	EIS001702	3.3 (50), 1.1 (101)
Lems, Kristin	EIS001595	5.3 (164), 8.10 (7831), 8.1 (170), 5.1 (27), 3.2 (90), 13 (5)
Lems-Dworkin, Carol	EIS001324	3.3 (50), 8.1 (170), 7.3.2 (216), 3.2 (64), 4.5 (9015), 12 (14), 3.3 (1), 13 (5)
	EIS001437	3.3 (50), 5.1 (27), 12 (139), 7.3.2 (216), 4.5 (9399), 3.2 (64), 5.5 (29), 3.1 (15), 5.5 (183), 3.3 (50), 3.3 (1), 13 (5)
	EIS001616	5.1 (27)
	010094	5.1 (27)
Lent, Ervin R.	EIS000377	7.5.11 (1431), 3.7 (53), 7.5.11.2 (1433), 8.1 (170)
	EIS000380	3.7 (57)
	EIS002271	7.5.11.2 (11724), 8.11.11.2 (11352), 8.11.11.2 (11353), 3.3 (11354), 3.3 (50), 7.5.11.2 (240)
	EIS002287	8.10.2 (212), 7.5.11.2 (240), 3.3 (9962), 7.5.11.1 (9963), 4.5 (11574), 5.5 (29)
Leonard, Tom	010031	5.2 (26)
Leong, Jennifer	EIS000303	5.1 (27)
Leppala, Bill	EIS000641	1.2 (77), 8.8.1 (198), 8.3 (149), 8.10.2 (2740), 8.11.4 (42), 8.11.1 (2747), 5.4 (219), 8.10.2 (114)
Leppala, Patti	EIS000620	3.1 (2207)
	EIS000635	8.7 (142), 3.1 (21), 5.3 (164)
Lesch, Dorothy M.	EIS001882	8.1 (170)
Leskevich, Diana	EIS001334	8.1 (170), 7.3 (206)
Lester, Grace	EIS002261	No comment
	EIS002289	7.5.11.2 (240), 12 (139)
Levy, Jay J. Nuclear Free Takoma Park Committee	EIS000147	7.3 (220)
Lewis, Barney U.S. Department of the Interior, U.S. Geological Survey	EIS001521	3.1 (4517), 3.1 (4518), 3.1 (4519), 3.1 (4520), 3.1 (11), 3.1 (22), 7.5.3.2 (4523), 7.5.3.2 (4524), 7.5.3.2 (3502), 7.5.3.2 (3499), 7.5.3.2 (1477), 3.1 (1478), 7.5.3.2 (4264), 3.1 (4263), 3.1 (4265), 3.1 (1479), 3.1 (12765), 7.3 (1481), 7.5.3.2 (1491), 7.5.3.2 (1482), 7.5.3.2 (1483), 7.5.3.3 (1484), 7.5.3.3 (4267), 7.1.1 (4266), 7.5.3.1 (4268), 7.5.3.1 (4269), 7.5.3.1 (1485), 7.5.3.1 (1490), 7.5.3.1 (1489), 7.5.3.1 (1492), 7.5.3.2 (1493), 7.5.3.2 (1494), 7.5.3.2 (1495),

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Lewis, Barney (continued) U.S. Department of the Interior, U.S. Geological Survey	EIS001521	7.5.3.2 (1497), 7.5.3.2 (1496), 7.5.3.2 (1498), 7.5.3.2 (4525), 7.5.3.2 (4526), 7.5.3 (4527), 7.5.3 (4528), 7.5.3.2 (4529), 7.5.3.2 (4530), 7.5.3.2 (4531), 7.5.3.2 (4532), 7.5.3.2 (4533), 7.5.3.2 (4534), 7.5.3.4 (4535), 7.5.3.2 (4536), 7.5.3.2 (4537), 7.5.3.2 (4538), 7.5.3.2 (4539), 7.5.3.2 (4540), 7.5.3.2 (4541), 7.5.3.2 (4542), 7.5.3.2 (4543), 7.5.3.2 (4544), 7.5.3.2 (4545), 7.5.3.2 (4546), 7.5.3.2 (4547), 7.5.3.2 (4548), 7.5.3.2 (4549), 7.5.3.2 (12313), 7.5.3.2 (4550), 7.5.3.2 (4551), 7.5.3.2 (4552), 7.5.3.2 (4553), 7.5.3.2 (4554), 7.5.3.2 (4556), 7.5.3.2 (4557), 7.5.3.2 (4558), 7.5.3.2 (4559), 7.5.4.1 (4560), 7.5.3.1 (4561), 7.5.3.1 (4562), 7.5.3.2 (12314), 7.5.9 (4563), 7.1.1 (4564), 3.1 (4565), 7.5.3.2 (4566), 7.5.9 (4568), 7.5.9 (4569), 10 (4570), 11.1 (4571), 7.3 (4572), 3.2 (69), 3.1 (4576), 3.1 (4220), 7.3 (4578), 3.1 (21), 3.1 (16), 7.5.3.2 (4583), 3.1 (12)
Lewis, Corey Center for Environmental Arts and Humanities and the Great Basin Institute	EIS000570	3.10 (2041), 1.2 (2042)
Lewis, Jay	EIS001024	7.5.3.2 (230), 13 (5)
	EIS001790	7.5.3.2 (230), 13 (5)
Lewis, Kathy	EIS001023	3.2 (64), 9.1 (8386), 8.1 (170), 7.5.3.2 (111), 7.5.3.2 (8392), 4.3 (70), 5.3 (164)
	EIS001789	3.2 (64), 9.1 (8386), 8.1 (170), 7.5.3.2 (111), 7.5.3.2 (8392), 4.3 (70), 5.3 (164)
Lewis, Marvin I.	EIS000007	3.3 (50), 7.4.1 (61), 8.1 (170), 3.2 (80), 3.2 (64), 7.5.3.2 (228)
	EIS001447	8.1 (170)
	010068	7.3 (232), 7.1 (13290), 2 (100), 12 (139)
	010491	5.1 (27), 7.1.2 (12362), 7.5.11.2 (181)
Lewis, Tedford P.	EIS001182	5.4 (219), 7.5.11.2 (4349), 7.5.4.1 (118), 7.5.4.2 (4351), 5.5 (183), 5.3 (164), 8.1 (170), 3.3 (50)
	EIS001750	4.3 (129), 5.4 (219), 5.3 (164), 5.1 (27)
	010167	8.1 (170)
Liberman, Andrew Kay	EIS001676	7.5.11.2 (181)
	EIS001709	2 (100), 4.5 (4983)
Licata, Gail A.	EIS000745	7.5.3.2 (228), 12 (139), 1.1 (101), 5.5 (30), 4.5 (3073), 5.5 (29)
Liddell, Timothy	EIS000382	8.3.1 (1346)
Lien, Susan San Bernardino, California, City of	EIS002282	8.1 (170)
Lihou, Leslie	EIS000975	8.1 (170), 5.3 (164)
	010207	8.8.1 (12369), 7.3 (220), 5.5 (29)
Like, Bobby	EIS001307	5.5 (29), 5.5 (30)
Limoges, Alison	EIS000339	8.1 (170)
Lindberg, Jay	EIS002244	5.3 (164), 6.0 (11316), 7.3 (206)
	EIS002283	5.3 (164), 13 (8550)

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Lindecke, Fred W.	EIS001158	5.2 (26)
	010001	13 (5)
Lindquist, Ken R.	010422	7.5.1 (5857), 7.5.3.2 (5858)
Lindros, Ann Mychelle	EIS001669	7.5.3.2 (2760), 10 (2761)
Lindstrom, Richard	EIS000329	5.1 (27), 4.5 (92), 13 (5)
Linvill, Becky	EIS000399	3.3 (50), 8.7 (28), 8.10.1 (133), 8.1 (259)
	EIS000604	3.3 (50), 8.7 (28), 8.10.1 (133), 5.3 (164)
Lipe, Marrianna	EIS001363	5.1 (27), 13 (5)
Lisa	EIS000777	5.1 (27)
Lisenbey, Ben	EIS000429	1.2 (77), 7.3 (209), 6.1 (46), 7.5.3.2 (228)
Lisi, Eddie	EIS000067	7.4.2 (399)
	EIS000095	7.4.2 (399)
	EIS000153	7.4.2 (399)
Lisi, Shelley	EIS000152	8.1 (259)
Livingston, Debra	EIS000281	8.1 (170)
Loadholt, Ann Savannah River Site Citizens Advisory Board	EIS001105	9.1 (3637), 4.5 (3638), 4.5 (63), 8.3 (201), 4.5 (3641)
Lobato, Natalie Claire	EIS002007	5.1 (27)
Lockwood, Katie	EIS002229	8.1 (170)
Lodge, Terry Toledo Coalition for Safe Energy	EIS001573	3.5 (113), 8.1 (170), 8.10.1 (166), 13 (7352), 5.5 (183)
Logan, Lyn	010437	5.1 (27)
Logan, Yvonne World Community Center	EIS001043	8.7 (141), 8.1 (170)
	EIS001780	10 (258), 8.1 (170)
	010189	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Lonergan, John	EIS001540	8.1 (170)
Long, Louis Southern Nuclear Operating Company	EIS000274	5.2 (26), 4.5 (99)
Long, Murray	EIS001143	7.5.7 (98), 5.1 (27)
Longville, John California, State of, California State Assembly	EIS001097	3.3 (50)
Lopez, Howard M.	EIS000918	3.3 (50)
Lopez, Maria	EIS000801	5.1 (27)
Lopez, Mary V.	EIS000945	1.2 (77), 7.3.1 (185)
Lopez, Ruth People Against Radioactive Dumping	EIS001837	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)
	EIS001929	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)

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Lopez, Ruth (continued) People Against Radioactive Dumping	EIS001939	5.4 (8566), 1.2 (77), 6.1 (8589), 8.1 (170), 3.3 (8600), 8.10.2 (8601), 8.8.1 (8603), 8.3 (149), 8.10 (8607), 8.10.1 (8612), 3.7 (8615), 3.7 (53), 8.10.2 (212), 5.1 (27), 3.3 (50), 5.3 (164), 8.7 (142), 8.8.1 (8657), 11.1 (8664), 4.5 (8665), 8.5.1 (8666), 1.2 (243), 8.8.3 (174), 5.4 (8670), 5.4 (1738), 5.5 (29), 5.5 (183), 13 (8682)
	EIS002248	3.3 (50), 8.3 (11532), 8.1 (11533), 3.5 (113), 4.1 (82), 12 (139)
	010089	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
	010101	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
	010363	5.3 (164), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.4 (25), 3.9 (109), 3.6 (257)
Lorinez, Thomas	EIS002253	3.7 (11485), 3.7 (11486), 8.10 (11487)
Losofsky, Sarah	EIS002024	1.2 (79), 8.10.2 (114)
Louden, Lee	EIS000621	8.11.4.2 (2211), 3.9 (109), 8.11.1 (134), 8.8.2 (135), 11.2 (202), 7.5.7 (2217), 8.1 (2218), 4.1 (82), 9.1 (138)
	EIS001944	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.7 (141), 5.3 (164), 5.1 (27), 7.5.3.2 (230)
Louden, Nancy	EIS000637	7.3 (209), 8.11.4.2 (2719), 11.2 (2720)
	EIS000646	8.7 (28)
	EIS000972	8.11.9 (47), 5.5 (29), 5.1 (27)
	EIS001941	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (170), 5.3 (164), 5.5 (183)
Louden, Nina	EIS001942	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (170)
Loux, Robert R. Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000043	3.2 (64), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106), 3.2 (80)
	EIS000054	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 7.3.2 (361), 3.2 (80)
	EIS000059	3.2 (80), 8.8.1 (196)
	EIS000062	3.2 (64), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106), 3.2 (80)
	EIS000096	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000141	3.2 (637), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 7.5.11.2 (240)
	EIS000439	1.2 (243), 3.2 (64), 3.2 (80), 2 (100), 3.2 (7010), 3.2 (7013), 7.3.2 (361)
	EIS000537	1.2 (243), 3.2 (80), 3.2 (64), 2 (100), 3.9 (109)
	EIS001887	3.2 (80), 3.2 (84), 3.2 (5238), 3.3 (50), 3.2 (64), 3.2 (32), 1.2 (5244), 3.7 (53), 2 (100), 8.3 (60), 3.2 (90), 4.5 (215), 3.2 (5260), 7.3.1 (185), 10 (5261), 7.3 (71), 7.3.2 (216), 8.7 (141), 7.5.3.2 (5270), 3.2 (9), 7.5.5 (5272), 7.5.5 (225), 7.5.11 (5274), 8.8.3 (171), 7.5.11.2 (240), 3.7 (57), 3.9 (109), 8.3 (149), 8.8.1 (5289), 8.3 (12688), 8.3.1 (195), 8.5.3 (5303), 6.1 (18), 8.8.1 (196), 8.10.1 (5307), 1.1 (124), 4.5 (5311), 1.2 (81), 1.2 (5315), 6.1 (89), 6.1 (5318), 1.1 (5319), 3.1 (5321), 3.1 (5323),

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Loux, Robert R. (continued) Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887	7.2 (5327), 3.1 (5328), 3.2 (75), 3.2 (5331), 6.1 (5332), 3.2 (5333), 6.1 (12394), 6.1 (5338), 7.5.1 (106), 3.2 (5342), 3.2 (5340), 8.3 (5346), 8.8.2 (11277), 7.2 (5352), 3.1 (11), 4.5 (5354), 7.1.1 (5356), 7.5.10 (5360), 7.1.1 (5361), 7.5.9 (95), 7.3.1 (5363), 7.1.1 (5364), 7.1.1 (5365), 7.1 (31), 7.1 (5368), 7.1 (5369), 7.1 (5370), 7.2 (5372), 7.2 (5373), 8.8.1 (5374), 8.11.11.2 (5377), 8.6.1 (223), 8.3.1 (12467), 8.10.1 (167), 8.9 (5389), 8.1 (259), 8.3.1 (5393), 8.11.1 (5394), 8.11.4.2 (5395), 8.11.1 (5396), 8.7 (142), 8.6.2 (186), 8.5.3 (11292), 8.5.3 (5406), 8.5.1 (5407), 8.5.3 (11294), 8.5.3 (190), 8.9 (193), 8.5.2 (5411), 7.3 (209), 7.1.1 (5413), 7.3 (5418), 5.4 (12691), 5.5 (29), 7.2 (5424), 9.1 (5426), 9.1 (5427), 5.4 (5428), 2 (5429), 3.2 (51), 8.3.3 (11299), 3.2 (5437), 5.4 (5439), 7.3 (5444), 8.8.1 (5449), 8.8.2 (7011), 2 (126), 3.2 (59), 3.2 (5466), 3.8 (65), 7.5.1 (5470), 7.5.2 (5471), 7.5.3.4 (5484), 7.1.1 (5485), 7.5.3.4 (5475), 7.5.3.4 (5487), 7.5.3.3 (5490), 7.5.3 (5491), 7.5.3.5 (5492), 7.5.3.5 (5493), 7.5.3.1 (5494), 7.5.3.2 (8), 7.5.3.2 (5496), 7.5.3.2 (12402), 7.5.3.2 (5498), 7.5.3.2 (5503), 7.5.3.2 (5504), 7.5.3.2 (111), 7.5.3.2 (5506), 7.5.3.2 (5508), 7.5.3.2 (5509), 7.5.3.2 (5512), 7.5.3.2 (5514), 7.5.3.2 (5515), 7.5.3.2 (5517), 7.5.3.3 (5521), 7.5.4 (5523), 7.5.5.2 (237), 7.5.11 (5534), 7.5.6 (5548), 10 (5549), 10 (5556), 7.5.10 (165), 8.3 (161), 8.9 (5561), 3.1 (5565), 8.11.10 (112), 8.11.1 (5569), 8.11.4 (5568), 8.11.5 (5572), 8.11.11.2 (5573), 7.5.6 (5574), 8.7 (140), 3.1 (7016), 8.11.5.1 (5576), 3.9 (5577), 7.5.4 (5582), 3.2 (5583), 7.1.1 (5584), 7.1.1 (5588), 7.5.2 (5589), 7.5.3.1 (5590), 7.5.3.1 (5591), 8.8.3 (176), 7.5.2 (5593), 7.5.2 (5594), 7.5.2 (5595), 7.5.2 (9729), 7.5.3 (5596), 7.5.3 (5597), 7.2 (5598), 7.2 (5599), 7.2 (5600), 8.11.3 (5601), 7.5.3.2 (5602), 7.5.3.2 (5603), 7.5.4.1 (5604), 8.11.11.2 (5606), 7.5.11.2 (5607), 7.5.11.2 (181), 7.5.11.2 (5610), 7.5.11.2 (5611), 8.11.6 (5616), 7.5.7 (5618), 7.5.7 (5617), 7.4.1 (61), 8.10.1 (5620), 7.5.9 (5621), 7.1.1 (5624), 7.5.11 (5629), 4.5 (12312), 7.1.1 (5630), 4.5 (217), 3.2 (5637), 7.5.6 (5638), 7.5.7 (5639), 7.4 (207), 4.5 (5640), 3.2 (5647), 7.3 (221), 7.3 (5650), 7.5.3.2 (5651), 7.3 (239), 7.3 (5657), 7.3 (5656), 7.3 (5659), 7.3.2 (5660), 7.3.2 (5661), 7.3 (7), 7.3 (5664), 7.1.1 (5665), 7.3 (5668), 7.3 (5669), 7.3 (5671), 7.1.1 (5673), 7.3 (5672), 7.3 (5674), 7.3 (5675), 7.3 (256), 7.3 (220), 7.3 (5683), 8.3 (5678), 6.1 (5680), 8.7 (5688), 8.3.3 (5690), 8.3 (5687), 8.3 (5689), 8.11.1 (5693), 8.7 (247), 8.11.4.2 (5697), 8.5.2 (11312), 8.11.5.1 (5698), 8.11.9 (5699), 8.11.9 (5700), 8.3 (160), 3.1 (5704), 3.1 (21), 8.10 (156), 8.10 (5708), 8.4 (12573), 8.10 (7383), 8.10 (5713), 8.10.1 (166), 8.11.11.2 (5717), 8.5.2 (5716), 8.10.2 (5718), 8.3.1 (5719), 8.10 (68),

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Loux, Robert R. (continued) Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887	8.6.2 (137), 8.11.1 (5729), 8.5.3 (5730), 8.10 (5731), 8.8.1 (187), 8.9 (5733), 8.11.11.2 (12509), 9.1 (138), 10 (5740), 10 (5741), 10 (5743), 10 (5744), 10 (5745), 10 (5746), 10 (5747), 10 (5748), 10 (5749), 10 (5750), 7.5.4.2 (5752), 7.5.4.1 (118), 8.7 (5755), 7.3 (5757), 7.5.4 (5756), 8.11.1 (5760), 7.3 (5759), 4.2 (5763), 4.1 (83), 4.2 (5769), 4.2 (5771), 4.2 (5761), 4.2 (5765), 3.1 (5768), 7.4 (5772), 7.3 (232), 7.3 (5775), 7.5.6 (130), 8.9 (5784), 8.10 (154), 9.1 (5785), 4.5 (12098), 7.5.7 (105), 8.11.1 (11873), 8.8.1 (11824), 8.3.1 (1172), 8.5.3 (1173), 8.9 (11877), 8.10 (148), 10 (7123), 3.3 (11251), 12 (12102), 12 (12103), 12 (12104), 4.5 (217), 3.2 (3961), 7.3.2 (12109), 7.5.1 (7348), 3.3 (12110), 7.3.2 (216), 12 (14), 3.2 (12675), 3.2 (7130), 3.2 (12121), 10 (12123), 10 (7374), 7.5.3.2 (9076), 3.2 (12128), 7.5.3.2 (12139), 7.5.3.2 (12132), 8.10 (8420), 8.10.1 (12134), 8.10 (12135), 8.10 (12136), 8.7 (12137), 7.5.3.2 (5809), 3.2 (12196), 12 (7276)
	010025	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
	010107	3.6 (257), 3.5 (36), 3.5 (246), 7.4 (241), 7.4 (125), 9.1 (250)
	010242	3.2 (32), 3.5 (204), 8.3 (161), 3.2 (55), 4.4 (11612), 3.5 (246), 3.5 (36), 3.0 (6065), 4.5 (92), 7.0 (12607), 7.4 (125), 7.0 (12555), 7.0 (12469), 7.4 (241), 3.9 (109), 7.4 (67), 8.12 (224), 7.5.9 (12537), 7.5.3 (8436), 7.0 (12470), 7.0 (12403), 7.5.2 (12404), 7.5.9 (175), 7.5.10 (165), 7.5.10 (12349), 7.3 (12317), 7.3.2 (216), 10 (12319), 3.5 (12303)
Lowe, Nancy	EIS000358	8.1 (170)
Lowes, Saundra A.	010064	8.1 (170), 7.5.3.2 (228), 5.3 (164)
Ludlow, Grant	EIS000104	12 (139), 12 (1614)
	EIS000112	5.5 (29), 7.5.7 (10722)
Luft, Mariah	EIS000424	7.3 (1341), 1.1 (124)
Lugar, Richard G. U.S. Senate - Indiana	EIS002177	3.3 (8068)
Lytle, Donna D.	EIS001336	5.1 (27), 8.1 (170)
Lytle, Ken E.	EIS000697	5.3 (164)
	EIS001332	5.1 (27), 8.1 (170)
Lytle, Leigh Earth Challenge	EIS000322	8.1 (170), 7.5.3 (1212), 7.5.11.2 (181), 7.5.3.2 (228), 5.1 (27), 7.3 (206)
Macander, Matt	EIS002190	5.1 (27)
Mack, Eva	EIS001810	1.2 (243), 8.7 (141), 12 (139), 5.5 (29)
Mack, Kay	EIS000513	No comment
Maddy, Bryan	EIS002041	1.1 (101), 5.5 (29), 8.4 (25), 7.3 (7962)
Madia, Joseph V.	EIS001519	5.1 (27), 3.2 (80), 7.3.1 (185), 7.5.3.2 (4778), 7.4.1 (61), 7.3 (4780), 8.10 (4781)
Madura, Ryan	EIS000573	3.2 (12533)
Magavern, Bill Committee to Bridge the Gap	EIS000390	3.2 (80), 3.2 (64), 8 (6949), 8.3 (161), 8.10.2 (114), 7.5.11.2 (240), 3.9 (109)
	EIS000539	12 (139), 3.2 (64), 7.5.7 (3038), 8.3 (161), 3.9 (109), 7.5.11.2 (240), 3.2 (80)

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Mahr, Ed	EIS001804	13 (37), 5.3 (164), 7.4 (6930)
Maietta, Marie	010467	5.1 (27)
Makhijani, Arjun Institute for Energy and Environmental Research	EIS001886	7.5.3 (10748), 3.2 (1031), 7.3 (12438), 7.3 (71), 7.5.7 (10749), 7.5.3.2 (229), 7.5.11.2 (240), 4.3 (10753), 7.5.3.2 (10756), 7.5.3 (10757), 4.3 (8290)
Mall, S.	EIS002090	4.1 (10119)
Malone, Charlie	EIS001106	3.2 (75), 3.2 (80), 11.1 (12433), 7.5.4 (7104), 7.5.4 (7106), 7.5.4 (7107), 3.2 (9), 8.11.4 (42), 9.1 (138), 10 (7115), 7.5.4 (7116), 7.5.4 (7117), 7.5.4 (7118), 7.5.1 (7122), 10 (7123), 3.3 (7125), 12 (7276), 12 (7283), 12 (139), 4.5 (217), 3.2 (3961), 7.3.2 (7345), 7.5.1 (7348), 7.3.2 (216), 3.2 (7359), 3.2 (11334), 10 (7362), 3.2 (7366), 10 (7369), 10 (7374), 3.2 (7101), 3.3 (12327), 12 (14)
Mandell, Sondra	EIS000003	3.3 (50), 5.1 (27)
Mankus, Timothy J.	EIS001065	8.1 (170)
Mannos, Allison	010412	5.1 (27)
Manuel, Carolyn Goalsby	EIS000928	7.5.11.2 (181)
Manzini, Tammy Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000613	8.3 (2202)
Manzini, Tammy Lander County, Nevada, Board of County Commissioners	EIS000614	8.3 (2304), 8.3 (149), 8.3 (8073), 8.1 (259), 7.3 (7), 3.2 (80), 10 (258), 7.5.6 (231), 7.5.8 (8091), 8.11.4.2 (43), 8.11.1 (2324), 8.7 (28), 8.10.2 (203), 10 (2330), 8.8.2 (135)
Maple, Susan L.	EIS001340	7.3 (4840), 7.5.3.3 (4841), 5.1 (27), 7.3.1 (4843), 13 (5), 8.10.1 (133), 5.5 (30)
	EIS001659	7.3 (4840), 7.5.3.3 (4841), 5.1 (27), 7.3.1 (4843), 13 (5), 8.10.1 (133), 5.5 (30)
	010176	8.1 (170)
Marchese, John	EIS001079	1.1 (101), 1.2 (3715), 4.3 (70), 3.2 (75), 8.3 (161), 8.4 (25), 7.5.7 (98), 7.3.2 (216), 7.3 (110), 7.5.11.2 (181), 3.3 (50)
Marciniak, Aimee	EIS001963	3.2 (80), 7.5.11 (52), 8.10 (8321)
Marcum, Debby	EIS002049	3.2 (51), 3.2 (64)
Maret, Susan Sierra Club	EIS000270	3.2 (80), 3.2 (1121), 5.1 (27), 8.10 (1123), 10 (3), 7.3.2 (216), 7.3 (220), 7.3 (232), 7.5.7 (93), 7.5.7 (98), 7.5.6 (1130), 7.5.4 (1131), 7.5.7 (688), 7.5.7 (1132), 1.2 (77), 7.5.7 (1133), 3.2 (1134), 10 (1135), 7.5.11.2 (181), 3.3 (50), 3.2 (1137), 13 (1138), 7.5.7 (1139), 8.10.1 (133)
	EIS000505	3.2 (80), 5.1 (27), 8.3 (149), 7.3.2 (216), 7.3 (220), 7.5.7 (98), 7.5.6 (1130), 7.5.4 (1508), 7.5.11.2 (181), 3.3 (50), 5.1 (27), 3.2 (1121)
Margie	EIS000744	7.5.7 (66), 5.5 (30)
Mark, Lary E.	010016	4.1 (82)
Marlovitz, Linda	EIS001604	8.1 (170), 7.5.11.2 (181), 13 (5), 5.3 (164)
Marquart, Carmen L.	EIS000342	5.1 (27), 7.5.3.2 (228), 7.1 (191), 6.1 (46)
Marquez, Deron San Manuel Band of Mission Indians	EIS001908	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Marren, Terrance P. Mesquite, Nevada, City of	EIS000039	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
	EIS000042	8.1 (170), 8.11.4.2 (392), 8.1 (259), 8.3 (161), 5.1 (27)
Marsden, Velma	EIS001494	5.1 (27), 13 (5)
Marsh, Amy Hadden	EIS000499	3.3 (50), 8.3 (161), 3.2 (64), 3.9 (109), 7.5.11.2 (240), 8.8.3 (171), 5.5 (29), 7.3 (220), 7.5.11.2 (181), 13 (5)
Marsh, Jim Longstreet Inn	EIS000864	5.2 (26), 3.9 (109)
Marshall, Tom Rocky Mountain Peace and Justice Center	EIS000517	1.1 (101), 7.3 (220), 7.5.11.2 (240), 3.3 (50), 8.3 (149), 3.2 (69), 8.10.2 (212), 3.9 (109), 8.8.3 (171), 8.8.1 (189), 3.2 (80)
	EIS001946	5.1 (27), 3.2 (80), 8.3 (161), 10 (3), 8.3 (149), 3.9 (109), 8.4 (115), 7.5.3.2 (228), 7.5.3.2 (229), 7.5.3.5 (4952), 3.2 (64), 7.5.11.2 (240), 8.8.3 (171)
Martin, Dick U.S. Department of the Interior, Death Valley National Park	EIS000375	7.5.3.2 (2), 8.10.2 (114), 7.5.8 (1368)
Martin, John Garfield County, Colorado, Board of County Commissioners	EIS000809	8.10.2 (212), 8.10.2 (114), 6.1 (89), 8.10.1 (10033), 3.3 (50)
Martin, Melissa	EIS001299	5.1 (27), 5.5 (29)
Marting, Mary Susan	EIS001236	5.3 (164)
Martinson, Ernest	EIS001486	9.1 (3959)
	010312	9.1 (250), 5.2 (26), 5.5 (183)
Martt, Rick	EIS000899	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Mason, Sara P. Citizen Alert	EIS000705	5.1 (27), 12 (139)
Massey, K. Jane	EIS000535	7.5.2 (2007), 5.1 (27)
Massey, Rex Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000617	8.3 (2202)
Mathews, John	EIS000686	3.3 (88)
Mathias, Richard L. Illinois, State of, Commerce Commission	EIS001375	5.2 (26), 8.3 (149), 9.1 (4101), 3.2 (64), 3.2 (80), 4.5 (107)
	EIS001442	5.2 (26), 8.3 (149), 9.1 (4101), 3.2 (64), 3.2 (80), 4.5 (107)
Mathieu, Elizabeth A.	EIS001391	8.1 (170), 7.5.3.2 (228), 5.3 (164)
	010065	8.1 (170)
Mayberry, Mark	EIS000883	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Mayes, Susan	EIS002281	8.10 (11571), 8.10.2 (11572), 8.1 (11573), 5.1 (27), 8.1 (170), 13 (5)
Mayr, Tony	EIS001100	8.1 (170), 8.4 (25), 8.7 (2874)
Mays, Gordon B.	EIS001347	5.1 (27), 13 (5)
Mays, Wallace	EIS000493	5.2 (26), 4.3 (1959), 13 (5)
McCall, Thomas W. L. U.S. Department of the Air Force	EIS001047	8.3.2 (136)

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McCall, Tom U.S. House of Representatives - Georgia	EIS000271	5.2 (26), 8 (158), 13 (5)
McClarren, Chris	EIS001031	5.1 (27), 5.5 (183), 5.3 (164), 5.4 (219), 8.1 (170), 8.4 (115), 8.10.2 (114), 8.10.2 (212), 4.5 (3605), 3.3 (50), 8.10 (54), 8.10 (3608), 8.7 (147), 7.1.3 (3609), 8.7 (184), 8.3 (3611), 8.3 (161), 8.7 (247), 4.5 (3615), 7.3 (3616), 8.3 (60), 6.1 (49)
	EIS001763	5.1 (27), 5.5 (183), 5.3 (164), 5.4 (219), 8.1 (170), 8.4 (115), 8.10.2 (114), 8.10.2 (212), 4.5 (3605), 3.3 (50)
McClarren, Thomas	EIS001764	5.4 (219), 8.4 (25), 8.10.1 (133), 8.10.3 (182), 5.3 (164), 8.1 (170), 13 (5)
McClay, Lawrence	010106	5.2 (26)
McClellan, Brad	EIS000548	5.1 (27), 13 (5), 4.5 (3582), 8.10 (155), 7.5.3.2 (228), 4.5 (3586)
McClelland, Dorrine	010201	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
McClure, John C. Nebraska Public Power District	EIS001166	8 (158), 8.4 (115), 8.10.2 (114)
McClure, Judy	EIS001825	5.3 (164)
McCormick, Bill	EIS001425	7.5.3.2 (228), 12 (139), 5.5 (183)
McCracken, Deborah	EIS002215	3.3 (50)
	010329	3.6 (257), 3.1 (12787)
McCracken, Ralph	EIS000087	8.4 (1144), 1.2 (77), 7.5.3.2 (1146), 3.9 (109), 3.2 (1148), 4.3 (128), 1.2 (1150), 5.1 (27)
McDade, Waynette	EIS000404	8.4 (115)
McDonald, Lauren Georgia, State of, Public Service Commission	EIS000163	4.5 (99), 5.2 (26)
	EIS000277	4.5 (99), 5.2 (26)
McDowell, Bethany	EIS000425	5.5 (29), 7.5.3.2 (230), 7.5.3.2 (228)
McFadden, Donna Mescalero Apache Tribe	EIS000030	3.10 (4)
McFail, Edward	EIS000769	3.3 (50), 3.3 (50)
	EIS000856	13 (131), 7.5.3.2 (2760), 10 (2761)
McFarland, Rose K.	EIS002044	8.1 (170), 8.10.2 (212)
McGee, T.	EIS000868	8.1 (170)
McGeehan, Carol	EIS001881	8.1 (170), 8.8.3 (171), 3.2 (80), 8.10 (168), 3.2 (64), 3.3 (6322), 7.3 (222)
	010277	8.1 (170), 8.10.2 (114), 8.3 (201), 8.4 (25)
McGhee, Earl	EIS000048	3.2 (80), 8.1 (170), 7.5.2 (383), 7.5.7 (384), 7.5.3.2 (230), 5.1 (27)
	EIS000086	3.2 (80), 8.1 (170), 7.5.2 (383), 7.5.7 (384), 7.5.3.2 (230), 5.1 (27)
McGinnis, Patrick	EIS001140	2 (100), 5.1 (27)
McGivern, Mary Ann Sisters of Loretto	EIS001004	5.1 (27), 5.5 (183), 12 (139)
	EIS001743	5.1 (27), 5.5 (183), 12 (139)
McGowan, Tom	EIS002124	5.1 (27), 7.5.11.2 (181), 3.2 (80), 7.3 (209)
	EIS002211	7.5.7 (98), 7.3 (10494), 5.5 (29), 7.3 (206), 1.2 (10522), 3.3 (10526)
	EIS002214	1.1 (34), 7.5.11.2 (181), 1.1 (124)

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McGowan, Tom (continued)	010005	3.1 (8703), 5.1 (27)
	010121	5.1 (27)
McGraw, John	EIS000628	13 (5)
McGuiness, James	EIS000461	3.3 (50), 1.1 (101), 8.3 (201), 8.1 (170), 5.4 (1671), 7.5.11.2 (240), 8.7 (1673)
McGuire, Dolores	EIS001263	8.1 (170), 5.5 (183)
McHugh, Sue A.	EIS000869	8.7 (141), 7.3.2 (216), 10 (258), 10 (8814), 5.5 (29), 8.10.2 (194), 7.5.3.3 (8826), 7.5.2 (8827), 7.5.3.4 (8828), 7.5.7 (8833), 7.4 (8834), 7.5.7 (98), 7.5.9 (8839), 7.5.2 (8841), 8.5.1 (8842), 7.5.10 (8843), 7.4.1 (61), 8.10.1 (133), 8.3 (149), 8.8.3 (8849), 8.8.3 (171), 7.5.11.2 (181), 7.5.6 (8856), 7.5.5 (8857), 10 (8860), 10 (8862), 10 (8864), 7.5.11.2 (8903), 7.3 (8904), 10 (8906), 5.3 (164), 3.2 (8909), 3.8 (65)
	EIS002152	7.3.2 (216), 10 (258), 10 (8814), 5.5 (29), 8.10.2 (194), 7.5.3.3 (8826), 7.5.3.4 (8828), 7.5.7 (8833), 7.5.2 (8827), 7.4 (8834), 7.5.7 (98), 5.1 (27)
McIntyre, Angela	EIS001063	5.3 (164), 3.9 (109), 7.5.7 (93), 8.1 (259)
McIntyre, John J.	EIS000779	5.1 (27)
McKeel, Daniel W.	EIS001021	3.3 (50), 7.4.1 (61), 7.3 (8209), 12 (139), 5.4 (219), 8.8.1 (8218), 8.4 (8223), 8.10.2 (212), 5.5 (29)
	EIS001380	5.3 (6523), 5.4 (12701), 3.3 (50), 8.1 (170), 5.1 (27), 8.3 (149), 8.8.3 (174), 7.5.7 (98), 7.5.7 (6577), 7.5.7 (6582), 7.5.7 (6584), 7.4 (6587), 7.4 (6589), 7.3 (6591), 7.4 (207), 7.5.7 (6594)
	EIS001784	3.3 (50), 7.3 (6906), 4.5 (6912), 8.10 (157), 8.10 (6916), 7.3 (209), 8.10.2 (200)
McKeown, Diana S. Clean Water Action Alliance of Minnesota	EIS001847	5.3 (164), 3.3 (50), 3.1 (15), 8.3 (149), 8.5.3 (7048), 8.3 (161), 8.10.2 (114), 7.5.11 (52), 1.2 (77), 7.5.3.2 (111), 7.5.3 (7081), 7.5.3.2 (229), 3.2 (80), 8.10.2 (200)
	010286	3.6 (257), 7.5.3.2 (228), 4.4 (12925), 7.5.11.2 (240), 7.5.1 (106)
McKinney, Patricia	EIS000091	5.2 (26), 11.2 (454)
McKinney, Paul	EIS000049	5.2 (26), 8.8.2 (135), 8.3 (160), 11.1 (346), 3.3 (50)
	EIS000085	5.2 (26), 7.5.1 (11230), 8.1 (259)
McLendon, Marci	EIS000178	8.8.1 (196), 8.10.2 (114), 8.3 (161), 1.2 (243), 5.1 (27), 1.2 (77)
	EIS000305	8.8.1 (196), 8.10.2 (114), 8.3 (161), 1.2 (243), 5.1 (27), 1.2 (77)
McMichael, Michelle	EIS000881	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27)
McMullen, Robert	010184	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
McMurray, Dean	EIS002054	3.1 (16), 7.3.2 (216), 7.3 (110), 8.1 (170)
McNaughton, Rose M.	EIS001341	8.1 (170), 1.1 (101)
McNeal, Jerry	EIS001932	8.4 (10016), 5.3 (164)
McNelley, Mark	EIS000017	8.3 (149), 1.1 (101)
McPartlin, Ann P.	EIS001189	5.1 (27), 7.5.3.2 (2)
McPhail, Michael B.	010443	5.1 (27)
McQueen, Kaitlyn	EIS001171	8.1 (170)
McRae, John	EIS001305	8.3.3 (23)
McVoy, Charles L.	EIS001267	8.1 (170)

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McWilliams, Earl	EIS000672	8.5.1 (180), 3.9 (109)
	EIS000695	8.5.1 (180)
Meacham, Ken Mesquite, Nevada, City of, Fire Department	EIS001399	8.1 (259), 8.10.2 (203), 7.5.6 (4388)
Meadows, Lora	EIS001983	2 (100), 13 (5), 5.1 (27)
Medica, Philip A.	010475	8.3.3 (23)
Medicus, Leo J.	EIS000810	3.2 (80), 1.1 (101)
Medina, Mitchell	EIS002011	7.5.7 (98), 8.1 (259), 1.1 (101)
Meharg, Margaret E.	EIS001265	8.1 (6092), 8.3.3 (23), 8.7 (184), 5.1 (27)
	EIS002068	8.3.3 (23), 8.3 (161), 8.11.1 (6986)
	010061	8.7 (184), 8.3.3 (24)
Mendelson, Jane C.	EIS000980	8.1 (170), 8.10.1 (3700), 7.4.1 (61)
	EIS001011	8.1 (170), 8.10.1 (3700), 7.4.1 (61)
	EIS001756	3.3 (50), 8.10.1 (7811)
Menefee, Tom	EIS000861	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27)
Menzer, David	EIS001839	5.1 (27), 12 (139)
Mersch, Jan	EIS001697	3.3 (50)
Mesko, Karen	EIS002178	5.1 (27)
Meyer, Shelly	EIS001407	8.1 (170)
Meyer, T.	EIS001406	8.1 (170)
Meyers, Calvin Moapa Band of Paiutes	EIS002144	8.11.11.2 (10764), 3.7 (58), 3.7 (57), 3.3 (50), 8.11.11.2 (10768), 7.5.11.2 (240), 8.8.2 (10770)
	010119	3.7 (58), 7.5.11 (13315), 3.7 (57), 10 (91)
	010335	3.6 (257), 3.7 (57), 7.5.11.2 (240), 3.9 (109), 8.1 (259)
Meza, Martin	EIS002008	5.1 (27)
Michelson, Renee	EIS001429	5.1 (27)
Mihill, Doris	EIS001339	8.1 (170), 13 (5), 5.1 (27)
Mikels, Jon D. San Bernardino County, California, Board of Supervisors	EIS001865	3.7 (53), 3.3 (50), 8.1 (170), 8.3 (149), 8.3 (161), 8.10.2 (10135), 8.3.1 (10139), 8.3 (201), 8.8.1 (10142), 8.6.1 (223)
	EIS002231	3.3 (50), 8.3 (149), 8.10 (68), 8.1 (170)
Mikels, Marjorie Musser	EIS001455	3.3 (50), 7.5.11.2 (181), 7.5.3.3 (4502), 7.5.3.2 (4503), 3.2 (80), 5.3 (164)
	EIS001542	3.3 (50), 7.5.11.2 (181), 7.5.3.3 (4502), 7.5.3.2 (4503), 3.2 (80), 5.3 (164)
	EIS001876	3.3 (50)
	EIS002241	3.3 (50), 8.3 (213), 5.5 (183)
	EIS002245	3.3 (50)
	010315	8.1 (170), 5.1 (27), 5.3 (164), 5.5 (183), 4.1 (82)
Mikler, Phillip	EIS000862	3.1 (16), 7.3.2 (216), 7.3 (110), 1.1 (101)
Miksicek, Michael Louis	EIS001211	5.2 (26)
Miller, Anne Norton U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance	010231	3.5 (13267), 3.5 (13268), 4.4 (13269), 4.5 (13270), 3.5 (13271), 7.1.2 (13272), 7.1.2.2 (13273), 7.1.2 (13274), 7.1.2 (13275), 7.4 (13276), 8.12 (13277), 7.3 (13279), 7.3 (13280), 5.4 (13281)
	010357	3.5 (13267), 3.5 (13268), 4.4 (13269), 4.5 (13270), 3.5 (13271), 7.1.2 (13272), 7.1.2.2 (13273), 7.1.2 (13274), 7.1.2 (13275), 7.4 (13276), 8.12 (13277), 7.3 (13279), 7.3 (13280), 5.4 (13281)

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Miller, Cynthia B. Florida, State of, Public Service Commission	EIS001824	4.5 (99), 5.2 (26), 8 (158), 3.2 (80), 4.5 (9125)
	EIS001897	5.2 (26), 4.5 (99), 4.1 (10552), 8 (158), 1.2 (78)
Miller, Dale Ohio, State of, Ohio House of Representatives	EIS001280	8.3 (60), 3.3 (50), 8.7 (197), 8.7 (247), 13 (5)
Miller, Heather	EIS000789	5.1 (27)
Miller, Jack	EIS000768	3.3 (50), 8.1 (170)
Miller, Joseph	EIS001871	5.1 (27), 8.4 (25), 8.10.2 (114), 8.3 (149), 8.10.2 (200)
Miller, Kit	EIS000352	5.1 (27), 12 (139), 3.2 (80), 13 (5), 5.3 (164), 8.3 (161), 3.9 (109), 7.5.11.2 (181)
Miller, Lalove	010347	3.3 (163)
Miller, Matt	EIS000584	5.1 (27)
Miller, Michael W.	010446	5.1 (27), 13 (5)
Miller, Robert Ely, Nevada, City of	010378	3.10 (12803), 8.3 (937), 3.4 (936)
Miller, Sally Wilderness Society, The	EIS001938	7.5.3 (9212), 7.5.3.2 (9213), 7.5.4.2 (39), 8.8.1 (9215), 7.5.3.2 (2), 3.9 (109), 3.2 (9273), 3.2 (51), 3.2 (80)
Miller, Vernon J. Paiute Indian Reservation of Owens Valley	010345	5.1 (27), 7.5.11.2 (240), 7.5.5 (11777)
Miller, Vernon Fort Independence Indian Tribe	EIS002084	3.3 (163)
Miller, William H.	EIS001037	5.2 (26), 8.4 (25), 8 (158), 13 (5)
	EIS001761	5.2 (26), 8.4 (25), 8 (158), 13 (5)
Mills, Bill	EIS001313	5.3 (164), 7.3 (4161), 1.2 (78)
	EIS001589	5.3 (164), 7.3 (4161), 1.2 (78)
Miner-Nordstrom, Dan Nukewatch	010208	5.1 (27)
Minerick, Adrienne R.	010082	5.5 (29)
Minghi, John	EIS000887	1.2 (77), 7.3.1 (185), 13 (2793)
Minn, Steve Nuclear Waste Strategy Coalition	EIS001210	5.2 (26), 5.4 (4319), 5.4 (4320), 8 (158)
Minogue, Rebecca	EIS000807	5.1 (27), 4.5 (2750)
Misener, Jill Ashtabula, Ohio, City Council	EIS001545	8.7 (6971)
Mitchell, Cynthia	EIS000547	3.2 (64), 8.3 (161)
Mitchell, Kirsten	EIS002290	13 (131)
Mocilnikarr, Brian	EIS001088	8.3.3 (23)
Modde, Janet	EIS001125	8.1 (170)
	EIS001172	8.1 (170)
Moehle, Cay	EIS001872	8.1 (170)
Molloff, Jeanine	EIS001766	12 (14), 7.5.7 (105), 6.1 (12605), 8.10.3 (182), 13 (5), 8.1 (170), 8.10.1 (133), 12 (139), 5.1 (27)
Money, Daniel G.	EIS001960	5.1 (27), 13 (5), 8.7 (184)
	EIS002174	5.1 (27), 13 (5), 8.7 (184)
Montana, Deborah	EIS002268	8.3 (161), 8.4 (115), 8.10 (157), 6.1 (11343), 1.1 (11344), 7.5.7 (11345)
Montre, John	EIS001782	8.1 (170), 5.3 (164), 5.5 (183)

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Moon-Sparrow, Julia Shundahai Network	EIS002151	5.1 (27), 7.5.7 (98), 2 (100), 7.5.11.2 (181), 7.5.3.2 (9715), 10 (9716), 12 (139), 5.3 (164), 3.3 (50)
Moore, Erin M. Oregon State University	010427	5.1 (27), 13 (5)
Moore, Janet A.	EIS002308	5.1 (27)
Moore, Liz	EIS001235	5.3 (164)
Moore, Margie	EIS000877	8.1 (170), 3.3 (50)
Moore, Richard P. St. Louis County, Missouri, Council	EIS001044	8.1 (170), 8.7 (144)
	EIS001786	8.1 (170), 8.7 (144)
Moose, Bertha Big Pine Paiute Tribe of the Owens Valley	EIS002083	3.3 (163)
Moose, Gayleen Bishop Owens Valley Paiute Tribe	010340	3.6 (257), 11.1 (1473), 5.1 (27)
Morris, Marigael	EIS000555	3.3 (50), 1.2 (79), 5.5 (29), 5.3 (164), 5.4 (219)
Morris, Norman	EIS001270	3.3 (50), 3.9 (109)
Morrison, Otto	EIS000821	5.1 (27)
Morrissey, Spencer W. Brotherhood of Maintenance of Way Employees	EIS001168	8.7 (144), 4.1 (82), 8.8.3 (205), 8.4 (25), 8.7 (142), 8.9 (193)
	EIS001335	8.7 (142), 8.4 (6925), 8.7 (144), 8.8.3 (205), 4.1 (82), 8.1 (170)
Morse, Carole	EIS000958	1.2 (79), 7.4.1 (61), 8.1 (170)
Moss, Paul	010421	5.1 (27), 3.6 (257)
Mount, George H.	EIS002279	13 (5)
	EIS002296	13 (5)
Mount, Julia Luna	EIS002280	13 (5)
Moyle, Donald L.	EIS001737	8.1 (170), 8.10.1 (8503), 5.3 (164)
Moyle, Frances L.	EIS001739	8.1 (170), 3.3 (50), 1.1 (10101)
Mueller, Margaret	EIS001092	8.7 (141), 5.3 (164), 5.5 (183), 7.3 (209), 8.1 (170)
	010041	1.1 (124), 8.1 (170)
Mueller, San	010254	5.1 (27)
Muhammad, W. Fard	EIS001718	5.1 (27)
Muia, Gloria	EIS001915	8.1 (170), 5.3 (164)
Mullarkey, Barbara Alexander Waste Ideas Network	EIS001318	8.1 (170), 13 (5), 7.5.11 (4963), 5.5 (29)
	EIS001601	8.1 (170), 13 (5), 7.5.11 (4963), 5.5 (29)
Muller, Mick	EIS001574	5.2 (26)
Mulock, Donald	EIS000661	5.1 (27)
Mulvenon, Norman A. Citizens' Advisory Panel of the Oak Ridge Reservation Local Oversight Committee, Inc.	EIS001450	5.2 (26), 4.3 (129), 3.2 (80), 4.5 (217), 3.7 (4744), 5.4 (4745), 7.3.1 (185), 3.2 (55), 10 (4749)
	EIS001505	5.2 (26), 4.3 (129), 3.2 (80), 4.5 (217), 3.7 (4744), 5.4 (4745), 7.3.1 (185), 3.2 (55), 10 (4749)
	010175	3.5 (204), 6.1 (46), 4.5 (63), 3.2 (55), 3.4 (10163), 4.4 (244), 3.5 (36)

Commenter	Comment Document	Location of Comments/Responses
Munger, Nancy J.	EIS001048	8.1 (259), 1.1 (101), 1.2 (77), 7.5.3.2 (230), 5.5 (3050), 7.5.3.2 (228), 5.3 (164), 4.1 (82)
	010271	5.1 (27), 5.5 (29)
	010309	5.1 (27), 5.5 (29)
Muñoz, Melissa Colorado People's Environmental and Economic Network	EIS000253	7.5.11.2 (240), 8.1 (518), 8.8.3 (171), 7.5.11 (52)
	EIS000503	7.5.11.2 (240), 8.1 (518), 8.8.3 (171), 7.5.11 (52)
Murphy, Angie	010200	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Murphy, Michael P. Virginia, Commonwealth of, Department of Environmental Quality	EIS001209	5.2 (26), 8.10.1 (4331), 4.2 (4332)
Murphy, Shelia	EIS001578	3.3 (50), 8.1 (170)
Murray, Bonnie	EIS001269	7.5.7 (98), 8.1 (170)
Murray, Carol L.	EIS001268	8.1 (170)
Murray, Kay	EIS000806	5.1 (27)
Musser, Edna H. Virginia Power	EIS000224	5.2 (26)
Mutrux, Elsa L.	010173	8.1 (170), 5.3 (164)
Mutton, James O.	EIS000051	8.8.2 (135)
Myers, Sarah Herstand	EIS001016	8.10.3 (182), 5.1 (27), 13 (5), 7.5.3.2 (228)
	EIS001779	7.5.5.2 (38), 8.1 (170), 3.3 (50), 4.1 (82), 8.10.2 (194), 5.1 (27), 13 (5)
Myers, Theodore FirstEnergy Nuclear Operating Company	EIS001553	4.5 (12045), 5.2 (26), 8 (158), 3.3 (50)
Napier, Larry	EIS000730	1.1 (101)
Napier, Nancy	EIS000175	8.1 (170)
Nations, Linda	EIS001937	5.3 (164), 3.2 (9110), 3.3 (9111), 11.2 (9112), 3.1 (12)
Navis, Irene Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	010027	3.6 (257), 3.5 (204), 3.5 (233), 3.5 (36), 10 (91), 10 (3), 7.3 (7), 7.3 (253), 4.5 (5766), 7.5.3.2 (5767)
	010118	3.6 (257), 3.5 (233), 8.3 (149), 4.5 (92), 10 (258), 7.3 (253)
Nazario, Joseph	EIS001355	5.1 (27), 13 (5)
Neal, Douglas	EIS002139	5.2 (26)
Negin, Gary A.	EIS002260	3.3 (50), 13 (211), 8.3 (149)
Nelson, Joan	EIS000187	5.3 (164)
Nester, Dennis	EIS000445	5.5 (29), 7.3 (210)
	EIS000464	5.5 (29), 13 (1906), 7.3 (209)
	EIS000471	No comment
	EIS002102	7.5.7 (93), 5.5 (29), 5.1 (27), 13 (10660)
	EIS002131	5.5 (29), 1.1 (122), 7.1 (10574), 5.4 (10580)
	010171	5.5 (29)
Neuffer, Daniel	EIS001330	7.5.3 (3969), 7.3 (232)
Neura, Sharon	EIS001664	5.5 (183), 5.3 (164), 8.4 (25), 8.10.2 (212), 8.10.1 (133), 8.1 (170)
Newell, Mark A.	EIS001682	7.5.11.2 (181), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Newton, Fletcher Power Resources	EIS000494	4.5 (99), 4.5 (1961), 5.2 (26)
Newton, Janice Southeast County Citizens Advisory Committee	EIS000260	3.9 (109), 3.2 (940), 7.5.3.2 (2), 8.10.2 (203)
	EIS000373	3.9 (109), 3.2 (940), 7.5.3.2 (2), 8.10.2 (203)
Nguyen, Hannah	EIS000944	7.5.3.2 (2760), 10 (2761)
Nicol, Deborah	010439	5.1 (27)
Nicol, Scott	010471	5.1 (27), 5.5 (29)
Nielson, Dianne R. Utah, State of, Department of Environmental Quality	EIS001376	8.8.3 (177), 8.3 (161), 8.10.1 (133), 9.1 (4482)
	EIS001445	8.8.3 (177), 8.3 (161), 8.10.1 (133), 9.1 (4482)
	EIS001472	3.3 (50), 8.3 (149), 8.8.3 (177), 8.3 (161), 8.5.3 (4419), 8.10.1 (133)
Niemann, Josephine	EIS001073	8.1 (170), 13 (5)
Niemietz, Roberta	EIS001020	4.2 (3547)
	EIS001783	4.2 (3547)
Niles, Ken Western Interstate Energy Board	EIS001877	8.3 (9958), 3.2 (80), 3.7 (53), 8.3 (201), 8.3 (213), 8.7 (153), 8.4 (25), 8.7 (147), 8.10.1 (10053), 8.3 (149), 3.7 (10089), 5.5 (29), 8.7 (12465), 8.7 (247)
Nischwitz, Laura Splan	010366	8.1 (170), 6.1 (49)
Niswander, M. Ruth	EIS000182	7.5.3.2 (230), 4.3 (128), 5.5 (29)
Noll, Joann E.	EIS001919	8.1 (170), 5.1 (27), 8.10.2 (212)
Noren, Robert C. General Atomics	EIS001831	3.1 (12), 9.1 (138), 5.5 (29)
Nosbisch, Jean	010040	1.1 (124)
Novak, Jane A.	EIS001883	8.1 (170)
Nuff, Rodney	EIS001308	8.1 (170)
Nunez, Albert	EIS000210	7.5.3.2 (228), 7.5.3.3 (724), 7.5.3.2 (725), 5.5 (29)
	EIS000457	7.5.3.2 (228), 7.5.3.3 (724), 7.5.3.2 (725), 5.5 (29)
Nyborg, Stephanie	EIS001266	2 (100), 8.1 (170), 5.5 (183)
Nygren, Maie	EIS000959	5.1 (27), 3.0 (3227), 1.1 (101), 8.1 (170)
O'Brien, Kathy	EIS000414	5.1 (27)
O'Brien, Rosemary	010400	3.6 (11236)
	010406	3.6 (11236)
	010407	3.6 (11236)
O'Connell, Brian National Association of Regulatory Utility Commissioners	EIS000469	3.1 (12), 3.3 (50), 3.2 (1742)
O'Connor, Amy	EIS000766	1.1 (101), 3.3 (50), 3.2 (51), 7.5.11.2 (181), 7.5.3.2 (228), 13 (5), 8.10.1 (133)
	EIS001478	3.3 (50), 1.2 (79), 3.2 (51), 7.5.11.2 (181), 7.5.3.2 (228), 13 (5), 8.10.1 (133)
O'Connor, Robert P.	EIS000666	5.5 (183)
O'Hara, James P.	010083	5.1 (27)
O'Hara, Sr. Madonna Ursuline Academy	EIS000930	8.1 (170)
O'Keefe, Kathleen	EIS001776	3.3 (50), 5.3 (164), 12 (14)

Commenter	Comment Document	Location of Comments/Responses
O'Toole, James P. Missouri, State of, Missouri House of Representatives	EIS001098	8.1 (170)
Oaks, David C.	EIS000156	6.1 (49), 8.1 (170), 5.5 (29), 5.5 (30), 1.2 (79)
Ochs, Richard	EIS000453	5.5 (183), 5.3 (164), 4.5 (217), 13 (5)
ofthedesert, Cynthia Utah Peace Test	EIS001476	7.5.11.2 (181), 3.2 (4106), 7.5.3.2 (228), 7.5.7 (4111), 8.4 (25), 8.10.3 (182), 8.7 (141), 5.3 (164), 12 (139), 3.3 (88)
Ohlman, Michael	010195	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Okahara, Shannon	EIS000734	5.1 (27)
Okenfuss, Elizabeth	EIS000978	13 (5), 8.1 (170), 1.1 (4165)
Oldham, Vicki Mendocino Environmental Center	EIS000955	2 (126), 7.5.11.2 (240), 7.3 (2827), 5.3 (164)
Oldham, Victoria	EIS001082	2 (126), 7.5.11.2 (240), 7.3 (2827), 5.3 (164)
Oliva	EIS000702	5.1 (27)
Olivares, Paula	EIS001690	8.3 (149), 8.4 (25), 5.5 (29)
Olive, Jason	EIS002186	7.5.11.2 (181), 7.5.11.2 (181)
Olson, Dorothy M.	EIS000866	8.1 (170)
Olson, Mary Nuclear Information and Resource Service	EIS000294	3.2 (1394), 3.2 (64), 1.2 (77), 7.1 (33), 12 (1399), 6.1 (116), 7.5.11.2 (181)
Olson, Mary	EIS000310	1.2 (77), 8.1 (170), 8.8.3 (174), 7.5.3.2 (228)
	EIS000325	8.10 (168), 8.1 (170), 13 (5), 8.8.1 (9265)
Olson, Terry S.	010088	8.1 (170)
Orozco, Maricela	EIS002002	1.1 (101), 8.1 (259)
Orrock, Nan Grogan Georgia, State of, House of Representatives	EIS000272	8.10.3 (182), 13 (1205), 6.1 (1206), 7.5.3.2 (228), 8.1 (170), 5.3 (164)
Ortciger, Thomas W. Illinois, State of, Department of Nuclear Safety	EIS001511	8.2 (4408), 8.3 (149), 8.3 (201), 8.3 (161)
Ortega, Deborah Denver, Colorado, City of, City Council	EIS000506	1.2 (78), 8.3 (149), 8.8.3 (171)
Ortega, Mireya	EIS000888	5.1 (27), 7.5.3.2 (2760), 10 (2761)
Ortmeyer, Mary	EIS001867	8.1 (170), 5.1 (27)
Ortmeyer, Pat Women's Action for New Directions Education Fund	EIS000160	1.2 (77), 7.1 (831), 1.1 (122), 7.5.11.2 (832), 12 (139), 13 (5)
	EIS000292	5.3 (164), 2 (100), 7.1 (831), 12 (139), 7.5.11.2 (832), 13 (5)
Osborne, Norma J.	EIS000827	5.1 (27)
Oscars, Frederick H.	EIS000834	5.1 (27)
Osiek, Henry C.	EIS000932	8 (158), 5.2 (26), 8.3 (60)
Overland, Carol A.	EIS001966	3.2 (64), 9.1 (10662), 9.1 (138), 1.2 (10666), 5.4 (10668), 9.1 (10669), 7.3 (10670), 4.3 (249), 13 (5)
Owens, Janice Edlow International Company	EIS000450	8 (158)
Ozbakan, Kristine Pilar	EIS000395	8.1 (170), 13 (5)
Pack, Marion Safe & Healthy Communities	010402	5.1 (27), 7.5.3 (6648), 8.1 (170), 5.3 (164)

Commenter	Comment Document	Location of Comments/Responses
Paddell, Sue	EIS000136	5.1 (27), 5.3 (164)
Page, Marc	EIS001279	13 (5), 5.1 (27)
	010129	1.1 (124), 13 (9440), 7.5.11.2 (181), 5.5 (183), 13 (13332)
Painter, Marla	EIS000566	1.1 (101), 1.2 (77), 3.2 (2236), 3.2 (90), 3.2 (51), 3.2 (64), 1.2 (243), 3.2 (80)
Palinei, Mary P.	EIS001985	8.3 (149), 8.4 (25), 5.1 (27)
Palmer, Carroll E. Confederated Tribes and Bands of the Yakama Nation	EIS001909	6.1 (7497), 3.7 (57), 10 (7582), 4.2 (7586), 6.1 (46), 6.1 (7590), 6.1 (7595), 6.1 (7600)
	EIS001964	6.1 (7497), 3.7 (57), 10 (7582), 4.2 (7586), 6.1 (46), 6.1 (7590), 6.1 (7595), 6.1 (7600)
Palmer, Connie	EIS000212	No comment
Palmer, Elizabeth S. NAC International	EIS000215	8 (158), 5.2 (26)
	EIS000275	8 (158), 5.2 (26)
Panko, Vincent	EIS001713	2 (100)
Panning, Adeil	EIS001362	5.1 (27), 13 (5)
Panvini, Vincent A. Sheet Metal Workers International Association	EIS000449	5.2 (26)
Pappas, Alexandra	EIS001656	8.4 (226), 7.5.3.2 (230), 7.5.11.2 (181), 5.1 (27)
Pappas, Carmen	EIS001413	8.1 (170), 13 (131)
Parfrey, Jonathan Physicians for Social Responsibility, Los Angeles	EIS000023	3.3 (50), 8.1 (170), 7.5.2 (971), 7.5.3.2 (230)
	EIS000719	8.10 (3489), 8.10 (156), 8.3 (161), 8.10.2 (114), 8.3 (149)
	EIS002095	8.10 (3489), 8.10 (156), 8.3 (161), 8.10.2 (114), 8.3 (149)
Parker, Stanley International Brotherhood of Electrical Workers	EIS000283	4.5 (99), 8 (158), 5.2 (26)
Parker, Stephanie	EIS000863	7.5.7 (93)
Parker, Victoria	EIS000287	3.2 (80), 8.10 (1069), 7.5.3.3 (1070)
Parnell, Bonnie Nevada, State of, Nevada State Assembly	EIS000595	5.1 (27), 7.5.3.2 (228)
Passetti, William A. Florida, State of, Department of Health	EIS000026	3.1 (12), 8.3 (213), 9.1 (292)
Passwater, Alan C. Union Electric Company dba AmerenUE	EIS000994	5.2 (26)
	EIS001731	5.2 (26)
Patera, Pat	EIS000569	7.3 (206), 8.1 (170), 8.10.1 (133)
Patterson, Karen K. Savannah River Site Citizens Advisory Board	010394	7.3 (7), 5.2 (26), 7.3 (3777), 3.5 (3778)
Pattison, Jerry	EIS000747	5.2 (26)
Patton, Thomas M. Nevada, State of, Office of the Attorney General	EIS000717	2 (100), 3.2 (2451), 8.3 (149), 3.9 (109), 7.5.3.2 (229), 3.2 (80)

Commenter	Comment Document	Location of Comments/Responses
Patton, Thomas M. (continued) Nevada, State of, Office of the Attorney General	EIS002092	4.1 (83), 2 (100), 3.2 (10172), 8.3 (161), 3.9 (109), 7.5.3.2 (229), 3.2 (80)
Patzer, Bob	EIS000111	7.5.3.2 (1177), 7.5.3.2 (2386)
Paul, Edward V.	EIS001637	3.1 (15), 8.3 (149), 8.3 (161), 8.10.2 (114), 7.5.11 (52)
Paul, Lance	EIS000633	4.5 (2243), 8.11.9 (47), 7.3 (210)
Pawlak, John	EIS000123	5.5 (29), 13 (10728), 5.5 (183)
Paz, Jacob D.	EIS002111	7.3 (9200), 4.2 (9201), 7.5.6 (9202)
	010321	7.3 (12310)
	010364	7.5.7 (12184), 7.5.7 (12181), 10 (91), 7.5.7 (12178), 7.5.7 (12179), 4.2 (86), 1.2 (77), 7.5.7 (10873)
Pearson, Keith	EIS000682	5.1 (27), 8.7 (142)
Pearson, Lee A.	EIS000681	8.1 (170), 12 (139), 8.7 (142)
Peck, Bob Wyoming, State of, Wyoming State Senate	EIS000491	5.2 (26), 5.5 (29), 8 (158)
Pegues, Jim Las Vegas, Nevada, City of	EIS002212	5.1 (27)
	010131	5.1 (27), 3.6 (257)
Peirce, Anne Nevada, State of, Commission on Nuclear Projects	EIS000388	3.2 (84), 8.3 (161), 8.3 (149), 8.1 (259), 7.5.11.2 (240), 5.1 (27)
	EIS000541	3.2 (84), 8.3 (161), 8.3 (149), 8.1 (259), 7.5.11.2 (240), 5.1 (27)
Pemelton, Jack	EIS001351	5.1 (27), 13 (5)
Penn, Jeanette M.	EIS001851	8.1 (170), 7.5.3.2 (228), 8.10.2 (212), 8.3.3 (23), 6.1 (9102), 5.3 (164)
Penner, Mitch	EIS002051	3.2 (51), 3.2 (64)
Penner, Rod	EIS001723	6.1 (7526), 8.2 (7528), 8.2 (7530), 4.1 (83), 1.1 (101), 8.7 (184)
Peralta, Michael	EIS001992	3.1 (16), 7.3.2 (216), 7.3 (110)
Perez, Barbara	EIS000926	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 13 (3657)
Perkins, Jerry	EIS001493	5.1 (27), 13 (5)
Perna, Frank	EIS001049	1.1 (101), 5.3 (164), 13 (35), 13 (5), 7.5.3 (2919), 5.4 (219)
	010034	7.1.1 (4166)
	010058	8.10 (154)
	010080	7.5.3.2 (230), 7.4 (12016), 5.4 (219), 13 (11458), 13 (11457), 1.1 (123), 5.3 (164), 8.1 (170)
Perna, Frank	010110	7.1.1 (4166), 1.1 (34), 13 (227), 4.5 (92), 5.3 (164), 5.1 (27)
	010134	7.3.2 (216), 13 (6959)
Perry, Carin	010222	5.1 (27)
Perry, David	010224	5.1 (27)
Perry, Earl	010220	5.1 (27)
Perry, Gavin	EIS000997	4.5 (3260), 13 (5), 8.3.3 (23), 8.7 (141), 8.1 (170), 8.10.1 (133)
	EIS001734	4.5 (3260), 13 (5), 8.3.3 (23), 8.7 (141), 8.3 (60), 8.10.1 (133), 13 (5)
Perry, Jean	010225	5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Perry, Michael	010223	5.1 (27)
Perry, Susan	EIS000711	8.3 (161), 7.3.2 (216)
Perry, Wilma	010219	5.1 (27)
Perry-Jones, Jean	EIS001640	5.1 (27), 5.3 (164)
	010213	5.1 (27)
Pestau, Cecilia	EIS000840	5.1 (27)
Petach, Lynn	EIS001449	7.3 (220), 5.3 (164)
Petersen, Art	EIS001377	1.2 (6704), 3.2 (6728), 3.3 (50), 3.3 (6730), 3.2 (6732), 3.2 (6733), 7.5.11.2 (181), 7.5.11.2 (6745), 8.8.3 (171), 5.3 (164), 3.2 (6752), 1.1 (6753), 3.3 (6754), 13 (5), 3.2 (6756)
	010485	1.2 (243), 7.5.11.2 (181), 7.5.5.2 (6545), 8.10.1 (12200), 7.5.11 (12754), 11.1 (7302), 8.12 (12708), 5.5 (29), 13 (5)
Peterson, William D. Pigeon Spur Spent Fuel Storage Facility	EIS001477	4.5 (92)
	010291	5.5 (30)
	010301	5.5 (30)
Petrikovitsch, Paul	EIS001382	8.1 (170), 5.3 (164)
Petuya, Germain P.	EIS001121	3.3 (50), 8.8.1 (3337), 8.3.2 (136), 6.1 (49), 1.1 (101)
Pfeffer, Ruth G.	EIS001258	8.1 (170)
Pfiester, Carolyn M.	EIS002168	8.1 (10104), 8.7 (144), 8.10 (157), 8.1 (170), 7.3 (206), 13 (5), 3.3 (10112)
	010365	13 (5), 13 (35)
Phillips, Donna	EIS000024	1.1 (101)
Phillips, Kevin J. Caliente, Nevada, City of	EIS000038	No comment
	EIS000226	3.2 (84), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.3.2 (136), 3.2 (80), 8.1 (170), 3.2 (84), 8.3.2 (136), 3.2 (1299), 11.2 (108), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069)
	EIS000650	3.2 (84), 8.11.1 (1239), 3.2 (1240), 8.11.6 (1241), 3.2 (1242), 8.3.2 (136), 3.2 (80), 8.1 (170), 3.2 (84), 8.3.2 (136), 3.2 (1299), 11.2 (108), 8.10.2 (114), 11.1 (12058), 8.11.6 (12069)
	EIS000718	3.9 (109), 8.8.3 (7789), 8.10.2 (203)
	EIS002093	3.9 (109), 8.8.3 (7789)
	010096	3.5 (204), 4.5 (214), 4.5 (217), 3.5 (12025), 8.12 (224), 3.1 (11450), 11.1 (11451), 8.10.2 (114), 4.5 (63), 11.1 (45), 7.3 (220), 8 (12273), 7.5.7 (235), 7.5.9 (175), 7.5.9 (11246), 7.5.7 (2867)
Piampanichwat, Regina	EIS000434	1.1 (101), 5.1 (27), 7.3 (1404)
Pick, Hannah	EIS001325	5.2 (26), 8.3 (60), 7.4 (3812)
Pier, Kate	EIS000398	8.7 (141), 8.1 (170)
Pierce, Margaret C.	EIS001253	5.1 (27)
Pierce, Samuel M.	EIS001244	8.3 (149), 8.5.3 (190), 3.9 (109), 8.10 (3782)
Pinard, Thomas C.	EIS000792	8.1 (11801)
Pinkus, Phil	EIS002183	1.2 (77), 7.3.1 (185)
Pintar, S. R.	EIS001058	3.2 (64), 7.5.6 (130), 3.9 (109), 7.5.3.2 (228)

Commenter	Comment Document	Location of Comments/Responses
Pinto, Joe A.	EIS000005	3.9 (109), 7.5.3.2 (228), 1.1 (101), 1.2 (243)
	010008	5.1 (27), 1.2 (79), 7.5.3.2 (228), 8.1 (259), 3.9 (109), 7.5.7 (11265)
	010109	5.1 (27), 1.2 (79), 7.5.3.2 (228), 8.1 (259), 3.9 (109), 7.5.7 (11265)
Pisci, John	EIS001216	5.1 (27), 3.2 (51), 3.2 (64), 8.3 (149), 8.4 (25), 7.5.7 (98), 2 (100), 3.1 (16), 7.3.2 (216), 7.3 (110), 7.5.11.2 (181), 3.3 (50)
Plank, Dennis Sierra Club, Northeast Ohio Group, Great Lakes Water Quality & Wetlands Committee	EIS001220	8.1 (170), 5.1 (27)
	EIS001569	8.1 (170), 5.1 (27)
Platnick, Sherry	EIS000416	5.4 (219)
Plummer, Nancy	EIS001231	13 (5), 5.1 (27), 3.9 (109)
	EIS001243	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 13 (5), 3.2 (80)
Plunkett, Karen	EIS000659	11.2 (2415)
Pogue, Stacey Colorado Public Interest Research Group	EIS000518	1.2 (77), 1.2 (243), 7.5.3.2 (111), 8.8.3 (171), 8.3 (149)
Poland, Marie	EIS001435	1.2 (77), 7.3.1 (185), 5.1 (27)
Ponzi, Jean C.	EIS001042	8.10.2 (212), 5.4 (219), 8.4 (115), 7.5.3.2 (228), 8.7 (4430), 5.5 (29), 8.1 (170), 3.3 (50)
	EIS001799	3.3 (50), 8.1 (170), 5.4 (219), 5.5 (29)
	010255	5.1 (27), 8.1 (170), 5.3 (164)
Porter, Irene Southern Nevada Home Builders Association	EIS001828	1.2 (6421), 3.9 (109), 8.1 (259), 7.5.6 (130), 8.11.6 (6434), 8.1 (170), 8.10 (157)
Potorti, Grace Rural Alliance for Military Accountability	EIS000393	3.2 (80), 3.2 (90), 3.5 (36), 3.2 (32), 3.7 (53)
	EIS000562	3.2 (80), 3.2 (90), 3.5 (36), 3.2 (32), 3.7 (53)
Pound, Jack	EIS000378	4.5 (1343), 5.5 (29), 3.3 (50)
Powell, Dana	EIS000313	8.1 (170)
Pozzo, Joan	EIS001818	5.3 (164)
Prescott, William A.	EIS000825	5.1 (27)
Press, Norman	EIS000754	1.1 (122), 5.1 (27)
Price, Bill	010120	5.2 (26)
Price-Bollinger, Claralyn	EIS000989	5.1 (27)
Prideaux, Ruth B.	EIS000183	5.2 (26)
Prince, Mary C.	EIS000335	8.1 (259), 3.3 (50), 8.1 (170)
Pritchard	EIS002228	8.3 (149), 8.4 (25)
Pritchett, Robert F.	EIS000036	3.1 (12)
Pronio, Micaela	EIS001427	8.1 (170), 8.10 (68), 7.5.11.2 (181)
Pryor, Linda	EIS001794	8.1 (170), 5.5 (29), 7.5.3.2 (229)
Pufalt, Caroline	EIS001030	5.3 (164), 8.1 (170), 7.5.3.2 (8941), 7.5.3.2 (8944), 2 (100), 1.2 (77)
Pulse, Jaymes	EIS002021	1.1 (101)
Pulsipher, Rick	EIS001532	13 (5), 1.1 (101)
Pustek, Charlotte	EIS000516	5.1 (27), 10 (3), 8.4 (1575), 8.10 (1992)

Commenter	Comment Document	Location of Comments/Responses
Pyne, Claire Fenton, Missouri, City of, Board of Aldermen	EIS001091	8.1 (170)
Quam, Brian A.	010484	5.1 (27)
Quam, Leah A.	010478	5.1 (27)
Quinn, Margaret L.	EIS001342	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 5.1 (27)
Quinn, Norbert F.	EIS000052	7.5.3.2 (228), 7.5.4 (341)
Quirk, James G.	EIS000045	7.5.3.4 (368), 7.5.3.3 (369), 7.5.7 (66), 8.10.1 (133), 3.2 (51), 3.3 (50)
	EIS000072	5.1 (27)
Quotchytewa, Phillip R. Hopi Tribe	EIS001451	5.3 (164), 5.1 (27), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139)
Radcliffe, Cynthia	010481	5.1 (27)
Raddatz, Alan	EIS001913	5.1 (27), 13 (5)
	010093	5.1 (27), 13 (1243)
Ramsey, Bill Human Rights Action Service	EIS000976	4.5 (3734)
Randolph, Bernard C. St. Louis Council On Environmental Health and Safety	EIS001438	3.3 (4697), 5.4 (4698)
	010302	3.10 (4)
Rankin, Ronald Eureka County, Nevada, Planning Commission	EIS000631	8.1 (259), 3.9 (109), 8.10.2 (203)
Rash, Dennis	EIS001575	8.10 (8291), 5.3 (164), 13 (5)
Rathburn, Lesley	EIS000327	5.1 (27), 1.2 (243), 13 (5)
Rauch, Margaret T. Sylvania, Ohio, City of	EIS002313	8.1 (170)
Rausch, Jeffrey	EIS000892	7.5.7 (98)
Ray, Ellis	EIS002259	4.5 (11379), 7.5.11.2 (181), 3.3 (50)
Ray, Robin E.	EIS002222	3.3 (50)
Reback, Mark	550005	8.3 (149)
Rebaleati, Mike Eureka County, Nevada, Local Emergency Planning Committee	EIS000950	8.10.2 (212)
Rebman, Marilyn D.	EIS000728	5.1 (27)
Redden, Geri	EIS001803	13 (131), 8.8.3 (5872), 12 (139), 7.5.11.2 (240), 3.3 (5888)
Redding, Judith M.	EIS002226	8.1 (259)
Reed, Don	EIS002146	5.2 (26), 4.5 (151), 7.5.6 (10698), 7.5.6 (10699), 13 (37)
Reed, James B. National Conference of State Legislatures	EIS001328	8.3 (149), 8.10.2 (200), 4.1 (82), 8.10.2 (114), 8.7 (197), 8.7 (6558), 8.3 (213), 8.7 (153), 3.7 (53), 8.4 (6559), 8.4 (6556), 8.6.1 (223), 8.10.2 (218), 8.10.2 (212)
Reed, Vanessa	EIS002017	8.10.2 (212), 5.5 (30)
Regan, James Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653	7.3 (7), 3.2 (7798), 3.2 (64), 7.3.2 (7801), 10 (258), 8.3 (149), 10 (7805), 11.1 (48), 3.2 (80), 7.3.1 (185), 7.1.1 (7425), 7.1.1 (7814), 8.3 (213), 8.3.3 (7822), 8.3 (7823), 3.7 (53), 3.2 (55), 7.3 (7826), 5.4 (7452), 4.5 (7836), 5.4 (7840), 3.2 (7842), 1.2 (7843), 3.2 (69), 7.5.11.2 (181), 8.1 (259), 7.5.3.2 (7854), 7.5.3.2 (9398),

Commenter	Comment Document	Location of Comments/Responses
Regan, James (continued) Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653	7.5.3 (7859), 7.5.3.2 (7861), 7.5.3.2 (7306), 7.5.6 (7875), 7.5.11.1 (7876), 3.2 (7888), 8.8.2 (7521), 7.5.2 (7894), 8.3.2 (136), 3.2 (7898), 8.11.3 (7901), 8.11.4.2 (7532), 7.5.6 (7910), 7.5.7 (105), 8.9 (193), 7.3 (12071), 5.4 (8076), 7.5.1 (106), 7.5.2 (8081), 3.2 (8084), 7.5.7 (8085), 4.5 (8087), 3.2 (8090), 7.3.2 (216), 3.2 (8110), 7.3 (8111), 10 (8113), 8.3 (201), 3.1 (8121), 8.11.7 (8123), 8.3 (8126), 8.11.1 (7625), 8.11.1 (8128), 8.8.1 (192), 3.8 (65), 8.8.1 (8139), 8.11.9 (8141), 8.3 (161), 8.11.6 (8144), 8.11.1 (8145), 8.10 (145), 8.3.1 (195), 8.10 (8154), 8.6.2 (186), 8.5.3 (7653), 9.1 (7647), 8.8.1 (8171), 10 (8176), 10 (7629), 10 (3), 10 (91), 11.1 (8182), 11.1 (8187), 11.1 (8188), 11.1 (8190), 2 (8196), 7.3 (11829), 7.1 (7576)
Reid, Harry U.S. Senate - Nevada	010266	3.5 (36), 3.5 (13242), 7.4 (87), 3.5 (204)
	010355	3.5 (36), 3.5 (13242), 7.4 (87), 3.5 (204)
Reid, Jeff	EIS000822	5.1 (27)
Reilly, Ann P.	EIS000013	1.1 (101)
Reim, Kenneth M.	EIS001972	5.2 (26), 6.0 (6251)
Reimer, Nancy	EIS001204	5.1 (27), 7.5.3.2 (229), 3.2 (51), 3.2 (64), 7.3 (9028), 5.5 (183), 8.1 (170), 7.3 (94), 5.3 (164), 13 (5)
	010486	5.1 (27), 1.2 (79), 7.5.11.2 (181), 8.1 (170), 5.5 (29), 1.1 (122)
Remus, Andrew Inyo County, California, Board of Supervisors	EIS002270	8.3 (161), 8.3 (213), 8.3.2 (136), 3.2 (64), 3.2 (59)
	EIS002297	8.3 (161), 8.3 (213), 8.3.2 (136), 3.2 (64), 3.2 (59)
Remus, Andrew Inyo County, California, Southeast Area Citizen Advisory Committee	010381	3.5 (36), 3.5 (204), 3.6 (257), 9.1 (250), 1.2 (243), 7.4 (241), 7.3 (222), 7.5.3.2 (2), 7.4 (12656), 5.3 (164)
Rendahl, Roy	EIS001113	3.2 (51), 3.2 (64), 8.3 (161), 8.7 (147), 8.4 (25), 7.5.7 (98), 2 (100), 7.3.2 (216), 7.3 (110), 7.5.11.2 (181), 3.3 (50)
	EIS001149	3.2 (75), 8.3 (149), 3.2 (2081), 2 (126), 7.3.2 (216), 7.5.11.2 (181), 3.3 (50), 5.5 (30)
Reynolds, Harold	EIS000830	5.1 (27)
Reynolds, John J. U.S.Department of the Interior, National Park Service, Pacific West Region	EIS001957	5.1 (7274), 7.5.3.2 (7277), 5.1 (7289), 3.2 (7293), 3.1 (7298), 3.2 (80), 3.0 (7346), 7.5.3.2 (7349), 7.5.3.3 (12328), 7.5.3.2 (7353), 7.3 (232), 3.1 (7365), 7.5.2 (7373), 7.5.3 (7387), 7.5.3.4 (7388), 7.5.3.3 (7389), 7.5.3.1 (7377), 7.5.3.2 (7396), 7.5.3.2 (7399), 7.5.3.2 (7400), 7.3.2 (7402), 7.5.3.2 (2), 7.3 (7404), 7.3 (12603), 8.1 (7405)
Reynolds, Robert	EIS000585	5.1 (27), 8.5.3 (190)
Rhoe, Elizabeth	EIS002004	7.3 (210), 7.5.4.2 (7926), 7.1 (191), 3.9 (109), 5.5 (29)
Ricci, Nancy J.	010428	5.1 (27)
Rice, Charles M. Citizens Advisory Board, Idaho National Engineering and Environmental Laboratory	EIS001230	3.2 (59), 6.1 (4707), 4.5 (96), 3.2 (4709), 5.2 (26), 3.1 (4711)

Commenter	Comment Document	Location of Comments/Responses
Rice, Charles M. (continued) Citizens Advisory Board, Idaho National Engineering and Environmental Laboratory	EIS001805	3.2 (80), 6.1 (5306), 5.2 (26), 3.1 (4711)
Rice, Dennis L.	EIS000824	5.1 (27)
Rice, Jean U.S. House of Representatives - Nevada	EIS000233	3.2 (80), 3.3 (50), 8.3 (201)
	EIS000667	3.2 (80), 3.3 (50), 8.3 (201)
Richards, Karla	EIS001670	7.5.3.2 (2760), 10 (2761), 5.1 (27), 13 (5)
Richnow, Jasmine	EIS001137	7.5.11.2 (181), 7.5.7 (93)
Rieser, Anne	EIS001852	8.1 (170)
Riitano, Margaret M.	010435	No comment
Riseden, Elizabeth I.	EIS000021	1.2 (243), 8.1 (170), 1.1 (287)
	EIS000144	3.2 (84), 8.10 (817), 3.2 (1268), 5.3 (164), 1.1 (101), 8.1 (170), 3.2 (10787)
	EIS000354	3.2 (84), 8.10 (817), 3.2 (1268), 5.3 (164), 1.1 (101), 8.1 (170), 3.2 (10787)
Rivera, Daniel J.	EIS000908	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Rivera, Y.	010046	7.4 (241)
	010047	4.4 (244)
	010048	3.2 (90)
	010049	7.4 (241)
	010050	3.6 (257)
	010051	7.5.9 (175)
	010052	7.4 (125), 9.1 (250)
	010053	3.6 (257)
	010054	7.5.7 (235)
	010055	7.3.2 (216)
	010056	3.5 (204)
	010057	7.5.11.2 (181)
Rives, Frank B. Entergy Services, Inc.	EIS001196	3.2 (80), 5.2 (26)
	010273	5.2 (26)
Robbins, Autumn	EIS000484	5.1 (27), 1.2 (77)
Roberts, Celeste	EIS001198	3.2 (8899), 5.1 (27), 8.1 (170), 8.10.2 (114), 5.3 (164)
Roberts, Kimberly Physicians for Social Responsibility	EIS000205	7.5.3.2 (228), 7.5.7 (677), 7.5.7 (678), 8.4 (115), 8.10.2 (680), 5.3 (164)
	EIS000462	5.3 (164)
Roberts, Terry California, State of, Governor's Office of Planning and Research	EIS001412	3.10 (4)
	010399	No comment
Robertson, Henry B.	EIS000974	4.5 (99), 5.1 (27), 13 (5)
Robertson, Joyce	EIS001277	5.5 (183), 5.3 (164), 8.4 (25), 8.10.2 (212), 8.10.1 (133)
Robertson, Terri	EIS002153	12 (139), 7.1 (191), 5.1 (27)
Robin, Neal	EIS001386	1.2 (79), 8.3 (60)

Commenter	Comment Document	Location of Comments/Responses
Rodriquez, Jose Future Growth Technologies Concepts, Inc.	EIS000693	1.1 (101), 1.2 (79), 3.9 (109)
Roe, Cal M.	EIS000519	5.2 (26)
	010013	5.2 (26), 3.6 (11536)
Rogers, Karel L.	EIS001628	5.1 (27)
	010076	5.1 (27)
Rogers, Stephen D.	EIS001077	5.2 (26), 13 (35), 13 (5)
	EIS002142	4.5 (10737), 11.2 (108), 5.2 (26)
Rogers, Steve	EIS002104	4.5 (92)
Rogots, Bob	EIS000035	1.1 (101)
Rojas, Luis	EIS001714	2 (100), 5.3 (164)
Romano, Daniel R. Gateway Green Alliance	EIS001535	8.1 (170), 3.2 (4799), 8.7 (141), 13 (4801), 7.5.7 (98), 5.5 (183)
Ronga, Matthew	EIS002040	1.1 (101), 8.1 (170)
Root, John	EIS001987	3.2 (51), 3.2 (64)
Roper, Alice M.	EIS000964	8.1 (170)
Rose, Judy	EIS002050	3.1 (16), 7.3.2 (216), 7.3 (110)
Rose, MerLynn	010152	8.12 (251), 7.5.5 (6740), 3.6 (257)
	010245	3.6 (257), 7.5.11.2 (181), 3.6 (11656)
Rose, Sharon	EIS000379	11.1 (1201), 5.3 (164), 7.5.7 (10912)
Rosen, Elana-Beth	010036	4.5 (214)
Ross, Steve	EIS002141	5.2 (26), 10 (10691), 11.2 (202), 11.2 (108)
Rossan, Ingegerd	EIS001130	5.3 (164), 7.5.3.2 (228)
Rossof, Rebecca	EIS001579	3.2 (8660)
Roth, Barbara	EIS000725	3.2 (64), 8.3 (161), 3.2 (90), 8.3 (149), 3.9 (109), 7.5.1 (106), 8.8.3 (171)
	EIS002125	2 (10442)
Royal, Jay A.	EIS000185	5.2 (26)
Royce-Rogers, Penny	EIS000549	5.5 (29), 5.1 (27), 10 (258)
Rucquoi, Jann	EIS000076	10 (91), 3.2 (75), 7.3 (206)
	EIS001508	8.1 (259), 7.5.3.2 (230), 3.9 (109)
	010326	10 (91), 7.5.3 (11924), 7.3 (220), 9.1 (250)
	010333	7.5.7 (93), 5.5 (29)
Ruesch, April	010377	3.6 (257), 5.1 (27)
Rumora, Andy A.	EIS001719	5.5 (29)
Runge, Henry T.	EIS001197	7.5.6 (130), 3.9 (109), 8.10 (154), 8.1 (259)
Russ, Ray	EIS000550	3.2 (3587), 3.3 (50)
Ruting, William	EIS001311	3.3 (50), 8.10.2 (212)
	EIS001585	3.3 (50), 8.10.2 (212)
Ryan, Curtis A.	010444	5.1 (27)
Ryan, Mary Ida	EIS000934	8.1 (170), 5.3 (164)
Rychlewski, Lois J.	EIS001959	8.1 (170), 5.1 (27)
Ryder, Amy K. Ohio Citizen Action	EIS001285	3.3 (50), 8.1 (170), 5.1 (27)
	EIS001546	3.3 (50), 8.1 (170), 5.1 (27)
Rynn, Joe	EIS001145	8.3 (149), 8.4 (25)
Rynne, Richard	EIS000369	8.1 (170), 5.5 (29), 8.10.2 (114), 8.1 (259), 1.1 (124)
Sadler, Matthew A.	EIS000846	5.1 (27)
Safe, Karen	EIS001038	8.1 (170), 8.10.2 (212), 8.8.3 (174), 8.1 (4440), 8.3 (161)

Commenter	Comment Document	Location of Comments/Responses
Safe, Karen (continued)	EIS001762	8.1 (170)
Salas, Maria	EIS000787	5.1 (27)
Salisbury, Ray	EIS000615	8.7 (2203), 8.11.1 (2204), 7.3.2 (216), 1.1 (101)
Salmons, Therese M.	EIS001261	8.1 (170)
Sanazaro, Leslie C.	010251	8.1 (170)
Sanborn, Jean C.	EIS001815	8.1 (170), 8.3 (60), 8.3 (149)
Sande, Christine	EIS000896	3.1 (16), 7.3.2 (216), 7.3 (110)
Sanderson, Richard E. U.S. Environmental Protection Agency, Office of Federal Activities	EIS001632	3.1 (6400), 7.3 (6403), 3.2 (6406), 6.1 (12590), 3.2 (10882), 7.3.1 (6414), 7.1.1 (6417), 7.1.1 (6418), 7.2 (6420), 7.1 (6422), 4.5 (6425), 7.5.3 (6427), 4.5 (215), 8.3 (6440), 5.4 (6442), 7.3 (6443), 3.1 (6452), 4.2 (6453), 3.1 (6454), 7.5.3.2 (6456), 7.5.3.2 (6457), 7.3 (12700), 7.5.3.2 (6459), 7.5.3.2 (6461), 7.5.3.2 (6462), 7.5.3.2 (6464), 7.5.3.2 (6465), 7.5.3.1 (6467), 7.5.3.2 (6468), 7.5.6 (6471), 7.5.7 (6473), 9.1 (6474), 8.10 (6476), 7.5.3.1 (6478), 7.5.3.2 (6484), 7.3 (6501), 8.8.1 (6502), 7.5.2 (6504), 7.5.4.2 (6542), 7.5.4.2 (6543), 7.3 (6544), 7.3 (6546), 7.3 (6547), 7.3 (6548), 7.3 (6550), 7.3 (6552), 7.5.3.2 (6553), 7.5.3.2 (6555), 7.5.3.2 (6557), 7.3 (6563), 7.5.3.4 (6564), 8.1 (6565), 8.10.2 (6566), 8.3 (6051), 8.7 (6567), 8.8.3 (6568), 8.8.1 (6569), 8.11.4.2 (6572), 9.1 (6573), 10 (6575), 10 (6578), 10 (6580), 10 (6581), 10 (6583), 10 (6585), 7.3.1 (6593), 3.7 (6619), 8.11.11.2 (6621), 7.5.11.2 (6629), 7.5.11.2 (6632), 4.2 (6635), 7.3 (6637), 4.2 (6651), 4.2 (6656), 4.2 (6658), 4.2 (6661), 4.2 (6666), 4.2 (6668), 4.2 (6672), 4.2 (6674), 3.1 (4480), 9.1 (6680), 9.1 (6683), 7.5.7 (6684), 3.1 (6688), 3.1 (6690), 8.10 (6693), 9.1 (6695), 9.2 (6698), 7.3.1 (6699)
Sandin, Susan	EIS000898	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Sandler, Arlene	EIS001025	5.1 (27), 8.10.2 (114)
	010247	3.5 (204), 8.10.2 (114), 8.10 (157), 7.4.1 (61), 5.3 (164)
Sandquist, Gary	EIS001473	8.8.1 (4130), 8 (158), 5.2 (26)
Sands, Kristin R.	010408	5.1 (27)
Saum, Judith Nevada Public Health Association	EIS000540	7.5.3.2 (2267), 8.7 (141), 7.5.3.2 (228), 5.1 (27), 5.5 (29), 4.3 (70), 7.5.3.3 (12035), 7.5.3.2 (111), 7.3 (12037), 8.1 (170), 2 (12021), 1.2 (12039), 8.3 (213), 2 (12042)
Savage, Felix A.	EIS000771	1.2 (77), 7.3.1 (185), 11.1 (1819)
Savala, Gevene E. Kaibab Band of Southern Paiutes	EIS002079	3.3 (163), 8.3 (213), 6.1 (49)
Savio, Anne C.	EIS001646	8.1 (170), 5.5 (29)
Saxon, Richard G. Physicians for Social Responsibility, Los Angeles	EIS000720	3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230)
	EIS002096	3.2 (80), 7.5.3 (3595), 7.5.7 (3596), 7.5.6 (130), 7.5.3.2 (230)
Schade, Maria	EIS001396	8.1 (170), 8.10.2 (114), 5.4 (4638), 5.1 (27)
Scharff, John Shundahai Network	EIS002118	7.3 (206), 8.1 (170), 5.3 (164)
	EIS002221	3.5 (113), 7.5.3.2 (10464)

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Scharff, John (continued) Shundahai Network	EIS002251	7.3.2 (11403), 12 (139), 8.10 (11405), 5.4 (11406), 10 (11407), 3.3 (50), 8.10.2 (11409), 8.4 (115), 3.2 (11411), 7.5.3.2 (11412), 7.5.7 (11413), 5.3 (164)
	EIS002278	8.10 (11364), 8.10.2 (11365), 3.2 (11366), 7.5.2 (11367), 5.3 (164)
Schatz, Tom Council for Citizens Against Government Waste	EIS000451	5.2 (26), 4.5 (1534), 5.4 (10891)
Scheinman, Stuart	EIS002066	5.1 (27)
Schirn, Jackie	EIS001055	5.1 (27), 5.5 (29), 13 (5)
	EIS001785	5.3 (164), 13 (5)
Schlomberg, Kurt A.	010482	5.5 (183)
Schmidt, Delores	EIS002219	1.2 (79)
Schmidt, Jerry	EIS001482	3.3 (50), 1.2 (12339), 8.10.1 (133), 8.10 (4082), 12 (139), 7.3.2 (216), 7.5.11.2 (181), 7.5.4 (4090)
Schmidt, Lawrence New Jersey, State of, Department of Environmental Protection	EIS001504	8.3.3 (24)
Schmidt, Ralph E.	EIS001956	8.1 (170), 8.3 (201)
Schmied, Debbie	EIS000937	8.1 (170)
Schnaible, Amanda	EIS002000	7.5.3.2 (228), 8.1 (259), 5.1 (27)
Schneider, Andrew	EIS000524	1.2 (1990)
Schoen, Stephen M. Placer Dome U.S.	EIS001195	8.11.1 (3164), 8.11.1 (2940), 8.6.2 (3165), 8.11.1 (3166), 11.1 (3167), 8.8.2 (135), 3.3 (50)
Schofield, Gary G.	EIS000532	3.9 (109), 8.1 (170), 5.1 (27)
	EIS000739	5.1 (27), 8.1 (259)
Scholes, Frank W.	EIS000760	5.1 (27)
Scholes, James A.	EIS000758	5.1 (27)
Schoon, Sarah L.	EIS001176	8.1 (170)
Schosser, Claire L.	EIS001222	7.5.3 (4322), 7.3 (4323), 7.4.1 (61), 8.1 (170), 7.5.11 (4327), 7.3 (4328), 13 (5)
Schott, Norbert	EIS001402	8.1 (170)
Schrade, Jeffrey A.	EIS000781	5.2 (26)
	EIS000783	5.2 (26), 3.9 (109), 5.2 (26)
Schramm, Marjorie B. Kirkwood, Missouri, City of	EIS001819	8.1 (170), 8.10.2 (6428)
Schrecongost, Earl	EIS000223	5.3 (164)
Schroeder, Betty Arizona Safe Energy Coalition	EIS001096	5.1 (27), 4.5 (92), 4.3 (70), 5.5 (183)
Schroeder, Linda	EIS000501	5.1 (27), 7.5.11.2 (240), 5.3 (164), 13 (5), 7.3 (220)
Schumacher, Steve	EIS000387	5.2 (26)
Schumann, Klaus GREEN Party of California	EIS000722	13 (5), 3.2 (80), 4.5 (3467), 3.3 (50), 8.3 (149), 3.9 (109), 7.5.11.2 (240), 7.3 (3472), 3.2 (64), 5.3 (164)
	EIS002100	13 (5), 3.2 (80), 4.5 (3467), 3.3 (50), 8.3 (149), 3.9 (109), 7.5.11.2 (240), 7.3 (3472), 3.2 (64), 5.3 (164)
Schwabacher, Michael	EIS000756	1.2 (77), 4.3 (70), 5.1 (27)
Schwartz, Leah	EIS001200	8.1 (170)
Schwartz, Norman C.	010447	7.3 (9150), 7.5.3.2 (4763), 8.1 (170)
Schweizer, Tina	EIS000397	1.1 (101), 5.1 (27), 3.3 (50)
Schweizer, Vanessa	EIS000576	1.1 (2053), 4.5 (2056), 3.2 (51)

Commenter	Comment Document	Location of Comments/Responses
Scott, Alicia M.	EIS001631	8.1 (170), 1.2 (79)
Scott, Jamie L.	EIS001075	5.1 (27), 3.2 (80), 5.5 (183)
Scott, Jay	EIS001366	5.1 (27), 13 (5)
Scott, Laura Mae	EIS001232	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 3.2 (80), 8.6.1 (4464), 8.11.1 (4465), 8.7 (141), 5.1 (27)
Scott, Laura Mae Crescent Valley Historical Society	EIS001242	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.3 (161), 3.9 (109), 4.1 (3361), 8.7 (141), 7.4 (3363), 8.6.3 (3364), 5.3 (164)
Scott, Patricia	EIS000428	2 (127), 5.1 (27)
Scott, Randy San Bernardino County, California	EIS002234	3.3 (50), 8.3 (149), 3.2 (80), 8.3 (149), 8.3 (161), 8.8.1 (11424), 8.6.1 (223)
Scully, Marian	EIS001641	5.4 (219), 1.2 (77), 7.5.11.2 (181), 8.10 (9452)
	010010	5.1 (27), 7.5.7 (98)
Sebolt, Aaron	EIS002005	7.1 (7931)
Sefton, James D.	EIS001434	7.5.3 (4498), 5.5 (30)
	EIS001503	7.5.6 (130), 3.2 (59), 3.9 (109), 8.8.3 (176), 8.11.1 (134)
Segal, Rita P.	EIS000750	1.1 (101)
Seifert, Duane	EIS000942	7.5.7 (98)
Seiler, Susan L.	010442	5.1 (27)
Selbach, LaVonne A.	EIS000082	5.1 (27), 12 (139)
Selinder, Bjorn P. Churchill County, Nevada, Office of the Churchill County Manager	010371	3.6 (257), 7.3 (210), 7.0 (12594), 3.5 (204), 4.3 (129)
Sellard, Lon W. B.	EIS001361	5.1 (27), 13 (5)
Sellard, Nancy	EIS001354	5.1 (27), 13 (5)
Sellard, Robert H.	EIS001349	5.1 (27), 13 (5)
Seman, Camille	EIS000776	8.1 (170)
Senos, Charles	EIS002314	5.1 (27)
Sewall, Christopher Western Shoshone Defense Project	EIS000638	7.5.11.2 (181), 1.1 (34), 3.2 (51), 3.2 (2337), 8.8.2 (135), 7.5.11.2 (2340), 3.2 (80)
Sgroi, Phillip	EIS001760	3.3 (50), 8.1 (170)
Shadis, Raymond New England Coalition On Nuclear Pollution	010281	3.6 (257), 7.1 (191), 7.3 (208), 7.3 (252), 7.0 (12921), 7.5.4 (12922)
	010349	3.6 (257), 7.1 (191), 7.3 (208), 7.3 (252), 7.0 (12921), 7.5.4 (12922)
Shaffer, Linda	EIS001141	3.3 (50), 5.1 (27)
Shankle, Judith A. Mineral County, Nevada, Nuclear Projects Office	EIS000361	5.5 (29), 5.3 (164), 8.10.2 (203), 5.4 (3102), 7.5.7 (105), 8.1 (170), 8.10.2 (203)
	EIS000383	5.5 (29), 5.3 (164), 8.10.2 (203), 8.10.2 (203), 5.4 (3102)
	EIS000391	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	EIS000400	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)

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Shankle, Judith A. (continued) Mineral County, Nevada, Nuclear Projects Office	EIS000542	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	EIS000593	8.3 (149), 8.10.2 (203), 7.3.2 (216), 8.11.3 (3019), 8.11.3 (3020), 3.2 (64), 10 (3), 8.3 (161), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 7.5.7 (105), 5.5 (29), 8.1 (170)
	EIS000723	8.3 (149), 8.10.2 (203), 7.5.3.1 (8038), 7.5.6 (130), 8.3 (161), 8.11.1 (134), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (5560), 8.8.1 (8059), 5.5 (29)
	EIS002115	3.2 (80), 8.10.2 (10227), 8.11.3 (3019), 7.5.6 (10229), 8.3 (161), 8.1 (259), 8.8.2 (10232), 8.10.2 (114), 8.4 (25), 8.11.2 (10248), 8.7 (28), 5.4 (10251), 5.5 (29), 8.10.1 (166), 7.5.7 (105), 8.3 (149), 8.11.3 (3020)
	EIS002188	5.5 (29), 8.1 (170), 8.3 (149), 7.5.3.1 (8038), 3.2 (64), 10 (3), 8.3 (161), 8.11.1 (8044), 8.10.1 (166), 8.4 (25), 8.7 (28), 5.4 (8055), 8.8.1 (8059), 8.10.2 (203)
	010232	3.5 (13386), 4.5 (63), 7.4 (13390)
Shea, Patrick	EIS001323	8.1 (170)
Sheehan, D. L.	EIS001925	8.1 (170), 5.3 (164), 8.4 (25), 8.8.1 (12302), 8.10.2 (114)
Shellabarger, Janet	EIS000189	5.3 (164)
Sheridan, Pat	010196	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Sherman, Patricia A.	EIS001974	8.1 (170), 5.3 (164)
Sherman, Thomas W.	EIS001179	5.2 (26), 7.3 (3633)
	010368	6.1 (116), 5.2 (26)
Shibler, James R. Spring Valley Town Advisory Board	EIS000796	5.2 (26)
Shillinglaw, Fawn	EIS000817	7.1 (6576), 7.3 (239), 7.1 (33), 7.1 (191), 7.1.1 (6996), 6.1 (7461), 7.1.1 (7463), 7.1.1 (74), 7.1.1 (7471), 3.2 (64), 5.3 (164), 5.4 (7483), 8.8.1 (7671), 3.2 (90), 3.9 (109), 8.8.3 (171), 3.1 (17), 7.5.3.2 (7733), 7.5.4 (7744), 7.3.1 (185), 7.5.11.2 (240), 7.4.1 (61), 8.3.2 (136), 9.2 (7769), 7.4 (207), 1.1 (7777), 7.1.1 (12606), 13 (5), 8.7 (247), 6.1 (12245), 6.0 (7923), 7.1 (7927), 8.3 (201), 8.1 (170), 1.2 (7978), 7.1.1 (7982), 7.5.10 (7983), 7.1.1 (7986), 7.1.1 (7988), 7.2 (7989), 7.1.1 (73), 2 (100), 7.1 (8000), 7.1.1 (8001), 3.2 (8002), 7.1.1 (8003), 7.1 (8004), 7.3 (8005), 4.5 (8010), 8.3.3 (24), 8.6.1 (223), 8.10.1 (133), 8.5.3 (190), 8.4 (8016), 7.1.1 (8018), 13 (8019), 9.1 (8027), 7.1 (8029), 7.5.10 (8030), 7.1.1 (12432), 7.1 (8032), 13 (37), 5.4 (8034), 3.2 (8134), 7.5.11.2 (181), 7.3 (8147), 7.5.3.3 (8148), 7.5.3.1 (8155), 7.5.3.2 (111), 4.5 (8163), 7.5.3.2 (8169), 7.5.3.2 (229), 7.3 (8175), 7.3 (8184), 7.3 (8197), 7.5.3.2 (8198), 7.3 (8200), 1.1 (8202), 7.3 (8206), 8.7 (144), 8.8.3 (176), 8.10 (8255), 7.5.2 (8284), 7.5.11.2 (8285), 8.4 (115), 8.8.1 (8288), 7.1 (8294), 8.4 (8297), 7.1 (8299), 7.1.1 (8312), 7.2 (8327), 7.2 (8330), 4.5 (92), 12 (139), 7.3 (8334), 7.3 (8335), 7.3 (9038), 7.3 (8336), 7.3 (8337), 7.3 (8339), 7.3 (209), 7.3 (8356), 7.3 (8358), 7.3 (8407), 7.5.3.2 (8410), 7.3 (8413), 7.5.3.2 (8417), 7.5.3.2 (8418),

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Shillinglaw, Fawn (continued)	EIS000817	7.5.3.2 (8410), 7.3 (8413), 7.5.3.2 (8417), 7.5.3.2 (8418), 7.3.2 (216), 7.3 (208), 7.5.3.2 (8454), 7.5.7 (8456), 7.3 (8462), 7.3 (8463), 8.3 (149), 8.8.1 (8470), 8.10 (8471), 8.10.1 (8472), 8.11.3 (8473), 8.11.2 (10886), 8.1 (259), 5.5 (30), 13 (72), 9.1 (8486), 4.5 (99), 9.1 (8488), 9.2 (11950), 9.1 (8494), 9.2 (8495), 13 (8497), 10 (5282), 10 (242), 10 (8499), 10 (8500), 10 (8501), 4.2 (8538), 10 (91), 10 (3), 10 (8553), 7.3 (8557), 7.3 (8558), 7.3 (8560), 7.3 (8563), 7.1.1 (8567), 7.1.1 (8568), 7.1 (8569), 7.1.1 (8570), 6.1 (8571), 6.1 (8572), 7.5.4 (6072), 7.1 (8577), 7.1.1 (8580), 3.2 (8582), 7.4 (8587), 7.4 (8592), 7.4 (8593), 7.4 (8595), 7.3 (110), 8.8.3 (173), 8.4 (8643), 9.1 (8646), 7.1 (8658), 8.4 (11929)
Shipp, Donald	010186	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Shollenberger, Amy Public Citizen	EIS000724	3.1 (3997), 8.3 (149), 8.1 (170), 3.9 (109), 10 (3990), 3.2 (3992)
	EIS001834	3.2 (80), 3.3 (50), 3.2 (90), 10 (3), 3.1 (15), 8.3 (149), 8.3 (161), 8.10 (156), 8.10 (148), 8.10.2 (8831), 3.9 (109), 7.5.11.2 (240), 7.5.11 (52), 3.7 (53), 7.5.11.2 (181), 10 (8881), 9.1 (8882), 7.5.4.2 (117), 7.5.4.4 (8884), 7.5.6 (130), 7.5.7 (98), 7.5.3 (8887), 7.5.3.1 (8888), 10 (8889), 8.10.1 (166), 8.10.2 (200)
	EIS002117	3.1 (3997), 8.3 (149), 8.1 (170), 3.9 (109), 10 (3990), 3.2 (3992)
	EIS002130	3.3 (50), 8.8.3 (171), 8.3 (161), 7.5.11.2 (240)
	EIS002166	3.3 (50)
Shope, Mary	010067	3.6 (257)
Showalter, James V.	010429	5.5 (29)
Shrader, Ray	EIS002058	2 (100), 5.1 (27)
Shrader-Frechette, Kristin	EIS001522	3.2 (80), 7.3 (6650), 7.5.3.2 (6725), 7.5.3.2 (6735), 7.3 (6750), 7.4 (6757), 7.4.1 (61), 7.1 (191), 8.3 (161), 8.10 (6769), 7.3 (94), 3.2 (51), 7.3.1 (185), 7.3 (6876), 11.1 (102), 3.2 (6889), 7.5.11 (6919), 4.3 (129), 12 (139), 7.5.11.2 (7024)
Shufelt, Joanna	EIS000588	1.1 (101)
Shumaker, Link	EIS000025	5.1 (27), 5.5 (29)
Siebert, Michael	EIS001712	2 (100)
Siegel, Nancy	EIS001870	8.1 (170)
Sill, Marjorie	EIS000551	8.1 (170), 3.2 (51), 5.5 (29)
Siller, Barbette	EIS001133	3.2 (51), 3.2 (64), 13 (3206)
Simeone, Wilma C.	EIS001855	8.1 (170), 7.5.3.2 (228), 8.10.2 (212), 8.3.3 (23), 6.1 (9102), 5.3 (164)
Simmons, Robert R.	EIS000879	5.2 (26)
Simpson, Audrey	EIS001536	7.5.11.2 (181), 8.1 (170), 7.5.11.2 (181)
Sims, Stan Nye County, Nevada, Department of Natural Resources and Federal Facilities	010143	3.6 (257), 7.4 (13278), 7.4 (125), 7.5.6 (130), 7.5.9 (175)
	010320	3.6 (257), 3.5 (11759), 7.4 (11754), 7.5.6 (130), 7.5.9 (175)
Sims, Thomas W.	EIS000015	5.1 (27)

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Sineriz, Maria M.	010250	3.6 (257)
Singer, Judy G.	010003	5.1 (27)
Singer, Stacy	EIS000314	5.1 (27), 13 (5)
Sipp, Valarie	EIS000311	5.1 (27), 13 (5)
	EIS000333	5.1 (27), 13 (5)
Sirnes, S. T. (Slim)	EIS000198	7.5.3 (1820), 7.1 (191), 11.1 (1822), 8.3 (161), 3.9 (109), 5.3 (164), 5.5 (183)
Sisson, Ray Inyo County, California, Environmental Review Board	EIS000259	7.5.3.2 (949), 7.3.1 (185), 7.3 (951)
	EIS000372	7.5.3.2 (949), 7.3.1 (185), 7.3 (209), 4.5 (11165)
Skindell, Michael J. Lakewood, Ohio, City of	EIS001284	3.3 (50), 8.1 (170), 8.10.2 (114), 8.7 (144), 1.1 (124), 8.8.1 (9055), 1.2 (81)
	EIS001549	3.3 (50), 8.1 (170), 8.10.2 (114), 8.7 (144), 1.1 (124)
Skow, Aine	EIS002311	7.3 (9965), 7.5.7 (12073), 7.5.4.1 (12074), 7.5.7 (12075), 8.10 (156), 8.8.3 (205)
Skow, Brian R.	010409	5.3 (164)
Skowera, Michael	EIS002062	8.3 (149), 8.4 (25), 5.1 (27)
Smagala, Rita	EIS001218	5.3 (164)
Smedley, Laurie	EIS001677	7.5.11.2 (181)
Smedley, Sully	EIS002150	8.11.7 (9871), 9.4 (9873), 1.1 (122), 5.5 (29)
Smit, Charles Thomas	EIS001499	7.5.7 (98), 7.4.1 (61)
	010062	7.4.1 (10862), 7.3 (220), 7.3 (5632), 5.2 (26), 8.3.3 (23)
Smith, Catherine Sierra Club, Toiyabe Chapter	EIS000567	3.2 (80), 5.1 (27), 8.1 (170)
Smith, Danny J.	EIS001692	7.5.7 (98)
Smith, Doris	EIS001358	5.1 (27), 13 (5)
Smith, Edward	EIS001052	2 (100)
	010011	7.5.3.2 (228)
Smith, Fred W.	EIS001353	5.1 (27), 13 (5)
Smith, Gerald M. U.S.Department of the Interior, Bureau of Land Management	EIS001444	8.11.4.2 (5148), 8.11.1 (5150), 8.11.4.1 (5151), 8.11.5.1 (5152), 8.11.11.1 (10012), 8.11.5.2 (5153), 8.11.1 (5154), 3.7 (53), 8.3 (149), 8.3.2 (136), 3.1 (5158), 8.11.4.2 (5159), 8.11.1 (5160), 7.5.3.2 (5161)
Smith, J.	EIS001408	8.1 (170)
Smith, Jan	EIS001981	3.1 (16), 7.3.2 (216), 7.3 (110)
Smith, Kathleen Logan	EIS001749	5.1 (27), 12 (139), 5.3 (164), 1.2 (79), 13 (5), 8.1 (170)
	010253	5.1 (27), 7.4 (5877), 7.3 (210), 3.5 (36), 5.5 (183), 5.3 (164), 5.5 (29)
	010272	5.1 (27), 7.3.2 (216), 1.1 (122), 3.5 (36), 5.5 (183), 5.3 (164)
Smith, Marian J. St. Clair Superior Neighborhood Development Association	EIS001829	8.8.3 (171)
Smith, Susan	EIS001248	5.1 (27)
Smith, Vanecia	EIS001053	8.7 (184), 13 (5)
Smith, William L.	EIS001388	8.1 (170)
Smoke, Henry R.	010445	8.1 (170)
Smucker, Richard W.	EIS000736	7.5.7 (93), 13 (5), 5.5 (29), 8.5.3 (190), 4.1 (83)
	010370	5.1 (27), 7.5.7 (93)

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Smutz, Robert	EIS001644	5.3 (164), 8.3.3 (23)
Snell, Blair	EIS001671	5.1 (27), 7.3.2 (216), 7.5.3.3 (8787), 5.3 (164)
Snoeberger, Geni	EIS001276	5.5 (183), 5.3 (164), 8.4 (25), 8.10.2 (212), 8.10.1 (133)
Snyder, Susi Shundahai Network	EIS000459	5.1 (27), 7.5.3 (1899), 6.1 (46), 3.2 (64), 5.5 (183), 7.5.11.2 (240), 8.3 (146)
	EIS000970	3.3 (50)
	EIS001907	3.2 (80), 5.1 (27), 3.2 (64), 8.3 (146), 3.3 (50), 8.1 (170), 8.10 (8746), 8.8.3 (174), 4.5 (8762), 3.2 (90), 7.3 (7), 12 (139), 7.1 (8777), 5.3 (164), 7.5.7 (98), 3.9 (109), 8.8.1 (8786), 8.10.2 (212), 7.5.6 (130), 7.5.7 (8797), 8.11.11 (8799), 7.5.11.2 (181), 4.3 (8803), 7.5.3.2 (8807), 4.2 (8810), 5.5 (183)
	EIS002133	7.5.3 (2512), 13 (5), 3.3 (50), 7.5.11.2 (181), 8.3 (161), 3.9 (109), 5.6 (12712), 3.2 (80)
	EIS002194	3.3 (50), 4.3 (249), 7.5.9 (175), 7.3 (7), 5.1 (27), 7.3 (10432), 7.5.6 (10433), 7.5.7 (98), 7.5.3.2 (111), 1.2 (243), 7.5.3.2 (228), 7.3 (10440), 7.3 (10441)
	EIS002199	13 (5)
	EIS002247	3.3 (50), 7.5.9 (175), 1.2 (11475), 1.1 (11476), 7.5.7 (848), 7.3 (7), 8.4 (11480), 8.3 (201), 8.10.2 (114), 13 (5), 12 (139)
	EIS002285	3.2 (11465), 7.5.7 (66), 8.8.3 (171), 1.1 (101), 3.3 (50), 1.2 (77)
	010114	3.6 (257), 7.3.2 (216), 3.2 (64), 7.5.7 (98), 7.5.7 (236), 5.3 (164), 7.5.3.1 (234), 7.3 (3549), 7.3 (222)
	010139	3.5 (233), 4.2 (12366), 7.1 (191), 13 (12368), 3.6 (257)
	010149	3.6 (257), 7.3.1 (185), 3.5 (204), 7.4 (241), 4.4 (244), 7.3 (220), 7.5.7 (235), 1.1 (124), 3.5 (233)
	010227	7.5.1 (106), 7.5.11.2 (240), 7.5.5.1 (13085), 7.1.2.1 (13086), 7.5.10 (13087), 7.4 (13088), 7.5.10 (13089), 7.5.9 (175), 7.5.7 (235), 4.3 (129), 7.5.7 (236), 4.4 (13094), 7.5.6 (130), 3.5 (36), 7.1.2.2 (13097), 7.5.3 (13098), 7.1.2.4 (13099), 7.1.2 (13100), 7.1.2 (13101), 7.3 (252), 7.4 (13104), 7.4 (241), 7.0 (13106), 9.1 (13109), 7.5.9 (13110), 4.4 (244), 5.3 (164)
	010322	3.6 (257), 4.4 (244), 7.5.9 (175), 7.4 (10782), 7.3.1 (185), 6.1 (7198)
	010328	7.5.11.2 (181), 7.3 (13248), 7.3 (256), 4.4 (13250), 7.3 (252)
	010353	7.5.1 (106), 7.5.11.2 (240), 7.5.5.1 (13085), 7.1.2.1 (13086), 7.5.10 (13087), 7.4 (13088), 7.5.10 (13089), 7.5.9 (175), 7.5.7 (235), 4.3 (129), 7.5.7 (236), 4.4 (13094), 7.5.6 (130), 3.5 (36), 7.1.2.2 (13097), 7.5.3 (13098), 7.1.2.4 (13099), 7.1.2 (13100), 7.1.2 (13101), 7.3 (252), 7.4 (13104), 7.4 (241),
	010353	7.0 (13106), 9.1 (13109), 7.5.9 (13110), 4.4 (244), 5.3 (164)
Snyder-Vine, Kim	EIS001620	5.1 (27)
Sonnenschein, Leonard A. St. Louis Children's Aquarium	EIS000996	8.10 (11906), 5.3 (164), 5.5 (183), 8.7 (11909)
	EIS001733	8.10 (11906), 5.3 (164), 8.7 (28), 8.7 (184)

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Sontag, Fran	EIS001748	12 (139), 6.1 (12278), 5.3 (164)
	010098	8.1 (170), 8.10.1 (133), 5.3 (164)
Sontag, Harry	EIS002154	6.1 (9704), 1.2 (79), 5.5 (29), 5.5 (30), 8.4 (159), 7.3 (9709), 7.4 (9710), 3.9 (109)
	010274	7.0 (13259), 7.1.2.2 (13260), 7.5.7 (93), 7.1.2.2 (13263), 7.4 (87), 5.5 (30), 5.1 (27)
Sontag, Ruth	EIS001506	5.1 (27), 7.5.3.2 (229)
Sorensen, B. W.	EIS000733	8.1 (259), 7.3 (220)
Sorkin, Steve	010203	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Soto, Lisa	EIS001392	8.1 (170)
Soto, Marci	EIS001395	8.1 (170)
Soto, Mitzi	EIS001892	8.1 (170)
Soutar, Jock A.	EIS000487	8.1 (170)
Speight, Philip D. Henderson, Nevada, City of	EIS001896	3.2 (80), 8.1 (259), 8.5.3 (190), 8.5.3 (11007), 8.11.2 (11008), 8.11.2 (11009), 8.8.1 (11010), 8.5.1 (180), 8.8.1 (11012), 8.8.1 (196), 7.5.6 (11014), 3.8 (65), 7.5.9 (11016), 8.5.3 (11017), 8.10.2 (212), 7.5.2 (11020), 7.5.3.2 (11021), 7.5.6 (11022), 7.4 (11023), 7.5.9 (1100)
Spiegelberg, Eldora	010204	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Spitzer, Gregory	EIS002059	7.5.7 (98)
Spitzner, John	EIS000581	5.3 (164)
St.John, Paz	EIS001453	4.3 (128), 4.3 (129)
	EIS001602	5.1 (27)
	EIS001902	4.3 (128), 4.3 (129)
Stacey, Chad	EIS001698	3.3 (50)
Stachunska, Agnes	EIS001054	1.1 (101), 13 (5), 5.4 (219)
Stadtmiller, Mark	EIS000939	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Stahl, Joel	EIS000004	5.3 (164)
Stall, J. A. Florida Power & Light Company	EIS001518	5.2 (26)
Stankovich, John	EIS000904	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Stanton, Timoty N. San Diego County, California, Department of Public Works	EIS001930	8.3 (161), 6.0 (10028)
Starnes, Bobbie	EIS000895	7.5.11.2 (181)
Starr, Stephen	EIS001400	8.1 (170)
Stecher, John	EIS001934	8.1 (170)
Steffen, Fred F. St. Louis, Missouri, City of, Board of Aldermen	EIS001007	8.1 (170)
	EIS001370	8.1 (170), 8.7 (144)
Stehlin, Vincent St. Louis, Missouri, City of, Metropolitan Police Department	EIS000981	8.8.1 (3253), 8.7 (153), 8.2 (3255), 8.10.2 (218), 8.10.2 (114), 8.10.2 (194), 8.10.1 (62)
Steibel, William W.	EIS000936	5.1 (27), 7.5.3.2 (230), 8.1 (10291), 4.3 (70)
Steiner, Susan L.	EIS001234	5.3 (164)
Stemmel, Cindy	EIS001401	8.1 (170)

Commenter	Comment Document	Location of Comments/Responses
Stempel, James D.	EIS001921	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 8.1 (170), 7.5.3.3 (6242), 5.3 (164), 5.4 (219)
Stephenitch Family, The Paul	EIS001940	8.1 (170)
Stephens-Jay, Carol	EIS000963	8.1 (170)
Stern, Griffith	EIS001422	8.3 (161), 8.10.3 (182)
Stern, Kris	EIS001836	5.3 (164), 4.5 (6985)
Stevens, John	EIS002257	8.7 (197), 1.1 (11401)
	EIS002276	8.1 (170)
Stewart, Sheri Mann	EIS000165	8.10 (1316), 8.1 (170)
	EIS000286	8.10 (1316), 8.1 (170)
Stock, Bill Pacific Gas & Electric	EIS002265	3.2 (80), 5.2 (26)
Stockman, Brian	EIS001984	7.5.7 (98)
Stokley, John	EIS000496	4.5 (99), 5.2 (26)
Stone, Leanne	EIS000034	5.1 (27)
Stoner, Nathaniel	EIS001193	5.1 (27)
Strand, John Michigan, State of, Public Service Commission	EIS000444	4.5 (99), 5.2 (26), 11.2 (108)
Stranquist, David L.	EIS001390	8.1 (170), 3.3 (4774)
Stricker, Karin E.	EIS001245	7.5.6 (130), 3.9 (109), 8.10.2 (212)
Stronach, Lesley H.	010374	5.1 (27)
Strong, Madge	EIS002309	5.1 (27), 5.3 (164), 5.5 (183)
Stryker, John W.	EIS002246	5.5 (29)
Stuart, Ryan	EIS001070	5.1 (27)
Studelska, Daniel	EIS001822	8.3.3 (23), 6.1 (9102), 5.3 (164), 5.5 (30)
Sugars, Stephanie	EIS001947	8.1 (170), 3.3 (50)
Sulejman, Enver	EIS001695	7.5.7 (98), 8.1 (170)
Sullivan, Graham S. Shundahai Network	EIS001840	3.2 (51), 5.1 (27), 7.1 (191), 7.5.11 (8132), 4.2 (8140), 13 (5), 8.3 (161), 5.3 (164)
	EIS002249	4.3 (129), 5.4 (219), 5.5 (183), 4.5 (6168), 7.3 (210), 12 (139)
	EIS002286	3.3 (50), 5.4 (8543), 1.1 (124), 13 (8244)
Sunnes, Bradley J.	EIS000345	5.1 (27), 1.1 (1676), 3.3 (50), 13 (5)
Sunswheat, Eric	EIS000145	5.1 (27), 8.1 (170)
Supko, Eileen Energy Resources International	EIS000290	3.2 (10815), 9.1 (138), 8.8.1 (172), 4.5 (107), 8 (158), 3.3 (88)
	EIS000359	5.2 (26), 8.1 (1656), 8.8.1 (172), 8.3 (149), 4.5 (10850), 8.11.1 (10851)
	EIS001458	8.3 (149), 8.8.2 (4125)
	EIS001835	1.2 (78), 2 (10473), 3.2 (90)
Sutton, Debra	EIS001767	5.3 (164)
Sutton, Robert F.	EIS001008	12 (139), 8.1 (170), 5.3 (164)
	EIS001746	12 (139), 8.1 (170), 5.3 (164)
	010210	5.1 (27), 8.1 (170), 5.5 (29)
Swafford, Shirley	EIS000605	8.10.1 (1773), 7.3.2 (216), 1.2 (243)
Swanson, Rochelle	EIS000557	5.3 (164), 4.5 (6985)
	EIS000600	5.1 (27), 8.4 (226), 13 (5), 1.1 (101)
Swanson, Roger W.	EIS000474	7.5.3.3 (1520)
	EIS000606	5.1 (27), 7.5.3.2 (228)

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Swanson, Roger W. (continued)	EIS000609	1.1 (11770)
Swanson, Sherman	EIS001164	7.5.3 (4640), 7.3 (4641), 5.1 (27)
Swart, Jeffrey	EIS001205	7.5.3.2 (2760), 10 (2761), 5.1 (27)
Swartz, Ginger Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000068	3.2 (64), 3.2 (80), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109), 7.5.1 (106)
	EIS000078	3.2 (64), 3.2 (80), 7.3.2 (361), 8.3 (362), 8.8.3 (171), 3.9 (109)
	EIS000101	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 7.3.2 (361), 3.2 (80)
	EIS000115	8.3 (149), 3.9 (109), 8.1 (259), 8.8.1 (196), 3.2 (80), 7.3.2 (361)
	EIS000148	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000157	11.1 (653)
	EIS000193	3.2 (80), 8.1 (259), 8.10 (773), 3.9 (109), 8.5.3 (776), 8.10 (12193), 8.5.3 (12195), 8.5.3 (190)
	EIS000227	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000269	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000356	3.2 (637), 8.3.1 (195), 8.4 (640), 8.3.1 (641), 3.9 (109), 7.5.11.2 (240)
	EIS000488	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000510	3.3 (50), 1.2 (243), 8.3 (161), 8.3 (160)
	EIS000651	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000678	3.2 (90), 3.2 (64), 7.3 (209), 10 (91), 8.3 (161), 7.5.6 (558), 10 (258), 8.5.1 (180), 3.9 (109)
	EIS000762	8.3 (161), 3.3 (50), 8.1 (10887), 8.2 (10888)
	EIS001456	8.3 (161), 3.3 (50), 8.1 (10887), 8.2 (10888)
Swift, Edie	EIS000343	5.1 (27)
Swoboda, Mike Kirkwood, City of, Missouri, City Council	010287	8.3 (60), 8.10.2 (212), 8.7 (142)
	010351	8.3 (60), 8.10.2 (212), 8.7 (142)
Swope, Roland	EIS000780	5.1 (27)
Szymanski, Jerry S.	EIS000046	7.5.3.2 (229)
	EIS000074	
Taguchi, Jeff Nye County, Nevada, Board of County Commissioners	EIS000441	3.2 (80), 7.5.7 (93), 1.1 (1663), 10 (104), 8.8.2 (188), 3.9 (109)
Talbot, Lyle Desert Citizens Against Pollution	EIS000366	8.10.2 (1745)
	EIS000368	5.3 (164)
Talent, James M. U.S. House of Representatives - Missouri	EIS000986	5.1 (27), 8.1 (170), 8.1 (3297)
Tamaro, Adeline F.	EIS000859	5.1 (27), 8.4 (2757), 8.10 (155)
	010240	5.1 (27), 3.5 (204), 1.2 (243), 7.4.1 (61), 8.1 (170), 8.3 (161), 8.7 (184)

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Tamaro, Adeline F. (continued)	010405	5.1 (27), 8.1 (170), 8.3 (161)
Tanner, John E. Coalition 21	EIS001329	4.5 (3936), 6.1 (13), 4.5 (107)
Taylor, Philip L.	EIS001296	3.2 (64), 5.3 (164)
	EIS001565	3.2 (64), 5.3 (164)
Taylor, Ruby	EIS000838	5.1 (27)
Taylor, Tim A.	010453	5.1 (27)
Taylor, Wayne The Hopi Tribe	010042	5.3 (164), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139), 5.1 (27)
	010091	5.3 (164), 5.3 (164), 5.1 (27), 8.3 (149), 8.10.2 (114), 8.1 (170), 3.9 (109), 12 (139)
Taylor, Willie R. U.S. Department of the Interior, Office of Environmental Policy and Compliance	EIS001969	7.5.4 (7438), 7.5.3.2 (7439), 8.11.4 (7441), 10 (7443), 8.7 (7445), 8.10.1 (7447), 8.10.1 (7449), 7.5.7 (7451), 8.11.1 (7453), 7.5.3.4 (7455), 7.5.3 (7457), 7.5.3.3 (7460), 7.5.3.3 (7464), 3.1 (7467), 7.5.3 (7469), 3.1 (7474), 7.5.3 (7506), 7.5.3.4 (7507), 3.1 (7508), 3.1 (7509), 7.5.3.1 (7513), 7.5.3 (7514), 7.5.3 (7517), 3.1 (7519), 7.5.3.3 (7520), 7.5.3.3 (7529), 7.5.3.3 (7536), 7.5.3.3 (7538), 3.1 (7541), 3.1 (12764), 3.1 (7559), 7.5.3.3 (7573), 7.5.3.5 (7574), 7.5.3.2 (7578), 7.5.3.2 (7581), 7.5.7 (7584), 3.7 (7585)
Tebbetts, Chartis L.	EIS001066	7.3 (3001), 8.1 (170), 13 (5)
Telfer, Richard G. Educational Directions	EIS000180	5.2 (26), 1.2 (78), 13 (5), 4.5 (217)
TenEyck, Michelle	EIS001383	5.1 (27), 8.1 (170), 4.3 (70)
	EIS001625	5.1 (27), 8.1 (170), 4.3 (70)
Terminel, Sarah	EIS000590	5.5 (30)
Terplan, Sprague	010464	5.5 (183)
Terry, Susan	EIS000579	13 (5), 4.5 (92), 1.2 (77), 3.2 (51)
Tershak, Carol A.	EIS000933	8.1 (170)
Tetzlaff, James W.	010044	5.2 (26)
	010069	5.2 (26)
Thallheimer, George W.	EIS001507	5.1 (27), 13 (5)
Thistlethwaite, Charles S. Inyo County, California, Planning Department	EIS000261	3.2 (1152), 8.10.2 (203), 8.3.1 (1155)
	EIS000374	3.2 (1152), 8.10.2 (203), 8.3.1 (11092)
Thomas, Celeste	010030	No comment
	010127	5.5 (29)
Thomas, Ellen B. Proposition One Committee	EIS001838	5.3 (164), 3.1 (15), 8.3 (149), 8.3 (161), 8.10.2 (114), 7.5.11 (52), 8.1 (170)
Thomas, Kristin	EIS000691	1.1 (122), 10 (258)
	EIS002157	5.1 (27), 7.5.7 (93), 5.5 (29)
Thomas, Mark L.	010459	5.1 (27)
Thomas, Steven	EIS001795	8.1 (170), 13 (5), 3.3 (50)
Thompson, Duane Shoshone-Bannock Tribes	EIS001928	3.7 (58), 3.3 (50), 9.5 (7631), 4.5 (7636), 3.1 (7638), 3.1 (7640), 4.5 (7642), 7.5.2 (7644), 7.3.1 (185), 7.5.7 (7652), 7.5.11 (7654), 8.8.1 (7655), 6.1 (46), 6.2 (7660), 4.5 (96), 4.2 (7667)

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Thompson, Hank Missouri, State of, Missouri State Senate	EIS001758	8.1 (170), 1.2 (8345), 5.3 (164)
Thompson, James J.	EIS000765	5.2 (26), 13 (2072), 7.5.7 (66), 8.4 (25), 7.1.4 (2190)
	EIS001467	5.2 (26), 13 (2072), 7.5.7 (66), 8.4 (25), 7.1.4 (2190)
Thoms, Michael	EIS000478	5.2 (26), 5.6 (1934), 4.5 (1935), 4.5 (92), 8.3 (146), 8.10.2 (114), 3.3 (50), 5.5 (29), 3.9 (109), 4.5 (1942), 8.3 (12209)
Throckmorton, Eugenie	EIS001343	2 (3882)
Thurlow, Andrew J.	EIS000752	8.10.2 (200)
	EIS001246	3.2 (51), 8.1 (170)
Tiesenhausen, Engelbrecht von Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000360	3.2 (80), 8.5.3 (190), 8.10 (12193), 7.5.3.2 (8)
	010323	7.3 (253), 1.2 (243), 3.6 (257)
Tilges, Kalynda Citizen Alert	010122	3.6 (257), 7.3.2 (216), 4.4 (244), 7.5.3 (11037), 7.5.9 (175), 7.5.3.1 (234), 3.5 (233), 3.5 (204), 7.3 (253)
	010138	13 (12298)
	010148	3.6 (257), 3.5 (233), 3.0 (11326), 7.4 (241), 7.5.9 (175)
	010327	3.6 (257), 7.5.3 (12159), 7.3.1 (185), 3.5 (204), 3.5 (233), 7.3.2 (216), 7.5.1 (106)
	010331	4.4 (244), 3.6 (12789)
	010332	5.4 (219)
Tilges, Kalynda	010164	1.2 (243)
Tilton, Dorothy	EIS001488	5.1 (27), 13 (5)
Tilton , Bill	EIS001490	5.1 (27), 13 (5)
Tinsley, Joanne	010418	5.1 (27)
Tobey, Jean	EIS000853	3.3 (50)
Todorovich, Pamela	EIS001006	8.10 (157), 8.1 (170), 4.5 (92), 5.5 (183)
	EIS001745	8.10 (157), 8.1 (170), 4.5 (92), 5.5 (183)
	010059	8.1 (170)
Towne, Shirley	EIS001161	5.1 (27)
Towner, Bruce	EIS001703	3.3 (50)
Tracey	EIS002169	5.1 (27)
Treacy, Rosemary C.	EIS000239	5.1 (27), 12 (139)
Treichel, Judy	EIS000075	1.2 (243), 3.2 (75), 3.2 (51), 3.2 (90), 6.1 (553), 7.3 (7), 8.3 (161)
Treichel, Judy Nevada Nuclear Waste Task Force, Inc.	EIS000094	3.3 (50), 7.5.1 (106), 4.5 (768)
	EIS000243	3.3 (50), 6.1 (1040)
	EIS001866	3.2 (80), 3.3 (9037), 3.2 (9039), 8.3 (161), 3.3 (9047), 1.1 (9049), 2 (9052), 4.5 (63), 8.10 (9057), 10 (258), 3.9 (109), 5.1 (27), 1.1 (34)
	EIS002201	3.5 (113)
	010123	3.6 (257), 7.3.1 (185), 4.4 (244), 1.2 (7020), 13 (227), 3.5 (204)
	010304	3.6 (257)
	010387	3.6 (257)

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Trepal, Chris Earth Day Coalition	EIS001286	5.1 (27), 8.3 (149), 8.1 (170), 8.10.2 (114), 3.9 (109), 8.8.1 (3896), 8 (3897), 8.10 (168), 8.10 (148)
	EIS001548	3.3 (50), 8.1 (170), 8.8.1 (3896), 8 (3897), 8.10 (148), 8.10 (168)
Trever, Kathleen E. Idaho, State of, INEEL Oversight	EIS001903	4.2 (12727), 6.1 (13), 4.5 (96), 3.1 (7933), 3.1 (11), 3.1 (7935), 3.1 (7939), 8.5.3 (7941), 4.2 (86), 3.1 (7946), 6.1 (7947), 8.8.1 (7948), 8.11.7 (7950), 3.1 (7952), 8.8.1 (187), 8.10 (7955)
Truads, Estilan	EIS000832	5.1 (27)
Truelove, Cynthia J. Clark County, Nevada, Department of Comprehensive Planning, Environmental Division	EIS001206	7.5.4.2 (4146), 8.11.4.2 (4147), 8.11.4.2 (4148)
Tucker, F. George	EIS000047	3.3 (50), 3.2 (51), 1.1 (124)
	EIS000083	3.3 (50), 3.2 (51), 7.5.3.2 (111), 3.5 (113)
Turbin, B.	EIS001271	1.1 (101)
Turk, Larry	EIS000533	1.1 (1743), 5.3 (164)
Turner, Allan Western Interstate Energy Board	EIS000497	3.7 (53), 3.3 (8210), 8.3 (149), 8.3 (161), 8.7 (147), 8.3 (146), 8.7 (153), 4.5 (8242), 8.7 (142), 8.7 (247), 8.7 (12465)
Twedt, Margaret	EIS001327	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10.2 (114), 1.2 (77), 8.3 (149)
	EIS001420	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10.2 (114), 1.2 (77), 8.1 (170)
Unger, Jacqueline	EIS002052	3.2 (51), 3.2 (64)
Ungricht, Margo	EIS001152	13 (72)
	EIS001153	13 (72)
	EIS001154	13 (72)
Unsigned Mesquite Area Chamber of Commerce	EIS000040	8.1 (259), 8.3 (377)
Unsigned Prairie Island Indian Community	EIS000328	13 (37), 4.5 (1730)
Uverks, Leslie	EIS001538	2 (100), 5.1 (27), 8.1 (170), 7.5.11.2 (240)
Valentino, F. William New York State Energy Research and Development Authority	EIS001955	3.10 (12699), 5.2 (26), 4.5 (6290), 4.5 (99), 11.2 (108)
van Wyck, Susan	EIS002304	1.2 (243), 5.4 (219), 7.3 (210)
Van Buren, John E.	010413	5.1 (27), 5.5 (29)
Van Landingham, Rick	EIS001571	5.4 (219)
Van Ronk, Ruth	010157	7.3.1 (185), 5.1 (27), 7.0 (13306), 7.3 (220), 7.5.3.2 (228)
	010367	7.5.1 (106), 7.5.9 (175), 8.1 (170), 3.5 (36), 7.0 (13514), 9.1 (250), 7.3.2 (216), 7.3 (210), 7.0 (12183), 5.1 (27)
Van Slyke, Hazel M.	EIS000386	5.1 (27)
Van de Werken, Paula	010411	5.5 (183)
Vandenberg, Alfred J.	EIS001530	8.1 (170), 5.3 (164), 5.1 (27)
Vasconi, Bill	EIS000353	3.7 (53), 11.1 (48), 8.3.1 (1440), 8.3.1 (1441), 8.8.2 (135), 8.3.1 (10906)
	EIS000694	5.2 (26), 11.2 (108), 8.7 (153), 3.2 (2505), 8.1 (259)
	EIS002103	5.2 (26), 3.9 (109), 8.1 (259), 11.2 (10478)

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Vasconi, Bill (continued)	EIS002137	5.2 (26), 4.5 (11501), 3.3 (50), 8.10.1 (11503), 8.7 (11504), 10 (11505), 6.0 (11506)
	010133	5.2 (26), 13 (6792), 3.6 (11534), 4.5 (11535)
Vatterott, Catherine	EIS001497	8.1 (170), 5.3 (164)
Vaughan, James A.	010297	13 (12874)
	010348	13 (12874)
Vaughan, Jimmy	EIS001716	2 (127), 5.5 (29)
Veerman, Gordon L. International Association of Fire Chiefs	EIS000991	5.2 (26), 4.5 (92), 8.10.2 (1325), 8.10.2 (114), 8 (158)
	EIS001728	5.2 (26), 8.10.2 (5824), 8.4 (5825)
Venturi, Deana	EIS001691	7.5.7 (98), 7.5.3.2 (230)
Vesperman, Gary C. Institute for New Energy	EIS001842	5.5 (29), 5.4 (8133)
	010124	3.4 (5712)
	010137	1.1 (124)
Viereck, Jennifer Olaranna	EIS000124	3.5 (113), 8.1 (259), 8.7 (153), 7.5.11.2 (181), 5.3 (164), 4.3 (129), 8.3 (149), 3.2 (90), 3.1 (650), 7.5.3.2 (228), 6.1 (120), 8.8.1 (918), 3.3 (50), 10 (242), 4.1 (83), 7.3 (209), 3.2 (55), 3.2 (80), 7.5.5.2 (38)
	EIS000622	6.1 (120), 7.5.11.2 (181), 7.5.4 (11780), 4.1 (83), 4.1 (2223), 3.2 (2224), 7.3 (209), 5.1 (27), 7.5.6 (130), 8.11.7 (2226), 10 (2227), 7.5.3.2 (2228), 1.1 (2229)
	EIS000636	6.1 (120), 7.5.11.2 (181), 4.1 (83), 1.2 (243), 8.7 (142), 8.3 (149), 3.2 (64)
	EIS001397	8.7 (197), 3.3 (50), 6.1 (120), 4.1 (83), 4.5 (8432), 7.5.11.2 (181), 2 (100), 8.1 (170), 4.3 (129), 3.2 (8442), 7.5.3.3 (8443), 7.5.6 (130), 7.5.2 (8445), 10 (8446), 6.1 (46), 8.7 (142), 8.3 (8449), 5.5 (183)
Viereck, Jennifer Olaranna Healing Ourselves & Mother Earth	010170	3.5 (11068), 3.5 (36), 7.5.11.2 (181), 7.5.9 (175), 3.6 (257), 7.4 (241), 7.4 (125), 7.5.11.2 (11827), 7.5.3.1 (234), 9.1 (250), 7.3.2 (216), 3.5 (204), 5.2 (26), 5.4 (12342), 7.3 (222)
Viereck, Jennifer Olaranna Southeast Area Citizen's Advisory Committee to the Inyo County, California, Board of Supervisors	010325	7.3.1 (185), 3.2 (80), 3.6 (257), 3.5 (204), 7.4 (241), 9.1 (250), 4.5 (9323), 7.0 (12226), 7.3 (209), 7.5.3.1 (234)
	010330	7.5.7 (98), 5.2 (26), 7.5.7 (236)
Viereck, Tim Twisted Light Projects	010275	7.3.2 (216), 5.1 (27)
Viljoen, Benjamin Esmeralda County, Nevada, Board of County Commissioners	EIS000154	7.5.6 (119), 11.1 (514)
	010230	8.10.2 (203), 11.1 (102), 3.5 (204), 3.5 (36), 7.5.6 (13079), 8.12 (13080), 7.5.6 (13081), 8.12 (13082)
Villaire, Louis A. Gas Technology Institute	010430	5.1 (27), 13 (5)
Vincent, John A. GPU Nuclear, Inc.	EIS000764	3.2 (2504), 8 (158), 8.8.3 (11861)
	EIS001460	3.2 (2504), 8 (158), 8.8.3 (11861)

Commenter	Comment Document	Location of Comments/Responses
Virgilio, Martin J. U.S. Nuclear Regulatory Commission	010248	3.2 (13069), 3.5 (13070), 3.5 (13071), 7.5.7 (13072)
Voelker, Roger H.	010252	3.6 (257), 3.5 (12849), 4.2 (12850), 4.4 (244), 7.3.2 (216), 7.4 (125), 9.1 (250), 7.0 (12858), 7.4 (241), 7.5.9 (175), 7.5.7 (235), 7.5.1 (106), 3.5 (204), 7.5.3.1 (234)
Voelker, Roger Citizens Action Coalition of Indiana	EIS001191	3.2 (64), 8.1 (170), 8.10.2 (212), 8.3 (4341), 8.8.3 (171), 3.2 (90), 7.5.3.2 (4344), 2 (100), 1.2 (243), 3.2 (80)
	EIS001233	3.2 (64), 8.1 (170), 8.10.2 (212), 8.3 (4341), 8.8.3 (171), 3.2 (90), 7.5.3.2 (4344), 2 (100), 1.2 (243), 3.2 (80)
	EIS001590	13 (5), 8.1 (170), 8.10.2 (114), 8.3 (149), 8.11.6 (6380), 8.11.11 (6382)
	550003	8.3 (149)
Voelker, Roger Rum Village Neighborhood Association	EIS001633	8.1 (170), 8.10.2 (200)
Vogel, Annie	EIS001523	8.1 (170), 8.8 (4383), 8.10 (4384), 8.8.1 (198)
Volner, Andy	EIS001306	7.5.4.2 (117)
von Ruden, June Mothers For Peace	EIS002109	5.3 (164), 8.3 (146), 7.5.3.2 (228)
Voorhies, Bill	010452	5.1 (27)
Voos, Charles J.	EIS000645	8.8.1 (2355)
Voos, Charles J. Elko County, Nevada, Board of County Commissioners	EIS001904	8.8.2 (6221), 1.2 (81), 3.9 (109), 7.5.1 (106), 3.2 (80)
Vorzimer, Rachel	EIS001672	5.1 (27), 3.2 (7995)
Vreeken, Tanya L.	EIS001076	8.1 (170)
Wagner, Maureen	EIS001262	8.1 (170)
	010017	8.1 (170)
Wainscott, Joyce	EIS000018	5.1 (27)
Waks, Mitch	EIS001513	7.5.3.2 (4038), 7.4 (4039), 5.1 (27)
Walker, Jamieson S. Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000060	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000149	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
	EIS000151	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000155	3.2 (80), 7.3 (208), 11.1 (76), 10 (104), 3.3 (50)
	EIS000196	3.8 (65), 7.5.7 (93), 3.2 (80), 3.2 (84), 10 (104), 11.1 (76)
	EIS000199	3.2 (80), 7.3 (208), 11.1 (76), 10 (104), 3.3 (50)
Walker, Jamieson S. Nye County, Nevada, Board of County Commissioners	EIS000061	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
	EIS000194	3.2 (80), 8.1 (259), 11.1 (6), 6.1 (510)
Walks, Ivan C. A. District of Columbia Department of Health	EIS000065	3.10 (4)
Wallace, Mariel	EIS001292	8.3 (161), 8.4 (25), 8.3 (149), 8.10.2 (114), 5.1 (27)

Commenter	Comment Document	Location of Comments/Responses
Wallace, Mariel (continued)	EIS001559	3.3 (50), 8.3 (161), 8.7 (197), 8.3 (201), 8.4 (25), 8.10.2 (114), 5.1 (27), 8.3 (149)
Wallis, Jackie Mineral County, Nevada, Board of County Commissioners	EIS001660	3.3 (88), 8.3 (149), 8.10.2 (200), 8.10.2 (194), 7.5.11 (5440), 9.1 (2043), 9.1 (5445), 3.7 (53), 11.2 (56), 1.2 (243), 4.3 (5454), 3.1 (5455), 8.3 (161), 8.10.1 (5469), 8.4 (5478), 8.7 (28), 8.11.6 (5483), 7.5.6 (130), 8.1 (170), 8.7 (141), 8.11.1 (5489), 8.11.2 (5497), 8.11.5 (5499), 8.11.6 (5501), 8.11.11 (5502), 8.10 (145), 8.11.1 (5511), 8.11.6 (5513), 8.6.2 (186), 8.10.2 (203), 8.10.2 (5520), 8.10 (154), 8.11.6 (5524), 8.11.1 (134), 8.11.4.3 (5528), 8.8.2 (5529), 7.5.4.1 (118), 8.11.3 (5539), 8.11.4.2 (5540), 8.11.4 (42), 9.1 (5546), 10 (5550), 11.1 (5554), 11.1 (102), 5.4 (5560), 7.5.7 (105), 3.2 (80), 7.5.3.3 (8700), 8.11.1 (11760), 8.3 (146)
Wallis, Stan Caliente, Nevada, City of, City Council	EIS000235	3.2 (995), 11.2 (996), 8.5.1 (997), 8.11.6 (44), 8.8.2 (179), 8.10.2 (999), 8.11.6 (1000), 7.4.2 (11982), 8.1 (170)
	EIS000670	8.11.6 (44)
Walsh, Helen C.	EIS001134	3.1 (16), 7.3.2 (216), 7.3 (110)
Walsh, Jane C.	EIS001051	7.5.7 (98), 7.4 (2943)
	EIS002148	5.1 (27), 12 (139)
Walsh, Martin P.	EIS000878	8.7 (184)
	010043	8.7 (142)
Walter, Marion	EIS001432	8.1 (170), 5.3 (164)
Walters, John	EIS000858	3.3 (50), 1.1 (101)
Walton, Barbara A.	EIS001430	13 (5), 5.4 (4605), 3.2 (80), 7.3 (4607), 7.3.1 (4484), 3.2 (55), 7.3.1 (185), 10 (4610), 10 (4611)
	010099	3.5 (204), 6.1 (46), 4.5 (63), 7.1.2 (12654), 3.2 (55), 3.5 (36), 4.4 (244)
Ward, D. P.	EIS000925	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154)
Ward, Fay	EIS000924	3.2 (64), 7.5.6 (130), 3.2 (59), 3.9 (109), 8.10 (154), 7.5.3.2 (228), 1.2 (77), 5.5 (29)
	EIS001489	5.1 (27), 13 (5)
Ward, Richard	EIS000222	5.1 (27)
Warden, Tom Howard Hughes Corporation	EIS002112	3.9 (109)
Warner, Edward K.	EIS001446	8.1 (170)
	010264	8.1 (170)
Warner, Rick	EIS000514	3.3 (50), 7.5.11.2 (240), 1.1 (11025), 8.1 (170), 4.3 (128), 7.3.1 (185), 3.2 (64), 8.10.2 (114), 3.7 (53), 3.2 (80)
Warnick, Ray	EIS000831	5.1 (27)
Warson, Suzanne	EIS001087	7.3 (209)
Waterston, Pat Missouri Coalition for the Environment	EIS000982	8.1 (170), 8.10.2 (212), 4.5 (3241), 1.1 (34)
Watson, Dan	EIS000907	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Watterson, Ken Timbisha Shoshone Tribe	010336	7.5.11.2 (240)
Watts, Fern	EIS001777	8.1 (170), 11.2 (8259)

Commenter	Comment Document	Location of Comments/Responses
Weber, Dan	EIS000582	7.5.3.2 (228), 13 (5)
Weber, Debbie	EIS000265	5.3 (164), 8.1 (170), 3.2 (80)
	EIS000707	8.10.2 (2350), 8.7 (12185), 8.9 (2352), 3.2 (51), 5.3 (164)
Weeks, Michael	EIS000090	7.5.1 (444), 7.4 (103)
Wefald, Susan E. North Dakota, State of, Public Service Commission	EIS001484	5.2 (26)
Wehrman, Richard M.	010448	5.1 (27)
Weidemann, Dean A.	EIS000032	8.1 (259)
Weidenheimer, Ruth	EIS002197	1.1 (124), 6.1 (46), 7.5.3.4 (10707), 7.4.1 (61)
Weidner, Maria Ohio Public Industry Research Group	EIS001550	1.2 (77), 7.5.3.2 (111), 7.5.3.2 (228), 8.3 (161), 8.4 (25), 8.1 (170), 13 (5), 3.5 (113)
Weinberg, Jessica L.	010369	5.1 (27), 7.5.3.2 (230), 8.3 (161), 5.5 (29), 5.3 (164), 3.6 (257), 3.3 (12281)
	550001	8.3 (149), 8.3 (149)
Weinberg, Piper Shundahai Network	010115	7.3.1 (185), 3.6 (257), 7.5.7 (10495), 7.5.11.2 (240), 7.5.5.2 (38), 7.5.5 (12157), 7.5.4.2 (117), 7.5.3.2 (230)
	010158	3.6 (257), 3.5 (233), 7.5.11.2 (240), 7.5.11.2 (181), 3.5 (204), 8.12 (10971), 6.1 (46), 5.1 (27)
Weinberg, Piper	010235	7.5.7 (9921), 3.3 (50), 7.5.11.2 (240), 7.5.11.2 (181), 7.5.5.2 (38), 3.5 (204), 6.1 (46), 13 (5555), 3.6 (257)
Weinman, Janice	EIS001398	8.1 (170), 8.4 (226), 3.3 (50), 5.5 (29)
Weisel, Herbert	EIS001958	8.1 (170), 8.3 (149), 3.3 (50)
Weiss, Giudi Gray Panthers	EIS001319	3.3 (50), 8.3 (161), 8.8.3 (174), 8.10 (68), 5.5 (183), 3.2 (80)
	EIS001607	3.3 (50), 8.3 (161), 8.8.3 (174), 8.10 (68), 5.5 (183), 3.2 (80)
Welch, Gerry Webster Groves, Missouri, City of	EIS001859	8.1 (170), 8.10.2 (114)
	010282	8.1 (170)
Wellington, Nancy	EIS000738	7.4 (87)
Wells, Pete Southern Nuclear	EIS000219	5.2 (26), 4.5 (217), 4.5 (1338), 2 (1339), 8 (158)
	EIS000302	5.2 (26), 4.5 (217), 4.5 (1338), 2 (1339), 8 (158)
Wells, Rachel	EIS001022	7.5.3.4 (12735)
	EIS001787	7.5.3.4 (12735)
Welsh, Thomas J.	EIS001722	8.7 (184), 8.1 (170), 1.2 (243), 5.1 (27), 13 (5)
Wendt, Patricia M.	EIS001885	8.1 (170)
Wendt, William F.	EIS001593	8.7 (140), 8.8.2 (9431), 3.3 (9441)
Wesley, Robert C.	EIS000713	7.5.11.2 (240), 8.11.11.1 (2390)
West, James F. Augusta Metro Chamber of Commerce	EIS000218	2 (828), 5.2 (26)
West, Misty	EIS001309	5.1 (27)
Weston, Michele R.	EIS000508	13 (5), 7.5.11.2 (240), 3.7 (58), 7.5.11.2 (5248)
Wexner, Adam	EIS001326	7.5.7 (4967), 7.1.1 (4968), 1.2 (4969)
Whidden, D.	EIS000909	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)

Commenter	Comment Document	Location of Comments/Responses
Whitaker, John Nevada, State of, Department of Transportation, Roadway System Division	EIS000544	8.8.3 (171), 8.8.2 (4168), 8.10.1 (7548)
White, Beverly	EIS001041	8.1 (170), 5.5 (183)
White, Byron Prairie Island Indian Community	EIS000490	5.2 (26), 9.4 (1537), 8.3 (149), 8.8.3 (171), 13 (5)
White, Debra P.	010460	5.1 (27)
White, Delores	EIS001454	3.1 (15), 3.3 (50), 5.1 (27), 5.5 (29), 12 (139)
	EIS002136	5.1 (27)
White, Laura F.	EIS001629	5.1 (27), 8.1 (170), 7.3.2 (216), 7.5.11.2 (181), 13 (5), 1.2 (243), 7.5.3.2 (228), 5.5 (29), 4.5 (92)
White, Randall	EIS000319	8.1 (170)
White, Robyn	EIS000685	8.1 (170), 7.3 (206)
White, William S.	EIS000033	5.3 (164), 1.2 (243)
Whitman, Frank B.	EIS000804	8.11.1 (1689)
Whitney, Lois E.	EIS000625	5.1 (27), 7.5.7 (93), 7.5.11 (11870)
	EIS000639	5.1 (27), 7.5.11.2 (181), 7.5.7 (93)
	EIS001948	7.5.11.2 (12425)
Wiedermann, Marcus	EIS000906	3.2 (75), 8.3 (149), 7.5.11.2 (181), 7.3.2 (216), 2 (126), 3.2 (2081), 3.3 (50)
Wiens, Debra M.	EIS001527	8.3 (60)
	EIS001854	8.1 (170)
Wilby, Debbie	EIS001994	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27)
Wilcox, Robert H.	EIS000181	3.1 (12), 5.2 (26), 4.5 (703), 13 (5), 13 (618)
Wilcox, Robert H.	010183	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Wilder, John	010180	8.1 (170), 5.3 (164), 8.8.3 (7219), 8.10 (155)
	010270	8.1 (170), 8.10 (155), 5.3 (164), 8.8.3 (7219)
Williams, Chris Citizens Action Coalition of Indiana	010155	8.1 (170)
Williams, Doris	EIS000855	7.5.7 (98), 7.5.7 (93)
Williams, H. C.	EIS001686	3.1 (16), 7.3.2 (216), 7.3 (110), 1.2 (77)
Williams, Harry C. Bishop Paiute Tribal Council	EIS000367	7.3.2 (216), 7.5.3 (1846), 7.5.4.2 (1847), 3.9 (109)
Williams, James M.	EIS000055	3.1 (337), 7.5.6 (338)
	EIS000106	7.5.6 (130), 7.5.7 (564), 8.3 (565), 8.1 (259), 8.3.2 (136)
	EIS000118	7.5.6 (529), 8.1 (259), 8.3 (532), 8.3 (201), 8.3 (149)
Williams, Jane California Communities Against Toxics	EIS000365	5.1 (27), 7.5.11.2 (3702), 7.5.3.2 (2), 3.2 (51), 3.2 (1844)
Williams, Martha R.	EIS000836	5.1 (27)
Williams, Matthew J.	EIS001069	8.1 (170)
Williams, Myrna Clark County, Nevada, Board of County Commissioners	EIS000706	8.8.2 (121), 3.9 (109), 8.3 (161), 8.8.3 (171), 10 (3092), 7.5.6 (130), 3.7 (53), 3.2 (80), 3.5 (233)
	EIS002129	8.8.2 (121), 3.9 (109), 8.3 (161), 8.8.3 (171), 10 (3092), 3.7 (53), 7.5.6 (130), 3.2 (80), 4.3 (128)
Williams, Paul C. Paul Williams and Associates	EIS001294	4.3 (70), 7.5.7 (66), 8 (158)
	EIS001570	4.3 (128), 7.5.7 (66), 8.1 (170), 8.4 (115)

Commenter	Comment Document	Location of Comments/Responses
Williams, Ray H.	EIS000616	8.3 (1794), 8.11.4.2 (43), 8.8.2 (1796)
Williams, Stella	EIS000122	7.5.7 (926), 8.11.7 (927), 4.1 (82)
	EIS000131	5.3 (164)
Williams, Terri	EIS001032	5.3 (164), 8.1 (170), 13 (5), 1.1 (8509)
	EIS001768	5.3 (164), 8.1 (170), 13 (5), 1.1 (8509)
Willis, Francine	EIS001050	1.2 (77), 7.3.1 (185), 5.1 (27)
Willis, Steve	EIS000770	1.2 (77), 7.3.1 (185), 5.1 (27)
Willoughby, Amber	EIS002031	1.1 (101), 8.4 (115), 8.10.2 (114), 8.4 (25), 7.5.7 (93), 8.1 (11820)
Wilson, David	EIS000977	5.5 (29), 13 (131)
	EIS001127	8.1 (170), 13 (4139), 5.3 (164), 1.2 (78), 13 (131)
Wilson, Debra L.	EIS000995	5.1 (27), 5.5 (183), 4.5 (7072), 7.5.3.3 (7075), 5.4 (219), 8.10.1 (7084), 8.1 (170), 8.10 (148), 4.1 (82), 8.4 (25), 8.10 (7099), 8.7 (247), 8.4 (159), 8.10.2 (12250)
	EIS001732	3.3 (9918), 4.5 (7072), 7.5.3.3 (7075), 5.4 (219), 8.10.1 (7084), 8.1 (170), 8.10 (148), 4.1 (82), 8.4 (25), 8.10 (9936), 8.10.1 (9942), 8.4 (159), 5.5 (183), 8.10.2 (12250)
	EIS002173	8.1 (170), 8.10.1 (133), 1.2 (79), 5.5 (183), 5.1 (27)
	010085	8.1 (170), 5.5 (183), 1.1 (124), 13 (5), 5.1 (27)
Wilson, Joy S.	EIS000364	5.1 (27)
Wilson, Mark	EIS001699	3.3 (50)
Wilson, Mary E.	EIS000121	5.5 (29)
Wilson, Michael J.	EIS001926	8.1 (170), 4.1 (82), 5.3 (164), 5.5 (183), 5.1 (27)
Wilson, Nicole Marie	EIS001411	7.5.7 (4149), 3.2 (84), 4.5 (3706), 7.3 (220), 7.5.3.2 (229), 8.1 (170), 7.3.2 (216), 5.1 (27), 5.3 (164)
Wilson, Troyce C.	010424	5.1 (27)
Wilson-Booth, Ursula	EIS000813	13 (5), 3.2 (64), 1.2 (4396), 5.1 (27), 7.3.2 (216), 8.1 (170), 8.3.2 (136), 7.5.11.2 (181), 8.3 (161), 5.5 (30)
Wimmer, Warren	010187	8.1 (170), 7.5.3.2 (228), 5.3 (164), 5.5 (183)
Windholz, Antony	EIS002014	5.1 (27), 8.4 (8396)
Winget, W. B.	010472	5.1 (27)
Winslow, Geralyn C.	EIS001108	13 (5), 5.1 (27)
Wissbeck, Cathy W.	EIS000237	8.1 (259)
	EIS000689	8.1 (259)
Wissbeck, Larry	EIS000232	8.3.3 (23), 8.10 (155), 8.10 (1082), 10 (3), 8.4 (115), 8.10 (1085), 7.5.7 (66), 8.3 (146), 3.2 (51), 8.1 (11177)
	EIS000663	3.2 (51), 8.3.3 (23), 8.10 (155), 8.10 (1082), 10 (3), 8.4 (115), 7.5.7 (66), 8.3 (146)
	EIS000688	12 (139), 8.10 (3488), 8.5.2 (11981)
Witham, Richard	EIS000737	5.2 (26), 3.3 (50)
Wold, Barbara	EIS001991	3.1 (16), 7.3.2 (216), 7.3 (110), 5.1 (27)
Wolf, Christopher	010293	8.1 (170), 5.5 (183)
Wolf, Howard W. Wolf Ranch	EIS001056	8.11.1 (2826), 5.1 (27)
Wolfe, Bertram Americans for Clean Responsible Energy	EIS002243	7.5.7 (66), 8 (158), 1.2 (78), 5.2 (26)
	EIS002266	13 (5)
	EIS002293	8.11.7 (11679), 5.2 (26)

Commenter	Comment Document	Location of Comments/Responses
Woo, James	EIS001681	7.5.11.2 (181)
Woodard, Victoria Escalante Wilderness Project	EIS001936	5.3 (164), 7.5.11.2 (240), 7.5.3.3 (9073), 7.3 (94), 7.3 (209)
	010288	3.5 (233), 5.3 (164), 4.4 (244), 3.5 (36), 3.6 (13491), 7.3.2 (216), 7.4 (125), 9.1 (250), 7.0 (13495), 7.4 (241), 7.5.9 (175), 7.5.7 (235), 7.5.1 (106), 3.6 (257)
Woodbury, Bruce L. Clark County, Nevada, Board of County Commissioners	EIS001888	3.2 (80), 3.9 (109), 8.3 (149), 3.5 (233), 8.1 (259), 3.7 (53), 3.3 (1), 3.2 (75), 3.2 (84), 3.2 (9291), 3.2 (64), 7.5.6 (130), 10 (3), 7.3.1 (185), 6.1 (18), 4.2 (9298), 7.5.3.2 (8), 11.1 (102), 8.3 (213), 8.8.1 (9303), 3.2 (9305), 3.2 (9230), 11.2 (9306), 11.1 (9309), 3.7 (9310), 3.2 (51), 11.1 (9315), 8.3 (161), 9.1 (9321), 5.4 (9337), 7.5.6 (9339), 3.3 (9340), 7.5.11 (9341), 8.11.11 (9342), 7.5.11 (9345), 1.1 (124), 7.5.5 (9348), 7.5.11 (52), 10 (9353), 10 (9354), 10 (9355), 10 (9356), 10 (9357), 2 (9368), 7.5.4.2 (9373), 7.4 (41), 6.1 (9376), 7.1 (33), 7.3 (9382), 7.3 (1436), 7.3 (7), 7.3 (12439), 7.3.2 (216), 7.3 (239), 7.1.4 (9391), 7.3 (9392), 8.8.1 (9401), 3.2 (9387), 8.3 (9403), 8.8.1 (9406), 8.4 (9407), 3.1 (9410), 8.1 (9411), 8.7 (153), 8.3 (201), 8.2 (9417), 8.5.3 (190), 8.8.3 (9424), 8.5.3 (9425), 8.8.3 (205), 8.10 (148), 8.10.2 (9434), 8.10 (155), 6.0 (9442), 8.7 (247), 8.10.1 (167), 8.10.2 (9457), 8.3.3 (24), 8.3 (60), 8.7 (142), 10 (9467), 8.10.3 (9468), 8.9 (193), 8.8.3 (173), 8.8.3 (171), 8.11.11 (9475), 3.3 (88), 7.5.11.2 (240), 3.2 (9479), 12 (139), 1.2 (9483), 10 (9485), 8.9 (9489), 8.1 (9495), 7.5.6 (9498), 7.5.6 (9499), 3.3 (9500), 7.5.11 (9502), 8.11.1 (134), 8.11.1 (9505), 11.2 (108), 11.2 (6142), 5.3 (164), 5.5 (29), 8.1 (170), 3.3 (50), 7.5.7 (98), 7.5.7 (9518), 7.4.1 (61), 7.5.3.2 (228), 1.2 (77), 8.4 (226), 8.4 (115), 4.1 (9533), 8.10 (9538), 8.2 (9540), 8.3.1 (20), 8.7 (141), 8.7 (140), 8.10.2 (114), 1.2 (12743), 8.11.4.2 (9478), 2 (100), 8.8.1 (9552), 8.3 (9553), 8.8.1 (9554), 8.1 (9557), 8.5.1 (9560), 8.10.1 (9566), 8.11.2 (9568), 8.8.3 (174), 8.8.1 (9572), 8.3 (9576), 8.10 (54), 8.10 (9580), 8.4 (9582), 8.8.1 (12265), 8.8.1 (9585), 8.4 (9587), 8.8.1 (9589), 8.4 (9590), 7.2 (9591), 8.1 (9594), 8.10.2 (9595), 8.8.1 (9596), 8.10.1 (9597), 8.7 (9598), 8.6.2 (9601), 8.5.1 (9600), 8.9 (9602), 8.5.1 (9604), 8.8.2 (9607), 8.3.2 (136), 8.3.1 (9611), 8.8.1 (9612), 8.8.1 (9613), 8.3.3 (23), 8.11.7 (9625), 8.8.1 (9630), 8.10.1 (9631), 8.10.1 (9633), 8.10.1 (9634), 8.10.1 (9635), 8.10.1 (9636), 8.11.2 (9644), 8.11.1 (9646), 8.8.3 (9649), 8.8.1 (187), 8.11.11 (9652), 8.10.2 (212), 10 (9660), 10 (9663), 3.2 (9737), 7.5.11.2 (9739), 10 (9740), 3.2 (9741), 7.5.11.2 (9744), 7.5.11.2 (181), 7.5.11.2 (9745), 7.5.11 (9746), 8.11.5.2 (9747), 8.11.5.2 (9748), 10 (9749), 7.5.7 (12407), 10 (9752), 4.5 (9753), 4.5 (9755), 4.1 (9754), 9.1 (9756), 6.1 (46), 8.10.1 (9758), 6.1 (9759), 3.2 (55), 3.2 (9761), 3.2 (9762), 3.2 (9), 2 (1244), 4.5 (9764), 3.3 (9765), 7.3 (206), 3.2 (9768),

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Woodbury, Bruce L. (continued) Clark County, Nevada, Board of County Commissioners	EIS001888	7.1.1 (11436), 8.7 (9770), 3.2 (9773), 3.2 (9775), 8.10.2 (203), 7.4.2 (9779), 8.10.2 (218), 8.7 (144), 7.5.3.2 (9787), 7.2 (9788), 8.6.2 (186), 7.5.3.2 (9791), 7.5.3.3 (12405), 7.5.3.5 (9793), 8.11.3 (9794), 7.5.3.2 (111), 7.5.3.2 (9796), 7.5.3.1 (234), 7.5.2 (11705), 4.2 (9798), 7.5.4 (9799), 7.5.3 (9800), 7.5.4.2 (9801), 8.11.4 (42), 10 (12381), 8.11.3 (9803), 3.8 (65), 4.5 (9805), 8.11.9 (9807), 8.11.2 (9808), 8.11.8 (10), 7.3 (9811), 8.11.11.1 (10655), 8.11.11.1 (9826), 13 (9827), 8.10.2 (9831), 3.2 (12288), 5.4 (219), 7.4 (9850), 8.11.1 (9851), 7.5.1 (12192), 7.5.1 (9852), 7.5.6 (9853), 8.3 (9854), 1.2 (243), 1.2 (79), 1.1 (9858), 5.1 (27), 5.2 (26), 7.4 (9881), 7.5.3.2 (9882), 7.5.3.4 (12413), 7.3 (9883), 7.1 (12744), 7.3.2 (9885), 7.3 (9886), 10 (9887), 7.3 (12199), 7.3 (12382), 2 (9889), 4.3 (129), 3.3 (9896), 3.1 (9898), 2 (9899), 8.7 (9902), 3.2 (9904), 3.3 (9750), 3.3 (9906), 3.3 (9907), 3.3 (9909), 4.1 (9912), 4.3 (9913), 4.3 (6799), 1.2 (78), 4.5 (9916), 7.5.6 (9935), 11.2 (9938), 3.7 (9940), 7.5.6 (9941), 3.9 (11433), 7.4.2 (9948), 7.5.6 (9950), 4.1 (9953), 7.5.6 (9954), 1.2 (9956), 3.9 (9957), 8.8.1 (9978), 3.2 (12753), 1.1 (101), 4.5 (9980), 4.5 (9982), 2 (9983), 7.5.6 (12416), 8.11.6 (9986), 11.2 (9989), 4.5 (12191), 11.2 (9990), 5.4 (9991), 7.5.6 (9992), 7.5.6 (9995), 7.5.6 (9996), 10 (10006), 11.2 (6144), 4.5 (217), 1.2 (10010), 7.1.1 (11437), 8.10.1 (10021), 8.10 (10022), 8.8.1 (10023), 4.1 (5473), 8.8.1 (10025), 8.8.1 (10034), 8.8.1 (10035), 8.10 (68), 8.11.6 (10037), 8.11.6 (10038), 8.1 (10039), 8.7 (2311), 8.7 (147), 8.10 (10055), 6.1 (10059), 8.8.1 (10060), 8.4 (199), 8.4 (25), 8.2 (10072), 8.8.1 (10075), 8.10 (157), 8.8.1 (10077), 8.10.1 (133), 8.10 (12419), 8.10 (145), 8.11.4 (10189), 8.11.6 (10194), 8.3 (10196), 8.7 (197), 1.1 (10216), 4.5 (10217), 3.2 (10220), 8.11.11 (10236), 8.3 (10237), 7.5.6 (10239), 5.4 (10240), 8.10.2 (200), 7.5.3 (10242), 5.5 (30), 3.1 (11807), 3.1 (11809), 3.2 (12198), 8.10 (12262)
Woodfin, James D.	010414	5.1 (27)
Woods, Donna M.	EIS001945	7.5.6 (130), 3.2 (59), 8.10 (154), 8.7 (184), 1.1 (101), 1.1 (34), 8.1 (259), 5.3 (164)
Wootan, Cathy	EIS001221	8.7 (144), 13 (5)
Wortel, Kathy Mankato Area Environmentalists	550006	8.3 (149)
Worth, Raymond	EIS000417	7.5.3.2 (228), 3.2 (1390)
Worth, Raymond	EIS000418	7.5.3.2 (228), 7.5.7 (1392), 3.2 (1393)
Wright, Elwood R.	EIS000472	3.2 (59), 8.11.1 (134)
Wright, Jeff	EIS001951	3.3 (50)
Wright, Patricia	EIS001365	5.1 (27), 13 (5)
Wright, Rebecca Missouri Coalition for the Environment	EIS001017	8.4 (6215), 8.4 (115), 5.5 (183)
	EIS001752	8.1 (170), 5.1 (27)
	EIS001781	8.4 (6215), 8.4 (115), 5.5 (183)

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Wright, Rebecca	010298	7.5.3.2 (230), 7.5.3.2 (228), 7.4 (125), 7.3 (220), 7.0 (13118), 7.0 (13119), 8.1 (170), 5.3 (164), 13 (13123)
Wyatt, Shasta	EIS000384	1.1 (101), 5.1 (27)
Xenos, Michelle Shundahai Network	EIS002099	5.5 (183), 7.5.7 (93), 13 (5), 7.4 (10313), 12 (139)
Yacek, Rick	EIS000790	5.1 (27)
Yarbro, Mickey Lander County, Nevada, Board of Commissioners	010372	3.6 (257), 7.0 (13472), 7.0 (13473), 7.3 (13474), 7.3 (13475), 3.5 (204)
Yarbrough, Jim L.	010468	5.1 (27)
Yaroslow, Gregory	EIS000520	8.1 (170), 7.1 (191), 1.1 (122), 3.2 (1639)
Yarroll, Shaun	EIS000431	7.5.3.2 (228), 7.5.3.2 (230), 5.1 (27), 1.1 (10892)
York, Steve	EIS001184	3.2 (80), 1.2 (77)
Young, Bob Augusta/Richmond County, Georgia	EIS000220	5.2 (26)
	EIS000298	5.2 (26), 8 (158), 4.5 (99)
Young, George	010130	3.9 (109), 4.5 (11548), 7.3 (220), 3.6 (12346)
Young, Jim	EIS001001	3.2 (64), 5.3 (164), 4.5 (3684), 13 (5)
	EIS001740	3.2 (64), 5.3 (164), 4.5 (3684), 13 (5)
	010236	8.3 (60), 5.3 (164), 7.5.3.2 (228), 7.5.3.2 (230), 13 (13131)
Young, Paul L South West Veterans Alliance	010020	5.3 (164)
Yuan, Lynn C. Square Y Consultants	EIS001085	8.10 (3311), 7.5.7 (3312), 7.5.2 (3313)
	010075	7.5.7 (11753)
Yurk, Peter	EIS000778	1.1 (101)
Zabarte, Ian Western Shoshone National Council	EIS002156	7.5.11.2 (181), 3.7 (58), 7.5.1 (10555), 7.5.5.2 (150), 3.7 (57), 7.5.11.2 (240), 7.5.11.2 (152), 10 (258)
	010029	3.6 (257)
	010132	3.6 (257), 7.5.11.2 (181), 3.7 (57), 7.5.11.2 (240)
Zalesiak, Charles A.	EIS000191	5.2 (26)
Zeller, Janet Marsh Blue Ridge Environmental Defense League	EIS000217	2 (100), 7.3.2 (1090), 6.0 (1091), 5.3 (164), 4.5 (99), 13 (35)
	EIS000296	5.1 (27), 5.3 (164), 4.5 (99), 13 (35), 2 (100), 7.1 (1220), 6.1 (1221), 12 (139), 5.4 (219)
Zeller, Louis A. Blue Ridge Environmental Defense League	EIS000166	8.10.2 (114), 3.2 (90), 8.3 (149), 8.8.3 (171), 7.5.11.2 (240), 7.5.1 (106), 7.5.11.2 (181), 3.2 (64)
	EIS000295	8.10.2 (114), 8.1 (11677), 7.5.11.2 (181)
	010102	6.1 (116), 5.1 (27), 5.3 (164), 5.4 (219), 6.1 (46), 7.5.3.1 (234), 7.5.11.2 (181)
Zimmerman, Susan Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000221	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)
	EIS000258	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)
	EIS000371	3.3 (50), 8.3 (1271), 8.3 (1276), 8.3 (161)

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Ziske, Sarah	EIS001247	8.10.2 (212)
Zolkover, Adrian	EIS000714	1.2 (77), 12 (139), 13 (2628)
	EIS002126	7.3.1 (185), 7.5.3.3 (10452), 1.2 (77), 12 (139), 13 (37), 5.1 (27)
	EIS002164	1.2 (77), 4.1 (9286)
Zucco, Marino Big Pine Paiute Tribes	010338	7.5.11.2 (240), 3.6 (257), 3.7 (58)
Zuck, Lowell H.	EIS001868	8.1 (170)
Zuercher, Richard R.	EIS000213	5.2 (26)
Zuzich, Thomas J.	EIS001194	8.8.1 (3170), 8.4 (115), 8.1 (170), 5.5 (3173)
Zyvaloski, Shawn	EIS002037	5.1 (27), 8.4 (115), 8.1 (170), 8.10.2 (114), 1.1 (122)

Comment Location	Commenter	Comment Document / Comment No.
8 (158) (continued)	Augusta/Richmond County, Georgia	EIS000298 / 0003
	Young, Bob	
8 (3801)	Cleveland, Ohio, City of	EIS001282 / 0003
	Appolito-Jackson, Collette	
8 (3897)	Earth Day Coalition	EIS001286 / 0007
	Trepal, Chris	
		EIS001548 / 0004
8 (6949)	Committee to Bridge the Gap	EIS000390 / 0003
	Magavern, Bill	
8 (8491)	Public Citizen	010150 / 0005
	Gue, Lisa	
8 (9209)	Darby, Forrest	EIS002140 / 0006
8 (9662)	Consolidated Group of Tribes and Organizations	EIS002074 / 0007
	Arnold, Richard	
8 (10992)	Cahall, Diana	EIS001952 / 0006
8 (12090)	Gleason, Mary	EIS002307 / 0004
8 (12273)	Caliente, Nevada, City of	010096 / 0017
	Phillips, Kevin	
8 (12415)	Timbisha Shoshone Tribe	010279 / 0004
	Helmer, Bill	
8.1 (170)	Anonymous	010259 / 0004
	Adams, JoAnn	EIS000874 / 0001
	Adams, Mary	010234 / 0001
	Alan, Susan	010199 / 0001
	Alexander, Cheryl	EIS000255 / 0001
	Algiere, V.	EIS001238 / 0001
	Earth Challenge	EIS000289 / 0001
	Alzner, Susan	
	Ames, Melissa	EIS000423 / 0005
	Anaya, Cheryl	EIS001894 / 0001
	Anderson, Barbara	EIS000344 / 0001
	Anderson, Robert	010239 / 0002
	Illinois, State of, Department of Nuclear Safety	EIS001726 / 0001
	Appel, Gordon	
	Arbogast, William	EIS001920 / 0001
	U.S. House of Representatives - Colorado	EIS000504 / 0001
	Arend, Chris	
	Arendes, Elizabeth	EIS001240 / 0001
	Armenta, Theodore	EIS000808 / 0001
	Physicians for Social Responsibility/Atlanta	010226 / 0003
	Arnold, Ed	
	Arnold, Joanne	EIS000872 / 0001
	Aronov, Jacob	EIS001605 / 0001
	Ashworth, Michael	EIS001935 / 0001
	Aubuchon, Deborah	010172 / 0001
	U.S. House of Representatives - California	EIS002294 / 0002
	Baca, Joe	
	Bailey, Dot	010077 / 0001
	Bailie, Ana	EIS000176 / 0001
	Bailie, Andy	EIS000177 / 0001
	Ban, Dee	EIS001237 / 0001
	Banks, Bobbie	EIS000161 / 0001
	Barnes, Kathryn	EIS000851 / 0001
	Beach, Therese	EIS001603 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	Beatty, Beth	EIS001754 / 0001
	Becherer, Joyce	010190 / 0001
	Becker, Janet	010289 / 0001
	Benezet, Louis	EIS001873 / 0072
	Bishop Paiute Tribal Council	EIS001862 / 0006
	Bengochia, Monty	
	Berger, Jody	EIS001705 / 0003
	Bernhardt, David	EIS001457 / 0007
	Bianchi, Vince	EIS000929 / 0005
	Bieg, Patricia	EIS001212 / 0001
	Birdsall, Paul	EIS001655 / 0001
	Blank, Erika	EIS000426 / 0003
	Oregon, State of, Office of Energy	EIS001215 / 0005
	Blazek, Mary	
	League of Women Voters of Ashtabula County	EIS001290 / 0001
	Blevins, Esther	
	Blodgett, Sammy	EIS001995 / 0001
	Bogolub, Rita	EIS001226 / 0005
		EIS001846 / 0002
	Botwinick, Joan	EIS000436 / 0001
	Bradbury, Audrey	EIS000125 / 0003
	Ursuline Provincialate	EIS000931 / 0001
	Brennan, Adele	
	Brennan, Kristyn	EIS001239 / 0001
	Bresnan, Lori	EIS001751 / 0001
	San Bernardino County, California	EIS002235 / 0006
	Brierty, Peter	
	Broderick, Sarah	EIS001973 / 0002
	Brown, William	EIS000108 / 0001
	Bullock, Louise	010197 / 0001
	Burgess, Donald	EIS001914 / 0001
	Burkham, Frances	EIS001094 / 0001
	Butler, Robert	EIS000740 / 0001
	Cahall, Diana	EIS001952 / 0004
	Caldwell, Juanita	EIS000009 / 0002
	Calhoun, Emily	EIS000797 / 0001
		EIS001529 / 0001
	Camte, Sondra	010380 / 0001
	Cargas, Millie	010258 / 0001
	Carlin, Seth	EIS001018 / 0001
	Carman, Kevin	EIS002035 / 0002
	Casey, David	EIS001634 / 0001
	Cawein, Mary	EIS001869 / 0001
	Owens Valley Indian Water Commission	EIS001107 / 0006
	Cawelti, Teri	
	Cedergreen, Hilary	EIS000983 / 0001
	Cleveland Peace Action	EIS001287 / 0003
	Chiappa, Francis	
	Green Party of St. Louis	EIS000987 / 0003
	Chicherio, Barbara	
	Chicoineau, Linda	EIS001416 / 0001
	Christie, Iryne	EIS001128 / 0002
	Missouri, State of, Missouri State Senate	EIS001036 / 0001
	Clay, William	

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8.1 (170) (continued)	Cleveland, Matt	EIS000572 / 0003
	Las Vegas Indian Center	EIS002210 / 0001
	Cloquet, Donald	
	Cloyes, Debra	EIS000523 / 0002
	DC Statehood Green Party	EIS000468 / 0002
	Colburn, Michelle	
	Collier, Beth	EIS001074 / 0001
	Collins, Ramon	EIS001116 / 0001
	Congdon, Lois	EIS000173 / 0003
	Cooley, Jackie	EIS002172 / 0001
	Cooper, Anne	EIS001433 / 0007
	Corbett, Jane	010198 / 0001
	Cotton, Keith	EIS001890 / 0002
	Cox, Sharon	EIS000802 / 0001
	Cramm, Jordan	EIS000967 / 0001
	Roman Catholic Archdiocese of St. Louis	EIS001369 / 0001
	Creason, Richard	
	Curtis, Elizabeth	EIS000318 / 0001
	Curtis, Lucy	EIS000174 / 0001
	Citizen Alert	EIS001673 / 0001
	Cvetkovic, Judy	
	Sierra Club, Illinois Chapter	EIS001316 / 0001
	Darin, Jack	
		EIS001598 / 0001
	Davidson, Harriet	010072 / 0001
	Davis, Helen	EIS000985 / 0001
	Davis, Jeff	EIS001417 / 0001
	U.S. House of Representatives - Colorado	EIS000266 / 0001
	DeGette, Diana	
	Delcoure, Sandra	010100 / 0001
	Detraz, Marjorie	EIS002220 / 0004
	Dewey, Marilyn	EIS000731 / 0001
	Dexter, Fred	EIS000708 / 0004
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS002267 / 0002
	diBartolo, Russell	
	Diesel, Mary	EIS001880 / 0001
	Dolan, Robert	EIS000816 / 0004
	Denver, Colorado, City and County of, Department of Environmental Health	EIS001539 / 0003
	Donahue, Theresa	
	Donaldson, Alice	EIS001721 / 0001
		010081 / 0001
	Donn, Marjory	EIS001874 / 0005
	Inyo County, California, Board of Supervisors	EIS001443 / 0001
	Dorame, Michael	
	Drey, Kay	010300 / 0002
		010314 / 0002
	Dumont, Coetta	EIS000870 / 0001
	Cleveland Peace Action	EIS001558 / 0001
	Edguer, Marji	
	Eiseman, Justine	EIS000435 / 0001
	Alliance for Nuclear Accountability	EIS000443 / 0010
	Eldredge, Maureen	

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8.1 (170) (continued)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0113
	Eldridge, Brent	
	Eller, Frank	010079 / 0001
	Downwinders	EIS001464 / 0003
	Erickson, Steve	
	Etling, Mark	EIS001526 / 0001
	Evans, Phyllis	EIS000984 / 0001
	Ewald, Linda	EIS002305 / 0003
	Ewing, Charles	EIS001977 / 0003
	Falk, Vera	EIS001010 / 0002
		EIS001753 / 0002
	Saint Peter Catholic Church	EIS001849 / 0001
	Feible, Ann	
	Fisher, Frederic	EIS000412 / 0007
	Fitzgibbon, Jewel	EIS001228 / 0001
	Foley, Barbara	010193 / 0001
	Folsom, Therese	EIS001647 / 0002
	Fortner, Angela	EIS001298 / 0001
	Foxworth, Margaret	EIS000321 / 0001
	Frank, Erica	EIS000164 / 0001
	Frankel, Helene	EIS001002 / 0001
	Lincoln County, Nevada, Board of County Commissioners	EIS000236 / 0016
	Frehner, Dan	
	Progressive Leadership Alliance of Nevada	EIS000564 / 0007
	Fulkerson, Bob	
	Furman, Savannah	010063 / 0001
	Gallegos, Oscar	EIS000561 / 0001
	Aon Consulting	010233 / 0001
	Garasky, Maybeth	
	Gaskill, Margaret	EIS001645 / 0001
	Gateley, Jenifer	EIS000415 / 0004
	Geary, Alice	EIS001657 / 0001
		EIS001759 / 0002
	Geary, Barbara	010292 / 0008
	George, Russ	EIS001970 / 0001
	Gerth, Amy	EIS001498 / 0001
	Gerth, Jacqueline	EIS001419 / 0001
	Gerth, John	EIS001414 / 0001
	Giese, Mark	EIS000336 / 0001
	Gilleo, Margaret	EIS001393 / 0001
		010185 / 0001
	Gilson, Doug	EIS002039 / 0003
	Gloeckner, Kena	EIS001331 / 0002
	Gloeckner, Patrick	EIS001333 / 0002
	Godet-Calogeras, J.	EIS001057 / 0003
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0033
	Goicoechea, Pete	
	Goldberg, Leah	EIS000396 / 0002
	Goldberg, Steve	EIS000170 / 0001
	Goldstein, Gay	EIS000002 / 0003
	Gomez, Jorge	EIS001384 / 0002
		EIS001636 / 0002
	Gondzur, Andrew	EIS001080 / 0004
	Goodman, Kelly	EIS000602 / 0001

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8.1 (170) (continued)	Goodyear, Betty	EIS000875 / 0001
	Green, Francis	EIS001643 / 0001
		010045 / 0001
	Greene, Eileen	EIS001479 / 0003
	Greene, Nancy	EIS000751 / 0001
	Grey, Marty	EIS001202 / 0006
	Grieshaber, Larry	EIS001651 / 0001
	Grondahl, James	EIS001537 / 0004
	Grossman, Zach	EIS001249 / 0003
	Grubaugh, Jessica	EIS001142 / 0002
	Public Citizen	010290 / 0006
	Gue, Lisa	
	Guenther, Charles	EIS001440 / 0001
	Gustafson, J.	EIS001112 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000273 / 0005
	Halstead, Robert	
		EIS000990 / 0004
		EIS001046 / 0004
		EIS001310 / 0002
		EIS001580 / 0003
		EIS002272 / 0004
	St. Louis, Missouri, City of	EIS002069 / 0001
	Harmon, Clarence	
	Harney, Corbin	EIS000624 / 0001
	Shundahai Network	EIS002240 / 0003
	Harney, Corbin	
	Harney, Corbin	010113 / 0002
	Harris, Laura	EIS001102 / 0001
	Harris, R.	EIS001338 / 0001
	Harris, Virginia	EIS001027 / 0001
		010211 / 0001
	Hartrich, Catherine	010192 / 0001
	Hartzog, Helen	EIS001623 / 0001
		EIS001642 / 0006
	Peace Education Center	EIS001661 / 0001
	Harvey, Elise	
	Hatfield, Scott	EIS000500 / 0005
	Physicians for Social Responsibility	EIS001807 / 0001
	Hattis, Ronald	
	Hauf, Louise	EIS001648 / 0001
		010006 / 0001
	Hauser, Lenore	EIS001617 / 0001
	Heilig, Kurt	EIS000913 / 0003
	Heinrich, Thomas	EIS001122 / 0001
	Heiple, Matthew	010306 / 0001
	Heller, Malea	EIS001259 / 0001
	Hellgeth, Jeanette	EIS000956 / 0009
	Henderson, Brittanie	EIS002030 / 0001
	Missouri Coalition for the Environment	EIS001013 / 0001
	Hengerson, Roy	
		EIS001229 / 0002
	Hengerson, Roy	010241 / 0001
	Henry, Cletus	010078 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	Henze, Walter	EIS001389 / 0001
		EIS001858 / 0001
	Hetzler, Alissa	010263 / 0001
	Ursuline Sisters of Kirkwood	EIS001173 / 0001
	Hickey, Julie	
	Hollander, Karon	EIS001103 / 0010
	Holly, Linda	EIS001186 / 0001
	Webster Groves Nature Study Society	010070 / 0001
	Homeyer, Yvonne	
	Mesquite, Nevada, City of	010283 / 0001
	Horne, Charles	
	Hueil, Diana	EIS001436 / 0001
	Hughes, Pam	010188 / 0001
	Hunter, Meredith	EIS001371 / 0001
	Women Speak Out for Peace and Justice	EIS001174 / 0002
	Ikuta, Yoshiko	
	Illegible	EIS001403 / 0001
		EIS001404 / 0001
	Illegible	EIS001405 / 0001
	Jacobson, Joan	EIS001084 / 0001
	Jakimczyk, Juliann	010191 / 0001
	James, Brian	010179 / 0001
	Jenkins, Barbara	EIS001415 / 0002
	Jensen, Alyssa	EIS000587 / 0001
	John, Bill	EIS002227 / 0001
	Johnson, Abby	EIS000648 / 0001
	Johnson, Homer	EIS002113 / 0006
	Johnson, Jordan	EIS001183 / 0002
	Johnson, Josh	EIS002042 / 0002
	Johnson, Margaret	010194 / 0001
	Johnson, Michael	010126 / 0001
	Jordan, Susan	EIS001439 / 0001
	Ely Shoshone Tribe	EIS001441 / 0102
	Kaamasee, Arthur	
	Kalish, Stephen	EIS000362 / 0003
	Kamm, G.	EIS001177 / 0002
	Nuclear Information and Resource Service	EIS000467 / 0006
	Kamps, Kevin	
		EIS001471 / 0005
		EIS001561 / 0004
		EIS002094 / 0004
		010246 / 0013
	Kean, Beth	EIS001409 / 0001
	Kempf, Joann	EIS002171 / 0001
	Kimmich, Mary	EIS001180 / 0001
	Kirkman, James	EIS001850 / 0001
	Kirkman, Janet	010074 / 0001
	Knepper, Ralph	EIS001418 / 0001
	Knopick, Suellen	EIS000575 / 0003
	Kott, Candice	EIS002022 / 0002
	Krapfl, Constance	010401 / 0001
	Kruse, Eileen	EIS001720 / 0001
	Kuciejczyk-Kernan, Madonna	010202 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001543 / 0004
		EIS001905 / 0007
	Kuharik, Shannon	EIS001534 / 0003
	Kulick, Larry	EIS001219 / 0003
	Kurnos, Amanda	EIS001423 / 0001
	U.S. House of Representatives - Ohio LaTourette, Steven	EIS001083 / 0002
	Lalo, Bernice	EIS000640 / 0003
	Larko, Sherry	010488 / 0001
	Larson, Donovan	EIS001801 / 0003
	Laub, Janet	010265 / 0001
	Lauer, Brenda	EIS001826 / 0001
	Laune, G.	010095 / 0001
	Leake, Mary	EIS001827 / 0001
	Lee, Mary	EIS001072 / 0006
	Leeds, Todd	010237 / 0005
	Lems, Kristin	EIS001595 / 0003
	Lems-Dworkin, Carol	EIS001324 / 0002
	Lent, Ervin	EIS000377 / 0004
	Lesch, Dorothy	EIS001882 / 0001
	Leskevich, Diana	EIS001334 / 0001
	Lewis, Kathy	EIS001023 / 0003
	Lewis, Marvin	EIS000007 / 0003
		EIS001447 / 0001
	Lewis, Tedford	EIS001182 / 0007
		010167 / 0001
	San Bernardino, California, City of Lien, Susan	EIS002282 / 0001
	Lihou, Leslie	EIS000975 / 0001
	Limoges, Alison	EIS000339 / 0001
	Livingston, Debra	EIS000281 / 0001
	Lockwood, Katie	EIS002229 / 0001
	Toledo Coalition for Safe Energy Lodge, Terry	EIS001573 / 0002
	World Community Center Logan, Yvonne	EIS001043 / 0002
		EIS001780 / 0002
		010189 / 0001
	Lonergan, John	EIS001540 / 0001
	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0004
	Louden, Nancy	EIS001941 / 0007
	Louden, Nina	EIS001942 / 0007
	Lowe, Nancy	EIS000358 / 0001
	Lowes, Saundra	010064 / 0001
	Lytle, Donna	EIS001336 / 0002
	Lytle, Ken	EIS001332 / 0002
	Earth Challenge Lytle, Leigh	EIS000322 / 0001
	Mankus, Timothy	EIS001065 / 0001
	Maple, Susan	010176 / 0001
	Marlovitz, Linda	EIS001604 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	San Manuel Band of Mission Indians	EIS001908 / 0001
	Marquez, Deron	
	Mesquite, Nevada, City of	EIS000039 / 0001
	Marren, Terrance	
	Mathieu, Elizabeth	EIS001391 / 0001
		010065 / 0001
	Mayes, Susan	EIS002281 / 0005
	Mayr, Tony	EIS001100 / 0001
	McClarren, Chris	EIS001031 / 0006
		EIS001763 / 0006
	McClarren, Thomas	EIS001764 / 0006
	McClelland, Dorrine	010201 / 0001
	McFarland, Rose	EIS002044 / 0001
	McGee, T.	EIS000868 / 0001
	McGeehan, Carol	EIS001881 / 0001
		010277 / 0001
	McGhee, Earl	EIS000048 / 0002
		EIS000086 / 0002
	McGuiness, James	EIS000461 / 0004
	McGuire, Dolores	EIS001263 / 0001
	McKeel, Daniel	EIS001380 / 0004
	McMullen, Robert	010184 / 0001
	McMurray, Dean	EIS002054 / 0004
	McNaughton, Rose	EIS001341 / 0001
	McQueen, Kaitlyn	EIS001171 / 0001
	McVoy, Charles	EIS001267 / 0001
	Mendelson, Jane	EIS000980 / 0001
	Meyer, Shelly	EIS001407 / 0001
	Meyer, T.	EIS001406 / 0001
	Mihill, Doris	EIS001339 / 0001
	San Bernardino County, California, Board of Supervisors	EIS001865 / 0003
	Mikels, Jon	
		EIS002231 / 0005
	Mikels, Marjorie	010315 / 0001
	Miller, Jack	EIS000768 / 0002
	Modde, Janet	EIS001125 / 0001
		EIS001172 / 0001
	Moehle, Cay	EIS001872 / 0001
	Molloff, Jeanine	EIS001766 / 0006
	Montre, John	EIS001782 / 0001
	Moore, Margie	EIS000877 / 0001
	St. Louis County, Missouri, Council	EIS001044 / 0001
	Moore, Richard	
		EIS001786 / 0001
	Brotherhood of Maintenance of Way Employees	EIS001335 / 0009
	Morrissey, Spencer	
	Morse, Carole	EIS000958 / 0003
	Moyle, Donald	EIS001737 / 0001
	Moyle, Frances	EIS001739 / 0001
	Mueller, Margaret	EIS001092 / 0005
		010041 / 0002
	Muia, Gloria	EIS001915 / 0001
	Waste Ideas Network	EIS001318 / 0001
	Mullarkey, Barbara	

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	Murphy, Angie	010200 / 0001
	Murphy, Shelia	EIS001578 / 0002
	Murray, Bonnie	EIS001269 / 0002
	Murray, Carol	EIS001268 / 0001
	Mutrux, Elsa	010173 / 0001
	Myers, Sarah	EIS001779 / 0002
	Napier, Nancy	EIS000175 / 0001
	Neura, Sharon	EIS001664 / 0006
	Niemann, Josephine	EIS001073 / 0001
	Nischwitz, Laura	010366 / 0001
	Noll, Joann	EIS001919 / 0001
	Novak, Jane	EIS001883 / 0001
	Nuff, Rodney	EIS001308 / 0001
	Nyborg, Stephanie	EIS001266 / 0002
	Nygren, Maie	EIS000959 / 0005
	Ursuline Academy O'Hara, Sr. Madonna	EIS000930 / 0001
	Missouri, State of, Missouri House of Representatives O'Toole, James	EIS001098 / 0001
	Oaks, David	EIS000156 / 0002
	Ohlman, Michael	010195 / 0001
	Okenfuss, Elizabeth	EIS000978 / 0002
	Olson, Dorothy	EIS000866 / 0001
	Olson, Mary	EIS000310 / 0002 EIS000325 / 0002
	Olson, Terry	010088 / 0001
	Georgia, State of, House of Representatives Orrock, Nan	EIS000272 / 0005
	Ortmeyer, Mary	EIS001867 / 0001
	Ozbakan, Kristine	EIS000395 / 0001
	Safe & Healthy Communities Pack, Marion	010402 / 0003
	Pappas, Carmen	EIS001413 / 0001
	Physicians for Social Responsibility, Los Angeles Parfrey, Jonathan	EIS000023 / 0002
	Patera, Pat	EIS000569 / 0002
	Pearson, Lee	EIS000681 / 0001
	Penn, Jeanette	EIS001851 / 0001
	Perna, Frank	010080 / 0008
	Perry, Gavin	EIS000997 / 0005
	Petrikovitsch, Paul	EIS001382 / 0001
	Pfeffer, Ruth	EIS001258 / 0001
	Pfiester, Carolyn	EIS002168 / 0004
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0008
	Pier, Kate	EIS000398 / 0002
	Sierra Club, Northeast Ohio Group, Great Lakes Water Quality & Wetlands Committee Plank, Dennis	EIS001220 / 0001
	Ponzi, Jean	EIS001042 / 0007 EIS001799 / 0002 010255 / 0002
	Southern Nevada Home Builders Association Porter, Irene	EIS001828 / 0007

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	Powell, Dana	EIS000313 / 0001
	Prince, Mary	EIS000335 / 0003
	Pronio, Micaela	EIS001427 / 0001
	Pryor, Linda	EIS001794 / 0001
	Pufalt, Caroline	EIS001030 / 0002
	Fenton, Missouri, City of, Board of Aldermen	EIS001091 / 0001
	Pyne, Claire	
	Hopi Tribe	EIS001451 / 0006
	Quotchytewa, Phillip	
	Sylvania, Ohio, City of	EIS002313 / 0001
	Rauch, Margaret	
	Reimer, Nancy	EIS001204 / 0007
		010486 / 0004
	Rieser, Anne	EIS001852 / 0001
	Riseden, Elizabeth	EIS000021 / 0002
		EIS000144 / 0006
	Roberts, Celeste	EIS001198 / 0003
	Gateway Green Alliance	EIS001535 / 0001
	Romano, Daniel	
	Ronga, Matthew	EIS002040 / 0002
	Roper, Alice	EIS000964 / 0001
	Ryan, Mary	EIS000934 / 0001
	Rychlewski, Lois	EIS001959 / 0001
	Ohio Citizen Action	EIS001285 / 0002
	Ryder, Amy	
	Rynne, Richard	EIS000369 / 0001
	Safe, Karen	EIS001038 / 0001
		EIS001762 / 0001
	Salmons, Therese	EIS001261 / 0001
	Sanazaro, Leslie	010251 / 0001
	Sanborn, Jean	EIS001815 / 0001
	Nevada Public Health Association	EIS000540 / 0011
	Saum, Judith	
	Savio, Anne	EIS001646 / 0001
	Schade, Maria	EIS001396 / 0001
	Shundahai Network	EIS002118 / 0002
	Scharff, John	
	Schmidt, Ralph	EIS001956 / 0001
	Schmied, Debbie	EIS000937 / 0001
	Schofield, Gary	EIS000532 / 0002
	Schoon, Sarah	EIS001176 / 0001
	Schosser, Claire	EIS001222 / 0004
	Schott, Norbert	EIS001402 / 0001
	Kirkwood, Missouri, City of	EIS001819 / 0001
	Schramm, Marjorie	
	Schwartz, Leah	EIS001200 / 0001
	Schwartz, Norman	010447 / 0003
	Scott, Alicia	EIS001631 / 0001
	Seman, Camille	EIS000776 / 0001
	Sgroi, Phillip	EIS001760 / 0002
	Mineral County, Nevada, Nuclear Projects Office	EIS000361 / 0006
	Shankle, Judith	
		EIS000391 / 0002
		EIS000593 / 0019

Comment Location	Commenter	Comment Document / Comment No.
8.1 (170) (continued)	Shea, Patrick	EIS001323 / 0001
	Sheehan, D.	EIS001925 / 0001
	Sheridan, Pat	010196 / 0001
	Sherman, Patricia	EIS001974 / 0001
	Shillinglaw, Fawn	EIS000817 / 0043
	Shipp, Donald	010186 / 0001
	Public Citizen	EIS000724 / 0003
	Shollenberger, Amy	
	Siegel, Nancy	EIS001870 / 0001
	Sill, Marjorie	EIS000551 / 0001
	Simeone, Wilma	EIS001855 / 0001
	Simpson, Audrey	EIS001536 / 0002
	Lakewood, Ohio, City of	EIS001284 / 0002
	Skindell, Michael	
		EIS001549 / 0002
	Sierra Club, Toiyabe Chapter	EIS000567 / 0003
	Smith, Catherine	
	Smith, J.	EIS001408 / 0001
	Smith, Kathleen	EIS001749 / 0007
	Smith, William	EIS001388 / 0001
	Smoke, Henry	010445 / 0001
	Shundahai Network	EIS001907 / 0007
	Snyder, Susi	
	Sontag, Fran	010098 / 0001
	Sorkin, Steve	010203 / 0001
	Soto, Lisa	EIS001392 / 0001
	Soto, Marci	EIS001395 / 0001
	Soto, Mitzi	EIS001892 / 0001
	Soutar, Jock	EIS000487 / 0001
	Spiegelberg, Eldora	010204 / 0001
	Starr, Stephen	EIS001400 / 0001
	Stecher, John	EIS001934 / 0001
	St. Louis, Missouri, City of, Board of Aldermen	EIS001007 / 0001
	Steffen, Fred	
		EIS001370 / 0001
	Stemmel, Cindy	EIS001401 / 0001
	Stempel, James	EIS001921 / 0007
	Stephenitch Family, The	EIS001940 / 0001
	Stephens-Jay, Carol	EIS000963 / 0001
	Stevens, John	EIS002276 / 0001
	Stewart, Sheri	EIS000165 / 0002
	Stranquist, David	EIS001390 / 0001
	Sugars, Stephanie	EIS001947 / 0001
	Sulejman, Enver	EIS001695 / 0002
	Sunswheat, Eric	EIS000145 / 0002
	Sutton, Robert	EIS001008 / 0002
		010210 / 0002
	U.S. House of Representatives - Missouri	EIS000986 / 0002
	Talent, James	
	Tamaro, Adeline	010240 / 0006
		010405 / 0002
	The Hopi Tribe	010042 / 0005
	Taylor, Wayne	
		010091 / 0007

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8.1 (170) (continued)	Tebbetts, Chartis	EIS001066 / 0002
	TenEyck, Michelle	EIS001383 / 0002
	Tershak, Carol	EIS000933 / 0001
	Proposition One Committee	EIS001838 / 0009
	Thomas, Ellen	
	Thomas, Steven	EIS001795 / 0001
	Missouri, State of, Missouri State Senate	EIS001758 / 0001
	Thompson, Hank	
	Thurlow, Andrew	EIS001246 / 0002
	Todorovich, Pamela	EIS001006 / 0002
		010059 / 0001
	Earth Day Coalition	EIS001286 / 0003
	Trepal, Chris	
		EIS001548 / 0002
	Twedt, Margaret	EIS001420 / 0008
	Uverks, Leslie	EIS001538 / 0003
	Van Ronk, Ruth	010367 / 0003
	Vandenberg, Alfred	EIS001530 / 0001
	Vatterott, Catherine	EIS001497 / 0001
	Viereck, Jennifer	EIS001397 / 0008
	Citizens Action Coalition of Indiana	EIS001191 / 0002
	Voelker, Roger	
		EIS001590 / 0002
	Rum Village Neighborhood Association	EIS001633 / 0001
	Voelker, Roger	
	Vogel, Annie	EIS001523 / 0001
	Vreeken, Tanya	EIS001076 / 0001
	Wagner, Maureen	EIS001262 / 0001
		010017 / 0001
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0022
	Wallis, Jackie	
	Caliente, Nevada, City of, City Council	EIS000235 / 0009
	Wallis, Stan	
	Walter, Marion	EIS001432 / 0001
	Warner, Edward	EIS001446 / 0001
		010264 / 0001
	Warner, Rick	EIS000514 / 0004
	Missouri Coalition for the Environment	EIS000982 / 0001
	Waterston, Pat	
	Watts, Fern	EIS001777 / 0001
	Weber, Debbie	EIS000265 / 0002
	Ohio Public Industry Research Group	EIS001550 / 0006
	Weidner, Maria	
	Weinman, Janice	EIS001398 / 0001
	Weisel, Herbert	EIS001958 / 0001
	Webster Groves, Missouri, City of	EIS001859 / 0001
	Welch, Gerry	
		010282 / 0001
	Welsh, Thomas	EIS001722 / 0002
	Wendt, Patricia	EIS001885 / 0001
	White, Beverly	EIS001041 / 0001
	White, Laura	EIS001629 / 0002
	White, Randall	EIS000319 / 0001
	White, Robyn	EIS000685 / 0001

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8.1 (170) (continued)	Wiens, Debra	EIS001854 / 0001
	Wilcox, Robert	010183 / 0001
	Wilder, John	010180 / 0001
		010270 / 0001
	Citizen Action Coalition of Indiana	010155 / 0001
	Williams, Chris	
	Williams, Matthew	EIS001069 / 0001
	Paul Williams and Associates	EIS001570 / 0003
	Williams, Paul	
	Williams, Terri	EIS001032 / 0002
	Wilson, David	EIS001127 / 0001
	Wilson, Debra	EIS000995 / 0007
		EIS001732 / 0006
		EIS002173 / 0001
		010085 / 0001
	Wilson, Michael	EIS001926 / 0001
	Wilson, Nicole	EIS001411 / 0006
	Wilson-Booth, Ursula	EIS000813 / 0006
	Wimmer, Warren	010187 / 0001
	Wolf, Christopher	010293 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0175
	Woodbury, Bruce	
	Missouri Coalition for the Environment	EIS001752 / 0001
	Wright, Rebecca	
	Wright, Rebecca	010298 / 0007
	Yaroslow, Gregory	EIS000520 / 0001
	Zuck, Lowell	EIS001868 / 0001
	Zuzich, Thomas	EIS001194 / 0003
	Zyvaloski, Shawn	EIS002037 / 0003
8.1 (259)	Goldfield, Nevada, Fire Department	EIS000195 / 0001
	Anderson, Mike	
	U.S. House of Representatives - California	EIS002230 / 0002
	Baca, Joe	
	Baker, Sylvia	EIS000355 / 0002
	Baltutis, Genelle	010299 / 0010
	Belenky, Lisa	EIS001814 / 0014
	North Las Vegas, Nevada, City of	EIS002116 / 0001
	Bell, Jim	
	Benezet, Louis	EIS000654 / 0006
		EIS001873 / 0004
	Berkness, Adam	EIS002038 / 0002
	Boudreau, Dustin	EIS002010 / 0003
	Bratton, Tara	EIS002218 / 0002
	Campbell, Kristal	EIS002015 / 0001
	Beowawe Crescent Valley Nuclear Waste Awareness Committee	EIS000623 / 0004
	Carruthers, Joseph	
	Nye County, Nevada, Board of County Commissioners	EIS002237 / 0004
	Carver, Dick	
	Chiara, Robert	EIS000534 / 0007
	Las Vegas, Nevada, City of	EIS000735 / 0003
	Cummings, Peter	
	Curnutt, Minette	EIS000527 / 0001
	Dockwell, Daniel	EIS002029 / 0001

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8.1 (259) (continued)	Dugan, Barbara	EIS000882 / 0002
	Dziegiel, Henry	010117 / 0005
		010311 / 0011
	Esmeralda County, Nevada, Board of County Commissioners	EIS000192 / 0001
	Ealey, Harriet	
	Eckhardt, Curtiss	EIS000254 / 0001
	Lander County, Nevada, Board of County Commissioners	EIS000406 / 0005
	Elquist, Bill	
	Escamilla, Natalie	EIS000965 / 0007
	Estella, Lucille	EIS001071 / 0001
	Mesquite, Nevada, City of	EIS002110 / 0001
	Fessenden, Alice	
	Fifield, Virginia	EIS001856 / 0002
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0072
	Frehner, Dan	
	Progressive Leadership Alliance of Nevada	EIS000315 / 0003
	Fulkerson, Bob	
	Rouse Company, The	EIS001861 / 0001
	Galen, Richard	
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000071 / 0015
	Giampaoli, Mary	
		EIS000081 / 0014
	Nye County, Nevada, Board of County Commissioners	EIS000245 / 0003
	Giampaoli, Mary	
	Gonzalez, Chalio	EIS002036 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000463 / 0006
	Halstead, Robert	
		EIS000674 / 0002
	Heath, Roy	EIS002145 / 0004
	Heim, Wesley	EIS002013 / 0003
	Hepworth, Brentwood	EIS000028 / 0002
	Mesquite, Nevada, City of	010283 / 0003
	Horne, Charles	
	North Las Vegas, Nevada, City of	EIS001157 / 0006
	Importuna, Patrick	
	Nevada, State of, Nevada State Senate	EIS001725 / 0002
	Jacobsen, Lawrence	
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000143 / 0001
	Kelman, Harry	
	Shundahai Network	EIS002135 / 0012
	Knutsen, Reinard	
	Kulkin, Harley	EIS000126 / 0003
	Ladnier, Steve	EIS000556 / 0001
	Lamb, Kris	EIS002028 / 0001
	Law, Martha	EIS000466 / 0009
	Meadows Homeowners Association at Elkhorn Springs	EIS000952 / 0002
	Lefkowitz, Todd	
	Linvill, Becky	EIS000399 / 0004
	Lisi, Shelley	EIS000152 / 0001

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8.1 (259) (continued)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000054 / 0006
	Loux, Robert	
		EIS000096 / 0002
		EIS001887 / 0098
	Lander County, Nevada, Board of County Commissioners	EIS000614 / 0004
	Manzini, Tammy	
	Mesquite, Nevada, City of	EIS000039 / 0003
	Marren, Terrance	
	McIntyre, Angela	EIS001063 / 0004
	McKinney, Paul	EIS000085 / 0005
	Mesquite, Nevada, City of, Fire Department	EIS001399 / 0001
	Meacham, Ken	
	Medina, Mitchell	EIS002011 / 0002
	Moapa Band of Paiutes	010335 / 0007
	Meyers, Calvin	
	Munger, Nancy	EIS001048 / 0001
	Mesquite Area Chamber of Commerce	EIS000040 / 0001
	NoLastName	
	Orozco, Maricela	EIS002002 / 0002
	Nevada, State of, Commission on Nuclear Projects	EIS000388 / 0005
	Peirce, Anne	
	Pinto, Joe	010008 / 0004
	Southern Nevada Home Builders Association	EIS001828 / 0003
	Porter, Irene	
	Prince, Mary	EIS000335 / 0001
	Eureka County, Nevada, Planning Commission	EIS000631 / 0001
	Rankin, Ronald	
	Redding, Judith	EIS002226 / 0001
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0036
	Regan, James	
	Rucquoi, Jann	EIS001508 / 0001
	Runge, Henry	EIS001197 / 0004
	Rynne, Richard	EIS000369 / 0004
	Schnaible, Amanda	EIS002000 / 0002
	Schofield, Gary	EIS000739 / 0002
	Mineral County, Nevada, Nuclear Projects Office	EIS002115 / 0006
	Shankle, Judith	
	Shillinglaw, Fawn	EIS000817 / 0148
	Sorensen, B.	EIS000733 / 0001
	Henderson, Nevada, City of	EIS001896 / 0002
	Speight, Philip	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000101 / 0006
	Swartz, Ginger	
		EIS000115 / 0004
		EIS000148 / 0002
		EIS000193 / 0002
	Vasconi, Bill	EIS000694 / 0005
		EIS002103 / 0003
	Viereck, Jennifer	EIS000124 / 0002
	Nye County, Nevada, Board of County Commissioners	EIS000061 / 0002
	Walker, Jamieson	

Comment Location	Commenter	Comment Document / Comment No.
8.1 (259) (continued)	Weidemann, Dean	EIS000032 / 0001
	Williams, James	EIS000106 / 0005
		EIS000118 / 0002
	Wissbeck, Cathy	EIS000237 / 0001
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0006
	Woods, Donna	EIS001945 / 0008
8.1 (518)	Colorado People's Environmental and Economic Network Muñoz, Melissa	EIS000253 / 0002
8.1 (1378)	Bailey, Chris	EIS000432 / 0006
8.1 (1656)	Energy Resources International Supko, Eileen	EIS000359 / 0002
8.1 (2218)	Louden, Lee	EIS000621 / 0008
8.1 (2265)	Georgia, State of, Department of Natural Resources Hardeman, Jim	EIS000394 / 0002
8.1 (2315)	Harmon, Amber	EIS000571 / 0002
8.1 (2819)	Brugere, Marie	EIS000935 / 0001
8.1 (3146)	Beowawe Crescent Valley Nuclear Waste Awareness Committee Carruthers, Joseph	EIS000642 / 0003
8.1 (3297)	U.S. House of Representatives - Missouri Talent, James	EIS000986 / 0003
8.1 (4121)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS002239 / 0007
8.1 (4440)	Safe, Karen	EIS001038 / 0007
8.1 (4663)	Fitzgerald, Keba	EIS001372 / 0006
8.1 (5912)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0028
8.1 (6092)	Meharg, Margaret	EIS001265 / 0001
8.1 (6565)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0052
8.1 (6793)	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001905 / 0005
8.1 (6795)	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001905 / 0006
8.1 (7148)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0045
8.1 (7405)	U.S. Department of the Interior, National Park Service, Pacific West Region Reynolds, John	EIS001957 / 0025
8.1 (7485)	East St. Louis Community Action Network Andria, Kathy	EIS001775 / 0002
8.1 (8925)	Green, Louise	EIS001028 / 0001
8.1 (9411)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0106
8.1 (9495)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0155
8.1 (9557)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0230
8.1 (9594)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0268

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8.1 (10039)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0526
8.1 (10104)	Pfiester, Carolyn	EIS002168 / 0001
8.1 (10291)	Steibel, William	EIS000936 / 0003
8.1 (10374)	Hunter, Meredith	EIS001371 / 0007
8.1 (10625)	Detraz, Marjorie	EIS002220 / 0010
8.1 (10887)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000762 / 0003
8.1 (11177)	Wissbeck, Larry	EIS000232 / 0010
8.1 (11384)	U.S. House of Representatives - California Baca, Joe	EIS002230 / 0005 EIS002294 / 0004
8.1 (11533)	People Against Radioactive Dumping Lopez, Ruth	EIS002248 / 0003
8.1 (11573)	Mayes, Susan	EIS002281 / 0003
8.1 (11621)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS002239 / 0001
8.1 (11677)	Blue Ridge Environmental Defense League Zeller, Louis	EIS000295 / 0002
8.1 (11801)	Pinard, Thomas	EIS000792 / 0001
8.1 (11811)	Buchheit, Martin	EIS001765 / 0001
8.1 (11820)	Willoughby, Amber	EIS002031 / 0006
8.2 (3255)	St. Louis, Missouri, City of, Metropolitan Police Department Stehlin, Vincent	EIS000981 / 0003
8.2 (4408)	Illinois, State of, Department of Nuclear Safety Ortciger, Thomas	EIS001511 / 0001
8.2 (7528)	Penner, Rod	EIS001723 / 0002
8.2 (7530)	Penner, Rod	EIS001723 / 0003
8.2 (9417)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0112
8.2 (9540)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0201
8.2 (10072)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0548
8.2 (10888)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000762 / 0004
8.3 (60)	Anonymous	EIS000876 / 0001
	Illinois, State of, Department of Nuclear Safety Appel, Gordon	EIS001597 / 0003
	Arbogast, William	EIS001920 / 0003
	Bacon, Elliott	EIS001250 / 0002
	Brugere, Marie	EIS001223 / 0001
	Missouri, State of Carnahan, Mel	EIS000999 / 0001
	Dziegiel, Henry	010256 / 0005
	Missouri, State of, Missouri House of Representatives Enz, Catherine	EIS001170 / 0001
	Women's International League for Peace and Freedom, St. Louis Branch Epstein, Hedy	EIS001005 / 0004
	Felkner, Larry	EIS000979 / 0002

Comment Location	Commenter	Comment Document / Comment No.
8.3 (60) (continued)	Fowler, Deb	EIS001090 / 0001
	Grossman, Zach	EIS001249 / 0001
	Hafer, Mark	010105 / 0002
	Alabama, State of, Public Service Commission Hanes, Eugene	EIS000279 / 0004
	James, Brian	EIS001853 / 0001
	Missouri, State of, Office of the Governor Lange, Tom	EIS001738 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0014
	McClarren, Chris	EIS001031 / 0023
	Ohio, State of, Ohio House of Representatives Miller, Dale	EIS001280 / 0001
	Osiek, Henry	EIS000932 / 0003
	Perry, Gavin	EIS001734 / 0005
	Pick, Hannah	EIS001325 / 0002
	Robin, Neal	EIS001386 / 0002
	Sanborn, Jean	EIS001815 / 0003
	Kirkwood, City of, Missouri, City Council Swoboda, Mike	010287 / 0001
	Wiens, Debra	EIS001527 / 0001
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0136
	Young, Jim	010236 / 0001
8.3 (146)	Benezet, Cordy	EIS000692 / 0003
	Dziegiel, Henry	010311 / 0015
	Gilbert, Jan	EIS001061 / 0007
	Nebraska, State of Johanns, Mike	EIS001045 / 0011
	Shundahai Network Snyder, Susi	EIS000459 / 0007 EIS001907 / 0005
	Thoms, Michael	EIS000478 / 0005
	Western Interstate Energy Board Turner, Allan	EIS000497 / 0009
	Mothers For Peace von Ruden, June	EIS002109 / 0002
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0055
	Wissbeck, Larry	EIS000232 / 0008 EIS000663 / 0008
8.3 (149)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0004
	Illinois, State of, Department of Nuclear Safety Appel, Gordon	EIS001726 / 0002
	Balentin, Jerry	EIS000592 / 0002
	Baughman, Mike	EIS000671 / 0001
	Belenky, Lisa	EIS001814 / 0015
	Benezet, Louis	EIS000683 / 0007 EIS001873 / 0002
	Biunno, Patti	EIS000893 / 0001
	Valley Watch, Inc. Blair, John	550002 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.3 (149) (continued)	Oregon, State of, Office of Energy	EIS001215 / 0008
	Blazek, Mary	
	Boykin, Fred	EIS000900 / 0002
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000079 / 0008
	Bradshaw, Les	
		EIS000102 / 0003
	Bramble, Pat	EIS000886 / 0002
	Branch, Michael	EIS000420 / 0003
	Tennessee Valley Authority	EIS001190 / 0020
	Burzynski, Mark	
	Cabezas, Sara	EIS000891 / 0001
	Cabovich, Jason	EIS001688 / 0001
	Cadek, John	EIS002274 / 0001
	Friendly Planet, The	EIS000772 / 0002
	Caldwell, Crystal	
	Callner, Amy	EIS001609 / 0004
	Caron, Nancy	EIS001663 / 0003
	Carroll, Cynthia	EIS001151 / 0004
	Nye County, Nevada, Board of County Commissioners	EIS001879 / 0005
	Carver, Dick	
	Cassano, Donna	EIS002175 / 0002
	Owens Valley Indian Water Commission	EIS001107 / 0007
	Cawelti, Teri	
	Chausse, Rhonda	EIS001144 / 0001
	Circost, Namaskar	EIS000905 / 0002
	Nevada Test Site Community Advisory Board	EIS001816 / 0016
	Claire, Phillip	
	Cleveland, El	EIS000912 / 0002
	Corban, Keith	EIS000110 / 0003
		EIS000709 / 0001
	STAR Foundation (Standing for Truth About Radiation)	EIS000225 / 0004
	Cullen, Scott	
	Las Vegas, Nevada, City of	EIS000735 / 0005
	Cummings, Peter	
	Daniel, Karla	EIS001916 / 0005
	deBottari, Louis	EIS000938 / 0011
	Delany, Evelyn	EIS000729 / 0001
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS002119 / 0004
	diBartolo, Russell	
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000228 / 0001
	Dilger, Fred	
	Denver, Colorado, City and County of, Department of Environmental Health	EIS001539 / 0001
	Donahue, Theresa	
	Donn, Marjory	EIS001874 / 0002
	Inyo County, California, Board of Supervisors	EIS000262 / 0001
	Dorame, Michael	
		EIS001443 / 0023
	Doran, Doug	EIS001986 / 0001
	Lander County, Nevada	EIS001912 / 0028
	Duke, Bonnie	

Comment Location	Commenter	Comment Document / Comment No.
8.3 (149) (continued)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0007
	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0003
	Errett, Janet	EIS000120 / 0003
	Timbisha Shoshone Tribe Esteves, Pauline	EIS001906 / 0015
	Fine, Jeff	EIS000890 / 0001
	Eureka County Yucca Mountain Information Office Fiorenzi, Leonard	010392 / 0011
	Fitzgerald, Brenna	EIS001146 / 0001
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS001256 / 0012
	Fragosa, William	EIS001147 / 0001
	Frost	EIS001811 / 0002
	Mineral County, Nevada, Board of Commissioners Funk, Arlo	010182 / 0034
	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000071 / 0014
		EIS000081 / 0013
		EIS000349 / 0002
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS000630 / 0002
		EIS001878 / 0004
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0006
	Grumman, Helen	EIS001891 / 0002
	H., Jeff	EIS000911 / 0002
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000172 / 0005
		EIS000273 / 0002
		EIS001727 / 0007
		EIS002239 / 0009
		EIS002291 / 0001
	Alabama, State of, Public Service Commission Hanes, Eugene	EIS000279 / 0003
		EIS001962 / 0004
	Harbin, April	EIS000880 / 0003
		EIS000922 / 0001
	Hatfield, Matt	EIS000903 / 0002
	Public Citizen, Critical Mass Energy Project Hauter, Wenonah	EIS000455 / 0002
	Hebert, Donna	EIS000526 / 0002
	Henson, Kathleen	EIS000901 / 0002
	Hobbs, Janna	EIS000902 / 0002
	Howland, Charles	EIS000200 / 0001
	Hurwitz, Matt	EIS001689 / 0001
	Washington, State of, Department of Ecology Inman, Rebecca	EIS001208 / 0004
	Nuclear Energy Institute Jefferson, Robert	EIS002242 / 0003

Comment Location	Commenter	Comment Document / Comment No.
8.3 (149) (continued)	Nebraska, State of	EIS001045 / 0004
	Johanns, Mike	
	Nuclear Information and Resource Service	EIS001927 / 0011
	Kamps, Kevin	
		010246 / 0011
	Citizens Awareness Network	EIS002176 / 0005
	Katz, Deborah	
	Keller, Lindsey	EIS000910 / 0002
	Khalsa, Mha Atma	EIS001857 / 0002
	Kinsey, Robert	550004 / 0001
	U.S. Department of the Interior	EIS001889 / 0005
	Kolkman, Gene	
	Nuclear Energy Institute	EIS001832 / 0020
	Kraft, Steven	
	U.S. House of Representatives - Ohio	EIS001905 / 0021
	Kucinich, Dennis	
	Kuntz, Felix	EIS001126 / 0003
	Kurnos, Amanda	EIS001423 / 0002
	Action for a Clean Environment	EIS001658 / 0001
	Kushner, Adele	
	California, State of, Energy Commission	EIS001622 / 0009
	Laurie, Robert	
		EIS002299 / 0002
	Law, Martha	EIS000466 / 0004
		EIS001968 / 0003
	Leeper, Linda	EIS000884 / 0002
	Leppala, Bill	EIS000641 / 0003
	People Against Radioactive Dumping	EIS001837 / 0008
	Lopez, Ruth	
		010101 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000054 / 0001
	Loux, Robert	
		EIS001887 / 0034
	Lander County, Nevada, Board of County Commissioners	EIS000614 / 0002
	Manzini, Tammy	
	Sierra Club	EIS000505 / 0003
	Maret, Susan	
	Rocky Mountain Peace and Justice Center	EIS000517 / 0005
	Marshall, Tom	
		EIS001946 / 0005
	Martt, Rick	EIS000899 / 0002
	Illinois, State of, Commerce Commission	EIS001375 / 0002
	Mathias, Richard	
	Mayberry, Mark	EIS000883 / 0002
	McHugh, Sue	EIS000869 / 0019
	McKeel, Daniel	EIS001380 / 0006
	Clean Water Action Alliance of Minnesota	EIS001847 / 0004
	McKeown, Diana	
	McNelley, Mark	EIS000017 / 0001
	San Bernardino County, California, Board of Supervisors	EIS001865 / 0008
	Mikels, Jon	
		EIS002231 / 0003
	Miller, Joseph	EIS001871 / 0004

Comment Location	Commenter	Comment Document / Comment No.
8.3 (149) (continued)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	010118 / 0003
	Navis, Irene	
	Negin, Gary	EIS002260 / 0003
	Utah, State of, Department of Environmental Quality	EIS001472 / 0002
	Nielson, Dianne	
	Western Interstate Energy Board	EIS001877 / 0010
	Niles, Ken	
	Olivares, Paula	EIS001690 / 0001
	Illinois, State of, Department of Nuclear Safety	EIS001511 / 0002
	Ortciger, Thomas	
	Denver, Colorado, City of, City Council	EIS000506 / 0002
	Ortega, Deborah	
	Palinei, Mary	EIS001985 / 0001
	Physicians for Social Responsibility, Los Angeles	EIS000719 / 0005
	Parfrey, Jonathan	
	Nevada, State of, Office of the Attorney General	EIS000717 / 0003
	Patton, Thomas	
	Paul, Edward	EIS001637 / 0002
	Nevada, State of, Commission on Nuclear Projects	EIS000388 / 0004
	Peirce, Anne	
	Pierce, Samuel	EIS001244 / 0001
	Pisci, John	EIS001216 / 0004
	Colorado Public Interest Research Group	EIS000518 / 0005
	Pogue, Stacey	
	Pritchard	EIS002228 / 0001
	Hopi Tribe	EIS001451 / 0004
	Quotchytewa, Phillip	
	Reback, Mark	550005 / 0001
	National Conference of State Legislatures	EIS001328 / 0001
	Reed, James	
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0006
	Regan, James	
	Rendahl, Roy	EIS001149 / 0002
	Rivera, Daniel	EIS000908 / 0002
	Roth, Barbara	EIS000725 / 0004
	Rynn, Joe	EIS001145 / 0001
	Sanborn, Jean	EIS001815 / 0004
	Sandin, Susan	EIS000898 / 0002
	GREEN Party of California	EIS000722 / 0005
	Schumann, Klaus	
		EIS002100 / 0005
	San Bernardino County, California	EIS002234 / 0002
	Scott, Randy	
	Mineral County, Nevada, Nuclear Projects Office	EIS000391 / 0003
	Shankle, Judith	
		EIS000593 / 0001
		EIS000723 / 0001
		EIS002115 / 0016
	Shillinglaw, Fawn	EIS000817 / 0140
	Public Citizen	EIS000724 / 0002
	Shollenberger, Amy	
		EIS001834 / 0008

Comment Location	Commenter	Comment Document / Comment No.
8.3 (149) (continued)	Skowera, Michael	EIS002062 / 0001
	U.S. Department of the Interior, Bureau of Land Management	EIS001444 / 0009
	Smith, Gerald	
	Stadtmiller, Mark	EIS000939 / 0002
	Stankovich, John	EIS000904 / 0002
	Energy Resources International	EIS000359 / 0004
	Supko, Eileen	
		EIS001458 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000101 / 0001
	Swartz, Ginger	
		EIS000115 / 0001
	The Hopi Tribe	010042 / 0003
	Taylor, Wayne	
		010091 / 0005
	Proposition One Committee	EIS001838 / 0003
	Thomas, Ellen	
	Earth Day Coalition	EIS001286 / 0002
	Trepal, Chris	
	Western Interstate Energy Board	EIS000497 / 0003
	Turner, Allan	
	Twedt, Margaret	EIS001327 / 0008
	Viereck, Jennifer	EIS000124 / 0007
		EIS000636 / 0006
	Citizens Action Coalition of Indiana	EIS001590 / 0004
	Voelker, Roger	
		550003 / 0001
	Wallace, Mariel	EIS001292 / 0003
		EIS001559 / 0008
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0002
	Wallis, Jackie	
	Watson, Dan	EIS000907 / 0002
	Weisel, Herbert	EIS001958 / 0002
	Whidden, D.	EIS000909 / 0002
	Prairie Island Indian Community	EIS000490 / 0003
	White, Byron	
	Wiedermann, Marcus	EIS000906 / 0002
	Weinberg, Jessica	550001 / 0001
		550001 / 0002
	Williams, James	EIS000118 / 0005
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0003
	Woodbury, Bruce	
	Illegible	EIS000941 / 0001
	Mankato Area Environmentalists	550005 / 0001
	Wortel, Kathy	
	Blue Ridge Environmental Defense League	EIS000166 / 0003
	Zeller, Louis	
8.3 (160)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000172 / 0002
	Halstead, Robert	
		EIS001310 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0316
	Loux, Robert	

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8.3 (160) (continued)	McKinney, Paul	EIS000049 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000269 / 0004
	Swartz, Ginger	
8.3 (161)	U.S. Public Interest Research Group	EIS000159 / 0004
	Aurilio, Anna	
	U.S. House of Representatives - California	EIS002230 / 0003
	Baca, Joe	
		EIS002294 / 0003
	Benezet, Louis	EIS001873 / 0031
	Bishop Paiute Tribal Council	EIS001862 / 0007
	Bengochia, Monty	
	Oregon, State of, Office of Energy	EIS001215 / 0006
	Blazek, Mary	
	Bogolub, Rita	EIS001614 / 0006
	U.S. Senate - Nevada	EIS000206 / 0002
	Bryan, Richard	
	Burton, Diane	EIS001165 / 0005
	Cahall, Diana	EIS001952 / 0002
	Caron, Nancy	EIS001663 / 0002
	Cassano, Donna	EIS002175 / 0007
	Nevada Test Site Community Advisory Board	EIS001816 / 0025
	Claire, Phillip	
	Craig, Robin	EIS002170 / 0002
	Nevada, State of, Office of the Governor	EIS002091 / 0004
	Cranor, Bud	
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000543 / 0005
	diBartolo, Russell	
	Inyo County, California, Board of Supervisors	EIS001443 / 0013
	Dorame, Michael	
	Lander County, Nevada	EIS001912 / 0040
	Duke, Bonnie	
	Dziegiel, Henry	010256 / 0004
		010311 / 0009
	Alliance for Nuclear Accountability	EIS000443 / 0011
	Eldredge, Maureen	
		EIS001922 / 0013
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0051
	Eldridge, Brent	
	Eureka County Yucca Mountain Information Office	010392 / 0005
	Fiorenzi, Leonard	
	Frost	EIS001811 / 0005
	Geary, Barbara	010292 / 0007
	Gilbert, Jan	EIS000553 / 0003
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0005
	Goicoechea, Pete	
	Goldstein, Gay	EIS000002 / 0004
	Greene, Eileen	EIS001479 / 0004
	Grumman, Helen	EIS001891 / 0005
	Public Citizen	010290 / 0002
	Gue, Lisa	
	Nevada, State of, Office of the Governor	EIS000716 / 0004
	Guinn, Kenny	

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8.3 (161) (continued)	Citizen Alert	EIS001924 / 0003
	Hadder, John	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000172 / 0001
	Halstead, Robert	
		EIS000273 / 0004
		EIS000470 / 0004
		EIS000990 / 0001
		EIS001046 / 0001
		EIS001310 / 0001
		EIS001580 / 0002
		EIS001727 / 0008
		EIS002239 / 0008
		EIS002272 / 0003
	Harbin, April	EIS000880 / 0002
	Public Citizen, Critical Mass Energy Project	EIS000211 / 0001
	Hauter, Wenonah	
	Hlywak, Stephanie	EIS001619 / 0006
	Mesquite, Nevada, City of	010283 / 0004
	Horne, Charles	
	Nebraska, State of	EIS001045 / 0005
	Johanns, Mike	
	Ely Shoshone Tribe	EIS001441 / 0050
	Kaamasee, Arthur	
	Nuclear Information and Resource Service	EIS001466 / 0002
	Kamps, Kevin	
		EIS001927 / 0005
	Khalsa, Mha Atma	EIS001857 / 0005
	U.S. Department of the Interior	EIS001889 / 0001
	Kolkman, Gene	
	U.S. House of Representatives - Ohio	EIS000476 / 0001
	Kucinich, Dennis	
		EIS001905 / 0004
	Kuntz, Felix	EIS001126 / 0002
	Action for a Clean Environment	EIS001658 / 0002
	Kushner, Adele	
	California, State of, Energy Commission	EIS001622 / 0026
	Laurie, Robert	
	Law, Martha	EIS000466 / 0002
		EIS001968 / 0002
	Lee, Denise	EIS001485 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0191
	Loux, Robert	
		010242 / 0003
	Committee to Bridge the Gap	EIS000390 / 0004
	Magavern, Bill	
		EIS000539 / 0004
	Marchese, John	EIS001079 / 0006
	Mesquite, Nevada, City of	EIS000039 / 0004
	Marren, Terrance	
	Marsh, Amy	EIS000499 / 0002
	Rocky Mountain Peace and Justice Center	EIS001946 / 0003
	Marshall, Tom	

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8.3 (161) (continued)	McClarren, Chris	EIS001031 / 0018
	Clean Water Action Alliance of Minnesota	EIS001847 / 0007
	McKeown, Diana	
	McLendon, Marci	EIS000178 / 0003
	Meharg, Margaret	EIS002068 / 0002
	San Bernardino County, California, Board of Supervisors	EIS001865 / 0010
	Mikels, Jon	
	Miller, Kit	EIS000352 / 0006
	Mitchell, Cynthia	EIS000547 / 0002
	Montana, Deborah	EIS002268 / 0001
	Utah, State of, Department of Environmental Quality	EIS001376 / 0002
	Nielson, Dianne	
		EIS001472 / 0004
	Illinois, State of, Department of Nuclear Safety	EIS001511 / 0004
	Ortciger, Thomas	
	Physicians for Social Responsibility, Los Angeles	EIS000719 / 0003
	Parfrey, Jonathan	
	Nevada, State of, Office of the Attorney General	EIS002092 / 0004
	Patton, Thomas	
	Paul, Edward	EIS001637 / 0005
	Nevada, State of, Commission on Nuclear Projects	EIS000388 / 0002
	Peirce, Anne	
	Perry, Susan	EIS000711 / 0001
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0086
	Regan, James	
	Inyo County, California, Board of Supervisors	EIS002270 / 0001
	Remus, Andrew	
	Rendahl, Roy	EIS001113 / 0003
	Roth, Barbara	EIS000725 / 0002
	Safe, Karen	EIS001038 / 0008
	Crescent Valley Historical Society	EIS001242 / 0007
	Scott, Laura	
	San Bernardino County, California	EIS002234 / 0006
	Scott, Randy	
	Mineral County, Nevada, Nuclear Projects Office	EIS000391 / 0007
	Shankle, Judith	
		EIS000593 / 0009
		EIS000723 / 0005
		EIS002115 / 0005
	Public Citizen	EIS001834 / 0011
	Shollenberger, Amy	
		EIS002130 / 0004
	Shrader-Frechette, Kristin	EIS001522 / 0009
	Sirnes, S. T.	EIS000198 / 0004
	Shundahai Network	EIS002133 / 0005
	Snyder, Susi	
	San Diego County, California, Department of Public Works	EIS001930 / 0001
	Stanton, Timoty	
	Stern, Griffith	EIS001422 / 0001
	Shundahai Network	EIS001840 / 0007
	Sullivan, Graham	

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8.3 (161) (continued)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000227 / 0005
	Swartz, Ginger	
		EIS000269 / 0003
		EIS000762 / 0001
	Tamaro, Adeline	010240 / 0007
		010405 / 0003
	Proposition One Committee	EIS001838 / 0006
	Thomas, Ellen	
	Treichel, Judy	EIS000075 / 0007
	Nevada Nuclear Waste Task Force, Inc.	EIS001866 / 0004
	Treichel, Judy	
	Western Interstate Energy Board	EIS000497 / 0005
	Turner, Allan	
	Wallace, Mariel	EIS001292 / 0001
		EIS001559 / 0002
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0013
	Wallis, Jackie	
	Ohio Public Industry Research Group	EIS001550 / 0004
	Weidner, Maria	
	Weinberg, Jessica	010369 / 0003
	Gray Panthers	EIS001319 / 0002
	Weiss, Giudi	
	Clark County, Nevada, Board of County Commissioners	EIS000706 / 0003
	Williams, Myrna	
		EIS002129 / 0003
	Wilson-Booth, Ursula	EIS000813 / 0009
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0047
	Woodbury, Bruce	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000221 / 0004
	Zimmerman, Susan	
8.3 (201)	Illinois, State of, Department of Nuclear Safety	EIS001726 / 0003
	Appel, Gordon	
	Benezet, Louis	EIS002158 / 0008
	Nuclear Waste Strategy Coalition	010303 / 0011
	Bradley, Phillip	
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000332 / 0004
	Bradshaw, Les	
	Nevada Test Site Community Advisory Board	EIS001816 / 0020
	Claire, Phillip	
	STAR Foundation (Standing for Truth About Radiation)	010238 / 0005
	Cullen, Scott	
	Western Shoshone Defense Project	EIS001965 / 0009
	Dann, Carrie	
	Denver, Colorado, City and County of, Department of Environmental Health	EIS001539 / 0008
	Donahue, Theresa	
	Inyo County, California, Board of Supervisors	EIS000370 / 0003
	Dorame, Michael	
		EIS001443 / 0014
	Lander County, Nevada	EIS001912 / 0077
	Duke, Bonnie	

Comment Location	Commenter	Comment Document / Comment No.
8.3 (201) (continued)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0005
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0066
	Rouse Company, The Galen, Richard	EIS001861 / 0002
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0015
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0011
	Nebraska, State of Johanns, Mike	EIS001045 / 0007
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0008
	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0014
	Savannah River Site Citizens Advisory Board Loadholt, Ann	EIS001105 / 0004
	McGeehan, Carol	010277 / 0003
	McGuiness, James	EIS000461 / 0003
	San Bernardino County, California, Board of Supervisors Mikels, Jon	EIS001865 / 0015
	Western Interstate Energy Board Niles, Ken	EIS001877 / 0004
	Illinois, State of, Department of Nuclear Safety Ortciger, Thomas	EIS001511 / 0003
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0075
	U.S. House of Representatives - Nevada Rice, Jean	EIS000233 / 0003
	Schmidt, Ralph	EIS001956 / 0003
	Shillinglaw, Fawn	EIS000817 / 0042
	Shundahai Network Snyder, Susi	EIS002247 / 0009
	Wallace, Mariel	EIS001559 / 0004
	Williams, James	EIS000118 / 0004
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0110
8.3 (213)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS002238 / 0003
	Clemens, Byron	EIS001040 / 0010 EIS001774 / 0009
	Inyo County, California, Board of Supervisors Dorame, Michael	EIS000370 / 0002 EIS001443 / 0020
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0024
	Timbisha Shoshone Tribe Goad, Grace	EIS002078 / 0001

Comment Location	Commenter	Comment Document / Comment No.
8.3 (213) (continued)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0010
	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0013
	Mikels, Marjorie	EIS002241 / 0002
	Western Interstate Energy Board Niles, Ken	EIS001877 / 0005
	Florida, State of, Department of Health Passetti, William	EIS000026 / 0002
	National Conference of State Legislatures Reed, James	EIS001328 / 0008
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0018
	Inyo County, California, Board of Supervisors Remus, Andrew	EIS002270 / 0002
	Nevada Public Health Association Saum, Judith	EIS000540 / 0015
	Kaibab Band of Southern Paiutes Savala, Gevene	EIS002079 / 0002
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0027
8.3 (362)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000043 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000068 / 0004
		EIS000078 / 0004
8.3 (377)	Mesquite Area Chamber of Commerce NoLastName	EIS000040 / 0003
8.3 (532)	Williams, James	EIS000118 / 0003
8.3 (565)	Williams, James	EIS000106 / 0004
8.3 (577)	Kentucky, Commonwealth of, Department for Environmental Protection Barber, Alex	EIS000066 / 0001
8.3 (675)	Corban, Keith	EIS000110 / 0004
8.3 (937)	Ely, Nevada, City of Miller, Robert	010378 / 0002
8.3 (1009)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS000262 / 0005
		EIS000370 / 0005
8.3 (1271)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Zimmerman, Susan	EIS000221 / 0002
8.3 (1276)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Zimmerman, Susan	EIS000221 / 0003
8.3 (1779)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Dilger, Fred	EIS000392 / 0004
8.3 (1794)	Williams, Ray	EIS000616 / 0001

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8.3 (2202)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Manzini, Tammy	EIS000613 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Massey, Rex	EIS000617 / 0001
8.3 (2304)	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0001
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0001
8.3 (2455)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0003
8.3 (3402)	Gilleo, Margaret	EIS001393 / 0003
8.3 (3611)	McClarren, Chris	EIS001031 / 0017
8.3 (4233)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0048
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0047
8.3 (4341)	Citizens Action Coalition of Indiana Voelker, Roger	EIS001191 / 0004
8.3 (4958)	Caudle, Joe	EIS001301 / 0002
8.3 (5035)	U.S. Nuclear Waste Technical Review Board Cohon, Jared	EIS001520 / 0003
8.3 (5042)	U.S. Nuclear Waste Technical Review Board Cohon, Jared	EIS001520 / 0010
8.3 (5052)	Missouri, State of Carnahan, Mel	EIS000999 / 0002
	Missouri, State of, Office of the Governor Lange, Tom	EIS001738 / 0002
8.3 (5346)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0070
8.3 (5678)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0300
8.3 (5687)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0304
8.3 (5689)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0305
8.3 (6051)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0054
8.3 (6440)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0014
8.3 (6493)	Clemens, Byron	EIS001774 / 0008
8.3 (7185)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0077
8.3 (7208)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0091

Comment Location	Commenter	Comment Document / Comment No.
8.3 (7290)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0029
	Nuclear Energy Institute Kraft, Steven	EIS001832 / 0029
8.3 (7623)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0080
8.3 (7823)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0026
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0020
8.3 (8073)	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0004
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0003
8.3 (8126)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0078
8.3 (8449)	Viereck, Jennifer	EIS001397 / 0017
8.3 (9403)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0101
8.3 (9553)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0226
8.3 (9576)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0250
8.3 (9854)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0419
8.3 (9958)	Western Interstate Energy Board Niles, Ken	EIS001877 / 0001
8.3 (9967)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000463 / 0005
8.3 (10196)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0567
8.3 (10237)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0586
8.3 (10311)	Cassano, Donna	EIS002175 / 0004
8.3 (10348)	Nuclear Information and Resource Service Kamps, Kevin	EIS001927 / 0006
8.3 (10911)	Cahall, Diana	EIS001115 / 0005
8.3 (10957)	Cahall, Diana	EIS001424 / 0002
8.3 (10980)	Cahall, Diana	EIS001115 / 0002
8.3 (11532)	People Against Radioactive Dumping Lopez, Ruth	EIS002248 / 0002
8.3 (11765)	Citizens for Alternatives to Radioactive Dumping Greenwald, Janet	EIS000512 / 0003
8.3 (12209)	Thoms, Michael	EIS000478 / 0011
8.3 (12255)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0001
8.3 (12596)	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001905 / 0003
8.3 (12671)	Johnson, Abby	EIS000648 / 0002

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8.3 (12688)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0037
8.3 (12752)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000990 / 0003
8.3 (12980)	Nuclear Waste Strategy Coalition Bradley, Phillip	010303 / 0009
8.3.1 (20)	Illinois, State of, Department of Nuclear Safety Appel, Gordon	EIS001597 / 0006
	Fish, Faith	EIS000020 / 0003
	Arizona, State of, Radiation Regulatory Agency Godwin, Aubrey	EIS001975 / 0002
	Huntsman, Christy	EIS000521 / 0002
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0202
8.3.1 (195)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0093
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0006
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS000630 / 0006
	Eureka County, Nevada Johnson, Abigail	EIS000618 / 0001
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0010
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000141 / 0002 EIS001887 / 0039
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0091
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000356 / 0002
8.3.1 (608)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000140 / 0002
8.3.1 (641)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0012
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0014
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000141 / 0005
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000356 / 0005
8.3.1 (1006)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS000262 / 0002
8.3.1 (1014)	Eckhardt, Curtiss	EIS000254 / 0004
8.3.1 (1155)	Inyo County, California, Planning Department Thistlethwaite, Charles	EIS000261 / 0003

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8.3.1 (1172)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000229 / 0005
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0390
8.3.1 (1346)	Liddell, Timothy	EIS000382 / 0001
8.3.1 (1440)	Vasconi, Bill	EIS000353 / 0003
8.3.1 (1441)	Vasconi, Bill	EIS000353 / 0004
8.3.1 (1456)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000142 / 0007
		EIS000350 / 0006
8.3.1 (1543)	White Pine County, Nevada Baughman, Mike	EIS000357 / 0002
8.3.1 (2399)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000674 / 0003
8.3.1 (4191)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0009
8.3.1 (4200)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0017
8.3.1 (4211)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0025
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0023
8.3.1 (4219)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0036
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0034
8.3.1 (4232)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0047
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0046
8.3.1 (4240)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0055
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0054
8.3.1 (4298)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0107
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0096
8.3.1 (5193)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0018
8.3.1 (5194)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0019
8.3.1 (5393)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0101
8.3.1 (5719)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0332
8.3.1 (5799)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0012

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8.3.1 (6026)	Death Valley Unified School District Kenny, June	EIS001273 / 0001
8.3.1 (7063)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0021
8.3.1 (8911)	Death Valley Unified School District Kenny, June	EIS001961 / 0001
8.3.1 (9611)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0283
8.3.1 (10139)	San Bernardino County, California, Board of Supervisors Mikels, Jon	EIS001865 / 0014
8.3.1 (10906)	Vasconi, Bill	EIS000353 / 0006
8.3.1 (11092)	Inyo County, California, Planning Department Thistlethwaite, Charles	EIS000374 / 0003
8.3.1 (11168)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS000370 / 0001
8.3.1 (11538)	Cady, Warren	010022 / 0001
8.3.1 (11748)	California, State of, Energy Commission Laurie, Robert	EIS002299 / 0005
8.3.1 (12376)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000142 / 0008 EIS000350 / 0007
8.3.1 (12467)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0095
8.3.1 (13181)	Clark County, Nevada, Board of County Commissioners Herrera, Dario	010243 / 0028
8.3.2 (136)	Baughman, Mike	EIS000671 / 0002
	Belenky, Lisa	EIS001814 / 0043
	Benezet, Louis	EIS000683 / 0008
	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000332 / 0005
	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0022
	Lincoln County, Nevada, Board of County Commissioners Donohue, Paul	EIS000677 / 0005
	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0022
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0052
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0023
	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000071 / 0016 EIS000081 / 0015 EIS002120 / 0002 EIS002134 / 0002
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0027
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000674 / 0005

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8.3.2 (136) (continued)	Alabama, State of, Public Service Commission	EIS001962 / 0005
	Hanes, Eugene	
	Keaton, Hal	EIS000656 / 0004
	U.S. Department of the Air Force	EIS001047 / 0001
	McCall, Thomas	
	Petuya, Germain	EIS001121 / 0004
	Caliente, Nevada, City of	EIS000226 / 0013
	Phillips, Kevin	
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0049
	Regan, James	
	Inyo County, California, Board of Supervisors	EIS002270 / 0003
	Remus, Andrew	
	Shillinglaw, Fawn	EIS000817 / 0028
	U.S. Department of the Interior, Bureau of Land Management	EIS001444 / 0010
	Smith, Gerald	
	Williams, James	EIS000106 / 0006
	Wilson-Booth, Ursula	EIS000813 / 0007
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0282
	Woodbury, Bruce	
8.3.2 (5044)	U.S. Nuclear Waste Technical Review Board	EIS001520 / 0012
	Cohon, Jared	
8.3.3 (23)	Alexander, Cheryl	EIS000255 / 0003
	Cadek, John	EIS002274 / 0002
	Christisen, D.	EIS001118 / 0001
	Diesel, Mary	EIS001880 / 0005
	Donn, Marjory	EIS001874 / 0004
	Filippini, Billie	EIS000480 / 0007
	Gonzalez, Chalio	EIS002036 / 0002
	Grey, Marty	EIS001202 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000172 / 0003
	Halstead, Robert	
	Hartzog, Helen	EIS001642 / 0003
	McRae, John	EIS001305 / 0001
	Medica, Philip	010475 / 0001
	Meharg, Margaret	EIS001265 / 0002
		EIS002068 / 0001
	Mocilnikarr, Brian	EIS001088 / 0001
	Penn, Jeanette	EIS001851 / 0004
	Perry, Gavin	EIS000997 / 0003
		EIS001734 / 0003
	Simeone, Wilma	EIS001855 / 0004
	Smit, Charles	010062 / 0005
	Smutz, Robert	EIS001644 / 0002
	Studelska, Daniel	EIS001822 / 0001
	Wissbeck, Larry	EIS000232 / 0001
		EIS000663 / 0002
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0290
	Woodbury, Bruce	
8.3.3 (24)	Bloomer, Catherine	EIS001884 / 0001
	Dickens, Billy	EIS001528 / 0001
		EIS001843 / 0001
	Meharg, Margaret	010061 / 0002

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8.3.3 (24)	New Jersey, State of, Department of Environmental Protection	EIS001504 / 0001
	Schmidt, Lawrence	
	Shillinglaw, Fawn	EIS000817 / 0063
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0135
	Woodbury, Bruce	
8.3.3 (178)	Benezet, Louis	EIS001873 / 0030
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0083
	Eldridge, Brent	
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0007
	Frehner, Dan	
	Ely Shoshone Tribe	EIS001441 / 0079
	Kaamasee, Arthur	
8.3.3 (5690)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0303
	Loux, Robert	
8.3.3 (7822)	Lander County, Nevada	EIS001912 / 0025
	Duke, Bonnie	
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0019
	Regan, James	
8.3.3 (11299)	Belenky, Lisa	EIS001814 / 0028
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0132
	Loux, Robert	
8.3.3 (11810)	California, State of, Energy Commission	EIS001622 / 0066
	Laurie, Robert	
8.4 (25)	Arnold, Ed	EIS000291 / 0004
	Biunno, Patti	EIS000893 / 0002
	OGD Awareness	EIS001475 / 0005
	Bullcreek, Margene	
	Burton, Diane	EIS001165 / 0004
	Cabezas, Sara	EIS000891 / 0002
	Cabovich, Jason	EIS001688 / 0002
	Friendly Planet, The	EIS000772 / 0003
	Caldwell, Crystal	
	FirstEnergy Corporation	EIS001556 / 0005
	Castaznacci, Albert	
	Chausse, Rhonda	EIS001144 / 0002
	Cleveland Peace Action	EIS001287 / 0005
	Chiappa, Francis	
	Congdon, Lois	EIS000173 / 0005
	STAR Foundation (Standing for Truth About Radiation)	010238 / 0006
	Cullen, Scott	
	Damel, David	EIS001278 / 0003
	deBottari, Louis	EIS002121 / 0004
		EIS002250 / 0003
		EIS002277 / 0002
	Doran, Doug	EIS001986 / 0002
	Drey, Kay	010300 / 0011
		010314 / 0011
	Cleveland Peace Action	EIS001558 / 0002
	Edguer, Marji	
	Feldman, Jane	EIS000726 / 0016
	Fine, Jeff	EIS000890 / 0002

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8.4 (25) (continued)	Fitzgerald, Brenna	EIS001146 / 0002
	Sierra Club, Southern Nevada Group	EIS000727 / 0012
	Forkos, Marcia	
	Fragosa, William	EIS001147 / 0002
	Geary, Barbara	010292 / 0006
	Citizens for Alternatives to Radioactive Dumping	EIS000512 / 0002
	Greenwald, Janet	
	Guthrie, Sheral	EIS001635 / 0003
	Guy, Peggy	EIS000515 / 0001
	Citizen Alert	EIS000599 / 0003
	Hadder, John	
		EIS001924 / 0005
		EIS002149 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000299 / 0001
	Halstead, Robert	
		EIS000679 / 0005
		EIS002272 / 0002
	Harbin, April	EIS000922 / 0002
	Hardy, David	EIS001150 / 0001
	Hellgeth, Jeanette	EIS000956 / 0010
	Missouri Coalition for the Environment	EIS001229 / 0006
	Hengerson, Roy	
	Hixon, Angela	EIS001272 / 0002
	Hixon, Duane	EIS001421 / 0003
	Citizen's Advisory Council/Esmeralda County Repository Oversight Program	EIS000202 / 0001
	Hoffman, Marsha	
	Hunter, Meredith	EIS001371 / 0008
	Hurwitz, Matt	EIS001689 / 0002
	Illegible	EIS000941 / 0002
	Nuclear Energy Institute	EIS001576 / 0001
	Jefferson, Robert	
	Shundahai Network	EIS002252 / 0007
	Knutsen, Reinard	
	Kubinski, Heather	EIS002018 / 0003
	People Against Radioactive Dumping	010101 / 0005
	Lopez, Ruth	
	Maddy, Bryan	EIS002041 / 0004
	Marchese, John	EIS001079 / 0007
	Mayr, Tony	EIS001100 / 0002
	McClarren, Thomas	EIS001764 / 0002
	McGeehan, Carol	010277 / 0004
	Miller, Joseph	EIS001871 / 0002
	Miller, William	EIS001037 / 0002
	Brotherhood of Maintenance of Way Employees	EIS001168 / 0004
	Morrissey, Spencer	
	Neura, Sharon	EIS001664 / 0003
	Western Interstate Energy Board	EIS001877 / 0007
	Niles, Ken	
	Utah Peace Test	EIS001476 / 0005
	ofthedesert, Cynthia	
	Olivares, Paula	EIS001690 / 0002
	Palinei, Mary	EIS001985 / 0002

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8.4 (25) (continued)	Pisci, John	EIS001216 / 0005
	Pritchard	EIS002228 / 0002
	Rendahl, Roy	EIS001113 / 0005
	Robertson, Joyce	EIS001277 / 0003
	Rynn, Joe	EIS001145 / 0002
	Mineral County, Nevada, Nuclear Projects Office	EIS000391 / 0012
	Shankle, Judith	
		EIS000593 / 0013
		EIS000723 / 0010
		EIS002115 / 0009
	Sheehan, D.	EIS001925 / 0003
	Skowera, Michael	EIS002062 / 0002
	Snoeberger, Geni	EIS001276 / 0003
	Thompson, James	EIS000765 / 0004
	Wallace, Mariel	EIS001292 / 0002
		EIS001559 / 0005
	Ohio Public Industry Research Group	EIS001550 / 0005
	Weidner, Maria	
	Willoughby, Amber	EIS002031 / 0004
	Wilson, Debra	EIS000995 / 0010
		EIS001732 / 0009
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0546
	Woodbury, Bruce	
8.4 (115)	Baker, Sylvia	EIS000355 / 0003
	Bianchi, Vince	EIS000929 / 0006
	Tennessee Valley Authority	EIS001190 / 0025
	Burzynski, Mark	
	Clemens, Byron	EIS001040 / 0028
	Drey, Kay	EIS001000 / 0004
		EIS001736 / 0004
	Alliance for Nuclear Accountability	EIS000443 / 0007
	Eldredge, Maureen	
	Ferreira, Mateo	EIS002101 / 0007
	Frankel, Helene	EIS001002 / 0002
	Garfield, Melodie	EIS000811 / 0006
	Citizen Alert	EIS001469 / 0003
	Hadder, John	
	Public Citizen, Critical Mass Energy Project	EIS000455 / 0004
	Hauter, Wenonah	
	North Las Vegas, Nevada, City of	EIS001157 / 0014
	Importuna, Patrick	
	Nuclear Energy Institute	EIS000492 / 0001
	Jefferson, Robert	
		EIS001564 / 0001
	Jones, Donna	EIS000660 / 0001
	Kean, Beth	EIS001409 / 0002
	Knopick, Suellen	EIS000575 / 0002
	Nuclear Energy Institute	EIS001832 / 0025
	Kraft, Steven	
	Rocky Mountain Peace and Justice Center	EIS001946 / 0007
	Marshall, Tom	
	McClarren, Chris	EIS001031 / 0007
		EIS001763 / 0007

Comment Location	Commenter	Comment Document / Comment No.
8.4 (115) (continued)	Nebraska Public Power District	EIS001166 / 0002
	McClure, John	
	McDade, Waynette	EIS000404 / 0001
	Montana, Deborah	EIS002268 / 0002
	Ponzi, Jean	EIS001042 / 0003
	Physicians for Social Responsibility	EIS000205 / 0004
	Roberts, Kimberly	
	Shundahai Network	EIS002251 / 0008
	Scharff, John	
	Shillinglaw, Fawn	EIS000817 / 0104
	Paul Williams and Associates	EIS001570 / 0004
	Williams, Paul	
	Willoughby, Amber	EIS002031 / 0002
	Wissbeck, Larry	EIS000232 / 0005
		EIS000663 / 0006
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0193
	Woodbury, Bruce	
	Missouri Coalition for the Environment	EIS001017 / 0002
	Wright, Rebecca	
		EIS001781 / 0002
	Zuzich, Thomas	EIS001194 / 0002
	Zyvaloski, Shawn	EIS002037 / 0002
8.4 (159)	Green, Louise	EIS001028 / 0002
	Sontag, Harry	EIS002154 / 0005
	Wilson, Debra	EIS000995 / 0013
		EIS001732 / 0012
8.4 (199)	Mineral County, Nevada, Board of Commissioners	010182 / 0014
	Funk, Arlo	
	White Pine County, Nevada, Board of County Commissioners	010073 / 0003
	Kirkeby, Kevin	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0543
	Woodbury, Bruce	
8.4 (226)	Barnes, Kathryn	EIS001624 / 0001
	Bluesky, Willa	EIS001281 / 0001
	Buola, Marcel	EIS001379 / 0001
	Dory, Pat	EIS000607 / 0001
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0050
	Eldridge, Brent	
	Farris, Mark	EIS001378 / 0001
	Gunter, Keith	EIS001381 / 0001
	Hales, Mary	EIS000027 / 0002
	Herrera, Helen	EIS002295 / 0004
	Johnston, Orla	EIS000664 / 0001
	Duke Energy Corporation	EIS000280 / 0010
	Jones, David	
	Ely Shoshone Tribe	EIS001441 / 0049
	Kaamasee, Arthur	
	Kamps, Kevin	EIS001297 / 0001
	Nuclear Information and Resource Service	EIS001561 / 0001
	Kamps, Kevin	
		EIS001967 / 0001
	LaMonica, Richard	EIS000988 / 0003
	U.S. House of Representatives - Ohio	EIS001083 / 0005
	LaTourette, Steven	

Comment Location	Commenter	Comment Document / Comment No.
8.4 (226) (continued)	Pappas, Alexandra	EIS001656 / 0001
	Swanson, Rochelle	EIS000600 / 0002
	Weinman, Janice	EIS001398 / 0002
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0191
8.4 (640)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0011
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0013
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000141 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000356 / 0004
8.4 (840)	Congdon, Lois	EIS000173 / 0006
8.4 (1061)	Earth Challenge Alzner, Susan	EIS000289 / 0007
8.4 (1144)	McCracken, Ralph	EIS000087 / 0001
8.4 (1575)	Pustek, Charlotte	EIS000516 / 0003
8.4 (2458)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0004
8.4 (2757)	Tamaro, Adeline	EIS000859 / 0002
8.4 (2787)	Caron, Nancy	EIS001663 / 0004
	Harbin, April	EIS000880 / 0004
	Kuntz, Felix	EIS001126 / 0004
	Law, Martha	EIS001968 / 0004
8.4 (5205)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0029
8.4 (5478)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0016
8.4 (5825)	International Association of Fire Chiefs Veerman, Gordon	EIS001728 / 0003
8.4 (6215)	Missouri Coalition for the Environment Wright, Rebecca	EIS001017 / 0001 EIS001781 / 0001
8.4 (6556)	National Conference of State Legislatures Reed, James	EIS001328 / 0012
8.4 (6559)	National Conference of State Legislatures Reed, James	EIS001328 / 0011
8.4 (6925)	Brotherhood of Maintenance of Way Employees Morrissey, Spencer	EIS001335 / 0003
8.4 (8016)	Shillinglaw, Fawn	EIS000817 / 0067
8.4 (8223)	McKeel, Daniel	EIS001021 / 0007
8.4 (8297)	Shillinglaw, Fawn	EIS000817 / 0107
8.4 (8396)	Windholz, Antony	EIS002014 / 0002
8.4 (8643)	Shillinglaw, Fawn	EIS000817 / 0195
8.4 (9407)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0103
8.4 (9582)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0256
8.4 (9587)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0262

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8.4 (9590)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0264
8.4 (10016)	McNeal, Jerry	EIS001932 / 0001
8.4 (11360)	Nuclear Energy Institute Jefferson, Robert	EIS002242 / 0002
8.4 (11480)	Shundahai Network Snyder, Susi	EIS002247 / 0008
8.4 (11579)	San Bernardino County, California Brierty, Peter	EIS002235 / 0002
8.4 (11929)	Shillinglaw, Fawn	EIS000817 / 0200
8.4 (11980)	Ferreira, Mateo	EIS002101 / 0014
8.4 (12573)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0324
8.5.1 (180)	Benezet, Louis	EIS001873 / 0008
	Las Vegas, Nevada, City of Cummings, Peter	EIS000735 / 0007
	McWilliams, Earl	EIS000672 / 0001 EIS000695 / 0001
	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0009
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000227 / 0008
8.5.1 (328)	Hepworth, Brentwood	EIS000028 / 0003
8.5.1 (911)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000139 / 0001
8.5.1 (997)	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0003
8.5.1 (2431)	Benezet, Louis	EIS000683 / 0009
8.5.1 (3080)	Las Vegas, Nevada, City of Cummings, Peter	EIS000735 / 0008
8.5.1 (5407)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0110
8.5.1 (7073)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0026
8.5.1 (7076)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0028
8.5.1 (7184)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0075
8.5.1 (8097)	Benezet, Louis	EIS001873 / 0003
8.5.1 (8359)	Benezet, Louis	EIS001873 / 0043
8.5.1 (8381)	Benezet, Louis	EIS001873 / 0065
8.5.1 (8666)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0026
8.5.1 (8842)	McHugh, Sue	EIS000869 / 0015
8.5.1 (9560)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0233
8.5.1 (9600)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0275
8.5.1 (9604)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0278
8.5.1 (10594)	Benezet, Louis	EIS002122 / 0008

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8.5.2 (5411)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0114
8.5.2 (5716)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0330
8.5.2 (7069)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0024
8.5.2 (7186)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0125
8.5.2 (11312)	Belenky, Lisa	EIS001814 / 0041
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0312
8.5.2 (11981)	Wissbeck, Larry	EIS000688 / 0003
8.5.3 (190)	Goldfield, Nevada, Fire Department Anderson, Mike	EIS000195 / 0003
	Belenky, Lisa	EIS001814 / 0037
	Benezet, Louis	EIS000683 / 0010 EIS001873 / 0033
	Bourgoin, Ron	010166 / 0001
	Greater Las Vegas Association of REALTORS Coles, Gary	EIS000721 / 0006
	Devlin, Sally	EIS000103 / 0003
	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0011
	Feldman, Jane	EIS000726 / 0014
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0113
	Goitein, Ernest	EIS001845 / 0003
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0045
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000229 / 0001 EIS000652 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000096 / 0010 EIS001887 / 0112
	Pierce, Samuel	EIS001244 / 0002
	Reynolds, Robert	EIS000585 / 0002
	Shillinglaw, Fawn	EIS000817 / 0066
	Smucker, Richard	EIS000736 / 0004
	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000148 / 0010 EIS000193 / 0010
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Tiesenhausen, Engelbrecht von	EIS000360 / 0002

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8.5.3 (190) (continued)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0113
8.5.3 (776)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000096 / 0005
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000148 / 0005
		EIS000193 / 0005
8.5.3 (1173)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000229 / 0006
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0391
8.5.3 (1267)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0005
8.5.3 (4419)	Utah, State of, Department of Environmental Quality Nielson, Dianne	EIS001472 / 0007
8.5.3 (5286)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0007
8.5.3 (5303)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0040
8.5.3 (5406)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0109
8.5.3 (5730)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0338
8.5.3 (7048)	Clean Water Action Alliance of Minnesota McKeown, Diana	EIS001847 / 0006
8.5.3 (7187)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0076
8.5.3 (7653)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0097
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0096
8.5.3 (7941)	Idaho, State of, INEEL Oversight Trever, Kathleen	EIS001903 / 0008
8.5.3 (8405)	Benezet, Louis	EIS001873 / 0071
8.5.3 (9425)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0116
8.5.3 (10804)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0006
8.5.3 (11007)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0005
8.5.3 (11017)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0015
8.5.3 (11292)	Belenky, Lisa	EIS001814 / 0021
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0108

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8.5.3 (11294)	Belenky, Lisa	EIS001814 / 0023
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0111
8.5.3 (12195)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000096 / 0008
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000148 / 0008
		EIS000193 / 0008
8.5.3 (12548)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0009
8.6.1 (223)	Belenky, Lisa	EIS001814 / 0013
	Benezet, Louis	EIS001873 / 0029
	Clemens, Byron	EIS001040 / 0018
		EIS001774 / 0018
	deBottari, Louis	EIS000337 / 0009
		EIS000610 / 0005
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0071
	Association of American Railroads Fronczak, Robert	EIS001201 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000463 / 0009
		EIS000643 / 0002
		EIS000679 / 0006
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0094
	San Bernardino County, California, Board of Supervisors Mikels, Jon	EIS001865 / 0019
	National Conference of State Legislatures Reed, James	EIS001328 / 0013
	San Bernardino County, California Scott, Randy	EIS002234 / 0009
	Shillinglaw, Fawn	EIS000817 / 0064
8.6.1 (402)	Harney, Corbin	EIS000088 / 0002
8.6.1 (4464)	Scott, Laura	EIS001232 / 0008
8.6.2 (137)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000408 / 0001
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0334
8.6.2 (186)	Belenky, Lisa	EIS001814 / 0039
	Benezet, Louis	EIS002158 / 0009
	Cleveland, David	EIS000114 / 0006
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0096
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0017
	Gruening, Jamie	EIS000632 / 0004

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8.6.2 (186) (continued)	Gruening, V.	EIS001241 / 0008
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000408 / 0004
	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0010
	U.S. Department of the Interior Kolkman, Gene	EIS001889 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0106
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0095
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0032
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0375
8.6.2 (804)	Gillium, Rita	EIS000201 / 0002
8.6.2 (3165)	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0003
8.6.2 (6496)	Gruening, V.	EIS001241 / 0009
8.6.2 (9601)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0274
8.6.2 (11896)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0087
8.6.3 (3364)	Crescent Valley Historical Society Scott, Laura	EIS001242 / 0013
8.7 (28)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0005
	Craig, Robin	EIS002170 / 0004
	Detraz, Marjorie	EIS002220 / 0008
	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0016
	Feldman, Jane	EIS000726 / 0007
	Sierra Club, Southern Nevada Group Feldman, Jane	EIS002127 / 0008
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0008
	Gladson, Linda	EIS001802 / 0003
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0056
	Hunter, Meredith	EIS001371 / 0009
	Linvill, Becky	EIS000399 / 0002 EIS000604 / 0002
	Louden, Nancy	EIS000646 / 0001
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0012
	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000391 / 0013 EIS000593 / 0014 EIS000723 / 0011 EIS002115 / 0011

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8.7 (28) (continued)	St. Louis Children's Aquarium	EIS001733 / 0003
	Sonnenschein, Leonard	
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0017
	Wallis, Jackie	
8.7 (140)	Citron, Kay	EIS000167 / 0002
	Physicians for Social Responsibility	EIS002269 / 0002
	Hattis, Ronald	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0201
	Loux, Robert	
	Wendt, William	EIS001593 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0211
	Woodbury, Bruce	
8.7 (141)	Brennan, Kristyn	EIS001239 / 0002
	Clemens, Byron	EIS001040 / 0008
		EIS001774 / 0004
	Congdon, Lois	EIS000306 / 0004
	STAR Foundation (Standing for Truth About Radiation)	010238 / 0008
	Cullen, Scott	
	deBottari, Louis	EIS000337 / 0026
		EIS000610 / 0020
	Dufer, Dale	EIS001798 / 0002
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0038
	Goicoechea, Pete	
	Gruening, Jamie	EIS000632 / 0001
	Gruening, V.	EIS001241 / 0010
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001727 / 0010
	Halstead, Robert	
		EIS002239 / 0002
	Nuclear Information and Resource Service	EIS001927 / 0015
	Kamps, Kevin	
	Lange, Patrick	EIS000962 / 0001
	World Community Center	EIS001043 / 0001
	Logan, Yvonne	
	Louden, Lee	EIS001944 / 0007
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0023
	Loux, Robert	
	Mack, Eva	EIS001810 / 0002
	McHugh, Sue	EIS000869 / 0001
	Mueller, Margaret	EIS001092 / 0001
	Utah Peace Test	EIS001476 / 0007
	ofthedesert, Cynthia	
	Perry, Gavin	EIS000997 / 0004
		EIS001734 / 0004
	Pier, Kate	EIS000398 / 0001
	Gateway Green Alliance	EIS001535 / 0003
	Romano, Daniel	
	Nevada Public Health Association	EIS000540 / 0002
	Saum, Judith	
	Scott, Laura	EIS001232 / 0010
	Crescent Valley Historical Society	EIS001242 / 0011
	Scott, Laura	

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8.7 (141)	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0023
	Wallis, Jackie	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0206
	Woodbury, Bruce	
8.7 (142)	Anderson, Robert	010239 / 0003
	Cahall, Diana	EIS001115 / 0003
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0074
	Frehner, Dan	
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0024
	Goicoechea, Pete	
	Goitein, Ernest	EIS001845 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000408 / 0003
	Halstead, Robert	
		EIS000643 / 0003
	Hunter, Meredith	EIS001371 / 0005
	Leppala, Patti	EIS000635 / 0001
	People Against Radioactive Dumping	EIS001837 / 0021
	Lopez, Ruth	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0105
	Loux, Robert	
	Brotherhood of Maintenance of Way Employees	EIS001168 / 0005
	Morrissey, Spencer	
		EIS001335 / 0001
	Pearson, Keith	EIS000682 / 0002
	Pearson, Lee	EIS000681 / 0003
	Kirkwood, City of, Missouri, City Council	010287 / 0003
	Swoboda, Mike	
	Western Interstate Energy Board	EIS000497 / 0016
	Turner, Allan	
	Viereck, Jennifer	EIS000636 / 0005
		EIS001397 / 0016
	Walsh, Martin	010043 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0137
	Woodbury, Bruce	
8.7 (143)	Ohio, State of, Public Utilities Commission	EIS001291 / 0002
	Agler, Alfred	
		EIS001557 / 0005
	Consumers Energy	EIS000993 / 0002
	Broschak, John	
	FirstEnergy Corporation	EIS001556 / 0006
	Castaznacci, Albert	
	Clemens, Byron	EIS001040 / 0019
		EIS001774 / 0012
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0092
	Eldridge, Brent	
	FirstEnergy Corporation	EIS001289 / 0002
	Higaki, Vernon	
	Ely Shoshone Tribe	EIS001441 / 0086
	Kaamasee, Arthur	
8.7 (144)	Anonymous	010259 / 0002
	Consolidated Group of Tribes and Organizations	EIS002074 / 0018
	Arnold, Richard	

Comment Location	Commenter	Comment Document / Comment No.
8.7 (144) (continued)	Kentucky, Commonwealth of, Department for Environmental Protection	EIS000066 / 0002
	Barber, Alex	
	Harris, Virginia	010211 / 0002
	FirstEnergy Corporation	EIS001289 / 0003
	Higaki, Vernon	
	St. Louis County, Missouri, Council	EIS001044 / 0002
	Moore, Richard	
		EIS001786 / 0002
	Brotherhood of Maintenance of Way Employees	EIS001168 / 0001
	Morrissey, Spencer	
		EIS001335 / 0004
	Pfiester, Carolyn	EIS002168 / 0002
	Shillinglaw, Fawn	EIS000817 / 0097
	Lakewood, Ohio, City of	EIS001284 / 0004
	Skindell, Michael	
		EIS001549 / 0004
	St. Louis, Missouri, City of, Board of Aldermen	EIS001370 / 0002
	Steffen, Fred	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0365
	Woodbury, Bruce	
	Wootan, Cathy	EIS001221 / 0001
8.7 (147)	Clemens, Byron	EIS001040 / 0009
	Citizen Alert	EIS001924 / 0004
	Hadder, John	
	deBottari, Louis	EIS002250 / 0005
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001580 / 0009
	Halstead, Robert	
	Nebraska, State of	EIS001045 / 0016
	Johanns, Mike	
	McClarren, Chris	EIS001031 / 0014
	Western Interstate Energy Board	EIS001877 / 0008
	Niles, Ken	
	Rendahl, Roy	EIS001113 / 0004
	Western Interstate Energy Board	EIS000497 / 0006
	Turner, Allan	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0534
	Woodbury, Bruce	
8.7 (153)	Ohio, State of, Public Utilities Commission	EIS001291 / 0001
	Agler, Alfred	
	Illinois, State of, Department of Nuclear Safety	EIS001726 / 0004
	Appel, Gordon	
	Nevada Test Site Community Advisory Board	EIS001816 / 0017
	Claire, Phillip	
	Clemens, Byron	EIS001040 / 0013
	Lander County, Nevada	EIS001912 / 0115
	Duke, Bonnie	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0093
	Eldridge, Brent	
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000071 / 0011
	Giampaoli, Mary	
		EIS000081 / 0010

Comment Location	Commenter	Comment Document / Comment No.
8.7 (153) (continued)	National Association of Regulatory Utility Commissioners	EIS001654 / 0025
	Gray, Charles	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000679 / 0007
	Halstead, Robert	
	Nebraska, State of	EIS001045 / 0008
	Johanns, Mike	
	Ely Shoshone Tribe	EIS001441 / 0087
	Kaamasee, Arthur	
	California, State of, Energy Commission	EIS001622 / 0010
	Laurie, Robert	
	Western Interstate Energy Board	EIS001877 / 0006
	Niles, Ken	
	National Conference of State Legislatures	EIS001328 / 0009
	Reed, James	
	St. Louis, Missouri, City of, Metropolitan Police Department	EIS000981 / 0002
	Stehlin, Vincent	
	Western Interstate Energy Board	EIS000497 / 0010
	Turner, Allan	
	Vasconi, Bill	EIS000694 / 0003
	Viereck, Jennifer	EIS000124 / 0003
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0108
	Woodbury, Bruce	
8.7 (184)	Anaya, Cheryl	EIS001894 / 0002
	Nye County, Nevada, Board of County Commissioners	EIS001879 / 0006
	Carver, Dick	
	Delia, Donna	EIS000873 / 0001
	Denver, Colorado, City and County of, Department of Environmental Health	EIS001539 / 0002
	Donahue, Theresa	
	Lander County, Nevada	EIS001912 / 0114
	Duke, Bonnie	
	Hunter, Meredith	EIS001371 / 0004
	Nuclear Energy Institute	EIS001576 / 0003
	Jefferson, Robert	
	U.S. House of Representatives - Ohio	EIS001083 / 0003
	LaTourette, Steven	
	McClarren, Chris	EIS001031 / 0016
	Meharg, Margaret	EIS001265 / 0003
		010061 / 0001
	Money, Daniel	EIS001960 / 0003
	Penner, Rod	EIS001723 / 0006
	Smith, Vanecia	EIS001053 / 0001
	St. Louis Children's Aquarium	EIS001733 / 0004
	Sonnenschein, Leonard	
	Tamaro, Adeline	010240 / 0008
	Walsh, Martin	EIS000878 / 0001
	Welsh, Thomas	EIS001722 / 0001
	Woods, Donna	EIS001945 / 0005
8.7 (197)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000463 / 0008
	Halstead, Robert	
		EIS000679 / 0009

Comment Location	Commenter	Comment Document / Comment No.
8.7 (197) (continued)	Physicians for Social Responsibility Hattis, Ronald	EIS002269 / 0001
	Hunter, Meredith	EIS001371 / 0006
	Jakovac, Nancy	010018 / 0001
	Nuclear Energy Institute Jefferson, Robert	EIS002242 / 0004
	Kenny, Clifford	EIS001274 / 0001 EIS002193 / 0001
	Ohio, State of, Ohio House of Representatives Miller, Dale	EIS001280 / 0003
	National Conference of State Legislatures Reed, James	EIS001328 / 0006
	Stevens, John	EIS002257 / 0001
	Viereck, Jennifer	EIS001397 / 0001
	Wallace, Mariel	EIS001559 / 0003
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0572
8.7 (247)	Citron, Kay	EIS000167 / 0001
	Gillium, Rita	EIS000201 / 0003
	Goodman, Kelly	EIS000602 / 0005
	Nebraska, State of Johanns, Mike	EIS001045 / 0020
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0310
	McClarren, Chris	EIS001031 / 0019
	Ohio, State of, Ohio House of Representatives Miller, Dale	EIS001280 / 0004
	Western Interstate Energy Board Niles, Ken	EIS001877 / 0020
	Shillinglaw, Fawn	EIS000817 / 0036
	Western Interstate Energy Board Turner, Allan	EIS000497 / 0019
	Wilson, Debra	EIS000995 / 0012
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0131
8.7 (905)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000116 / 0004
8.7 (1673)	McGuiness, James	EIS000461 / 0007
8.7 (2066)	Citizen Alert Hadder, John	EIS000599 / 0002
8.7 (2203)	Salisbury, Ray	EIS000615 / 0001
8.7 (2311)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0531
8.7 (2874)	Mayr, Tony	EIS001100 / 0003
8.7 (3323)	Frankel, Helene	EIS001002 / 0003
8.7 (3427)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0125
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0120
8.7 (3430)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0128

Comment Location	Commenter	Comment Document / Comment No.
8.7 (3430) (continued)	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0123
8.7 (3796)	Hixon, Angela	EIS001272 / 0006
8.7 (4231)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0046
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0045
8.7 (4244)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0058
8.7 (4310)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0120
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0109
8.7 (4430)	Ponzi, Jean	EIS001042 / 0005
8.7 (5278)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0002
8.7 (5425)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000323 / 0001
8.7 (5688)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0302
8.7 (5755)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0359
8.7 (5817)	Gladson, Linda	EIS001802 / 0002
8.7 (5866)	Ohio, State of, Public Utilities Commission Agler, Alfred	EIS001557 / 0002
8.7 (5969)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0004
8.7 (6206)	Ohio, State of, Public Utilities Commission Agler, Alfred	EIS001291 / 0003
8.7 (6488)	Clemens, Byron	EIS001774 / 0006
8.7 (6558)	National Conference of State Legislatures Reed, James	EIS001328 / 0007
8.7 (6567)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0055
8.7 (6631)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0068
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0064
8.7 (6905)	Denver, Colorado, City and County of, Department of Environmental Health Donahue, Theresa	EIS001539 / 0007
8.7 (6971)	Ashtabula, Ohio, City Council Misener, Jill	EIS001545 / 0001
8.7 (7014)	Kawaters, Alan	EIS001600 / 0001
8.7 (7061)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0018
8.7 (7176)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0070

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8.7 (7445)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0005
8.7 (8404)	Khan, Mushtaq	EIS001124 / 0001
8.7 (8970)	Sierra Club, Southern Nevada Group Feldman, Jane	EIS002127 / 0012
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0022
8.7 (9033)	League of Women Voters of Ashtabula County Blevins, Esther	EIS001290 / 0003
8.7 (9598)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0272
8.7 (9770)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0356
8.7 (9902)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0448
8.7 (10448)	Ohio, State of, Public Utilities Commission Agler, Alfred	EIS001567 / 0001
8.7 (10904)	White Pine County, Nevada Baughman, Mike	EIS000357 / 0023
8.7 (11192)	Ohio, State of, Public Utilities Commission Agler, Alfred	EIS001557 / 0003
8.7 (11504)	Vasconi, Bill	EIS002137 / 0005
8.7 (11909)	St. Louis Children's Aquarium Sonnenschein, Leonard	EIS000996 / 0004
8.7 (11977)	deBottari, Louis	EIS001923 / 0005
8.7 (12137)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0439
8.7 (12185)	Weber, Debbie	EIS000707 / 0002
8.7 (12465)	Nebraska, State of Johanns, Mike	EIS001045 / 0018
	Western Interstate Energy Board Niles, Ken	EIS001877 / 0018
	Western Interstate Energy Board Turner, Allan	EIS000497 / 0022
8.7 (12658)	deBottari, Louis	EIS002250 / 0004
8.8 (4383)	Vogel, Annie	EIS001523 / 0002
8.8 (4833)	Bogolub, Rita	EIS001226 / 0007
8.8 (12091)	Gleason, Mary	EIS002307 / 0005
8.8.1 (172)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0022
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0005
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000470 / 0002
		EIS001727 / 0002
	Nuclear Energy Institute Kraft, Steven	EIS000208 / 0002
		EIS000452 / 0002
		EIS001832 / 0022
	Energy Resources International Supko, Eileen	EIS000290 / 0003 EIS000359 / 0003

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8.8.1 (187)	Inyo County, California, Board of Supervisors	EIS001443 / 0016
	Dorame, Michael	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000229 / 0007
	Halstead, Robert	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0340
	Loux, Robert	
	Idaho, State of, INEEL Oversight	EIS001903 / 0015
	Trever, Kathleen	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0314
	Woodbury, Bruce	
8.8.1 (189)	Feldman, Jane	EIS000726 / 0010
	Sierra Club, Southern Nevada Group	EIS002127 / 0010
	Feldman, Jane	
	Sierra Club, Southern Nevada Group	EIS000727 / 0010
	Forkos, Marcia	
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0115
	Frehner, Dan	
	Harris, Virginia	EIS001027 / 0003
	Rocky Mountain Peace and Justice Center	EIS000517 / 0010
	Marshall, Tom	
8.8.1 (192)	Bogolub, Rita	EIS001226 / 0008
	Lander County, Nevada	EIS001912 / 0083
	Duke, Bonnie	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0112
	Eldridge, Brent	
	Guy, Peggy	EIS000515 / 0006
	Ely Shoshone Tribe	EIS001441 / 0101
	Kaamasee, Arthur	
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0081
	Regan, James	
8.8.1 (196)	San Bernardino County, California	EIS002235 / 0003
	Brierty, Peter	
	Alliance for Nuclear Accountability	EIS000443 / 0006
	Eldredge, Maureen	
	Timbisha Shoshone Tribe	EIS000263 / 0005
	Esteves, Pauline	
		EIS000376 / 0005
	Feldman, Jane	EIS000726 / 0011
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001580 / 0005
	Halstead, Robert	
	Nuclear Information and Resource Service	EIS001471 / 0004
	Kamps, Kevin	
		EIS001927 / 0004
	White Pine County, Nevada, Board of County Commissioners	EIS000140 / 0003
	Kirkeby, Kevin	
	Knopick, Suellen	EIS000575 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000054 / 0007
	Loux, Robert	EIS000059 / 0002
		EIS001887 / 0042

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8.8.1 (196) (continued)	McLendon, Marci	EIS000178 / 0001
	Henderson, Nevada, City of	EIS001896 / 0011
	Speight, Philip	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000101 / 0007
	Swartz, Ginger	
		EIS000115 / 0005
8.8.1 (198)	Hebert, Donna	EIS000526 / 0003
	Leppala, Bill	EIS000641 / 0002
	Vogel, Annie	EIS001523 / 0004
8.8.1 (918)	Viereck, Jennifer	EIS000124 / 0012
8.8.1 (1007)	Inyo County, California, Board of Supervisors	EIS000262 / 0003
	Dorame, Michael	
8.8.1 (1259)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000228 / 0003
	Dilger, Fred	
8.8.1 (1264)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000228 / 0007
	Dilger, Fred	
8.8.1 (1320)	Hudon, Travis	EIS000340 / 0003
8.8.1 (1546)	White Pine County, Nevada	EIS000357 / 0005
	Baughman, Mike	
8.8.1 (2355)	Voos, Charles	EIS000645 / 0001
8.8.1 (2403)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000674 / 0006
	Halstead, Robert	
8.8.1 (2404)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000653 / 0001
	Dilger, Fred	
8.8.1 (3114)	Feldman, Jane	EIS000726 / 0008
8.8.1 (3170)	Zuzich, Thomas	EIS001194 / 0001
8.8.1 (3253)	St. Louis, Missouri, City of, Metropolitan Police Department	EIS000981 / 0001
	Stehlin, Vincent	
8.8.1 (3337)	Petuya, Germain	EIS001121 / 0003
8.8.1 (3621)	Gehr, Patricia	EIS001101 / 0002
8.8.1 (3896)	Earth Day Coalition	EIS001286 / 0006
	Trepal, Chris	
		EIS001548 / 0003
8.8.1 (4063)	Danzeisen, Cathy	EIS001181 / 0001
8.8.1 (4130)	Sandquist, Gary	EIS001473 / 0001
8.8.1 (4205)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0027
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0025
	Kaamasee, Arthur	
8.8.1 (4207)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0028
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0026
	Kaamasee, Arthur	
8.8.1 (4208)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0029
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0027
	Kaamasee, Arthur	
8.8.1 (4212)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0026
	Eldridge, Brent	

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8.8.1 (4212) (continued)	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0024
8.8.1 (4215)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0032
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0030
8.8.1 (4282)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0089
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0083
8.8.1 (4299)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0108
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0097
8.8.1 (4363)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0008
8.8.1 (4651)	Krahenbuhl, Melinda	EIS001462 / 0002
8.8.1 (4889)	deBottari, Louis	EIS000337 / 0029 EIS000610 / 0023
8.8.1 (5145)	Prairie Island Indian Community Kohnen, Audrey	EIS001911 / 0004
8.8.1 (5192)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0017
8.8.1 (5289)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0035
8.8.1 (5291)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0008
8.8.1 (5374)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0091
8.8.1 (5449)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0138
8.8.1 (5889)	deBottari, Louis	EIS001901 / 0003
8.8.1 (5949)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0051
8.8.1 (5991)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0017
8.8.1 (6021)	Curtis, Leslie	EIS001679 / 0001
8.8.1 (6040)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001580 / 0006
8.8.1 (6050)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001580 / 0010
8.8.1 (6152)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0033
8.8.1 (6326)	Callner, Amy	EIS001609 / 0002
8.8.1 (6502)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0037
8.8.1 (6511)	Gruening, V.	EIS001241 / 0014

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8.8.1 (6569)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0057
8.8.1 (6634)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0027
8.8.1 (6638)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0088
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0082
8.8.1 (6855)	Nuclear Information and Resource Service Kamps, Kevin	EIS001466 / 0003
8.8.1 (7009)	Feinhandler, F.	EIS000402 / 0005
8.8.1 (7066)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0022
8.8.1 (7157)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0053
8.8.1 (7209)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0088
8.8.1 (7459)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0034
8.8.1 (7643)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0101
8.8.1 (7655)	Shoshone-Bannock Tribes Thompson, Duane	EIS001928 / 0012
8.8.1 (7671)	Shillinglaw, Fawn	EIS000817 / 0016
8.8.1 (7948)	Idaho, State of, INEEL Oversight Trever, Kathleen	EIS001903 / 0012
8.8.1 (8059)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000391 / 0016 EIS000723 / 0014
8.8.1 (8139)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0086
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0084
8.8.1 (8171)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0100
8.8.1 (8218)	McKeel, Daniel	EIS001021 / 0006
8.8.1 (8288)	Shillinglaw, Fawn	EIS000817 / 0105
8.8.1 (8376)	Benezet, Louis	EIS001873 / 0061
8.8.1 (8470)	Shillinglaw, Fawn	EIS000817 / 0142
8.8.1 (8603)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0007
8.8.1 (8647)	U.S. Department of the Interior Kolkman, Gene	EIS001889 / 0002
8.8.1 (8657)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0023
8.8.1 (8717)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division diBartolo, Russell	EIS002119 / 0005
8.8.1 (8786)	Shundahai Network Snyder, Susi	EIS001907 / 0021

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8.8.1 (8946)	Alliance for Nuclear Accountability Eldredge, Maureen	EIS001922 / 0010
8.8.1 (8975)	Clemens, Byron	EIS001040 / 0017
8.8.1 (9055)	Lakewood, Ohio, City of Skindell, Michael	EIS001284 / 0007
8.8.1 (9215)	Wilderness Society, The Miller, Sally	EIS001938 / 0004
8.8.1 (9265)	Olson, Mary	EIS000325 / 0004
8.8.1 (9303)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0028
8.8.1 (9401)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0099
8.8.1 (9406)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0102
8.8.1 (9552)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0225
8.8.1 (9554)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0227
8.8.1 (9572)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0246
8.8.1 (9585)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0260
8.8.1 (9589)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0263
8.8.1 (9596)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0270
8.8.1 (9612)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0284
8.8.1 (9613)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0285
8.8.1 (9630)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0299
8.8.1 (9978)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0483
8.8.1 (10023)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0517
8.8.1 (10025)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0520
8.8.1 (10034)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0521
8.8.1 (10035)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0522
8.8.1 (10060)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0541
8.8.1 (10075)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0551
8.8.1 (10077)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0554
8.8.1 (10142)	San Bernardino County, California, Board of Supervisors Mikels, Jon	EIS001865 / 0017
8.8.1 (10300)	Benezet, Louis	EIS001873 / 0080
8.8.1 (10356)	Nuclear Information and Resource Service Kamps, Kevin	EIS001927 / 0007

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8.8.1 (10575)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001310 / 0006
8.8.1 (11010)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0008
8.8.1 (11012)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0010
8.8.1 (11424)	San Bernardino County, California Scott, Randy	EIS002234 / 0008
8.8.1 (11700)	Illinois, State of, Department of Nuclear Safety Appel, Gordon	EIS001597 / 0005
8.8.1 (11752)	Bogolub, Rita	EIS001226 / 0009
8.8.1 (11824)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0389
8.8.1 (12265)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0257
8.8.1 (12302)	Sheehan, D.	EIS001925 / 0004
8.8.1 (12361)	San Bernardino County, California Goss, John	EIS002233 / 0002
8.8.1 (12369)	Lihou, Leslie	010207 / 0001
8.8.1 (12577)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0016
8.8.1 (12694)	U.S. Nuclear Regulatory Commission Kane, William	EIS001898 / 0006
8.8.2 (121)	Belenky, Lisa	EIS001814 / 0031
	Benezet, Louis	EIS001873 / 0081
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0001
	Clark County, Nevada, Board of County Commissioners Williams, Myrna	EIS000706 / 0001 EIS002129 / 0001
8.8.2 (135)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0004
	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0022
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0015
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0023
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000408 / 0005
	Hollander, Karon	EIS001103 / 0008
	Kulkin, Harley	EIS000126 / 0002
	Louden, Lee	EIS000621 / 0004
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0016
	McKinney, Paul	EIS000049 / 0002
	Mutton, James	EIS000051 / 0001
	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0006

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8.8.2 (135) (continued)	Western Shoshone Defense Project Sewall, Christopher	EIS000638 / 0005
	Vasconi, Bill	EIS000353 / 0005
8.8.2 (179)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0031
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0037
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0029
	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0005
8.8.2 (188)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0035
	Nye County, Nevada, Board of County Commissioners Taguchi, Jeff	EIS000441 / 0006
8.8.2 (419)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000071 / 0017
		EIS000081 / 0016
8.8.2 (1170)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000229 / 0003
8.8.2 (1796)	Williams, Ray	EIS000616 / 0003
8.8.2 (3067)	Eureka County, Nevada, Board of County Commissioners Green, Sandy	EIS000619 / 0008
8.8.2 (4125)	Energy Resources International Supko, Eileen	EIS001458 / 0002
8.8.2 (4168)	Nevada, State of, Department of Transportation, Roadway System Division Whitaker, John	EIS000544 / 0002
8.8.2 (4286)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0094
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0088
8.8.2 (4300)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0109
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0098
8.8.2 (4357)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0002
8.8.2 (4365)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0011
8.8.2 (4370)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0016
8.8.2 (5529)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0039
8.8.2 (6221)	Elko County, Nevada, Board of County Commissioners Voos, Charles	EIS001904 / 0001
8.8.2 (6708)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0072
8.8.2 (7011)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0140

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8.8.2 (7043)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0044
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0043
8.8.2 (7141)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0038
8.8.2 (7521)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0050
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0047
8.8.2 (8725)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division diBartolo, Russell	EIS002119 / 0010
8.8.2 (9431)	Wendt, William	EIS001593 / 0002
8.8.2 (9607)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0279
8.8.2 (9664)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002074 / 0008
8.8.2 (9671)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002074 / 0016
8.8.2 (9771)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0123
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0116
8.8.2 (10232)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS002115 / 0007
8.8.2 (10770)	Moapa Band of Paiutes Meyers, Calvin	EIS002144 / 0007
8.8.2 (11277)	Belenky, Lisa	EIS001814 / 0011
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0071
8.8.2 (11278)	Belenky, Lisa	EIS001814 / 0012
8.8.2 (11285)	Belenky, Lisa	EIS001814 / 0017
8.8.2 (11286)	Belenky, Lisa	EIS001814 / 0018
8.8.2 (11287)	Belenky, Lisa	EIS001814 / 0019
8.8.2 (11288)	Belenky, Lisa	EIS001814 / 0020
8.8.2 (11293)	Belenky, Lisa	EIS001814 / 0022
8.8.2 (11296)	Belenky, Lisa	EIS001814 / 0025
8.8.2 (11304)	Belenky, Lisa	EIS001814 / 0033
8.8.3 (171)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002074 / 0005
	U.S. House of Representatives - California Baca, Joe	EIS002230 / 0004
	U.S. Senate - Nevada Bryan, Richard	EIS000206 / 0004
	Prairie Island, Minnesota, City of Campbell, Darrell	EIS000456 / 0004
	Ely Shoshone Tribe Charles, Jerry	EIS002080 / 0003
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0018
	Feldman, Jane	EIS000726 / 0020

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8.8.3 (171) (continued)	Sierra Club, Southern Nevada Group Feldman, Jane	EIS002127 / 0009
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0009
	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0004
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0016
	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001905 / 0025
	Action for a Clean Environment Kushner, Adele	EIS001658 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000043 / 0004
		EIS001887 / 0029
	Marsh, Amy	EIS000499 / 0006
	Rocky Mountain Peace and Justice Center Marshall, Tom	EIS000517 / 0009
		EIS001946 / 0013
	McGeehan, Carol	EIS001881 / 0002
	McHugh, Sue	EIS000869 / 0022
	Colorado People's Environmental and Economic Network Muñoz, Melissa	EIS000253 / 0003
	Denver, Colorado, City of, City Council Ortega, Deborah	EIS000506 / 0003
	Petersen, Art	EIS001377 / 0009
	Colorado Public Interest Research Group Pogue, Stacey	EIS000518 / 0004
	Roth, Barbara	EIS000725 / 0007
	Shillinglaw, Fawn	EIS000817 / 0019
	Public Citizen Shollenberger, Amy	EIS002130 / 0003
	St.Clair Superior Neighborhood Development Association Smith, Marian	EIS001829 / 0001
	Shundahai Network Snyder, Susi	EIS002285 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000068 / 0005
		EIS000078 / 0005
	Citizens Action Coalition of Indiana Voelker, Roger	EIS001191 / 0005
	Nevada, State of, Department of Transportation, Roadway System Division Whitaker, John	EIS000544 / 0001
	Prairie Island Indian Community White, Byron	EIS000490 / 0004
	Clark County, Nevada, Board of County Commissioners Williams, Myrna	EIS000706 / 0004
		EIS002129 / 0004
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0143

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8.8.3 (171) (continued)	Blue Ridge Environmental Defense League	EIS000166 / 0004
	Zeller, Louis	
8.8.3 (173)	Nevada Test Site Community Advisory Board	EIS001816 / 0019
	Claire, Phillip	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0104
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0093
	Kaamasee, Arthur	
	Shillinglaw, Fawn	EIS000817 / 0194
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0142
	Woodbury, Bruce	
8.8.3 (174)	deBottari, Louis	EIS002121 / 0001
		EIS002138 / 0011
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS002119 / 0001
	diBartolo, Russell	
	Garfield, Melodie	EIS000811 / 0005
	Public Citizen, Critical Mass Energy Project	EIS000455 / 0003
	Hauter, Wenonah	
	Nuclear Information and Resource Service	EIS001466 / 0001
	Kamps, Kevin	
		EIS001471 / 0002
	Kring, Bernice	EIS001448 / 0004
	People Against Radioactive Dumping	EIS001837 / 0029
	Lopez, Ruth	
	McKeel, Daniel	EIS001380 / 0007
	Olson, Mary	EIS000310 / 0005
	Safe, Karen	EIS001038 / 0006
	Shundahai Network	EIS001907 / 0009
	Snyder, Susi	
	Gray Panthers	EIS001319 / 0003
	Weiss, Giudi	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0242
	Woodbury, Bruce	
8.8.3 (176)	Cleveland, David	EIS000114 / 0004
	Eureka County, Nevada, Board of County Commissioners	EIS000630 / 0003
	Goicoechea, Pete	
	Eureka County, Nevada, Board of County Commissioners	EIS000619 / 0003
	Green, Sandy	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0217
	Loux, Robert	
	Sefton, James	EIS001503 / 0005
	Shillinglaw, Fawn	EIS000817 / 0098
8.8.3 (177)	Utah, State of, Department of Environmental Quality	EIS001376 / 0001
	Nielson, Dianne	
		EIS001472 / 0003
8.8.3 (205)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000268 / 0002
	Halstead, Robert	
	Brotherhood of Maintenance of Way Employees	EIS001168 / 0003
	Morrissey, Spencer	
		EIS001335 / 0007
	Skow, Aine	EIS002311 / 0007

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8.8.3 (205) (continued)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0120
8.8.3 (2453)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000679 / 0002
8.8.3 (2499)	Anonymous	010294 / 0009
	Dziegiel, Henry	010261 / 0009
8.8.3 (3428)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0126
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0121
8.8.3 (5872)	Redden, Geri	EIS001803 / 0002
8.8.3 (5992)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0018
8.8.3 (6287)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001727 / 0006
8.8.3 (6568)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0056
8.8.3 (7219)	Wilder, John	010180 / 0004 010270 / 0007
8.8.3 (7230)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0107
8.8.3 (7789)	Caliente, Nevada, City of Phillips, Kevin	EIS000718 / 0002 EIS002093 / 0002
8.8.3 (8849)	McHugh, Sue	EIS000869 / 0021
8.8.3 (8972)	Sierra Club, Southern Nevada Group Feldman, Jane	EIS002127 / 0013
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0014
8.8.3 (9424)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0115
8.8.3 (9649)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0313
8.8.3 (10345)	U.S. House of Representatives - Ohio Kucinich, Dennis	EIS001543 / 0005
8.8.3 (10996)	Cahall, Diana	EIS001952 / 0011
8.8.3 (11861)	GPU Nuclear, Inc. Vincent, John	EIS000764 / 0003
8.9 (193)	Illinois, State of, Department of Nuclear Safety Appel, Gordon	EIS001597 / 0002
	Belenky, Lisa	EIS001814 / 0024
	Bilyeu, Sally	EIS001394 / 0003
	Devlin, Sally	EIS000409 / 0004 EIS002192 / 0006
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0059
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS000630 / 0011
	Guthrie, Sheral	EIS001635 / 0002

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8.9 (193)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0113
	Brotherhood of Maintenance of Way Employees Morrissey, Spencer	EIS001168 / 0006
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0055
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0140
8.9 (425)	Devlin, Sally	EIS000103 / 0002
8.9 (2352)	Weber, Debbie	EIS000707 / 0003
8.9 (3121)	Feldman, Jane	EIS000726 / 0013
8.9 (4918)	Hoopes, Mary	EIS001510 / 0003
8.9 (5389)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0097
8.9 (5561)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0192
8.9 (5733)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0341
8.9 (5784)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000229 / 0008
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0379
8.9 (5990)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0015
8.9 (6885)	Nuclear Energy Information Service Kraft, David	EIS001611 / 0001
8.9 (8774)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0021
8.9 (8992)	Clemens, Byron	EIS001040 / 0025
8.9 (9489)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0152
8.9 (9602)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0277
8.9 (11877)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0393
8.10 (54)	Earth Challenge Alzner, Susan	EIS000289 / 0005
	Callner, Amy	EIS001609 / 0003
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0090
	Hebert, Donna	EIS000526 / 0001
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0084
	McClarren, Chris	EIS001031 / 0012
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0252

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8.10 (68)	Clark County, Nevada, Local Emergency Planning Committee	EIS000968 / 0003
	Andrews, Bob	
	Benezet, Louis	EIS001873 / 0062
	FirstEnergy Corporation	EIS001556 / 0003
	Castaznacci, Albert	
	Ellison, David	EIS001577 / 0001
	Falk, Vera	EIS001753 / 0003
	Gruening, V.	EIS001241 / 0013
	Hollander, Karon	EIS001103 / 0007
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0333
	Loux, Robert	
	San Bernardino County, California, Board of Supervisors	EIS002231 / 0004
	Mikels, Jon	
	Pronio, Micaela	EIS001427 / 0002
	Gray Panthers	EIS001319 / 0004
	Weiss, Giudi	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0523
	Woodbury, Bruce	
8.10 (145)	East St. Louis Community Action Network	EIS001775 / 0003
	Andria, Kathy	
	Anonymous	010259 / 0005
	Buqo, Thomas	EIS000348 / 0001
	Nye County, Nevada, Board of County Commissioners	EIS001879 / 0016
	Carver, Dick	
	Charlton, Bud	EIS000657 / 0003
	Lander County, Nevada	EIS001912 / 0091
	Duke, Bonnie	
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0101
	Frehner, Dan	
	Eureka County, Nevada, Board of County Commissioners	EIS000630 / 0008
	Goicoechea, Pete	
	Hatfield, Scott	EIS000500 / 0004
	Kostelaz, Rick	EIS001639 / 0009
	Lamb, Emily	EIS002016 / 0001
	Churchill County, Nevada, Office of the Churchill County Commissioners	EIS001653 / 0089
	Regan, James	
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0029
	Wallis, Jackie	
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0559
	Woodbury, Bruce	
8.10 (148)	Earth Challenge	EIS000289 / 0006
	Alzner, Susan	
	Boyles, Jean	EIS000063 / 0001
	Clark, Patricia	EIS000098 / 0003
	Geary, Barbara	010292 / 0004
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001727 / 0013
	Halstead, Robert	
		EIS002239 / 0005
	Nuclear Information and Resource Service	010246 / 0012
	Kamps, Kevin	

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8.10 (148) (continued)	Shundahai Network	EIS002135 / 0010
	Knutsen, Reinard	
	Kruse, Eileen	EIS001720 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0396
	Loux, Robert	
	Public Citizen	EIS001834 / 0013
	Shollenberger, Amy	
	Earth Day Coalition	EIS001286 / 0010
	Trepal, Chris	
		EIS001548 / 0005
	Wilson, Debra	EIS000995 / 0008
		EIS001732 / 0007
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0122
	Woodbury, Bruce	
8.10 (154)	Benezet, Louis	EIS001873 / 0005
	Carruthers, Joseph	EIS001155 / 0006
	Chiara, Robert	EIS000534 / 0006
	Clark, Darlyne	EIS001060 / 0006
	Cocke, Marie	EIS001943 / 0006
	Dann, Richard	EIS000411 / 0006
	DePaoli, Arlene	EIS001081 / 0006
	Escamilla, Natalie	EIS000965 / 0006
	Filippini, Billie	EIS000480 / 0006
	Filippini, John	EIS000482 / 0006
	Fisher, Frederic	EIS000412 / 0006
	Fye, Susan	EIS001156 / 0006
	Gilbert, Jan	EIS001061 / 0006
	Gruening, V.	EIS001241 / 0006
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000229 / 0004
	Halstead, Robert	
		EIS000674 / 0004
	Haney, Nick	EIS000589 / 0001
	Harper, Charles	EIS001502 / 0006
	Holek, Stan	EIS000525 / 0006
	Hollander, Karon	EIS001103 / 0006
	King, Jeanne	EIS000971 / 0006
	Lee, Mary	EIS001072 / 0004
	Louden, Lee	EIS001944 / 0006
	Louden, Nancy	EIS001941 / 0006
	Louden, Nina	EIS001942 / 0006
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0380
	Loux, Robert	
	Perez, Barbara	EIS000926 / 0006
	Perna, Frank	010058 / 0001
	Plummer, Nancy	EIS001243 / 0006
	Quinn, Margaret	EIS001342 / 0006
	Runge, Henry	EIS001197 / 0003
	Scott, Laura	EIS001232 / 0006
	Crescent Valley Historical Society	EIS001242 / 0006
	Scott, Laura	
	Stempel, James	EIS001921 / 0006

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8.10 (154) (continued)	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0035
	Wallis, Jackie	
	Ward, D.	EIS000925 / 0006
	Ward, Fay	EIS000924 / 0006
	Woods, Donna	EIS001945 / 0004
8.10 (155)	U.S. House of Representatives - California	EIS002230 / 0009
	Baca, Joe	
	Burton, Diane	EIS001165 / 0003
	McClellan, Brad	EIS000548 / 0004
	Tamaro, Adeline	EIS000859 / 0003
	Wilder, John	010180 / 0006 010270 / 0003
	Wissbeck, Larry	EIS000232 / 0002 EIS000663 / 0003
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0126
	Woodbury, Bruce	
8.10 (156)	Tennessee Valley Authority	EIS001190 / 0033
	Burzynski, Mark	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0106
	Eldridge, Brent	
	Gleason, Mary	EIS002307 / 0008
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000643 / 0001
	Halstead, Robert	
		EIS001727 / 0011 EIS002272 / 0001
	Ely Shoshone Tribe	EIS001441 / 0095
	Kaamasee, Arthur	
	Nuclear Information and Resource Service	EIS001927 / 0008
	Kamps, Kevin	
	Nuclear Energy Institute	EIS001832 / 0033
	Kraft, Steven	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0321
	Loux, Robert	
	Physicians for Social Responsibility, Los Angeles	EIS000719 / 0002
	Parfrey, Jonathan	
	Public Citizen	EIS001834 / 0012
	Shollenberger, Amy	
	Skow, Aine	EIS002311 / 0005
8.10 (157)	Alexander, Sharon	EIS002034 / 0001
	Burton, Diane	EIS001165 / 0006
	Clemency, Brian	EIS001410 / 0003
	DeRosa, David	EIS001618 / 0003
	Gilleo, Margaret	EIS001393 / 0005
	Physicians for Social Responsibility	EIS001807 / 0002
	Hattis, Ronald	
		EIS002269 / 0003
	Hoopes, Mary	EIS001510 / 0002
	U.S. House of Representatives - Ohio	EIS001905 / 0008
	Kucinich, Dennis	
	McKeel, Daniel	EIS001784 / 0004
	Montana, Deborah	EIS002268 / 0003
	Pfiester, Carolyn	EIS002168 / 0003

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8.10 (157) (continued)	Southern Nevada Home Builders Association	EIS001828 / 0009
	Porter, Irene	
	Sandler, Arlene	010247 / 0003
	Todorovich, Pamela	EIS001006 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0552
	Woodbury, Bruce	
8.10 (168)	Bogolub, Rita	EIS001614 / 0008
	STAR Foundation (Standing for Truth About Radiation)	EIS000225 / 0003
	Cullen, Scott	
	Fitzgerald, Keba	EIS001372 / 0008
	Nuclear Information and Resource Service	EIS001927 / 0009
	Kamps, Kevin	
	McGeehan, Carol	EIS001881 / 0004
	Olson, Mary	EIS000325 / 0001
	Earth Day Coalition	EIS001286 / 0008
	Trepal, Chris	
		EIS001548 / 0006
8.10 (299)	U.S. Senate - California	EIS002292 / 0002
	Boxer, Barbara	
		EIS002232 / 0002
8.10 (632)	U.S. Public Interest Research Group	EIS000159 / 0005
	Aurilio, Anna	
8.10 (738)	Goldfield, Nevada, Fire Department	EIS000195 / 0002
	Anderson, Mike	
8.10 (773)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000096 / 0003
	Loux, Robert	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000148 / 0003
	Swartz, Ginger	
		EIS000193 / 0003
8.10 (817)	Riseden, Elizabeth	EIS000144 / 0002
8.10 (843)	Congdon, Lois	EIS000173 / 0009
8.10 (1069)	Parker, Victoria	EIS000287 / 0002
8.10 (1082)	Wissbeck, Larry	EIS000232 / 0003
		EIS000663 / 0004
8.10 (1085)	Wissbeck, Larry	EIS000232 / 0006
8.10 (1123)	Sierra Club	EIS000270 / 0004
	Maret, Susan	
8.10 (1202)	Congdon, Lois	EIS000306 / 0003
8.10 (1261)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS000228 / 0005
	Dilger, Fred	
8.10 (1316)	Stewart, Sheri	EIS000165 / 0001
8.10 (1798)	Campaign for a Prosperous Georgia	EIS000312 / 0002
	Kilpatrick, Rita	
8.10 (1928)	Nuclear Information and Resource Service	EIS000467 / 0003
	Kamps, Kevin	
8.10 (1992)	Pustek, Charlotte	EIS000516 / 0004
8.10 (2266)	Georgia, State of, Department of Natural Resources	EIS000394 / 0003
	Hardeman, Jim	

Comment Location	Commenter	Comment Document / Comment No.
8.10 (2398)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000674 / 0001
8.10 (2849)	Jones, Clinton	EIS000871 / 0001
8.10 (3311)	Square Y Consultants Yuan, Lynn	EIS001085 / 0001
8.10 (3488)	Wissbeck, Larry	EIS000688 / 0002
8.10 (3489)	Physicians for Social Responsibility, Los Angeles Parfrey, Jonathan	EIS000719 / 0001
8.10 (3608)	McClarren, Chris	EIS001031 / 0013
8.10 (3782)	Pierce, Samuel	EIS001244 / 0004
8.10 (3926)	Cleveland Peace Action Chiappa, Francis	EIS001287 / 0004
	Cleveland Peace Action Edguer, Marji	EIS001558 / 0003
8.10 (4057)	Nuclear Information and Resource Service Kamps, Kevin	EIS001474 / 0006
8.10 (4082)	Schmidt, Jerry	EIS001482 / 0004
8.10 (4296)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0105
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0094
8.10 (4302)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0111
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0100
8.10 (4384)	Vogel, Annie	EIS001523 / 0003
8.10 (4781)	Madia, Joseph	EIS001519 / 0007
8.10 (4888)	deBottari, Louis	EIS000337 / 0028
8.10 (4891)	deBottari, Louis	EIS000337 / 0031
8.10 (5036)	U.S. Nuclear Waste Technical Review Board Cohon, Jared	EIS001520 / 0004
8.10 (5043)	U.S. Nuclear Waste Technical Review Board Cohon, Jared	EIS001520 / 0011
8.10 (5294)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0011
8.10 (5708)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0323
8.10 (5713)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0326
8.10 (5731)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0339
8.10 (5882)	Connecticut Coalition Against Millstone Burton, Nancy	EIS001900 / 0003
8.10 (6233)	Berenson, David	EIS001560 / 0005
8.10 (6332)	Foreman, Lindsay	EIS001613 / 0002
8.10 (6476)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0033
8.10 (6622)	deBottari, Louis	EIS000938 / 0013

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8.10 (6693)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0087
8.10 (6700)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0064
8.10 (6769)	Shrader-Frechette, Kristin	EIS001522 / 0010
8.10 (6916)	McKeel, Daniel	EIS001784 / 0005
8.10 (7083)	Benezet, Louis	EIS001873 / 0032
8.10 (7099)	Wilson, Debra	EIS000995 / 0011
8.10 (7265)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0013
	Nuclear Energy Institute Kraft, Steven	EIS001832 / 0013
8.10 (7273)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0021
	Nuclear Energy Institute Kraft, Steven	EIS001832 / 0021
8.10 (7383)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0325
8.10 (7496)	Nuclear Energy Institute Jefferson, Robert	EIS001576 / 0002
8.10 (7831)	Lems, Kristin	EIS001595 / 0002
8.10 (7955)	Idaho, State of, INEEL Oversight Trever, Kathleen	EIS001903 / 0016
8.10 (7966)	Grace, Ana	EIS001791 / 0002
8.10 (8050)	Kintzer, Hailey	EIS002001 / 0003
8.10 (8109)	Benezet, Louis	EIS001873 / 0006
8.10 (8154)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0095
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0093
8.10 (8255)	Shillinglaw, Fawn	EIS000817 / 0100
8.10 (8291)	Rash, Dennis	EIS001575 / 0001
8.10 (8321)	Marciniak, Aimee	EIS001963 / 0003
8.10 (8325)	Brundage, Robert	EIS001572 / 0002
8.10 (8383)	Benezet, Louis	EIS001873 / 0066
8.10 (8414)	Benezet, Louis	EIS001873 / 0077
8.10 (8420)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0435
8.10 (8460)	Congdon, Lois	EIS000306 / 0006
8.10 (8471)	Shillinglaw, Fawn	EIS000817 / 0143
8.10 (8607)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0009
8.10 (8746)	Shundahai Network Snyder, Susi	EIS001907 / 0008
8.10 (8822)	Pahrump Paiute Tribe Jim, Clara	EIS002082 / 0003
8.10 (8956)	Clemens, Byron	EIS001040 / 0005
8.10 (8957)	Clemens, Byron	EIS001040 / 0006
8.10 (9057)	Nevada Nuclear Waste Task Force, Inc. Treichel, Judy	EIS001866 / 0009

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8.10 (9452)	Scully, Marian	EIS001641 / 0004
8.10 (9538)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0199
8.10 (9580)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0254
8.10 (9722)	Citizen Alert Hadder, John	EIS002149 / 0002
8.10 (9936)	Wilson, Debra	EIS001732 / 0010
8.10 (10022)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0516
8.10 (10055)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0536
8.10 (10385)	Hunter, Meredith	EIS001371 / 0010
8.10 (10746)	Ferreira, Mateo	EIS002101 / 0008
8.10 (10905)	White Pine County, Nevada Baughman, Mike	EIS000357 / 0024
8.10 (11063)	deBottari, Louis	EIS000610 / 0022
8.10 (11067)	deBottari, Louis	EIS000610 / 0025
8.10 (11271)	Belenky, Lisa	EIS001814 / 0006
8.10 (11364)	Shundahai Network Scharff, John	EIS002278 / 0001
8.10 (11405)	Shundahai Network Scharff, John	EIS002251 / 0003
8.10 (11432)	deBottari, Louis	EIS002277 / 0003
8.10 (11487)	Lorinez, Thomas	EIS002253 / 0003
8.10 (11493)	Herrera, Helen	EIS002254 / 0006
8.10 (11571)	Mayes, Susan	EIS002281 / 0001
8.10 (11581)	San Bernardino County, California Brierty, Peter	EIS002235 / 0004
8.10 (11906)	St. Louis Children's Aquarium Sonnenschein, Leonard	EIS000996 / 0001 EIS001733 / 0001
8.10 (12031)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0055
8.10 (12032)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0056
8.10 (12093)	Gleason, Mary	EIS002307 / 0007
8.10 (12135)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0437
8.10 (12136)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0438
8.10 (12193)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS000096 / 0006
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000148 / 0006 EIS000193 / 0006
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Tiesenhausen, Engelbrecht von	EIS000360 / 0003

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8.10 (12262)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0598
8.10 (12419)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0558
8.10 (12734)	Benezet, Louis	EIS001873 / 0060
8.10 (12895)	Drey, Kay	010300 / 0003 010314 / 0003
8.10 (12896)	Drey, Kay	010300 / 0004 010314 / 0004
8.10.1 (62)	Anonymous	010294 / 0011
	Benezet, Louis	EIS001873 / 0028
	deBottari, Louis	EIS000337 / 0008 EIS000610 / 0004
	Dziegiel, Henry	010261 / 0011
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0061
	Guy, Peggy	EIS000515 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000209 / 0001 EIS000440 / 0003 EIS000463 / 0002 EIS000679 / 0008
	Physicians for Social Responsibility Hattis, Ronald	EIS001808 / 0001
	Hixon, Angela	EIS001272 / 0004
	St. Louis, Missouri, City of, Metropolitan Police Department Stehlin, Vincent	EIS000981 / 0007
8.10.1 (133)	Baughman, Mike	EIS000671 / 0005
	Becker, Janet	EIS001012 / 0002
	Benezet, Louis	EIS002158 / 0012
	Brennan, Kristyn	EIS001239 / 0004
	STAR Foundation (Standing for Truth About Radiation) Cullen, Scott	010238 / 0007
	Damel, David	EIS001278 / 0005
	Danzeisen, Cathy	EIS001181 / 0003
	deBottari, Louis	EIS001923 / 0003 EIS002250 / 0002
	Devlin, Sally	EIS000103 / 0004 EIS000409 / 0008 EIS002198 / 0001
	Dolan, Robert	EIS000816 / 0005 EIS001120 / 0004
	Drey, Kay	010300 / 0005 010314 / 0005
	Dziegiel, Henry	010256 / 0003 010311 / 0014
	Frank, Erica	EIS000164 / 0002
	Gleason, Mary	EIS002307 / 0003
	Hales, Mary	EIS000231 / 0001
	Harris, Virginia	010211 / 0003
	Hixon, Duane	EIS001421 / 0005
	Hoopes, Mary	EIS001510 / 0005

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8.10.1 (133) (continued)	Nuclear Information and Resource Service	EIS000467 / 0004
	Kamps, Kevin	
	Kulick, Larry	EIS001219 / 0004
	Linvill, Becky	EIS000399 / 0003
		EIS000604 / 0003
	Maple, Susan	EIS001340 / 0006
	Sierra Club	EIS000270 / 0027
	Maret, Susan	
	McClarren, Thomas	EIS001764 / 0003
	McHugh, Sue	EIS000869 / 0018
	Molloff, Jeanine	EIS001766 / 0007
	Neura, Sharon	EIS001664 / 0005
	Utah, State of, Department of Environmental Quality	EIS001376 / 0007
	Nielson, Dianne	
		EIS001472 / 0008
	O'Connor, Amy	EIS000766 / 0007
		EIS001478 / 0007
	Patera, Pat	EIS000569 / 0003
	Perry, Gavin	EIS000997 / 0006
		EIS001734 / 0006
	Quirk, James	EIS000045 / 0004
	Robertson, Joyce	EIS001277 / 0005
	Schmidt, Jerry	EIS001482 / 0003
	Shillinglaw, Fawn	EIS000817 / 0065
	Snoeberger, Geni	EIS001276 / 0005
	Sontag, Fran	010098 / 0002
	Wilson, Debra	EIS002173 / 0002
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0557
	Woodbury, Bruce	
8.10.1 (166)	Las Vegas Indian Center	EIS002213 / 0001
	Cloquet, Donald	
	deBottari, Louis	EIS000337 / 0032
		EIS000938 / 0010
		EIS001901 / 0002
		EIS002138 / 0010
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000209 / 0002
	Halstead, Robert	
		EIS000440 / 0002
		EIS000463 / 0001
		EIS001580 / 0007
		EIS002239 / 0004
	Hoopes, Mary	EIS001510 / 0006
	Toledo Coalition for Safe Energy	EIS001573 / 0003
	Lodge, Terry	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0327
	Loux, Robert	
	Mineral County, Nevada, Nuclear Projects Office	EIS000391 / 0011
	Shankle, Judith	
		EIS000593 / 0012
		EIS000723 / 0009
		EIS002115 / 0014

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8.10.1 (166) (continued)	Public Citizen Shollenberger, Amy	EIS001834 / 0031
8.10.1 (167)	Nuclear Information and Resource Service Kamps, Kevin	EIS001927 / 0028
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0096
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0132
8.10.1 (1028)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000209 / 0003
8.10.1 (1035)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000209 / 0005
8.10.1 (1773)	Swafford, Shirley	EIS000605 / 0001
8.10.1 (1922)	Kipp, Joseph	EIS000477 / 0002
8.10.1 (2718)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000440 / 0001
8.10.1 (2732)	Corban, Keith	EIS000709 / 0006
8.10.1 (3251)	Pahrump, Nevada, Town of, Town Board Bishop, Ed	EIS000949 / 0002
8.10.1 (3437)	Kennell, Wilma	EIS000973 / 0001
8.10.1 (3645)	Dolan, Robert	EIS000816 / 0002 EIS001120 / 0002
8.10.1 (3700)	Mendelson, Jane	EIS000980 / 0002
8.10.1 (4054)	Nuclear Information and Resource Service Kamps, Kevin	EIS001474 / 0004
8.10.1 (4331)	Virginia, Commonwealth of, Department of Environmental Quality Murphy, Michael	EIS001209 / 0002
8.10.1 (4427)	Jones, Robert	EIS000992 / 0002
8.10.1 (5293)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0010
8.10.1 (5307)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0043
8.10.1 (5469)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0015
8.10.1 (5620)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0246
8.10.1 (6127)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0016
8.10.1 (6372)	Nuclear Energy Institute Jefferson, Robert	EIS001587 / 0002
8.10.1 (7084)	Wilson, Debra	EIS000995 / 0006 EIS001732 / 0005
8.10.1 (7295)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0032
	Nuclear Energy Institute Kraft, Steven	EIS001832 / 0032

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8.10.1 (7447)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0006
8.10.1 (7449)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0007
8.10.1 (7548)	Nevada, State of, Department of Transportation, Roadway System Division Whitaker, John	EIS000544 / 0003
8.10.1 (7811)	Mendelson, Jane	EIS001756 / 0002
8.10.1 (8472)	Shillinglaw, Fawn	EIS000817 / 0144
8.10.1 (8503)	Moyle, Donald	EIS001737 / 0002
8.10.1 (8612)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0010
8.10.1 (8733)	Sierra Club Sauk-Calumet Group Kawaters, Anne	EIS001317 / 0001 EIS001599 / 0001
8.10.1 (9184)	Detraz, Marjorie	EIS002123 / 0003
8.10.1 (9269)	DeRosa, David	EIS001618 / 0004
8.10.1 (9422)	Klotz, Themis	EIS001584 / 0002
8.10.1 (9566)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0239
8.10.1 (9597)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0271
8.10.1 (9631)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0300
8.10.1 (9633)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0301
8.10.1 (9634)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0302
8.10.1 (9635)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0303
8.10.1 (9636)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0304
8.10.1 (9758)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0342
8.10.1 (9942)	Wilson, Debra	EIS001732 / 0011
8.10.1 (10021)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0515
8.10.1 (10032)	Charlton, Bud	EIS000657 / 0002
8.10.1 (10033)	Garfield County, Colorado, Board of County Commissioners Martin, John	EIS000809 / 0004
8.10.1 (10053)	Western Interstate Energy Board Niles, Ken	EIS001877 / 0009
8.10.1 (10918)	Nuclear Energy Institute Jefferson, Robert	EIS000241 / 0005
8.10.1 (11120)	Cahall, Diana	EIS001207 / 0009
8.10.1 (11220)	Jones, Robert	EIS001729 / 0002
8.10.1 (11503)	Vasconi, Bill	EIS002137 / 0004
8.10.1 (12134)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0436
8.10.1 (12200)	Petersen, Art	010485 / 0004
8.10.1 (12359)	Guthrie, Sheral	010489 / 0003

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8.10.2 (114)	Ohio, State of, Public Utilities Commission	EIS001291 / 0004
	Agler, Alfred	
		EIS001557 / 0004
	Clark County, Nevada, Local Emergency Planning Committee	EIS000968 / 0009
	Andrews, Bob	
	U.S. House of Representatives - Colorado	EIS000504 / 0002
	Arend, Chris	
	Consolidated Group of Tribes and Organizations	EIS002074 / 0015
	Arnold, Richard	
		010334 / 0005
	Baker, Sylvia	EIS000355 / 0004
	Barfield, Ellen	EIS000454 / 0001
	San Bernardino County, California	EIS002235 / 0001
	Brierty, Peter	
	Cassano, Donna	EIS002175 / 0005
	Nevada Test Site Community Advisory Board	EIS001816 / 0026
	Claire, Phillip	
	Clemens, Byron	EIS001040 / 0012
		EIS001774 / 0007
	Greater Las Vegas Association of REALTORS	EIS000721 / 0005
	Coles, Gary	
		EIS002107 / 0003
	Congdon, Lois	EIS000173 / 0008
	Craig, Robin	EIS002170 / 0003
	STAR Foundation (Standing for Truth About Radiation)	EIS000225 / 0007
	Cullen, Scott	
		010238 / 0004
	U.S. House of Representatives - Colorado	EIS000266 / 0002
	DeGette, Diana	
	Devlin, Sally	EIS000409 / 0007
	Donn, Marjory	EIS001874 / 0003
	Lander County, Nevada	EIS001912 / 0111
	Duke, Bonnie	
	Alliance for Nuclear Accountability	EIS000443 / 0008
	Eldredge, Maureen	
		EIS001922 / 0011
	Falk, Vera	EIS001010 / 0003
	Fitzgerald, Keba	EIS001372 / 0007
	Lincoln County, Nevada, Board of County Commissioners	EIS000236 / 0017
	Frehner, Dan	
	Frost	EIS001811 / 0006
	Geary, Barbara	010292 / 0005
	Public Citizen, Critical Mass Energy Project	EIS000211 / 0003
	Hauter, Wenonah	
	Missouri Coalition for the Environment	EIS001229 / 0005
	Hengerson, Roy	
	Keaton, Hal	EIS000680 / 0001
	Khalsa, Mha Atma	EIS001857 / 0006
	Kindler, Kate	EIS000812 / 0002
	White Pine County, Nevada, Board of County Commissioners	EIS000139 / 0004
	Kirkeby, Kevin	
	U.S. House of Representatives - Ohio	EIS001905 / 0009
	Kucinich, Dennis	

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8.10.2 (114) (continued)	Action for a Clean Environment	EIS001658 / 0003
	Kushner, Adele	
	U.S. House of Representatives - Ohio	EIS001083 / 0004
	LaTourette, Steven	
	Law, Martha	EIS001950 / 0006
	Lawrence, Susan	EIS000675 / 0001
	Lee, Denise	EIS001485 / 0003
	Leppala, Bill	EIS000641 / 0008
	People Against Radioactive Dumping	010101 / 0003
	Lopez, Ruth	
	Losofsky, Sarah	EIS002024 / 0002
	Committee to Bridge the Gap	EIS000390 / 0005
	Magavern, Bill	
	U.S. Department of the Interior, Death Valley National Park	EIS000375 / 0002
	Martin, Dick	
	Garfield County, Colorado, Board of County Commissioners	EIS000809 / 0002
	Martin, John	
	McClarren, Chris	EIS001031 / 0008
		EIS001763 / 0008
	Nebraska Public Power District	EIS001166 / 0003
	McClure, John	
	McGeehan, Carol	010277 / 0002
	Clean Water Action Alliance of Minnesota	EIS001847 / 0008
	McKeown, Diana	
	McLendon, Marci	EIS000178 / 0002
	Miller, Joseph	EIS001871 / 0003
	Physicians for Social Responsibility, Los Angeles	EIS000719 / 0004
	Parfrey, Jonathan	
	Paul, Edward	EIS001637 / 0006
	Caliente, Nevada, City of	EIS000226 / 0021
	Phillips, Kevin	
		010096 / 0010
	Hopi Tribe	EIS001451 / 0005
	Quotchytewa, Phillip	
	National Conference of State Legislatures	EIS001328 / 0005
	Reed, James	
	Roberts, Celeste	EIS001198 / 0004
	Rynne, Richard	EIS000369 / 0003
	Sandler, Arlene	EIS001025 / 0002
		010247 / 0002
	Schade, Maria	EIS001396 / 0002
	Mineral County, Nevada, Nuclear Projects Office	EIS002115 / 0008
	Shankle, Judith	
	Sheehan, D.	EIS001925 / 0005
	Lakewood, Ohio, City of	EIS001284 / 0003
	Skindell, Michael	
		EIS001549 / 0003
	Shundahai Network	EIS002247 / 0010
	Snyder, Susi	
	St. Louis, Missouri, City of, Metropolitan Police Department	EIS000981 / 0005
	Stehlin, Vincent	
	The Hopi Tribe	010042 / 0004
	Taylor, Wayne	
		010091 / 0006

Comment Location	Commenter	Comment Document / Comment No.
8.10.2 (114) (continued)	Proposition One Committee	EIS001838 / 0007
	Thomas, Ellen	
	Thoms, Michael	EIS000478 / 0006
	Earth Day Coalition	EIS001286 / 0004
	Trepal, Chris	
	Twedt, Margaret	EIS001327 / 0006
		EIS001420 / 0006
	International Association of Fire Chiefs	EIS000991 / 0004
	Veerman, Gordon	
	Citizens Action Coalition of Indiana	EIS001590 / 0003
	Voelker, Roger	
	Wallace, Mariel	EIS001292 / 0005
		EIS001559 / 0006
	Warner, Rick	EIS000514 / 0008
	Webster Groves, Missouri, City of	EIS001859 / 0003
	Welch, Gerry	
	Willoughby, Amber	EIS002031 / 0003
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0215
	Woodbury, Bruce	
	Blue Ridge Environmental Defense League	EIS000166 / 0001
	Zeller, Louis	
		EIS000295 / 0001
	Zyvaloski, Shawn	EIS002037 / 0004
8.10.2 (194)	Belenky, Lisa	EIS001814 / 0007
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0007
	Goicoechea, Pete	
	U.S. Department of Health and Human Services, Public Health Service, CDC	EIS000775 / 0001
	Holt, Kenneth	
	Jackson, Kevin	EIS000649 / 0001
	Nuclear Information and Resource Service	EIS001561 / 0005
	Kamps, Kevin	
	McHugh, Sue	EIS000869 / 0006
		EIS002152 / 0005
	Myers, Sarah	EIS001779 / 0006
	St. Louis, Missouri, City of, Metropolitan Police Department	EIS000981 / 0006
	Stehlin, Vincent	
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0004
	Wallis, Jackie	
8.10.2 (200)	Baughman, Mike	EIS000671 / 0003
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0030
	Eldridge, Brent	
	Elkins, Bryan	EIS000669 / 0001
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0044
	Frehner, Dan	
	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0036
	Goicoechea, Pete	
	Goitein, Ernest	EIS001845 / 0001
	Ely Shoshone Tribe	EIS001441 / 0028
	Kaamasee, Arthur	
	Nuclear Information and Resource Service	EIS001927 / 0010
	Kamps, Kevin	
	Khalsa, Mha Atma	EIS001857 / 0007
	McKeel, Daniel	EIS001784 / 0007

Comment Location	Commenter	Comment Document / Comment No.
8.10.2 (200) (continued)	Clean Water Action Alliance of Minnesota McKeown, Diana	EIS001847 / 0016
	Miller, Joseph	EIS001871 / 0006
	National Conference of State Legislatures Reed, James	EIS001328 / 0003
	Public Citizen Shollenberger, Amy	EIS001834 / 0032
	Thurlow, Andrew	EIS000752 / 0001
	Rum Village Neighborhood Association Voelker, Roger	EIS001633 / 0002
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0003
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0590
8.10.2 (203)	Benezet, Louis	EIS000654 / 0005
	Dolan, Robert	EIS000816 / 0003
	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0008
	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0017
	Geary, Barbara	010292 / 0003
	Keaton, Hal	EIS000656 / 0001
	Death Valley Unified School District Kenny, June	EIS001961 / 0002
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0014
	Mesquite, Nevada, City of, Fire Department Meacham, Ken	EIS001399 / 0002
	Southeast County Citizens Advisory Committee Newton, Janice	EIS000260 / 0005
	Caliente, Nevada, City of Phillips, Kevin	EIS000718 / 0003
	Eureka County, Nevada, Planning Commission Rankin, Ronald	EIS000631 / 0003
	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000361 / 0007
		EIS000383 / 0004
		EIS000391 / 0017
		EIS000593 / 0002
		EIS000723 / 0002
	Inyo County, California, Planning Department Thistlethwaite, Charles	EIS000261 / 0002
		EIS000374 / 0002
	Esmeralda County, Nevada, Board of County Commissioners Viljoen, Benjamin	010230 / 0001
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0033
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0361
8.10.2 (212)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0012
	Anonymous	010294 / 0001
	Bishop Paiute Tribal Council Bengochia, Monty	EIS001862 / 0008

Comment Location	Commenter	Comment Document / Comment No.
8.10.2 (212) (continued)	League of Women Voters of Ashtabula County	EIS001290 / 0004
	Blevins, Esther	
	Texas Parks & Wildlife	010490 / 0001
	Boydston, Kathy	
	Prairie Island, Minnesota, City of	EIS000456 / 0003
	Campbell, Darrell	
	FirstEnergy Corporation	EIS001556 / 0007
	Castaznacci, Albert	
	Owens Valley Indian Water Commission	EIS001107 / 0008
	Cawelti, Teri	
	Damel, David	EIS001278 / 0004
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division	EIS002119 / 0008
	diBartolo, Russell	
	Diesel, Mary	EIS001880 / 0004
	Dziegiel, Henry	010261 / 0001
	Saint Peter Catholic Church	EIS001849 / 0003
	Feible, Ann	
	Feldman, Jane	EIS000726 / 0018
	Sierra Club, Southern Nevada Group	EIS002127 / 0015
	Feldman, Jane	
	Sierra Club, Southern Nevada Group	EIS000727 / 0021
	Forkos, Marcia	
	Lincoln County, Nevada, Board of County Commissioners	EIS001337 / 0019
	Frehner, Dan	
	Eureka County, Nevada, Board of County Commissioners	EIS000630 / 0005
	Goicoechea, Pete	
		EIS001878 / 0066
	Green, Louise	EIS001028 / 0003
	Grumman, Helen	EIS001891 / 0003
	Guy, Peggy	EIS000515 / 0004
	Hartzog, Helen	EIS001642 / 0002
	Hixon, Angela	EIS001272 / 0003
	Hixon, Duane	EIS001421 / 0004
	Washington, State of, Department of Ecology	EIS001208 / 0005
	Inman, Rebecca	
	Prairie Island Indian Community	EIS001911 / 0005
	Kohnen, Audrey	
	Lent, Ervin	EIS002287 / 0001
	People Against Radioactive Dumping	EIS001837 / 0013
	Lopez, Ruth	
	Rocky Mountain Peace and Justice Center	EIS000517 / 0007
	Marshall, Tom	
	Garfield County, Colorado, Board of County Commissioners	EIS000809 / 0001
	Martin, John	
	McClarren, Chris	EIS001031 / 0009
		EIS001763 / 0009
	McFarland, Rose	EIS002044 / 0002
	McKeel, Daniel	EIS001021 / 0008
	Neura, Sharon	EIS001664 / 0004
	Noll, Joann	EIS001919 / 0003
	Penn, Jeanette	EIS001851 / 0003
	Ponzi, Jean	EIS001042 / 0001

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8.10.2 (212) (continued)	Eureka County, Nevada, Local Emergency Planning Committee Rebaleati, Mike	EIS000950 / 0001
	National Conference of State Legislatures Reed, James	EIS001328 / 0015
	Reed, Vanessa	EIS002017 / 0001
	Robertson, Joyce	EIS001277 / 0004
	Ruting, William	EIS001311 / 0002
	Safe, Karen	EIS001038 / 0004
	Simeone, Wilma	EIS001855 / 0003
	Snoeberger, Geni	EIS001276 / 0004
	Shundahai Network Snyder, Susi	EIS001907 / 0022
	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0016
	Stricker, Karin	EIS001245 / 0003
	Kirkwood, City of, Missouri, City Council Swoboda, Mike	010287 / 0002
	Citizens Action Coalition of Indiana Voelker, Roger	EIS001191 / 0003
	Missouri Coalition for the Environment Waterston, Pat	EIS000982 / 0003
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0317
	Ziske, Sarah	EIS001247 / 0001
8.10.2 (218)	Denning, Bruce	EIS000647 / 0001
	Goitein, Ernest	EIS001845 / 0002
	National Conference of State Legislatures Reed, James	EIS001328 / 0014
	St. Louis, Missouri, City of, Metropolitan Police Department Stehlin, Vincent	EIS000981 / 0004
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0364
8.10.2 (579)	Kentucky, Commonwealth of, Department for Environmental Protection Barber, Alex	EIS000066 / 0003
8.10.2 (680)	Physicians for Social Responsibility Roberts, Kimberly	EIS000205 / 0005
8.10.2 (999)	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0006
8.10.2 (1325)	International Association of Fire Chiefs Veerman, Gordon	EIS000991 / 0003
8.10.2 (1745)	Desert Citizens Against Pollution Talbot, Lyle	EIS000366 / 0001
8.10.2 (2273)	Elkins, Bryan	EIS000669 / 0002
8.10.2 (2350)	Weber, Debbie	EIS000707 / 0001
8.10.2 (2740)	Leppala, Bill	EIS000641 / 0004
8.10.2 (3213)	Dolan, Robert	EIS001120 / 0003
8.10.2 (4242)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0057
8.10.2 (4790)	OGD Awareness Bullcreek, Margene	EIS001475 / 0007
8.10.2 (5067)	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0055

Comment Location	Commenter	Comment Document / Comment No.
8.10.2 (5276)	Clark County, Nevada, Local Emergency Planning Committee Andrews, Bob	EIS000968 / 0001
8.10.2 (5520)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0034
8.10.2 (5718)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0331
8.10.2 (5824)	International Association of Fire Chiefs Veerman, Gordon	EIS001728 / 0002
8.10.2 (6405)	Johnson, Reginald	EIS001114 / 0001
8.10.2 (6428)	Kirkwood, Missouri, City of Schramm, Marjorie	EIS001819 / 0002
8.10.2 (6505)	Clemens, Byron	EIS001774 / 0011
8.10.2 (6566)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0053
8.10.2 (6697)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0063
8.10.2 (8601)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0006
8.10.2 (8831)	Public Citizen Shollenberger, Amy	EIS001834 / 0014
8.10.2 (8987)	Clemens, Byron	EIS001040 / 0022 EIS001774 / 0015
8.10.2 (9434)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0124
8.10.2 (9457)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0134
8.10.2 (9595)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0269
8.10.2 (9614)	Kaibab Band of Southern Paiutes Jake, Vivienne	EIS002075 / 0001
8.10.2 (9831)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0409
8.10.2 (10135)	San Bernardino County, California, Board of Supervisors Mikels, Jon	EIS001865 / 0011
8.10.2 (10227)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS002115 / 0002
8.10.2 (10305)	Benezet, Louis	EIS001873 / 0082
8.10.2 (10747)	Ferreira, Mateo	EIS002101 / 0009
8.10.2 (10997)	Cahall, Diana	EIS001952 / 0012
8.10.2 (11365)	Shundahai Network Scharff, John	EIS002278 / 0002
8.10.2 (11409)	Shundahai Network Scharff, John	EIS002251 / 0007
8.10.2 (11572)	Mayes, Susan	EIS002281 / 0002
8.10.2 (11582)	San Bernardino County, California Brierty, Peter	EIS002235 / 0005
8.10.2 (11605)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS002237 / 0003
8.10.2 (12083)	Oak Ridge Reservation Local Oversight Committee, Inc. Kuhaida, Jerry	EIS002310 / 0002
8.10.2 (12250)	Wilson, Debra	EIS000995 / 0016 EIS001732 / 0015

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8.10.2 (12251)	U.S. Department of Health and Human Services, Public Health Service, CDC Holt, Kenneth	EIS000775 / 0002
8.10.2 (12263)	Cassano, Donna	EIS002175 / 0008
8.10.2 (12604)	East St. Louis Community Action Network Andria, Kathy	EIS001775 / 0004
8.10.3 (182)	Anonymous	EIS000712 / 0004
	Bieg, Patricia	EIS001212 / 0003
	Women's International League for Peace and Freedom, St. Louis Branch Epstein, Hedy	EIS001005 / 0002
	Sierra Club, Southern Nevada Group Feldman, Jane	EIS002127 / 0014
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0015
	Hellgeth, Jeanette	EIS000956 / 0011
	Herrera, Helen	EIS002295 / 0006
	McClarren, Thomas	EIS001764 / 0004
	Molloff, Jeanine	EIS001766 / 0004
	Myers, Sarah	EIS001016 / 0001
	Utah Peace Test ofthedesert, Cynthia	EIS001476 / 0006
	Georgia, State of, House of Representatives Orrock, Nan	EIS000272 / 0001
	Stern, Griffith	EIS001422 / 0002
8.10.3 (7724)	Kubinski, Heather	EIS002018 / 0001
8.10.3 (9468)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0139
8.10.3 (12543)	Cleveland, Ohio, City of Appolito-Jackson, Collette	EIS001282 / 0002
8.11.1 (134)	Dugan, Kenneth	EIS000940 / 0002
	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0013
	Heizer, Michael	EIS001817 / 0001
	Louden, Lee	EIS000621 / 0003
	Sefton, James	EIS001503 / 0006
	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000723 / 0008
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0037
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0163
	Wright, Elwood	EIS000472 / 0002
8.11.1 (1015)	Eckhardt, Curtiss	EIS000254 / 0005
8.11.1 (1186)	Cleveland, David	EIS000114 / 0007
8.11.1 (1239)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0010
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0002
8.11.1 (1553)	White Pine County, Nevada Baughman, Mike	EIS000357 / 0012
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0072

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8.11.1 (1553) (continued)	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0068
8.11.1 (1689)	Whitman, Frank	EIS000804 / 0001
8.11.1 (2204)	Salisbury, Ray	EIS000615 / 0002
8.11.1 (2324)	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0011
8.11.1 (2615)	Benezet, Cordy	EIS000692 / 0004
8.11.1 (2747)	Leppala, Bill	EIS000641 / 0006
8.11.1 (2826)	Wolf Ranch Wolf, Howard	EIS001056 / 0001
8.11.1 (2940)	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0002
8.11.1 (3066)	Eureka County, Nevada, Board of County Commissioners Green, Sandy	EIS000619 / 0006
8.11.1 (3164)	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0001
8.11.1 (3166)	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0004
8.11.1 (3526)	Greater Las Vegas Association of REALTORS Coles, Gary	EIS000721 / 0003
8.11.1 (4306)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0116
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0105
8.11.1 (4465)	Scott, Laura	EIS001232 / 0009
8.11.1 (5150)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0002
8.11.1 (5154)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0007
8.11.1 (5160)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0013
8.11.1 (5394)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0102
8.11.1 (5396)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0104
8.11.1 (5489)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0024
8.11.1 (5511)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0030
8.11.1 (5569)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0196
8.11.1 (5693)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0308
8.11.1 (5729)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0335
8.11.1 (5760)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0363

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8.11.1 (5989)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0014
8.11.1 (6645)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0034
8.11.1 (6679)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0051
8.11.1 (6691)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0060
8.11.1 (6702)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0068
8.11.1 (6986)	Meharg, Margaret	EIS002068 / 0003
8.11.1 (7150)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0047
8.11.1 (7212)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0092
8.11.1 (7237)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0119
8.11.1 (7416)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0011
8.11.1 (7453)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0009
8.11.1 (7518)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0049
8.11.1 (7625)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0081
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0079
8.11.1 (8044)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000391 / 0010 EIS000593 / 0010
8.11.1 (8100)	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0019
8.11.1 (8128)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0082
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0080
8.11.1 (8145)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0090
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0088
8.11.1 (9505)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0164
8.11.1 (9646)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0310
8.11.1 (9851)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0415
8.11.1 (10851)	Energy Resources International Supko, Eileen	EIS000359 / 0007
8.11.1 (11282)	Belenky, Lisa	EIS001814 / 0016
8.11.1 (11298)	Belenky, Lisa	EIS001814 / 0027

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8.11.1 (11309)	Belenky, Lisa	EIS001814 / 0038
8.11.1 (11760)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0054
8.11.1 (11873)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0388
8.11.1 (12530)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS000630 / 0004
8.11.2 (1410)	Baker, Sylvia	EIS000355 / 0005
8.11.2 (4362)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0007
8.11.2 (5497)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0025
8.11.2 (6669)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0052
8.11.2 (6901)	Denver, Colorado, City and County of, Department of Environmental Health Donahue, Theresa	EIS001539 / 0005
8.11.2 (7082)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0031
8.11.2 (9568)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0241
8.11.2 (9644)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0309
8.11.2 (9808)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0395
8.11.2 (10248)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS002115 / 0010
8.11.2 (10886)	Shillinglaw, Fawn	EIS000817 / 0147
8.11.2 (11008)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0006
8.11.2 (11009)	Henderson, Nevada, City of Speight, Philip	EIS001896 / 0007
8.11.2 (13187)	Clark County, Nevada, Board of County Commissioners Herrera, Dario	010243 / 0034
8.11.3 (3019)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000593 / 0004 EIS002115 / 0003
8.11.3 (3020)	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000593 / 0005 EIS002115 / 0017
8.11.3 (4197)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0015
8.11.3 (5539)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0074
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0041
8.11.3 (5601)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0227
8.11.3 (7225)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0098

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8.11.3 (7901)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0051
8.11.3 (8473)	Shillinglaw, Fawn	EIS000817 / 0145
8.11.3 (9794)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0379
8.11.3 (9803)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0390
8.11.3 (11150)	Benezet, Cordy	EIS000692 / 0006
8.11.3 (12453)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0032
8.11.4 (42)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0119
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0034
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0057
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0108
	Leppala, Bill	EIS000641 / 0005
	Malone, Charlie	EIS001106 / 0008
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0043
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0388
8.11.4 (1412)	Baker, Sylvia	EIS000355 / 0007
8.11.4 (5568)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0197
8.11.4 (5905)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0024
8.11.4 (5946)	California, State of, Energy Commission Laurie, Robert	EIS001622 / 0049
8.11.4 (6294)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001727 / 0009
8.11.4 (7223)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0097
8.11.4 (7441)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0003
8.11.4 (10189)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0560
8.11.4 (11311)	Belenky, Lisa	EIS001814 / 0040
8.11.4 (11749)	California, State of, Energy Commission Laurie, Robert	EIS002299 / 0007
8.11.4.1 (5151)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0003
8.11.4.2 (43)	Lander County, Nevada, Board of County Commissioners Elquist, Bill	EIS000406 / 0012
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0010
	Williams, Ray	EIS000616 / 0002

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8.11.4.2 (392)	Mesquite, Nevada, City of Horne, Charles	010283 / 0002
	Mesquite, Nevada, City of Marren, Terrance	EIS000039 / 0002
8.11.4.2 (2211)	Louden, Lee	EIS000621 / 0001
8.11.4.2 (2719)	Louden, Nancy	EIS000637 / 0002
8.11.4.2 (4147)	Clark County, Nevada, Department of Comprehensive Planning, Environmental Division Truelove, Cynthia	EIS001206 / 0002
8.11.4.2 (4148)	Clark County, Nevada, Department of Comprehensive Planning, Environmental Division Truelove, Cynthia	EIS001206 / 0003
8.11.4.2 (5148)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0001
8.11.4.2 (5159)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0012
8.11.4.2 (5395)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0103
8.11.4.2 (5540)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0042
8.11.4.2 (5697)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0311
8.11.4.2 (6572)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0058
8.11.4.2 (6717)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0075
8.11.4.2 (7213)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0093
8.11.4.2 (7231)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0121
8.11.4.2 (7532)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0056
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0052
8.11.4.2 (9478)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0221
8.11.4.3 (5528)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0038
8.11.4.3 (6706)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0070
8.11.4.3 (7089)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0033
8.11.5 (5499)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0026
8.11.5 (5572)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0198
8.11.5 (7216)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0094

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8.11.5 (9665)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002074 / 0009
8.11.5.1 (254)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0010
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0114
	Citizen's Advisory Council/Esmeralda County Repository Oversight Program Hoffman, Marsha	EIS000197 / 0001
8.11.5.1 (4294)	White Pine County, Nevada Baughman, Mike	EIS000357 / 0018
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0103
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0092
8.11.5.1 (5152)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0004
8.11.5.1 (5168)	National Congress of American Indians/Nuclear Waste Program Holden, Robert	EIS001910 / 0007
8.11.5.1 (5576)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0203
8.11.5.1 (5698)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0313
8.11.5.1 (6671)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0053
8.11.5.1 (7142)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0039
8.11.5.1 (7214)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0099
8.11.5.1 (8360)	Benezet, Louis	EIS001873 / 0044
8.11.5.2 (5153)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0006
8.11.5.2 (8379)	Benezet, Louis	EIS001873 / 0064
8.11.5.2 (9650)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002074 / 0006
8.11.5.2 (9747)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0331
8.11.5.2 (9748)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0332
8.11.6 (44)	Lincoln County, Nevada, Regional Development Authority Gilpatrick, Victoria	EIS000684 / 0001
	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0004 EIS000670 / 0001
8.11.6 (740)	Goldfield, Nevada, Fire Department Anderson, Mike	EIS000195 / 0004
8.11.6 (795)	Citizen's Advisory Council/Esmeralda County Repository Oversight Program Hoffman, Marsha	EIS000197 / 0002
8.11.6 (1000)	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0007

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8.11.6 (1241)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0012
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0004
8.11.6 (3145)	Beowawe Crescent Valley Nuclear Waste Awareness Committee Carruthers, Joseph	EIS000642 / 0002
8.11.6 (3147)	Beowawe Crescent Valley Nuclear Waste Awareness Committee Carruthers, Joseph	EIS000642 / 0004
8.11.6 (4216)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0033
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0031
8.11.6 (4239)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0054
8.11.6 (4290)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0098
8.11.6 (5483)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0019
8.11.6 (5501)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0027
8.11.6 (5513)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0031
8.11.6 (5524)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0036
8.11.6 (5616)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0242
8.11.6 (6053)	U.S. Nuclear Regulatory Commission Kane, William	EIS001898 / 0014
8.11.6 (6303)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS001727 / 0012
8.11.6 (6380)	Citizens Action Coalition of Indiana Voelker, Roger	EIS001590 / 0005
8.11.6 (6434)	Southern Nevada Home Builders Association Porter, Irene	EIS001828 / 0005
8.11.6 (6675)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0054
8.11.6 (6687)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0058
8.11.6 (6689)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0059
8.11.6 (6692)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0061
8.11.6 (6694)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0062
8.11.6 (6701)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0065
8.11.6 (6705)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0067

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8.11.6 (6903)	Denver, Colorado, City and County of, Department of Environmental Health Donahue, Theresa	EIS001539 / 0006
8.11.6 (7205)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0090
8.11.6 (7242)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0116
8.11.6 (7633)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0085
8.11.6 (8144)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0089
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0087
8.11.6 (8300)	Benezet, Louis	EIS001873 / 0040
8.11.6 (8384)	Benezet, Louis	EIS001873 / 0067
8.11.6 (9986)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0492
8.11.6 (10037)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0524
8.11.6 (10038)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0525
8.11.6 (10194)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0565
8.11.6 (10935)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS000463 / 0010
8.11.6 (12069)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0019
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0023
8.11.7 (801)	Frank, Erica	EIS000164 / 0004
8.11.7 (927)	Williams, Stella	EIS000122 / 0002
8.11.7 (2226)	Viereck, Jennifer	EIS000622 / 0010
8.11.7 (3967)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Halstead, Robert	EIS002239 / 0003
8.11.7 (4486)	Kean, Beth	EIS001409 / 0003
8.11.7 (6908)	Denver, Colorado, City and County of, Department of Environmental Health Donahue, Theresa	EIS001539 / 0009
8.11.7 (7620)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0079
8.11.7 (7950)	Idaho, State of, INEEL Oversight Trever, Kathleen	EIS001903 / 0013
8.11.7 (8123)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0077
8.11.7 (9625)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0295
8.11.7 (9871)	Smedley, Sully	EIS002150 / 0001
8.11.7 (11679)	Americans for Clean Responsible Energy Wolfe, Bertram	EIS002293 / 0001

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8.11.8 (10)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS000192 / 0003 EIS002043 / 0013
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0035
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0396
8.11.8 (7217)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0100
8.11.9 (47)	Eckhardt, Curtiss	EIS000254 / 0002
	Louden, Nancy	EIS000972 / 0001
	Paul, Lance	EIS000633 / 0002
8.11.9 (5699)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0314
8.11.9 (5700)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0315
8.11.9 (7139)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0036
8.11.9 (7221)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0096
8.11.9 (8141)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0087
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0085
8.11.9 (8361)	Benezet, Louis	EIS001873 / 0045
8.11.9 (8387)	Benezet, Louis	EIS001873 / 0068
8.11.9 (8388)	Benezet, Louis	EIS001873 / 0069
8.11.9 (9807)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0394
8.11.9 (9868)	Benezet, Louis	EIS002158 / 0013
8.11.9 (11937)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0069
8.11.10 (112)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0071
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0195
8.11.11 (3084)	Las Vegas, Nevada, City of Cummings, Peter	EIS000735 / 0012
8.11.11 (5147)	Prairie Island Indian Community Kohnen, Audrey	EIS001911 / 0006
8.11.11 (5502)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0028
8.11.11 (6382)	Citizens Action Coalition of Indiana Voelker, Roger	EIS001590 / 0006
8.11.11 (8799)	Shundahai Network Snyder, Susi	EIS001907 / 0026
8.11.11 (8853)	Consolidated Group of Tribes and Organizations Arnold, Richard	EIS002087 / 0003
8.11.11 (9342)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0058

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8.11.11 (9475)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0144
8.11.11 (9652)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0315
8.11.11 (10236)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0585
8.11.11 (10404)	Nuclear Information and Resource Service Kamps, Kevin	EIS001927 / 0022
8.11.11 (10635)	Timbisha Shoshone Tribe Esteves, Pauline	EIS001906 / 0016
8.11.11.1 (2390)	Wesley, Robert	EIS000713 / 0002
8.11.11.1 (2612)	Benezet, Cordy	EIS000692 / 0001
8.11.11.1 (4367)	North Las Vegas, Nevada, City of Importuna, Patrick	EIS001157 / 0013
8.11.11.1 (6677)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0055
8.11.11.1 (9136)	Chelette, Iona	EIS001860 / 0005
8.11.11.1 (9826)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0403
8.11.11.1 (10012)	U.S. Department of the Interior, Bureau of Land Management Smith, Gerald	EIS001444 / 0005
8.11.11.1 (10655)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0402
8.11.11.2 (5377)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0093
8.11.11.2 (5573)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0199
8.11.11.2 (5606)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0232
8.11.11.2 (5717)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0328
8.11.11.2 (6621)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0068
8.11.11.2 (10764)	Moapa Band of Paiutes Meyers, Calvin	EIS002144 / 0001
8.11.11.2 (10768)	Moapa Band of Paiutes Meyers, Calvin	EIS002144 / 0005
8.11.11.2 (11352)	Lent, Ervin	EIS002271 / 0002
8.11.11.2 (11353)	Lent, Ervin	EIS002271 / 0003
8.11.11.2 (12509)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0342
8.12 (224)	Georgians Against Nuclear Energy Carroll, Glenn	010151 / 0003
	Eureka County Yucca Mountain Information Office Fiorenzi, Leonard	010392 / 0009
	Las Vegas, Nevada, City of Goodman, Oscar	010244 / 0014

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8.12 (224) (continued)	Clark County, Nevada, Board of County Commissioners Herrera, Dario	010243 / 0029
	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	010073 / 0002
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	010242 / 0017
	Caliente, Nevada, City of Phillips, Kevin	010096 / 0006
8.12 (251)	Las Vegas, Nevada, City of Goodman, Oscar	010244 / 0012
	Clark County, Nevada, Board of County Commissioners Herrera, Dario	010243 / 0033
	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	010073 / 0007
	Rose, MerLynn	010152 / 0001
8.12 (10971)	Shundahai Network Weinberg, Piper	010158 / 0007
8.12 (12708)	Petersen, Art	010485 / 0007
8.12 (13080)	Esmeralda County, Nevada, Board of County Commissioners Viljoen, Benjamin	010230 / 0006
8.12 (13082)	Esmeralda County, Nevada, Board of County Commissioners Viljoen, Benjamin	010230 / 0008
8.12 (13225)	Las Vegas, Nevada, City of Goodman, Oscar	010244 / 0024
8.12 (13277)	U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance Miller, Anne	010231 / 0011
9.1 (138)	Eide-Tollefson, Kristen	EIS001971 / 0004
	Ellison, David	EIS001577 / 0006
	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0029
	Washington, State of, Department of Ecology Inman, Rebecca	EIS001208 / 0002
	Louden, Lee	EIS000621 / 0010
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0343
	Malone, Charlie	EIS001106 / 0009
	General Atomics Noren, Robert	EIS001831 / 0002
	Overland, Carol	EIS001966 / 0005
	Energy Resources International Supko, Eileen	EIS000290 / 0002
9.1 (162)	Eide-Tollefson, Kristen	EIS001971 / 0012
9.1 (250)	Anonymous	010294 / 0015
	Baltutis, Genelle	010299 / 0007
	GE Stockholders' Alliance for a Sustainable Nuclear-Free Future Birnie, Patricia	010174 / 0009
	Bogger, Karen	010295 / 0008
	Dziegiel, Henry	010028 / 0009 010261 / 0015 010311 / 0018

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9.1 (250) (continued)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	010324 / 0006
	Frishman, Steve	
	Mineral County, Nevada, Board of Commissioners	010182 / 0007
	Funk, Arlo	
	Alliance for Nuclear Accountability	010316 / 0007
	Gordon, Susan	
	Citizen Alert	010262 / 0008
	Hadder, John	
	Harris, Virginia	010211 / 0004
	Citizens Awareness Network	010307 / 0012
	Katz, Deborah	
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	010025 / 0006
	Loux, Robert	
	Martinson, Ernest	010312 / 0001
	Inyo County, California, Southeast Area Citizen Advisory Committee	010381 / 0005
	Remus, Andrew	
	Rivera, Y.	010052 / 0002
	Rucquoi, Jann	010326 / 0004
	Van Ronk, Ruth	010367 / 0006
	Healing Ourselves & Mother Earth	010170 / 0011
	Viereck, Jennifer	
	Southeast Area Citizen's Advisory Committee to the Inyo County, California, Board of Supervisors	010325 / 0006
	Viereck, Jennifer	
	Voelker, Roger	010252 / 0007
	Escalante Wilderness Project	010288 / 0008
	Woodard, Victoria	
9.1 (292)	Florida, State of, Department of Health	EIS000026 / 0003
	Passetti, William	
9.1 (2043)	Eureka County, Nevada, Board of County Commissioners	EIS001878 / 0009
	Goicoechea, Pete	
	Mineral County, Nevada, Board of County Commissioners	EIS001660 / 0006
	Wallis, Jackie	
9.1 (3637)	Savannah River Site Citizens Advisory Board	EIS001105 / 0001
	Loadholt, Ann	
9.1 (3959)	Martinson, Ernest	EIS001486 / 0001
9.1 (4101)	Illinois, State of, Commerce Commission	EIS001375 / 0005
	Mathias, Richard	
9.1 (4260)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0075
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0071
	Kaamasee, Arthur	
9.1 (4272)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0080
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0076
	Kaamasee, Arthur	
9.1 (4279)	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0087
	Eldridge, Brent	
9.1 (4407)	Gannis, Steve	EIS001555 / 0004
9.1 (4482)	Utah, State of, Department of Environmental Quality	EIS001376 / 0008
	Nielson, Dianne	

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9.1 (4850)	Oregon, State of, Office of Energy Blazek, Mary	EIS001215 / 0001
9.1 (4852)	Oregon, State of, Office of Energy Blazek, Mary	EIS001215 / 0003
9.1 (4853)	Oregon, State of, Office of Energy Blazek, Mary	EIS001215 / 0004
9.1 (4874)	deBottari, Louis	EIS000337 / 0012 EIS000610 / 0008
9.1 (4894)	deBottari, Louis	EIS000337 / 0034
9.1 (5040)	U.S. Nuclear Waste Technical Review Board Cohon, Jared	EIS001520 / 0008
9.1 (5426)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0125
9.1 (5427)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0126
9.1 (5445)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0010
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0007
9.1 (5546)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0077
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0044
9.1 (5785)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0381
9.1 (6016)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0041
9.1 (6076)	Citizen Alert Hadder, John	EIS001469 / 0002
9.1 (6146)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0036
9.1 (6474)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0032
9.1 (6573)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0059
9.1 (6680)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0082
9.1 (6683)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0083
9.1 (6695)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0088
9.1 (6724)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0076
9.1 (7192)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0083

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9.1 (7379)	Tennessee Valley Authority Burzynski, Mark	EIS001190 / 0010
	Nuclear Energy Institute Kraft, Steven	EIS001832 / 0010
9.1 (7647)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0099
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0098
9.1 (7981)	Ellison, David	EIS001577 / 0003
9.1 (8027)	Shillinglaw, Fawn	EIS000817 / 0071
9.1 (8386)	Lewis, Kathy	EIS001023 / 0002
9.1 (8486)	Shillinglaw, Fawn	EIS000817 / 0152
9.1 (8488)	Shillinglaw, Fawn	EIS000817 / 0154
9.1 (8494)	Shillinglaw, Fawn	EIS000817 / 0156
9.1 (8608)	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS001256 / 0007
9.1 (8646)	Shillinglaw, Fawn	EIS000817 / 0196
9.1 (8882)	Public Citizen Shollenberger, Amy	EIS001834 / 0023
9.1 (9175)	Eide-Tollefson, Kristen	EIS001971 / 0005
9.1 (9229)	Eide-Tollefson, Kristen	EIS001971 / 0006
9.1 (9284)	Eide-Tollefson, Kristen	EIS001971 / 0017
9.1 (9321)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0051
9.1 (9386)	Citizen Alert Hadder, John	EIS002149 / 0006
9.1 (9756)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0339
9.1 (10124)	Ellison, David	EIS001295 / 0005
9.1 (10431)	Nuclear Information and Resource Service Kamps, Kevin	EIS001927 / 0036
9.1 (10662)	Overland, Carol	EIS001966 / 0002
9.1 (10669)	Overland, Carol	EIS001966 / 0009
9.1 (11152)	South Carolina, State of, Public Service Commission Bradley, Philip	EIS000278 / 0002
9.1 (11607)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0037
9.1 (12711)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0084
9.1 (13109)	Shundahai Network Snyder, Susi	010227 / 0027
9.1 (13371)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	010296 / 0016
9.2 (6698)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0089
9.2 (7769)	Shillinglaw, Fawn	EIS000817 / 0029
9.2 (8495)	Shillinglaw, Fawn	EIS000817 / 0157
9.2 (11950)	Shillinglaw, Fawn	EIS000817 / 0155
9.3 (7985)	Ellison, David	EIS001577 / 0005
9.4 (1537)	Prairie Island, Minnesota, City of Campbell, Darrell	EIS000456 / 0002

Comment Location	Commenter	Comment Document / Comment No.
9.4 (1537) (continued)	Prairie Island Indian Community White, Byron	EIS000490 / 0002
9.4 (6136)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0038
9.4 (9873)	Smedley, Sully	EIS002150 / 0002
9.5 (7631)	Shoshone-Bannock Tribes Thompson, Duane	EIS001928 / 0003
10 (3)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000102 / 0007
	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0018
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0105
	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS001256 / 0013
	Clark County, Nevada, Board of County Commissioners Herrera, Dario	010243 / 0027
	Sierra Club Maret, Susan	EIS000270 / 0005
	Rocky Mountain Peace and Justice Center Marshall, Tom	EIS001946 / 0004
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Navis, Irene	010027 / 0007
	Pustek, Charlotte	EIS000516 / 0002
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0104
	Mineral County, Nevada, Nuclear Projects Office Shankle, Judith	EIS000391 / 0006 EIS000593 / 0007
	Shillinglaw, Fawn	EIS000817 / 0167
	Public Citizen Shollenberger, Amy	EIS001834 / 0005
	Wissbeck, Larry	EIS000232 / 0004 EIS000663 / 0005
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0020
10 (91)	Devlin, Sally	010141 / 0004
	Lander County, Nevada Duke, Bonnie	EIS001912 / 0106
	Ferreira, Matteo	EIS000089 / 0004
	Goans, Brad	EIS000127 / 0008
	Moapa Band of Paiutes Meyers, Calvin	010119 / 0005
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Navis, Irene	010027 / 0006
	Paz, Jacob	010364 / 0003
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0105

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10 (91) (continued)	Rucquoi, Jann	EIS000076 / 0001
		010326 / 0001
	Shillinglaw, Fawn	EIS000817 / 0166
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS000227 / 0004
	Swartz, Ginger	
10 (104)	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000079 / 0005
	Bradshaw, Les	
		EIS000102 / 0004
		EIS000116 / 0002
		EIS000332 / 0003
		EIS002238 / 0004
		010296 / 0037
	Nye County, Nevada, Board of County Commissioners	EIS001879 / 0047
	Carver, Dick	
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000071 / 0002
	Giampaoli, Mary	
		EIS000081 / 0002
		EIS000107 / 0007
		EIS000119 / 0009
	Nye County, Nevada, Board of County Commissioners	EIS000441 / 0005
	Taguchi, Jeff	
	Nye County, Nevada, Department of Natural Resources and Federal Facilities	EIS000060 / 0009
	Walker, Jamieson	
		EIS000151 / 0009
		EIS000155 / 0004
10 (242)	Progressive Leadership Alliance of Nevada	EIS000564 / 0003
	Fulkerson, Bob	
	Shillinglaw, Fawn	EIS000817 / 0161
	Viereck, Jennifer	EIS000124 / 0014
10 (258)	Baker, Sylvia	EIS000355 / 0001
	Georgians for Clean Energy	010260 / 0009
	Barczak, Sara	
	Benezet, Louis	EIS001873 / 0011
		EIS002122 / 0009
		EIS002158 / 0001
	Nevada, State of, Office of the Attorney General	EIS000865 / 0002
	Bishop, Kathleen	
	Blackeye, Heidi	EIS000627 / 0006
	OGD Awareness	EIS001475 / 0003
	Bullcreek, Margene	
	Lander County, Nevada	EIS001912 / 0006
	Duke, Bonnie	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0056
	Eldridge, Brent	
	Lander County, Nevada, Board of County Commissioners	EIS000406 / 0008
	Elquist, Bill	
	Ewald, Linda	EIS002305 / 0005
	Feinhandler, F.	EIS000402 / 0004
	Healy, Gretchen	EIS000951 / 0003

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10 (258) (continued)	Pahrump Paiute Tribe Jim, Clara	EIS002082 / 0001
	Keaton, Hal	EIS000656 / 0002
	World Community Center Logan, Yvonne	EIS001780 / 0001
	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0007
	McHugh, Sue	EIS000869 / 0003 EIS002152 / 0002
	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Navis, Irene	010118 / 0005
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0005
	Royce-Rogers, Penny	EIS000549 / 0003
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000227 / 0007
	Thomas, Kristin	EIS000691 / 0002
	Nevada Nuclear Waste Task Force, Inc. Treichel, Judy	EIS001866 / 0010
	Western Shoshone National Council Zabarte, Ian	EIS002156 / 0011
10 (335)	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000056 / 0001
10 (380)	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000044 / 0002 EIS000070 / 0002
10 (421)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000071 / 0019 EIS000081 / 0018 EIS000107 / 0009
10 (437)	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000080 / 0008
10 (475)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000069 / 0007
10 (524)	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000105 / 0001
10 (893)	Cox, Thomas	EIS000410 / 0001
10 (981)	Nye County, Nevada, Board of County Commissioners Giampaoli, Mary	EIS000242 / 0002 EIS000245 / 0004
10 (1119)	STAR Foundation (Standing for Truth About Radiation) Cullen, Scott	EIS000225 / 0005
10 (1135)	Sierra Club Maret, Susan	EIS000270 / 0020
10 (1168)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000119 / 0010
10 (1723)	Cox, Thomas	EIS000578 / 0001

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10 (1777)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Dilger, Fred	EIS000392 / 0002
10 (1792)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS000630 / 0009
10 (1808)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000332 / 0007
10 (1815)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000332 / 0013
10 (2227)	Viereck, Jennifer	EIS000622 / 0011
10 (2330)	Lander County, Nevada, Board of County Commissioners Manzini, Tammy	EIS000614 / 0015
10 (2761)	Brown, Axll	EIS000897 / 0002
	Damiol	EIS001668 / 0002
	Deletto, Ryann	EIS001666 / 0002
	Griffeth, Carolyn	EIS001667 / 0002
	Lindros, Ann	EIS001669 / 0002
	McFail, Edward	EIS000856 / 0003
	Nguyen, Hannah	EIS000944 / 0002
	Ortega, Mireya	EIS000888 / 0003
	Richards, Karla	EIS001670 / 0002
	Swart, Jeffrey	EIS001205 / 0002
10 (3004)	Benezet, Cordy	EIS000692 / 0005
10 (3092)	Clark County, Nevada, Board of County Commissioners Williams, Myrna	EIS000706 / 0005 EIS002129 / 0005
10 (3990)	Public Citizen Shollenberger, Amy	EIS000724 / 0005
10 (4206)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0022
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0020
10 (4555)	STAR Foundation (Standing for Truth About Radiation) Cullen, Scott	EIS000225 / 0006
10 (4570)	U.S. Department of the Interior, U.S. Geological Survey Lewis, Barney	EIS001521 / 0084
10 (4610)	Walton, Barbara	EIS001430 / 0008
10 (4611)	Walton, Barbara	EIS001430 / 0009
10 (4749)	Citizens' Advisory Panel of the Oak Ridge Reservation Local Oversight Committee, Inc. Mulvenon, Norman	EIS001450 / 0010
10 (5167)	National Congress of American Indians/Nuclear Waste Program Holden, Robert	EIS001910 / 0006
10 (5186)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0011
10 (5187)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0012
10 (5261)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0020
10 (5282)	Shillinglaw, Fawn	EIS000817 / 0160

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10 (5549)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0188
10 (5550)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0045
10 (5556)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0189
10 (5740)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0344
10 (5741)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0345
10 (5743)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0347
10 (5744)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0348
10 (5745)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0349
10 (5746)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0350
10 (5747)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0351
10 (5748)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0352
10 (5749)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0353
10 (5750)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0354
10 (5964)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0054
10 (5968)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0052
10 (5972)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0050
10 (5974)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0049
10 (5980)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0010
10 (6000)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0027
10 (6044)	U.S. Nuclear Regulatory Commission Kane, William	EIS001898 / 0005
10 (6159)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0030

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10 (6575)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0060
10 (6578)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0061
10 (6580)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0062
10 (6581)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0063
10 (6583)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0064
10 (6585)	U.S. Environmental Protection Agency, Office of Federal Activities Sanderson, Richard	EIS001632 / 0065
10 (6727)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0078
10 (7115)	Malone, Charlie	EIS001106 / 0010
10 (7123)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0398
	Malone, Charlie	EIS001106 / 0015
10 (7152)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0049
10 (7362)	Malone, Charlie	EIS001106 / 0029
10 (7369)	Malone, Charlie	EIS001106 / 0032
10 (7374)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0425
	Malone, Charlie	EIS001106 / 0035
10 (7413)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0008
10 (7443)	U.S. Department of the Interior, Office of Environmental Policy and Compliance Taylor, Willie	EIS001969 / 0004
10 (7582)	Confederated Tribes and Bands of the Yakama Nation Palmer, Carroll	EIS001909 / 0004
10 (7594)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0072
10 (7629)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0104
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0103
10 (7803)	Brechin, Vernon	EIS001227 / 0002
10 (7805)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0007
10 (7853)	Brechin, Vernon	EIS001227 / 0004

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10 (8113)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0071
10 (8176)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0103
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0102
10 (8189)	Benezet, Louis	EIS001873 / 0012
10 (8446)	Viereck, Jennifer	EIS001397 / 0014
10 (8499)	Shillinglaw, Fawn	EIS000817 / 0162
10 (8500)	Shillinglaw, Fawn	EIS000817 / 0163
10 (8501)	Shillinglaw, Fawn	EIS000817 / 0164
10 (8553)	Shillinglaw, Fawn	EIS000817 / 0168
10 (8683)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0003
10 (8690)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0005
10 (8695)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0007
10 (8699)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0009
10 (8724)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division diBartolo, Russell	EIS002119 / 0009
10 (8741)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0011
10 (8747)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0013
10 (8814)	McHugh, Sue	EIS000869 / 0004 EIS002152 / 0003
10 (8860)	McHugh, Sue	EIS000869 / 0028
10 (8862)	McHugh, Sue	EIS000869 / 0029
10 (8864)	McHugh, Sue	EIS000869 / 0030
10 (8881)	Public Citizen Shollenberger, Amy	EIS001834 / 0022
10 (8889)	Public Citizen Shollenberger, Amy	EIS001834 / 0030
10 (8906)	McHugh, Sue	EIS000869 / 0033
10 (9353)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0066
10 (9354)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0067
10 (9355)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0068
10 (9356)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0069
10 (9357)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0070
10 (9467)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0138
10 (9485)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0150

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10 (9660)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0319
10 (9663)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0321
10 (9716)	Shundahai Network Moon-Sparrow, Julia	EIS002151 / 0006
10 (9740)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0324
10 (9749)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0333
10 (9752)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0335
10 (9887)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0435
10 (10006)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0502
10 (10259)	Dixon, Earl	EIS002216 / 0001
10 (10691)	Ross, Steve	EIS002141 / 0002
10 (10878)	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000053 / 0001 EIS000105 / 0002
10 (11101)	Shundahai Network Knutsen, Reinard	EIS002135 / 0007
10 (11178)	Law, Martha	EIS000466 / 0010
10 (11407)	Shundahai Network Scharff, John	EIS002251 / 0005
10 (11490)	Herrera, Helen	EIS002254 / 0003
10 (11505)	Vasconi, Bill	EIS002137 / 0006
10 (11522)	Shundahai Network Knutsen, Reinard	EIS002252 / 0008
10 (12092)	Gleason, Mary	EIS002307 / 0006
10 (12123)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0422
10 (12247)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0027
10 (12248)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0010
10 (12271)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0023
10 (12319)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	010242 / 0030
10 (12338)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0009
10 (12381)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0389
10 (12589)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0008
10 (12599)	Timbisha Shoshone Tribe Helmer, Bill	010279 / 0019
10 (12697)	Nevada Test Site Community Advisory Board Claire, Phillip	EIS001816 / 0006
10 (13310)	Brechin, Vernon	010317 / 0006

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10 (13311)	Brechin, Vernon	010317 / 0007
10 (13452)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	010296 / 0038
10 (13527)	Eureka County Yucca Mountain Information Office Fiorenzi, Leonard	010392 / 0010
11.1 (6)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000069 / 0009
	Nye County, Nevada, Nuclear Waste Project Office Buqo, Thomas	EIS000056 / 0003 EIS000080 / 0004
	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0008
	Cleveland, David	EIS000114 / 0012
	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0003
	Kostelaz, Rick	EIS001639 / 0002
	Nye County, Nevada, Board of County Commissioners Walker, Jamieson	EIS000061 / 0003
11.1 (45)	Mineral County, Nevada, Board of Commissioners Funk, Arlo	010182 / 0021
	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	010073 / 0014
	Caliente, Nevada, City of Phillips, Kevin	010096 / 0012
11.1 (48)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0009
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0008
	Vasconi, Bill	EIS000353 / 0002
11.1 (76)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000069 / 0003 EIS000079 / 0006
	Nye County, Nevada, Department of Natural Resources and Federal Facilities Giampaoli, Mary	EIS000081 / 0009
	Nye County, Nevada, Department of Natural Resources and Federal Facilities Walker, Jamieson	EIS000060 / 0010 EIS000151 / 0010 EIS000155 / 0003
11.1 (97)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001954 / 0002
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0004
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0057
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0007
11.1 (102)	Benezet, Louis	EIS001873 / 0076

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11.1 (102) (continued)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division Dilger, Fred	EIS000228 / 0004
	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0001
	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0038
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0055
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0036
	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000142 / 0010
		EIS000350 / 0009
	Shrader-Frechette, Kristin	EIS001522 / 0015
	Esmeralda County, Nevada, Board of County Commissioners Viljoen, Benjamin	010230 / 0002
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0047
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0026
11.1 (346)	McKinney, Paul	EIS000049 / 0004
11.1 (514)	Esmeralda County, Nevada, Board of County Commissioners Viljoen, Benjamin	EIS000154 / 0002
11.1 (653)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Swartz, Ginger	EIS000157 / 0001
11.1 (655)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS000192 / 0002
11.1 (764)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	EIS000140 / 0004
11.1 (1188)	Cleveland, David	EIS000114 / 0009
11.1 (1201)	Rose, Sharon	EIS000379 / 0001
11.1 (1473)	Bishop Owens Valley Paiute Tribe Moose, Gayleen	010340 / 0002
11.1 (1809)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	EIS000332 / 0008
11.1 (1819)	Savage, Felix	EIS000771 / 0003
11.1 (1822)	Sirnes, S. T.	EIS000198 / 0003
11.1 (1877)	Alliance for Nuclear Accountability Eldredge, Maureen	EIS000443 / 0009
11.1 (2410)	White Pine County, Nevada, Board of County Commissioners Eldridge, Brent	EIS001160 / 0129
	Ely Shoshone Tribe Kaamasee, Arthur	EIS001441 / 0124
11.1 (3167)	Placer Dome U.S. Schoen, Stephen	EIS001195 / 0005
11.1 (4571)	U.S. Department of the Interior, U.S. Geological Survey Lewis, Barney	EIS001521 / 0085
11.1 (4869)	deBottari, Louis	EIS000337 / 0007 EIS000596 / 0005
11.1 (5204)	Inyo County, California, Board of Supervisors Dorame, Michael	EIS001443 / 0028

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11.1 (5554)	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0046
11.1 (5999)	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0024
11.1 (6048)	U.S. Nuclear Regulatory Commission Kane, William	EIS001898 / 0007
11.1 (6744)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0080
11.1 (6771)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0081
11.1 (7182)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0073
11.1 (7229)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0122
11.1 (7302)	Petersen, Art	010485 / 0006
11.1 (7415)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0010
11.1 (8182)	Lander County, Nevada Duke, Bonnie	EIS001912 / 0107
	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0106
11.1 (8187)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0108
11.1 (8188)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0109
11.1 (8190)	Churchill County, Nevada, Office of the Churchill County Commissioners Regan, James	EIS001653 / 0110
11.1 (8416)	Benezet, Louis	EIS001873 / 0078
11.1 (8664)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0024
11.1 (8702)	Darby, Forrest	010004 / 0002
11.1 (9087)	Benezet, Louis	EIS001873 / 0079
11.1 (9309)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0036
11.1 (9315)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0045
11.1 (10507)	Dallas, Don	EIS002105 / 0007
11.1 (10802)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0003
11.1 (11329)	Clark County, Nevada, Department of Comprehensive Planning, Nuclear Waste Division diBartolo, Russell	EIS002267 / 0003
11.1 (11451)	Caliente, Nevada, City of Phillips, Kevin	010096 / 0009
11.1 (11914)	Economic Development Partnership Chaput, Ernest	EIS000308 / 0001
11.1 (12058)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0018
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0022

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11.1 (12433)	Malone, Charlie	EIS001106 / 0003
11.1 (13010)	Consolidated Group of Tribes and Organizations Arnold, Richard	010334 / 0007
11.1 (13012)	Consolidated Group of Tribes and Organizations Arnold, Richard	010334 / 0009
11.1 (13211)	Las Vegas, Nevada, City of Goodman, Oscar	010244 / 0010
11.1 (13222)	Las Vegas, Nevada, City of Goodman, Oscar	010244 / 0021
11.1 (13375)	Mineral County, Nevada, Board of Commissioners Funk, Arlo	010182 / 0017
11.1 (13456)	Nye County, Nevada, Department of Natural Resources and Federal Facilities Bradshaw, Les	010296 / 0042
11.2 (56)	Greater Las Vegas Association of REALTORS Coles, Gary	EIS002107 / 0004
	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0012
	Mineral County, Nevada, Board of County Commissioners Wallis, Jackie	EIS001660 / 0009
11.2 (108)	Anaya, Cheryl	EIS001894 / 0003
	Anonymous	EIS000712 / 0005
	Benezet, Louis	EIS001873 / 0075
	OGD Awareness Bullcreek, Margene	EIS001459 / 0003
	Nye County, Nevada, Board of County Commissioners Carver, Dick	EIS001879 / 0037
	Lincoln County, Nevada, Board of County Commissioners Donohue, Paul	EIS000677 / 0004
	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS000236 / 0008
	Caliente, Nevada, City of Phillips, Kevin	EIS000226 / 0016
	Rogers, Stephen	EIS002142 / 0002
	Ross, Steve	EIS002141 / 0006
	Michigan, State of, Public Service Commission Strand, John	EIS000444 / 0004
	New York State Energy Research and Development Authority Valentino, F.	EIS001955 / 0005
	Vasconi, Bill	EIS000694 / 0002
	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0166
11.2 (202)	Gruening, Jamie	EIS000632 / 0002
	Gruening, V.	EIS001241 / 0007
	Louden, Lee	EIS000621 / 0006
	Ross, Steve	EIS002141 / 0004
11.2 (454)	McKinney, Patricia	EIS000091 / 0002
11.2 (809)	Devlin, Sally	EIS000103 / 0007
11.2 (982)	Nye County, Nevada, Board of County Commissioners Giampaoli, Mary	EIS000242 / 0003 EIS000245 / 0005
11.2 (996)	Caliente, Nevada, City of, City Council Wallis, Stan	EIS000235 / 0002
11.2 (2415)	Plunkett, Karen	EIS000659 / 0001

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11.2 (2720)	Louden, Nancy	EIS000637 / 0003
11.2 (2968)	Sierra Club, Southern Nevada Group Forkos, Marcia	EIS000727 / 0013
11.2 (3123)	Feldman, Jane	EIS000726 / 0015
11.2 (3125)	Feldman, Jane	EIS000726 / 0017
11.2 (5169)	National Congress of American Indians/Nuclear Waste Program Holden, Robert	EIS001910 / 0008
11.2 (5721)	White Pine County, Nevada, Board of County Commissioners Kirkeby, Kevin	010073 / 0010
11.2 (5844)	Goitein, Ernest	EIS001845 / 0006
11.2 (6142)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0167
11.2 (6143)	National Association of Regulatory Utility Commissioners Gray, Charles	EIS001654 / 0031
11.2 (6144)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0503
11.2 (7191)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0082
11.2 (7233)	Lincoln County, Nevada, Board of County Commissioners Frehner, Dan	EIS001337 / 0120
11.2 (8259)	Watts, Fern	EIS001777 / 0002
11.2 (9112)	Nations, Linda	EIS001937 / 0004
11.2 (9306)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0033
11.2 (9938)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0466
11.2 (9989)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0493
11.2 (9990)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0495
11.2 (10278)	Kelso, Larry	EIS002203 / 0003
11.2 (10478)	Vasconi, Bill	EIS002103 / 0004
11.2 (10493)	Dallas, Don	EIS002105 / 0006
11.2 (10755)	Heath, Roy	EIS002145 / 0002
11.2 (10805)	Esmeralda County, Nevada, Board of County Commissioners Ealey, Harriet	EIS002043 / 0007
11.2 (11716)	Bryant, Sheryl	EIS000601 / 0003
11.2 (12501)	Eureka County, Nevada, Board of County Commissioners Goicoechea, Pete	EIS001878 / 0089
12 (14)	East St. Louis Community Action Network Andria, Kathy	EIS001775 / 0006
	OGD Awareness Bullcreek, Margene	EIS001475 / 0004
	Cahall, Diana	EIS000475 / 0012
	deBottari, Louis	EIS001923 / 0004 EIS002250 / 0006
	Public Citizen, Critical Mass Energy Project Hauter, Wenonah	EIS000455 / 0009
	Positives for Peace and Environmental Justice Karch, Gary	EIS001312 / 0001
	Lems-Dworkin, Carol	EIS001324 / 0007
	Nevada, State of, Office of the Governor, Agency for Nuclear Projects Loux, Robert	EIS001887 / 0415

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12 (14) (continued)	Malone, Charlie	EIS001106 / 0041
	Molloff, Jeanine	EIS001766 / 0001
	O'Keefe, Kathleen	EIS001776 / 0003
12 (139)	Ælfgifie	EIS001933 / 0006
	Anderson, Robert	010239 / 0001
	Ashman, Peggy	EIS000741 / 0002
	Bastin, Clinton	EIS000815 / 0001
	Bolger, Sean	EIS001111 / 0002
	Boniface, George	EIS001003 / 0001
	Bratton, Tara	EIS002160 / 0002
	Cahall, Diana	EIS000475 / 0004
		EIS001515 / 0001
	Charlton, Bud	EIS000657 / 0001
	Clemens, Byron	EIS001040 / 0030
		EIS001774 / 0016
	Cody, Sharon	EIS001610 / 0002
	Cook, Michael	EIS000565 / 0003
	Dallas, Don	EIS002105 / 0001
	deBottari, Louis	EIS002121 / 0003
	Devlin, Sally	EIS000409 / 0002
	Doe, John	EIS000531 / 0001
	Inyo County, California, Board of Supervisors	EIS000262 / 0004
	Dorame, Michael	
		EIS000370 / 0004
	Errett, Janet	EIS000120 / 0001
	Feldman, Jane	EIS000726 / 0002
	Ferreira, Mateo	EIS002101 / 0002
	Progressive Leadership Alliance of Nevada	EIS000284 / 0003
	Fulkerson, Bob	
		EIS000564 / 0002
	Goldstein, Gay	EIS000002 / 0006
	Gratrix, Bob	EIS002159 / 0001
	Citizens for Alternatives to Radioactive Dumping	EIS000507 / 0001
	Greenwald, Janet	
	Citizen Alert	EIS001481 / 0001
	Hadder, John	
	Nevada Environmental Coalition Inc.	010128 / 0005
	Hall, Robert	
	Harmon, Amber	EIS000571 / 0009
	Harney, Corbin	EIS000088 / 0001
		EIS001483 / 0001
		EIS002097 / 0002
	Shundahai Network	EIS002240 / 0001
	Harney, Corbin	
	Hathaway, Wanda	EIS000010 / 0003
	Physicians for Social Responsibility	EIS001807 / 0004
	Hattis, Ronald	
	Hepburn, Paul	EIS001630 / 0002
	Hickman, Judith	EIS000860 / 0001
	Hopkins, Steve	EIS000250 / 0009
	Nuclear Information and Resource Service	EIS001474 / 0010
	Kamps, Kevin	
	Kaplan, Ed	EIS000598 / 0002
	Keaton, Hal	EIS000680 / 0002

Comment Location	Commenter	Comment Document / Comment No.
12 (139) (continued)	King, Joan	EIS000158 / 0002
	Klotz, Themis	EIS001584 / 0001
		EIS001606 / 0001
	Shundahai Network	EIS000458 / 0002
	Knutsen, Reinard	
		EIS001465 / 0003
		EIS001480 / 0003
		EIS002135 / 0001
		EIS002252 / 0003
	Nuclear Energy Information Service	EIS001320 / 0003
	Kraft, David	
	Kring, Bernice	EIS001448 / 0005
	U.S. House of Representatives - Ohio	EIS001543 / 0002
	Kucinich, Dennis	
		EIS001905 / 0001
	Lehman, Dale	EIS001596 / 0002
	Lems-Dworkin, Carol	EIS001437 / 0003
	Lester, Grace	EIS002289 / 0002
	Lewis, Marvin	010068 / 0004
	Licata, Gail	EIS000745 / 0002
	People Against Radioactive Dumping	EIS002248 / 0007
	Lopez, Ruth	
	Ludlow, Grant	EIS000104 / 0001
	Mack, Eva	EIS001810 / 0003
	Committee to Bridge the Gap	EIS000539 / 0001
	Magavern, Bill	
	Malone, Charlie	EIS001106 / 0020
	Citizen Alert	EIS000705 / 0002
	Mason, Sara	
	McCormick, Bill	EIS001425 / 0002
	Sisters of Loretto	EIS001004 / 0003
	McGivern, Mary	
		EIS001743 / 0003
	McKeel, Daniel	EIS001021 / 0004
	Menzer, David	EIS001839 / 0002
	Miller, Kit	EIS000352 / 0002
	Molloff, Jeanine	EIS001766 / 0009
	Shundahai Network	EIS002151 / 0007
	Moon-Sparrow, Julia	
	Utah Peace Test	EIS001476 / 0009
	ofthedesert, Cynthia	
	Women's Action for New Directions Education Fund	EIS000160 / 0005
	Ortmeyer, Pat	
		EIS000292 / 0004
	Pearson, Lee	EIS000681 / 0002
	Hopi Tribe	EIS001451 / 0008
	Quotchytewa, Phillip	
	Redden, Geri	EIS001803 / 0003
	Robertson, Terri	EIS002153 / 0001
	Shundahai Network	EIS002251 / 0002
	Scharff, John	
	Schmidt, Jerry	EIS001482 / 0005
	Selbach, LaVonne	EIS000082 / 0002
	Shillinglaw, Fawn	EIS000817 / 0114

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12 (139) (continued)	Shrader-Frechette, Kristin	EIS001522 / 0019
	Smith, Kathleen	EIS001749 / 0003
	Shundahai Network	EIS001907 / 0016
	Snyder, Susi	
		EIS002247 / 0013
	Sontag, Fran	EIS001748 / 0001
	Shundahai Network	EIS002249 / 0006
	Sullivan, Graham	
	Sutton, Robert	EIS001008 / 0001
	The Hopi Tribe	010042 / 0007
	Taylor, Wayne	
		010091 / 0009
	Treacy, Rosemary	EIS000239 / 0002
	Walsh, Jane	EIS002148 / 0002
	White, Delores	EIS001454 / 0005
	Wissbeck, Larry	EIS000688 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0148
	Woodbury, Bruce	
	Shundahai Network	EIS002099 / 0007
	Xenos, Michelle	
	Blue Ridge Environmental Defense League	EIS000296 / 0008
	Zeller, Janet	
	Zolkover, Adrian	EIS000714 / 0003
		EIS002126 / 0004
12 (1399)	Nuclear Information and Resource Service	EIS000294 / 0005
	Olson, Mary	
12 (1614)	Ludlow, Grant	EIS000104 / 0002
12 (7259)	Tennessee Valley Authority	EIS001190 / 0006
	Burzynski, Mark	
	Nuclear Energy Institute	EIS001832 / 0006
	Kraft, Steven	
12 (7276)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0445
	Loux, Robert	
	Malone, Charlie	EIS001106 / 0018
12 (7283)	Malone, Charlie	EIS001106 / 0019
12 (8838)	Florida, State of, Public Service Commission	EIS000216 / 0009
	Clark, Susan	
12 (10354)	Hunter, Meredith	EIS001371 / 0002
12 (10489)	deBottari, Louis	EIS002138 / 0004
12 (10754)	Heath, Roy	EIS002145 / 0001
12 (11184)	Allister, Pam	EIS000249 / 0003
12 (12102)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0402
	Loux, Robert	
12 (12103)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0403
	Loux, Robert	
12 (12104)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0404
	Loux, Robert	
13 (5)	Adams, JoAnn	EIS000874 / 0002
	Alexander, Cheryl	EIS000255 / 0005

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12 (139) (continued)	Shrader-Frechette, Kristin	EIS001522 / 0019
	Smith, Kathleen	EIS001749 / 0003
	Shundahai Network	EIS001907 / 0016
	Snyder, Susi	
		EIS002247 / 0013
	Sontag, Fran	EIS001748 / 0001
	Shundahai Network	EIS002249 / 0006
	Sullivan, Graham	
	Sutton, Robert	EIS001008 / 0001
	The Hopi Tribe	010042 / 0007
	Taylor, Wayne	
		010091 / 0009
	Treacy, Rosemary	EIS000239 / 0002
	Walsh, Jane	EIS002148 / 0002
	White, Delores	EIS001454 / 0005
	Wissbeck, Larry	EIS000688 / 0001
	Clark County, Nevada, Board of County Commissioners	EIS001888 / 0148
	Woodbury, Bruce	
	Shundahai Network	EIS002099 / 0007
	Xenos, Michelle	
	Blue Ridge Environmental Defense League	EIS000296 / 0008
	Zeller, Janet	
	Zolkover, Adrian	EIS000714 / 0003
		EIS002126 / 0004
12 (1399)	Nuclear Information and Resource Service	EIS000294 / 0005
	Olson, Mary	
12 (1614)	Ludlow, Grant	EIS000104 / 0002
12 (7259)	Tennessee Valley Authority	EIS001190 / 0006
	Burzynski, Mark	
	Nuclear Energy Institute	EIS001832 / 0006
	Kraft, Steven	
12 (7276)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0445
	Loux, Robert	
	Malone, Charlie	EIS001106 / 0018
12 (7283)	Malone, Charlie	EIS001106 / 0019
12 (8838)	Florida, State of, Public Service Commission	EIS000216 / 0009
	Clark, Susan	
12 (10354)	Hunter, Meredith	EIS001371 / 0002
12 (10489)	deBottari, Louis	EIS002138 / 0004
12 (10754)	Heath, Roy	EIS002145 / 0001
12 (11184)	Allister, Pam	EIS000249 / 0003
12 (12102)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0402
	Loux, Robert	
12 (12103)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0403
	Loux, Robert	
12 (12104)	Nevada, State of, Office of the Governor, Agency for Nuclear Projects	EIS001887 / 0404
	Loux, Robert	
13 (5)	Adams, JoAnn	EIS000874 / 0002
	Alexander, Cheryl	EIS000255 / 0005

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13 (5) (continued)	Earth Challenge	EIS000289 / 0009
	Alzner, Susan	
	WILPF	010465 / 0002
	Anderson, Gloria-Jeanne	
	Anonymous	010294 / 0006
	Bailey, John	EIS001841 / 0003
	Illinois Peace Action	EIS001674 / 0001
	Balch, Jeff	
	Barfield, Ellen	EIS000454 / 0002
	Barnes, Judy	EIS001650 / 0004
	Barrowes, Steven	EIS000927 / 0002
	Bastin, Clinton	EIS000815 / 0009
	Bayne, Luke	EIS000064 / 0002
	Bayne, Luke	EIS000577 / 0003
	Bedonie, Tom	EIS001773 / 0002
	Berenson, David	EIS001560 / 0002
	Bianchi, Vince	EIS000929 / 0007
	Bingham, Lisa	EIS001694 / 0002
	Blank, Erika	EIS000426 / 0007
	Bolten, Kim	EIS001131 / 0003
	Botwinick, Joan	EIS000436 / 0003
	Brakefield, Zac	EIS001304 / 0002
	Bratton, Tara	EIS002160 / 0001
	Burns, David	EIS001360 / 0002
	Caligiuri, Irene	EIS000749 / 0002
	Campanella, JoAnne	EIS002185 / 0002
	Prairie Island, Minnesota, City of	EIS000456 / 0005
	Campbell, Darrell	
	Caraccio, Laura	EIS001687 / 0005
	Beowawe Crescent Valley Nuclear Waste Awareness Committee	EIS000623 / 0005
	Carruthers, Joseph	
		EIS000642 / 0006
	Caudle, Joe	EIS001301 / 0001
	Green Party of St. Louis	EIS000987 / 0004
	Chicherio, Barbara	
	Christie, Iryne	EIS001128 / 0001
	Circost, Namaskar	EIS000905 / 0008
	Citron, Kay	EIS000167 / 0005
	International Brotherhood of Electrical Workers Local 15	EIS001582 / 0001
	Citta, Nick	
	Clark, Darlyne	EIS001495 / 0002
	Cocke, Marie	EIS001943 / 0007
	Collins, Kevin	EIS000324 / 0002
	Congdon, Lois	EIS000306 / 0005
	Conway, Ursula	EIS000784 / 0003
		EIS002155 / 0006
	Cox, Barbara	EIS001217 / 0002
	Damel, David	EIS001278 / 0006
	Western Shoshone Defense Project	EIS001965 / 0007
	Dann, Carrie	
	American Nuclear Society, Savannah River Section	EIS000300 / 0006
	Dewes, John	
	Divis, Mary-Jo	EIS001352 / 0002

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13 (5) (continued)	Drey, Kay	EIS001000 / 0003
		EIS001736 / 0003
	International Brotherhood of Electrical Workers	EIS000448 / 0001
	Dushaw, James	
	Dziegiel, Henry	010261 / 0006
	Sargent & Lundy Engineers	EIS001581 / 0001
	Erler, Bryan	
	Estella, Lucille	EIS001071 / 0004
	Estreito, Anthony	EIS001132 / 0003
	Falk, Vera	EIS001753 / 0005
	Felkner, Larry	EIS000979 / 0001
	Fish, Faith	EIS000020 / 0001
	Folsom, Therese	EIS001647 / 0004
	Foxworth, Margaret	EIS000321 / 0002
	Friedman, Maurice	EIS002179 / 0002
	Fritz, Edward	EIS001293 / 0002
		EIS001562 / 0002
	Gann, Dawn	EIS001348 / 0002
	Gannis, Steve	EIS001555 / 0003
	Gehr, Patricia	EIS001101 / 0006
	Gilleo, Margaret	EIS001393 / 0002
	Gimsky, Ken	EIS001357 / 0002
	Gledhill, Elizabeth	EIS000419 / 0002
	John P.Gnaedinger Research Corp.	EIS001594 / 0002
	Gnaedinger, John	
	Goldberg, Leah	EIS000396 / 0001
	Gondzur, Andrew	EIS001080 / 0002
	Gordon, Lenore	EIS001496 / 0002
	Gordon, William	EIS001345 / 0002
	Grace, Ana	EIS001791 / 0001
	Gratrix, Bob	EIS002159 / 0004
	Grazier, Bill	010086 / 0001
	Griffeth, Carolyn	EIS001667 / 0003
		EIS001685 / 0005
	Griswald, Diane	EIS001368 / 0002
	Guenther, Charles	EIS001440 / 0002
	Citizen Alert	EIS002284 / 0001
	Hadder, John	
	Hatfield, Scott	EIS000500 / 0003
	Hauser, Lenore	EIS001431 / 0002
	Hebert, Donna	EIS000526 / 0005
	Hellgeth, Jeanette	EIS000956 / 0003
	Hendricks, Karen	EIS001350 / 0002
	Henze, Walter	EIS001389 / 0006
		EIS001858 / 0002
	Ursuline Sisters of Kirkwood	EIS001173 / 0002
	Hickey, Julie	
	Holek, Stan	EIS001359 / 0002
	Hopper, Heidi	EIS001428 / 0002
	Illegible	EIS001346 / 0002
		EIS001364 / 0002
		EIS001487 / 0002
		EIS001491 / 0002
		EIS002006 / 0004

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13 (5) (continued)	Illegible, Garry	EIS001367 / 0002
	Illegible, Patricia	EIS001356 / 0002
	Jacobson, Joan	EIS001084 / 0004
	League of Women Voters	EIS001586 / 0001
	Johnson, Betty	
	Johnston, Art	EIS000389 / 0002
		EIS001059 / 0001
	Jordan, Susan	EIS001439 / 0004
	Jose, Joshua	EIS001675 / 0001
	Nuclear Information and Resource Service	EIS001471 / 0007
	Kamps, Kevin	
		EIS001474 / 0009
	Positives for Peace and Environmental Justice	EIS001312 / 0002
	Karch, Gary	
	Kean, Beth	EIS001409 / 0005
	Shundahai Network	EIS001465 / 0002
	Knutsen, Reinard	
		EIS001480 / 0002
		EIS002135 / 0003
		EIS002252 / 0005
	U.S.Chamber Business	EIS000447 / 0003
	Kovacs, Bill	
	Kring, Bernice	EIS001448 / 0002
	Kuchuris, Christopher	010112 / 0004
	Kuck, Kay	EIS000317 / 0001
	Kunkel, Michael	010458 / 0002
	Ohio Citizen Action	EIS001568 / 0002
	Lauber, Maureen	
	Leclercq, Carol Jene	EIS000563 / 0002
	Lems, Kristin	EIS001595 / 0006
	Lems-Dworkin, Carol	EIS001324 / 0009
		EIS001437 / 0013
	Lewis, Jay	EIS001024 / 0002
	Lindecke, Fred	010001 / 0001
	Lindstrom, Richard	EIS000329 / 0003
	Lipe, Marrianna	EIS001363 / 0002
	Maple, Susan	EIS001340 / 0005
	Marlovitz, Linda	EIS001604 / 0003
	Marsden, Velma	EIS001494 / 0002
	Marsh, Amy	EIS000499 / 0010
	Mayes, Susan	EIS002281 / 0006
	Mays, Gordon	EIS001347 / 0002
	Mays, Wallace	EIS000493 / 0003
	U.S. House of Representatives - Georgia	EIS000271 / 0003
	McCall, Tom	
	McClarren, Thomas	EIS001764 / 0007
	McClellan, Brad	EIS000548 / 0002
	McGraw, John	EIS000628 / 0001
	Meadows, Lora	EIS001983 / 0002
	Mihill, Doris	EIS001339 / 0002
	Ohio, State of, Ohio House of Representatives	EIS001280 / 0005
	Miller, Dale	
	Miller, Kit	EIS000352 / 0004
	Miller, Michael	010446 / 0002

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13 (5) (continued)	Miller, William	EIS001037 / 0004
	Molloff, Jeanine	EIS001766 / 0005
	Money, Daniel	EIS001960 / 0002
	Oregon State University	010427 / 0002
	Moore, Erin	
	Mount, George	EIS002279 / 0001
	Mount, Julia	EIS002280 / 0001
	Waste Ideas Network	EIS001318 / 0002
	Mullarkey, Barbara	
	Myers, Sarah	EIS001016 / 0003
		EIS001779 / 0008
	Nazario, Joseph	EIS001355 / 0002
	Niemann, Josephine	EIS001073 / 0002
	O'Connor, Amy	EIS000766 / 0006
		EIS001478 / 0006
	Ochs, Richard	EIS000453 / 0004
	Okenfuss, Elizabeth	EIS000978 / 0001
	Olson, Mary	EIS000325 / 0003
	Women's Action for New Directions Education Fund	EIS000160 / 0006
	Ortmeyer, Pat	
		EIS000292 / 0006
	Overland, Carol	EIS001966 / 0012
	Ozbakan, Kristine	EIS000395 / 0002
	Page, Marc	EIS001279 / 0001
	Panning, Adeil	EIS001362 / 0002
	Pemelton, Jack	EIS001351 / 0002
	Perkins, Jerry	EIS001493 / 0002
	Perna, Frank	EIS001049 / 0004
	Perry, Gavin	EIS000997 / 0002
		EIS001734 / 0007
	Petersen, Art	EIS001377 / 0014
		010485 / 0009
	Pfiester, Carolyn	EIS002168 / 0006
		010365 / 0001
	Plummer, Nancy	EIS001231 / 0001
		EIS001243 / 0007
	Pulsipher, Rick	EIS001532 / 0001
	Raddatz, Alan	EIS001913 / 0002
	Rash, Dennis	EIS001575 / 0003
	Rathburn, Lesley	EIS000327 / 0004
	Reimer, Nancy	EIS001204 / 0013
	Richards, Karla	EIS001670 / 0004
	Robertson, Henry	EIS000974 / 0003
	Rogers, Stephen	EIS001077 / 0003
	Schirn, Jackie	EIS001055 / 0003
		EIS001785 / 0002
	Schosser, Claire	EIS001222 / 0008
	Schroeder, Linda	EIS000501 / 0004
	GREEN Party of California	EIS000722 / 0001
	Schumann, Klaus	
		EIS002100 / 0001
	Scott, Jay	EIS001366 / 0002
	Sellard, Lon	EIS001361 / 0002
	Sellard, Nancy	EIS001354 / 0002

Comment Location	Commenter	Comment Document / Comment No.
13 (5) (continued)	Sellard, Robert	EIS001349 / 0002
	Shillinglaw, Fawn	EIS000817 / 0035
	Singer, Stacy	EIS000314 / 0002
	Sipp, Valarie	EIS000311 / 0002
	Smith, Doris	EIS001358 / 0002
	Smith, Kathleen	EIS001749 / 0006
	Smith, Fred	EIS001353 / 0002
	Smith, Vanecia	EIS001053 / 0002
	Smucker, Richard	EIS000736 / 0002
	Shundahai Network	EIS002133 / 0002
	Snyder, Susi	
		EIS002199 / 0001
		EIS002247 / 0011
	Stachunska, Agnes	EIS001054 / 0002
	Shundahai Network	EIS001840 / 0006
	Sullivan, Graham	
	Sunnes, Bradley	EIS000345 / 0004
	Swanson, Rochelle	EIS000600 / 0003
	Tebbetts, Chartis	EIS001066 / 0003
	Educational Directions	EIS000180 / 0003
	Telfer, Richard	
	Terry, Susan	EIS000579 / 0001
	Thallheimer, George	EIS001507 / 0002
	Thomas, Steven	EIS001795 / 0002
	Tilton , Bill	EIS001490 / 0002
	Tilton, Dorothy	EIS001488 / 0002
	Gas Technology Institute	010430 / 0002
	Villaire, Louis	
	Citizens Action Coalition of Indiana	EIS001590 / 0001
	Voelker, Roger	
	Walton, Barbara	EIS001430 / 0001
	Ward, Fay	EIS001489 / 0002
	Weber, Dan	EIS000582 / 0002
	Ohio Public Industry Research Group	EIS001550 / 0007
	Weidner, Maria	
	Welsh, Thomas	EIS001722 / 0006
	Weston, Michele	EIS000508 / 0001
	Prairie Island Indian Community	EIS000490 / 0005
	White, Byron	
	White, Laura	EIS001629 / 0005
	Wilcox, Robert	EIS000181 / 0004
	Williams, Terri	EIS001032 / 0003
	Wilson, Debra	010085 / 0004
	Wilson-Booth, Ursula	EIS000813 / 0001
	Winslow, Geralyn	EIS001108 / 0001
	Americans for Clean Responsible Energy	EIS002266 / 0001
	Wolfe, Bertram	
	Wootan, Cathy	EIS001221 / 0002
	Wright, Patricia	EIS001365 / 0002
	Shundahai Network	EIS002099 / 0003
	Xenos, Michelle	
	Young, Jim	EIS001001 / 0004
13 (35)	Georgians for Clean Energy	010260 / 0006
	Barczak, Sara	

Comment Location	Commenter	Comment Document / Comment No.
13 (35) (continued)	Barrowes, Steven	010284 / 0001
	Chastain, E.	010002 / 0004
	Hopkins, Steve	EIS000250 / 0008
	King, Joan	010012 / 0002
	Shundahai Network	EIS001480 / 0004
	Knutsen, Reinard	
	Perna, Frank	EIS001049 / 0003
	Pfiester, Carolyn M.	010365 / 0002
	Rogers, Stephen	EIS001077 / 0002
	Blue Ridge Environmental Defense League	EIS000217 / 0006
	Zeller, Janet	
		EIS000296 / 0004
13 (37)	Andrus, Calvin	EIS001468 / 0003
	Georgians for Clean Energy	010260 / 0002
	Barczak, Sara	
	Benezet, Louis	EIS002158 / 0003
	Devlin, Sally	010268 / 0005
		010305 / 0005
	Mineral County, Nevada, Board of Commissioners	010182 / 0023
	Funk, Arlo	
	Hanson, Jo	EIS001509 / 0002
	Hoyt, Becky	EIS002053 / 0002
	League of Women Voters	EIS001586 / 0003
	Johnson, Betty	
	Ohio Citizens Against a Radioactive Environment	EIS001288 / 0003
	Kline, Connie	
		EIS001551 / 0002
	Mahr, Ed	EIS001804 / 0001
	Prairie Island Indian Community	EIS000328 / 0001
	NoLastName	
	Reed, Don	EIS002146 / 0006
	Shillinglaw, Fawn	EIS000817 / 0077
	Zolkover, Adrian	EIS002126 / 0006
13 (72)	OGD Awareness	EIS001459 / 0001
	Bullcreek, Margene	EIS001475 / 0008
		EIS002106 / 0006
	Nuclear Information and Resource Service	EIS001471 / 0008
	Kamps, Kevin	
	Shillinglaw, Fawn	EIS000817 / 0151
	Ungricht, Margo	EIS001152 / 0001
		EIS001153 / 0001
		EIS001154 / 0001
13 (131)	Darby, Forrest	EIS002140 / 0003
	Friedman, Maurice	EIS002179 / 0001
	Healy, Gretchen	EIS000951 / 0001
	Kuntz, Felix	EIS001126 / 0005
	McFail, Edward	EIS000856 / 0001
	Mitchell, Kirsten	EIS002290 / 0001
	Pappas, Carmen	EIS001413 / 0002
	Redden, Geri	EIS001803 / 0001
	Wilson, David	EIS000977 / 0002
		EIS001127 / 0005
13 (211)	OGD Awareness	EIS002106 / 0002
	Bullcreek, Margene	

Comment Location	Commenter	Comment Document / Comment No.
13 (211) (continued)	Cahall, Diana	EIS001952 / 0007
	Dallas, Don	EIS002105 / 0002
	Detraz, Marjorie	EIS002128 / 0001
	Devlin, Sally	010162 / 0005
	Downwinders	EIS001464 / 0001
	Erickson, Steve	
	Grey, Marty	EIS001202 / 0005
	Negin, Gary	EIS002260 / 0002
13 (227)	Conn, Corey	EIS001321 / 0002
	Dziegiel, Henry	010028 / 0005
		010311 / 0012
	Nuclear Information and Resource Service	EIS000467 / 0007
	Kamps, Kevin	EIS001561 / 0003
	Shundahai Network	EIS000458 / 0010
	Knutsen, Reinard	
	Perna, Frank	010110 / 0003
	Nevada Nuclear Waste Task Force, Inc.	010123 / 0005
	Treichel, Judy	
13 (618)	Wilcox, Robert	EIS000181 / 0005
13 (1138)	Sierra Club	EIS000270 / 0025
	Maret, Susan	
13 (1205)	Georgia, State of, House of Representatives	EIS000272 / 0002
	Orrock, Nan	
13 (1243)	Raddatz, Alan	010093 / 0002
13 (1548)	White Pine County, Nevada	EIS000357 / 0007
	Baughman, Mike	
	White Pine County, Nevada, Board of County Commissioners	EIS001160 / 0065
	Eldridge, Brent	
	Ely Shoshone Tribe	EIS001441 / 0061
	Kaamasee, Arthur	
13 (1906)	Nester, Dennis	EIS000464 / 0002
13 (2004)	Jones, Terry	EIS000528 / 0001
13 (2072)	Thompson, James	EIS000765 / 0002
13 (2628)	Zolkover, Adrian	EIS000714 / 0004
13 (2790)	Dugan, Barbara	EIS000882 / 0003
13 (2793)	Minghi, John	EIS000887 / 0003
13 (3206)	Siller, Barbette	EIS001133 / 0003
13 (3657)	Perez, Barbara	EIS000926 / 0007
13 (3921)	Cleveland Peace Action	EIS001287 / 0001
	Chiappa, Francis	
13 (3962)	Cleveland Peace Action	EIS001547 / 0001
	Chiappa, Francis	
13 (4139)	Wilson, David	EIS001127 / 0002
13 (4337)	Grey, Marty	EIS001202 / 0007
13 (4687)	Nuclear Information and Resource Service	EIS001471 / 0001
	Kamps, Kevin	
13 (4801)	Gateway Green Alliance	EIS001535 / 0004
	Romano, Daniel	
13 (4862)	DeFelice, Holly	EIS001708 / 0002
13 (4893)	deBottari, Louis	EIS000337 / 0033
13 (4980)	Hackert, David	010144 / 0002
13 (5218)	Brennan, Michael	EIS001322 / 0001
13 (5555)	Weinberg, Piper	010235 / 0008
13 (5642)	Delcoure, Sandra	010100 / 0003

Comment Location	Commenter	Comment Document / Comment No.
13 (5917)	Bastin, Clinton	EIS000815 / 0007
13 (6781)	Devlin, Sally	010141 / 0001
13 (6792)	Vasconi, Bill	010133 / 0002
13 (6959)	Perna, Frank	010134 / 0002
13 (7200)	Devlin, Sally	010162 / 0002
13 (7352)	Toledo Coalition for Safe Energy Lodge, Terry	EIS001573 / 0004
13 (8019)	Shillinglaw, Fawn	EIS000817 / 0070
13 (8244)	Shundahai Network Sullivan, Graham	EIS002286 / 0004
13 (8265)	Law, Martha	EIS001950 / 0005
13 (8352)	Pennsylvania, Commonwealth of, Public Utility Commission Barth, Lawrence	EIS001627 / 0004
13 (8497)	Shillinglaw, Fawn	EIS000817 / 0159
13 (8550)	Lindberg, Jay	EIS002283 / 0002
13 (8682)	People Against Radioactive Dumping Lopez, Ruth	EIS001837 / 0034
13 (9145)	Eide-Tollefson, Kristen	EIS001971 / 0002
13 (9180)	Detraz, Marjorie	EIS002123 / 0002
13 (9207)	Darby, Forrest	EIS002140 / 0005
13 (9440)	Page, Marc	010129 / 0002
13 (9827)	Clark County, Nevada, Board of County Commissioners Woodbury, Bruce	EIS001888 / 0404
13 (10660)	Nester, Dennis	EIS002102 / 0004
13 (10724)	Craig, Robin	EIS002170 / 0008
13 (10728)	Pawlak, John	EIS000123 / 0002
13 (10777)	Hopkins, Steve	EIS000250 / 0011
13 (10920)	Idaho, State of, House of Representatives Barraclough, Jack	EIS000244 / 0005
13 (10946)	Nuclear Information and Resource Service Kamps, Kevin	EIS000467 / 0008
13 (10958)	Cahall, Diana	EIS001424 / 0003
13 (11056)	Cahall, Diana	EIS000475 / 0011
13 (11083)	Earth Challenge Alzner, Susan	EIS000309 / 0001
13 (11149)	Goad, Ken	EIS000320 / 0001
13 (11457)	Perna, Frank	010080 / 0005
13 (11458)	Perna, Frank	010080 / 0004
13 (11509)	Barfield, Ellen	EIS000454 / 0003
13 (11735)	Grazier, Bill	010032 / 0001
13 (12298)	Citizen Alert Tilges, Kalynda	010138 / 0001
13 (12368)	Shundahai Network Snyder, Susi	010139 / 0004
13 (12583)	Bastin, Clinton	EIS000815 / 0005
13 (12874)	Vaughan, James	010297 / 0001
13 (13123)	Wright, Rebecca	010298 / 0010
13 (13131)	Young, Jim	010236 / 0005
13 (13200)	Nuclear Information and Resource Service Kamps, Kevin	010246 / 0010
13 (13332)	Page, Marc	010129 / 0005
13 (13340)	Getty, Greg	010161 / 0002

KEY AGENCY COMMENTS AND RESPONSES

Section 114 (a)(1)(D) of the NWPA specifies that any site recommendation by the Secretary of Energy submitted to the President must include comments on the EIS received from four Federal agencies—the Department of the Interior, the President's Council on Environmental Quality, the Environmental Protection Agency, and the Nuclear Regulatory Commission. This section of the Comment-Response Document includes copies of the comments from these agencies on the Draft EIS and Supplement to the Draft EIS, followed by responses to the comments. DOE has included these materials as a convenience for these agencies as they review the Final EIS. The information in this section includes the following:

1. U.S. Department of the Interior

    a. Comments on the Draft EIS - Comment Document 1969
    b. Comments on the Supplement to the Draft EIS – Comment Document 10066

2. U.S. Environmental Protection Agency

    a. Comments on the Draft EIS - Comment Document 1632
    b. Comments on the Supplement to the Draft EIS – Comment Document 10231

3. U.S. Nuclear Regulatory Commission

    a. Comments on the Draft EIS - Comment Document 1898
    b. Comments on the Supplement to the Draft EIS – Comment Document 10248

The President's Council on Environmental Quality did not comment on the Draft EIS or the Supplement to the Draft EIS.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

In Reply Refer to:
ER 99/712

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FEB 28 2000

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MAR 07 2000

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EIS Project Manager
Yucca Mountain Site Characterization Office
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
P.O. Box 30307, Mail Stop 010
North Las Vegas, Nevada 89036-0307

Dear Ms. Dixon:

The United States Department of the Interior (Department) has reviewed the draft environmental impact statement (DEIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, and offers the following comments.

BACKGROUND INFORMATION

The Nuclear Waste Policy Act (NWPA) was enacted by Congress in 1982 in recognition of the need to provide for the permanent disposal of spent nuclear fuel and high-level radioactive waste in the United States. Currently, approximately 70,000 metric tons of heavy metal (MTHM) of spent nuclear fuel and high-level radioactive waste is housed at some 77 sites across the United States. In 1986, the Department of Energy (DOE) narrowed the number of potentially acceptable sites for a geologic repository to three (3) sites in three (3) States. However, Congress in 1987 amended the NWPA and directed the Secretary of Energy to characterize only the Yucca Mountain as a potential location for a geologic repository, setting forth a process for the Federal Government to decide whether to designate Yucca Mountain as the site for a repository. Yucca Mountain is located in Nye County, Nevada, approximately 100 miles northwest of Las Vegas, Nevada, on the western boundary of the Nevada Test Site (NTS).

POTENTIAL ADVERSE IMPACTS TO BIOLOGICAL RESOURCES

1... The Department's Fish and Wildlife Service (Service) is responsible for protection of trust resources which include species listed as threatened or endangered under the Endangered Species Act of 1973 (ESA), as amended, birds protected under the Migratory Bird Treaty Act, and other biological resources managed under the National Wildlife Refuge (NWR) System. The Service is concerned with possible adverse effects to these and other resources that could

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1 cont. result from the operation of the Yucca Mountain facility. Trust resources on or in the vicinity of the proposed waste storage facility include the following:

- Yucca Mountain is at the northern edge of the range for the desert tortoise (*Gopherus agassizii*) which is listed as threatened under the ESA. On July 23, 1997, the Service issued a biological opinion to DOE for programmatic activities associated with site characterization studies at Yucca Mountain (File No. 1-5-96-F-307R).

- Rainfall runoff accumulating in low lying areas at the NTS such as Frenchman Flat, attract migratory birds to the area.

- The Desert National Wildlife Range, located approximately 30 miles to the east of the proposed repository, provides habitat for numerous wildlife species that are unique to the Mojave Desert ecosystem.

- The Ash Meadows NWR is located approximately 25 miles south of Yucca Mountain and provides habitat for 12 species listed under the ESA, including the Devils Hole pupfish (*Cyprinodon diabolis)* and Ash Meadows Amargosa pupfish (*Cyprinodon nevadensis mionectes).* Ash Meadows also provides aquatic and riparian habitat essential for other sensitive species of plants and invertebrates and for migratory and resident bird species. These and other wildlife species are dependent upon several free-flowing springs within the boundary of the refuge.

2... The NWPA requires DOE to provide reasonable assurance that the environment will be protected from the hazards posed by the Yucca Mountain repository. In order to meet this requirement, DOE has conducted numerous detailed analyses of Yucca Mountain's geology and hydrology for the past 15 years. Through these and other activities associated with site characterization, DOE has amassed a large body of evidence to support the likely determination that Yucca Mountain is the most suitable site to store the nation's high-level nuclear waste. Despite the fact that the most advanced technology is being utilized to design a foolproof waste barrier system for the repository and given the fact that the waste would remain radioactive for many thousands of years, we continue to be concerned that a facility of this nature inherently poses some degree of risk to wildlife resources. Our primary concerns are as follows:

Groundwater flows in aquifers below Yucca Mountain are generally to the south. Therefore, radionuclides and toxic chemicals, if introduced to the groundwater either by a short-term catastrophic event (e.g. earthquake, flood) or through long-term (i.e. >1,000 years) degradation of the waste storage containers, could eventually migrate to environmentally sensitive areas such as Ash Meadows NWR. A recent study found that the plutonium compound PuO2, once thought to be the most stable form of plutonium waste, can be oxidized by water making it more soluble and increasing the risk of groundwater contamination from storage facilities (Haschke et al. 2000).

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2 cont. We find these and other uncertainties associated with containment of high level radioactive waste to be cause for concer..

3 Transportation of high level radioactive waste to Yucca Mountain by truck or rail from nuclear facilities nationwide also has the potential to impact wildlife resources should a breach in containment occur. There is an inherent risk associated with transportation of any hazardous material. Although DOE has conducted detailed analysis of worst-case scenarios, even the best waste management strategies cannot predict every possibility. We understand that the radioactive waste would be transported in a virtually leak-proof stainless steel cask in the form of dry pellets which would make release of any waste material extremely remote. Nevertheless, there remains a potential environmental risk, albeit minuscule, at any given point along the proposed rail or highway transportation corridor.

4 Cumulative environmental effects from the future operation of the Yucca Mountain repository and past activities at the NTS are also of concern. Possible impacts to groundwater and spring discharges resulting from activities at NTS, approximately 25 miles north of Ash Meadows NWR, are being evaluated by DOE, the Service and the U.S. Geological Survey (USGS). Activities at the NTS which may have resulted in contamination of the region include both atmospheric and subterranean tests of nuclear devices and other tests involving radioactive materials, controlled atmospheric releases of numerous gaseous materials, and disposal and destruction of various types of solid and liquid wastes. The extent to which these activities have placed wildlife resources at risk is still under investigation. DOE's Environmental Management Program is focused on identifying the nature and extent of contamination from the nuclear weapons programs at DOE facilities. This process is underway at the NTS with ongoing environmental restoration and waste management activities.

ACCIDENTS

5 We agree with the DOE that a major accident involving a shipment of this material is of low probability with a level of general uncertainty, and therefore, is not quantified to be zero. Moving70,000 metric tons of high- level nuclear waste, including 50 metric tons of weapons grade materials, from sites that are almost entirely east of the Mississippi River, over a 100 year period, almost ensures that an accident will occur, sometime, somewhere. Testing has shown that conditions exist under which shipping casks can be penetrated or ruptured (page 6-33 of the EIS). It is not clear in the draft whether a head-on truck or train collisions and train derailments will produce such conditions but it is important that the final EIS address DOE's plans to contain or control such events and their impacts.

SABOTAGE

6 That there are devices already in existence that can penetrate the truck shipping casks (page 6-33 of the EIS) if used by saboteurs, must not be taken lightly. That the trains and trucks will be guarded solves part of the problem, but not entirely. It is presumed that the guards will be armed, but would that protect against an intentional derailment? If the act of sabotage is successful, how would DOE address response and cleanup or control?

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HIJACKING

7 We could find no mention, in the EIS, of the possibility of one of the trucks being hijacked. A hijacked truck could be driven anywhere and used as a threat. A hijacked trucks would be most vulnerable when they are stopped so that the guards and drivers can eat or sleep. How does DOE plan to address this situation?

RADIATION

8 If we are interpreting Table 4-34 (page 4-59) correctly, over a 70 year life span a person living within 12 miles of the repository would receive a life time radiation dose of between 38 to 100 millirems from the repository depending on the thermal load scenario used. Is this correct? If so, it is significantly lower than the NRC's standard of 100 millirems per year at abandoned mines after reclamation. We believe that it is unusual that a person residing near this repository would receive less radiation than would one who lived near many other areas containing less radiation, such as abandoned mine sites. If our interpretation is incorrect, and the correct dose rate is between 38 and 100 millirems per year, then the low thermal load matches the NRC standard. Perhaps this figure needs to be reevaluated in the final EIS to clear up this ambiguity.

CONFLICTS WITH EXISTING LAND USES

9 The need for rights of way across public lands to access the Yucca Mountain Facility could create conflicts with existing land uses in the area through traffic, construction, accidents and incidental spillage of nuclear materials containers. How will these be addressed?

SPECIFIC COMMENTS:

Draft Environmental Impact Statement, Summary.

10 **Page S-36, 5.4.1.3 Geology, first paragraph.**

Most of the faulting that affected Yucca Mountain occurred during the 11.4 to 14 Ma interval of volcanic activity and not subsequent to the activity, as stated in the text.

11 **Page S-36, 5.4.1.3 Geology, second paragraph.**

The correct name of the repository host rock is the Topopah Spring Tuff, not "Topopah Springs Formation" or "Topopah Springs formation."

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12 **Page S-37, 5.4.1.3 Geology, first paragraph.**

Point (3) states that the Topopah Spring Tuff was chosen because of ". . . its location away from major faults that could adversely affect the stability of underground openings. . ." This statement implies that the Topopah Spring Tuff is not intersected by major faults, which it most assuredly is. Faults cut through all of the Tertiary volcanic units in the proposed repository area, including the Topopah Spring Tuff. Solitario Canyon fault and several other known faults cut through the Topopah Spring Tuff, some immediately adjacent to the underground facilities.

The relationship between faulting and the selection criteria of the Topopah Spring Tuff as the repository host rock in the Summary and the Draft EIS itself (page 3-24) is unclear and needs more detailed and accurate explanation. The selection of Topopah Spring Tuff cannot be predicated on its lack of proximity to seismically active faults. If so, the site would not be viable. Clarification is needed.

13 **Page S-37, second paragraph.**

The statement, "The Solitario Canyon fault forms the major bounding fault on the west side of Yucca Mountain, and volcanic units in the mountain tilt eastward as a result of displacement along this and lesser faults through the mountain . . .," needs clarification. There are faults on the east side of Yucca Mountain. The faults that bound the eastern side of the proposed repository area, the Bow Ridge and Paintbrush Canyon faults, to name just two (see table 3-8, Characteristics of major faults at Yucca Mountain, v. 1 - Impact Analysis, Draft EIS), need to be mentioned here. Additionally, because these latter two north-trending faults dip to the west beneath the repository area and the adjacent material handling facilities that would be built at the north and south portals, understanding the seismic hazard potential of these faults is extremely important.

In addition, easterly tilts are not the result of movement on the Solitario Canyon fault and "lesser faults through the mountain." These tilts are the result of movement on a whole series of block-bounding faults, of which the Solitario Canyon fault is one.

Draft Environmental Impact Statement.

14 **Page 3-14, Section 3.1.3.1 Physiography (Characteristic Land forms).**

This section label and content are confusing. The unnumbered subsections on Site Stratigraphy and Lithology, Selection of Repository Host Rock, and Potential for Volcanism at the Yucca Mountain site should be numbered subsections under the main section 3.1.3, Geology, and not the subsection of Physiography, to which they have little relation.

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15 **Page 3-16, Site Stratigraphy and Lithology.**

The sedimentary history of the region including the Tertiary sedimentary rocks (for example Pavits Springs Formation) need to be discussed in this section and included in Table 3-6 (page 3-19).

16 "Paleozoic and Precambrian" need to be substituted for "pre-Cenozoic" in order to correspond with the wording in the referenced Table 3-6, page 3-19.

17 **Page 3-19, first paragraph.**

The "pre-Cenozoic" (see above) rocks are also exposed at Calico Hills and Striped Hills, which are as close or closer to Yucca Mountain than are the pre-Cenozoic rocks at Bare Mountain, and therefore should be included in the discussion.

For clarity, the borehole (first paragraph) should be described as 2 kilometers east of the crest of Yucca Mountain, because Yucca Mountain is physiographically defined as all the numerous ridges that surround the borehole.

18 **Page 3-21, last paragraph.**

The statement, "Volcanic rocks younger than the Tertiary units. . .," is incorrect. Most of the volcanic rocks are Tertiary in age, including the Skull/Little Skull lava flows, the lava flow at the south edge of Crater Flat, the 10 Ma basaltic dike, and the 3.7-Ma cones and flows in Crater Flat.

19... **Page 3-22, Figure 3-7, General bedrock geology of the proposed repository Central Block area.**

This figure is inaccurate and does not correctly correspond to Figures 3-8, 3-10, or the original geologic map (Day and others, 1998). The following changes and/or additions need to be made:

a. The configuration of the Drill Hole Wash fault needs to be mapped as shown in Figure 3-10.

b. The Ghost Dance fault needs to continue to the southwest and not abruptly terminate as shown is this Figure (see Figure 3-10).

c. The zone of intense faulting between the Bow Ridge and Ghost Dance faults is missing. This zone connects with the Dune Wash fault. These faults are shown in the cross-section (Figure 3-8).

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19 cont.

d. The small intra block faults need to be included in the Figure because the contacts are drawn incorrectly without them. Figure 3-8 cannot be reconciled with Figure 3-7 without these mapped faults.

e. For clarity, the cross-section line in Figures 3-7 and 3-8 should be named A-A', not B-B', because there is only one cross section on these maps.

f. Because no lower block is shown, the "upper block" text needs to be deleted from the "Proposed drift boundary" in the Legend.

20 **Page 3-23, Figure 3-8, Simplified geologic cross-section of Yucca Mountain, West to east.**

The mismatch of contacts between units, which appears as wiggles, is incorrect. The Figure needs to show these contacts correctly.

21 **Page 3-24, first paragraph, and Page 3-33, Flood Potential.**

Boulders as large as 2 meters in diameter, as well as sand, silt, and clay, are part of the alluvial deposits on these fans and stream beds. This boulder-size material has the potential for significant destructive force during the flash floods.

22 **Page 3-25, Section 3.1.3.2 Geologic Structure.**

Discussion of the occurrence of joints and fractures in the volcanic rock at Yucca Mountain is needed in this section, including mention of the geographic and stratigraphic distribution of fractures, and whether they are fault- and/or stratigraphically-controlled.

23 **Page 3-25, Section 3.1.3.2 Geologic Structure, second paragraph.**

"Major crustal compression" and "crustal extension" need to have an associated direction, such as "Major east-west crustal compression" and "east-west crustal extension."

Crustal compression is stated to have occurred between 350 and 50 Ma, but there is no evidence for east-west compression younger than about 100 Ma in this region.

24 Day and others 1996 should be changed to 1998, both here and in the References (page 12-8).

25... **Page 3-25, Section 3.1.3.2 Geologic Structure, fifth paragraph.**

It is stated here that the ". . . total estimated displacement on the most active block-bounding faults . . . during the past 1.6 million years is less than 50 meters. . . (Simonds and others, 1995)." This statement is from the Conclusion section of Simonds and others (1995) and is misleading

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25 cont. when taken out of context. All measurements of Quaternary (1.6 Ma to present) displacement on these faults range from 0 to 6 m with most displacement in the 1-2.5 m range, as reported in Table 2 of Simonds and others (1995). Reference Table 3-8 in this paragraph to help clarify this point.

26 **Page 3-25, Section 3.1.3.2 Geologic Structure, sixth paragraph.**

The statement, "The Solitario Canyon fault along the west side of Yucca Mountain is **the** major block-bounding fault . . .," is incorrect. The Solitario Canyon fault is one of numerous block-bounding faults that are shown on Figure 3-10. These include the Northern Windy Wash, Fatigue Wash, Solitario, Iron Ridge, Dune Wash Bow Ridge, Midway Valley, Paintbrush Canyon faults, just to name those within 4 km radius of the proposed perimeter of the repository.

27 **Page 3-25, Section 3.1.3.2 Geologic Structure, last paragraph.**

This short treatment of intra block faults (the subsidiary faults between the block bounding faults) places undue emphasis on NW-trending faults by discussing them first. Within the central block, where the repository would be sited, the intra block faults with the longest map traces and the largest amounts of displacement are the Ghost Dance Fault (splitting the center of the block) and the block-margin faults ("Imbricate Zone" of Scott, 1990) that are just west of the Bow Ridge Fault. Day and others (1998, USGS Map I-2601) and Scott and Bonk (1984) also document this. The NW- trending faults, such as the Sundance Fault, though characterized correctly, are relatively minor in comparison (Potter and others, USGS OFR 98-266, in press). It would be more appropriate to mention the much larger Ghost Dance fault first.

28 **Page 3-26, Figure 3-9, Types of geologic faults.**

For clarity, definitions of normal and reverse faults need to uniquely specify the correct sense of motion. For a normal fault reword the description, "dip-slip fault where one block has moved downdip relative to the other," to "dip-slip fault where the upper block has moved downdip relative to the lower block." For reverse fault, reword "dip-slip fault where one block has moved updip relative to the other" to "dip-slip fault where the upper block has moved updip relative to the lower block."

A diagram is needed for low-angle normal faults, such as in Calico Hills east, and Bare Mountain west, of Yucca Mountain.

29 **Page 3-27, Figure 3-10, Mapped faults at Yucca Mountain and in the Yucca Mountain vicinity.**

In the legend, the strike-slip fault symbol should have arrows showing relative sense of lateral motion (as on map), as well as an explanation of the strike-slip symbol. As it is, the legend only shows the dip-slip component on these faults.

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30 **Page 3-28, Table 3-8, Characteristics of major faults at Yucca Mountain.**

Define the late Quaternary in years for clarity.

31 **Page 3-29, Section 3.1.3.3 Modern Seismic Activity.**

The seismicity map with faults needs to be shown here as a numbered Figure.

32 **Page 3-30, fifth paragraph.**

The correct statement is that there is no observable strain measured *within the error of the data.*

33 **Page 3-30, Section 3.1.3.4 Mineral and Energy Resources.**

There is no discussion of energy resources in this section. The Yucca Mountain site is about 200 km SW of producing oil fields in Railroad Valley (one of two valleys in the state that have produced commercial oil). Published literature on the presence or absence of oil resources in the Yucca Mountain/NTS area include Chamberlain (1991 AAPG abstract), who suggested that Yucca Mountain is situated over a billion-barrel oil field, and Trexler and others (1996, AAPG Bulletin v. 80, no. 1), who disputed this, as did Grow and others (Hi-Level Waste Proceedings, 1994). Although it appears that there is a low potential for mineral and energy resources in the context of today's recovery technology, a discussion of the potential resources should be included here.

34 **Page 3-36, Section 3.1.4.2.1 Regional Groundwater.**

There is insufficient data to fully characterize the site-scale hydrology of the area. Because of the complexity of the geology and inconsistencies between the Large Hydraulic Gradient and thermal data, additional boreholes, appropriately configured, that penetrate to the Paleozoic carbonates beneath the Tertiary tuffs should be considered.

There is a lack of data on the hydrologic interaction between the Tertiary tufts and the underlying Paleozoic carbonate aquifers.

35 **Page 3-39 and Page 3-51, Section 3.1.4.2 Groundwater.**

The **range** of infiltration rates, hydraulic conductivities, etc. should be used rather than the average, especially in the case where the range is large. For example, apparent hydraulic conductivities range over 3 orders of magnitude (page 3-51). Also, the average infiltration rate of 6.5 mm/yr on page 3-39 is misleading because fracture systems allow much more rapid flow locally. The difficulty of Yucca Mountain hydrology is in the inability to predict which fractures or faults will act as highly transmissive zones. Care must be taken to show ranges of behavior so that best and worst case scenarios can both be evaluated.

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36 **Page 3-79, Section 3.1.8 Occupational and Public Health and Safety.**

The radiological hazards and their consequences were discussed in a concise way such that the average citizen can draw conclusions about the risks of the proposed and alternative actions. The background information that was provided to develop an understanding of ionizing radiation and the hazards/risks was especially helpful.

37 In summary, as DOE continues to further characterize the suitability of the proposed Yucca Mountain site in sufficiently isolating high-level radioactive waste and spent nuclear fuel, we look forward to continued coordination on protection of the Department's trust wildlife and other resources. The Service's Southern Nevada Field Office is interested and available to provide technical support in development and implementation of monitoring programs for Yucca Mountain operations. The Service's technical support can be integrated with ongoing groundwater monitoring programs by several other agencies in the vicinity of Yucca Mountain. DOE and USGS have collaborated since 1989 on the Environmental Monitoring Program in order to better understand the hydrology of this area. Monitoring is essential in our view and will help to ensure that any changes in the environment are detected and investigated appropriately. We look forward to working with the DOE on this important national initiative.

The Department appreciates the opportunity to review this DEIS. We hope our comments will be useful in evaluating the Yucca Mountain site for a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste. References are included on the following page.

Should you have any questions or wish to discuss our comments further, please do not hesitate to call Dr. Vijai N. Rai of this Office at (202)208-6661.

Sincerely,

Willie R. Taylor
Director
Office of Environmental Policy
and Compliance

EIS001969

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RESPONSES TO U.S. DEPARTMENT OF THE INTERIOR COMMENTS ON THE DRAFT EIS (Comment Document 1969)

1. On December 17, 1998, DOE requested a species list from the U.S. Fish and Wildlife Service and initiated consultation to evaluate whether the Proposed Action could affect the threatened desert tortoise or protected species at Ash Meadows, Devils Hole, or along transportation corridors. In a Biological Assessment submitted to the U.S. Fish and Wildlife Service on April 24, 2000, DOE concluded that the Proposed Action would not affect the listed species in the Ash Meadows or Devils Hole areas because these areas are in a different regional groundwater sub-basin from Yucca Mountain. The Fish and Wildlife Service concurred with this conclusion during consultation on the effects of repository construction, operation and monitoring, and closure on threatened and endangered species (see the Fish and Wildlife Service Final Biological Opinion in Appendix O of the EIS). Furthermore, there are no playas in the vicinity of Yucca Mountain where surface water could accumulate and attract migratory birds. The playa at Frenchman Flat is located approximately 35 kilometers (22 miles) east of Yucca Mountain and would be unaffected by the Proposed Action.

   DOE did determine that the Proposed Action could affect the desert tortoise and consequently has proposed mitigation measures to minimize effects. If the Secretary of Energy recommends approval of the Yucca Mountain site to the President, and Yucca Mountain is ultimately authorized for the disposal of spent nuclear fuel and high-level radioactive waste, DOE would implement all reasonable and prudent mitigation measures and comply with the terms and conditions of the Final Biological Opinion from the U.S. Fish and Wildlife Service. See Appendix O of the EIS for the Opinion.

   The Desert National Wildlife Range, approximately 48 kilometers (30 miles) east of the repository, would be unaffected by the Proposed Action unless the Valley Modified Corridor, which could be on, or adjacent to, the southern boundary of the Range, was selected. With regard to the transportation implementing alternatives in the State of Nevada, DOE believes this EIS is sufficient for the determination of the relative merits and a selection decision among the various corridors and shipment modes discussed in the EIS, but acknowledges additional environmental review would be required to assess the potential impacts of specific route alignment within a corridor. DOE would continue discussions with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act, as amended, on any corridor or alignment within a corridor determined to require further environmental review and would implement the terms and conditions of any subsequent Biological Opinions.

2. DOE believes that the comments expressed by the U.S. Fish and Wildlife Service concerning risks to wildlife resources are addressed in the EIS. Section 4.1.8 of the EIS discusses the potential for catastrophic events (including earthquakes) occurring at the Yucca Mountain Repository during construction, operation and monitoring, and closure of the repository, and the consequences of these events. As described in Section 4.1.3, flooding would be unlikely to release contaminants because the design of critical surface facilities would withstand the most severe reasonably possible floods. Chapter 5 discusses impacts from the long-term performance of the repository. The evaluations included impacts from volcanic (Section 5.7.2) and seismic disturbances, as well as impacts from the slow degradation of waste packages over thousands of years. This slow degradation has the highest potential to spread contaminants as they are leached into the groundwater beneath Yucca Mountain.

   Section 3.1.4.2.1 of the EIS shows that the flow path of groundwater from Yucca Mountain extends to Jackass Flats and the Amargosa Desert, and continues southward to the primary point of discharge at Franklin Lake Playa in Alkali Flat. The EIS recognizes that some groundwater reaching this far might bypass Franklin Lake Playa and continue into Death Valley. The EIS also recognizes that a fraction of the groundwater that reaches the Amargosa Desert might flow through the southeastern end of the Funeral Mountains to springs in the Furnace Creek Wash in Death Valley National Park. The springs in Ash Meadows (including Devils Hole) are not along the groundwater flow path from Yucca Mountain. As described in Section 3.1.4.2.1, groundwater beneath Yucca Mountain flows to the Amargosa Desert but does not discharge in Ash Meadows. From Ash Meadows to the low axis (Carson Slough) of the Amargosa Desert, the groundwater table declines

about 64 meters (210 feet), indicating that the groundwater flows from Ash Meadows toward the Amargosa Desert, not the other way around.

Chapter 5 of the EIS does not specifically address the risks to people and natural resources in Death Valley National Park from the use and consumption of groundwater. However, it clearly indicates that risks would decrease with increased distance from the repository. Accordingly, impacts to the Park, because it is far from Yucca Mountain, would be negligible.

In Section 5.3 of the EIS, DOE concluded that the predicted long-term levels of radionuclide concentrations in groundwater and the resulting dose levels at the predicted discharge area in Amargosa Valley would be low. As a consequence, DOE does not expect that the dose rates to plants and animals would cause measurable detrimental effects in populations of any species because the rates would be less than 100 millirad per day. The International Atomic Energy Agency concluded that chronic dose rates of much less than 100 millirad per day are unlikely to cause measurable detrimental effects in populations of even the more radiosensitive species in terrestrial ecosystems (DIRS 103277-IAEA 1992). The DOE interim technical standard, *A Graded Approach for Evaluating Dose to Aquatic and Terrestrial Biota*, which the Department made available for interim use on July 20, 2000, contains more information about potential effects of radiation on biota.

The comment also refers to a recent laboratory finding that a species of plutonium oxide has a higher solubility than the species most often considered to be the normal oxidized form of the metal (plutonium dioxide) (DIRS 150367-Haschke, Allen, and Morales 2000). Scientists working on the Yucca Mountain Project are aware of this finding. DOE believes that the finding is within the range of conservatisms built into the plutonium solubility model used to model the long-term performance of the repository.

3. DOE agrees that a release of hazardous materials during accidents involving spent nuclear fuel or high-level radioactive waste would be very unlikely. With regard to the potential impacts to wildlife resources, a transportation accident could result in the dispersal or death of individual members of a species within a localized area but would be unlikely to have long-term detrimental effects upon a population as a whole.

4. This comment accurately summarizes some of the issues involving the potential cumulative impacts associated with the Proposed Action and some of the ongoing evaluations being conducted by the Department and other agencies, including the U.S. Fish and Wildlife Service. In preparing Chapter 8 of the EIS, the Department reviewed many past, present, and reasonably foreseeable future actions to determine where there was potential for cumulative impacts. Chapter 8 of the EIS describes both the short-term and long-term impacts of the proposed repository, along with transportation and manufacturing cumulative impacts.

5. The shipping casks used to transport these spent nuclear fuel and high-level radioactive waste are massive and tough with design features that comply with strict regulatory requirements that ensure the casks perform their safety functions even when damaged. Numerous tests and extensive analyses have demonstrated that casks would provide containment and shielding even under the most severe kinds of accidents. In addition, since the publication of the Draft EIS, the Nuclear Regulatory Commission published *Reexamination of Spent Fuel Shipment Risk Estimates* (DIRS 152476-Sprung et al. 2000). Based on the revised analyses, DOE has concluded in the EIS that casks would continue to contain spent nuclear fuel fully in more than 99.99 percent of all accidents (of the thousands of shipments over the last 30 years, none has resulted in an injury due to release of radioactive materials). This means that of the approximately 53,000 truck shipments, there would be an estimated 66 accidents, each having less than a 0.01-percent chance that radioactive materials would be released. The chance of a rail accident that would cause a release from a cask would be even less. The corresponding chance that such an accident would occur in any particular locale would be extremely low. Section J.1.4.2.1 of the EIS presents consequences for accidents that could release radioactive materials.

   With regard to the containment or control of accident events, DOE would rely on a number of actions including the training of public safety officials and the implementation of safeguards and security plans. Section 180(c) of the NWPA requires DOE to provide technical assistance and funds to states for training public safety officials and appropriate units of local government and tribes through whose jurisdictions DOE

shipments would pass. DOE anticipates financial and technical assistance to eligible jurisdictions to begin at least 4 years before the commencement of shipments to the repository.

Concerning safeguards and security plans, DOE would comply with all requirements of 10 CFR Part 73, including preshipment planning, communications, armed escorts and tamper-indicating devices on shipping casks. Regarding shipment routes, pursuant to U.S. Department of Transportation regulations, 49 CFR 397.101 and DIRS 154766-NRC (1980), added protection would be afforded by the selection of routes which exhibit certain criteria including the likelihood of swift law enforcement response, avoidance of tactically disadvantageous locations such as long tunnels or bridges spanning heavily populated areas, and flexibility to adjust schedules to accommodate unexpected situations.

6. Transportation shipments would be protected from sabotage. The Nuclear Regulatory Commission has developed a set of rules specifically aimed at protecting the public from harm that could result from sabotage of spent nuclear fuel casks. Known as physical protection or safeguards regulations (10 CFR 73.37), these security rules are distinguished from other regulations that deal with issues of safety affecting the environment and public health. The objectives of the safeguards regulations are to minimize the possibility of sabotage and facilitate recovery of spent nuclear fuel shipments that could come under control of unauthorized persons.

   Cask safety features that provide containment, shielding, and thermal protection also provide protection against sabotage. The casks would be massive. The spent nuclear fuel in a cask would typically be only about 10 percent of the gross weight; the remaining 90 percent would be shielding and structure.

   Although it is not possible to predict the types of potential sabotage events with certainty, DOE has examined various accident scenarios, which can provide a sense of the consequences that could occur in such events. In addition, DOE has specifically analyzed the potential consequences of sabotage against a truck or rail cask. The results of this analysis indicate that the maximally exposed individual would increase the risk of incurring a fatal cancer from approximately 23 percent (the current risk of incurring a fatal cancer from all other causes) to about 29 percent. The same event could cause 48 latent cancer fatalities in an assumed population of a large urban area.

   Because of the attacks on September 11, 2001, the Department and other agencies are reexamining the protections built into their physical security and safeguards systems for transportation shipments. As dictated by results of this reexamination, DOE would modify its methods and systems as appropriate.

   In response to public comments, DOE has included a discussion on the range of potential costs of cleanup following a severe transportation accident in Appendix J of the EIS. This discussion reviews calculations of land area contaminated and costs for cleanup presented in past studies, including a report used in the 1986 Environmental Assessments (DIRS 154814-Sundquist et al. 1985), and information submitted by the State of Nevada in its comments on the Draft EIS. The information submitted by the State included estimates of cleanup costs as high as $270 billion. Cost data used in the studies reviewed in Section J.1.4.2.5 included data compiled from case studies involving actual cleanup of radioactive materials contamination. Section J.1.4.2.5 discusses environmental restoration after a release of radioactive material.

7. Transportation shipments would be protected from sabotage. The Nuclear Regulatory Commission has developed a set of rules specifically aimed at protecting the public from harm that could result from sabotage of spent nuclear fuel casks. Known as physical protection or safeguards regulations (10 CFR 73.37), these security rules are distinguished from other regulations that deal with issues of safety affecting the environment and public health. The objectives of the safeguards regulations are to minimize the possibility of sabotage and facilitate recovery of spent nuclear fuel shipments that could come under control of unauthorized persons.

8. The interpretation is correct. In the Draft EIS, the maximally exposed individual would receive an estimated dose of 38 to 100 millirem over 70 years. Table 4-35 (Footnote c) and Section 4.1.7.5.3 of the Draft EIS explain this dose. Section 4.1.2 of the EIS discusses the highest potential annual dose would be less than 2 millirem per year.

Exposure scenarios at reclaimed uranium mines or mills are much different from the potential exposure near the proposed repository at the Yucca Mountain site. The key differences at Yucca Mountain would be the lack of high uranium and uranium decay product source material, lack of tailings with enhanced concentrations of uranium decay chain radionuclides, and the location of the potential public dose receptor at the boundary of the controlled area (15 millirem per 40 CFR Part 197). Further, potential public exposures at Yucca Mountain would be held to a much more rigorous standard than 100 millirem per year. The discussions in Sections 4.1.2 and 4.1.7, along with the supporting information in Section G.2, explain potential public radiation doses.

9. Sections 6.3.1, 6.3.2, and 6.3.3 of the EIS address the potential impacts of Nevada legal-weight truck, heavy-haul truck, and branch rail line implementing alternatives, respectively, including land-use impacts. These sections recognize and describe the impacts related to construction and operation of branch rail lines and developing or upgrading highways, including traffic impacts. Section 6.2.4.2 addresses impacts from accidents, including spills.

   DOE acknowledges that some land-use conflicts could be inevitable during the construction and operation of a transportation corridor for the Yucca Mountain Repository. The implementing alternatives for transportation described in the EIS were based in part on attempts to avoid or minimize potential land-use conflicts.

   DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada. Should the branch rail line implementing alternative be selected and a preferred rail corridor identified, additional engineering and environmental studies would be conducted as a basis for detailed design and for appropriate National Environmental Policy Act reviews. During this process, DOE would initiate consultations with responsible local, State, Federal, and tribal agencies, landowners, and other stakeholders to identify, acquire, and evaluate additional information and develop mitigative actions necessary to minimize potential impacts, including land use.

10. DOE agrees that most of the faulting occurred during this period and Section S.4.1.3 of the EIS Summary has been changed to, "Yucca Mountain is a product of volcanic and seismic activity that occurred 14 million to 11.5 million years ago."

11. DOE has corrected the name of the repository host rock to "Topopah Spring Tuff."

12. DOE agrees that it cannot predicate its selection of the Topopah Spring Tuff for the repository on the lack of proximity to seismically active faults. The Department has changed the statement in the Summary and Section 3.1.3 of the EIS to indicate that it chose the repository emplacement area because of its location away from major faults that could adversely affect the stability of underground openings.

13. The comment is correct that the Solitario Canyon fault is not the only block-bounding fault identified in the EIS. However, DOE did not modify the text of the Summary in order to keep it understandable to a wide range of readers. DOE has, however, clarified the text in Section 3.1.3.2 of the EIS, which also refers readers to numerous reference materials on the subject.

14. The purpose of Section 3.1.3.1 is to provide a broad overview of regional and site geology. The purpose of the subsections that are part of Section 3.1.3.1 is to address specific issues of particular concern or interest to the public (such as faulting and seismic activity) or that are a definite change of topic (for example, mineral and energy resources). DOE agrees that it could put the topics identified in the comment in separately numbered sections, but made an editorial decision not to do so.

15. Although the EIS is concerned with the sedimentary history of the region and sedimentary rock units at Yucca Mountain, the main focus is on those units important for the study of groundwater infiltration, flow, and transport. Table 3-6 is highly generalized and identifies only the Topopah Spring Tuff, the repository host rock, by name. The commenter is referred to other parts of Section 3.1.3 of the EIS that describe the

history and stratigraphy of the Yucca Mountain area, and to Table 3-7, which describes the Tertiary rock units at Yucca Mountain in more detail than Table 3-6.

16. DOE has revised the text of Section 3.1.3.1 of the EIS such that the parenthetical explanation "(that is, Paleozoic and Precambrian)" follows the reference to Pre-Cenozoic.

17. This comment is correct. DOE has revised Section 3.1.3.1 of the EIS to include the exposures at Calico Hills and Striped Hills.

18. DOE has revised Section 3.1.3.1 of the EIS to state that volcanic rocks younger than Tertiary age pertain only to the four northeast-trending cinder cones in the center of Crater Flat, dated at about 1 million years old, and the Lathrop Wells basaltic cinder cone, dated at 70,000 to 90,000 years old.

19. DOE has updated the general bedrock geology figure in Section 3.1.3.1 in the EIS as described in the comment to show additional faults in the repository block area. The figure is now consistent with the simplified geologic cross-section figure that follows it.

    This comment suggested that the cross-section line in these figures should be named A-A', not B-B'. DOE has made this modification.

    DOE provided the upper block label in the figure to help the reader identify the area shown because the EIS discusses other blocks.

20. The maps in Chapter 3 of the EIS depicting fault information are simplified and show only selected faults. However, DOE has added more faults to the general bedrock geology in Section 3.1.3.1 to make it more consistent with the cross-section figure that follows.

21. Section 3.1.3 of the EIS has been changed to indicate that the alluvial deposits on fans and in stream beds includes boulders, cobbles, pebbles, sand, silt and clay; Section 3.1.4.1.2 has been modified to indicate that mud flows may include boulder-size material.

22. DOE has modified the discussion in Section 3.1.3.2 of the EIS. The faults described are well-defined structures; joints, along which there is no appreciable movement, also occur in the rock units mapped at the site. Within the Paintbrush Group (Tiva Canyon, Yucca Mountain, Pah Canyon, and Topopah Spring tuffs), joints have been subdivided into three groups based on how they developed and their approximate time of origin: early cooling joints, later tectonic joints, and joints due to erosional unloading (DIRS 151945-CRWMS M&O 2000). Each group of joints exhibits specific characteristics with respect to joint length, orientation, and connectivity. The cooling and tectonic joints have similar orientations (generally trending north-south), whereas cooling joints include irregularly spaced horizontal joints as well. Joints that developed from erosional unloading are variably oriented but trend predominantly east to west, perpendicular to the cooling and tectonic joints. Tectonic joints occur throughout the Paintbrush Group; cooling joints occur in each of the welded units. In general, the Tiva Canyon tuff and the Topopah Spring tuff have the highest joint frequencies and joint connectivities. The nonwelded Yucca Mountain tuff and the Pah Canyon tuff have the fewest joints. Geologic, geoengineering, and hydrologic aspects of fractures are discussed in detail in the *Yucca Mountain Site Description* (DIRS 151945-CRWMS M&O 2000). DOE has added to Section 3.1.3.2 of the EIS more information about joints and fractures in the volcanic rock at Yucca Mountain.

23. The text in Section 3.1.3.2 has been modified to indicate that major east-west crustal compression occurred periodically in the Great Basin between about 350 million years ago to about 65 million years ago. This compression moved large sheets of older rock great distances upward and eastward over younger rocks to produce mountains. References to support this discussion include Armstrong (DIRS 101583-1968), Fleck (DIRS 150625-1970), CRWMS M&O (DIRS 100127-1998), and Dunne (DIRS 102861-1986).

24. DOE has updated the subject reference.

25. DOE has clarified this paragraph in Section 3.1.3.2 of the EIS, as suggested by the comment.

26. The comment is correct; text in Section 3.1.3.2 has been revised for clarity. The Solitario Canyon fault is not the only block-bounding fault identified.

27. DOE has reorganized the paragraph in question to discuss the Ghost Dance fault, which occurs in the middle of the repository block, before discussing the northwest-trending faults.

28. The description of faults in Figure 3-9 of the Final EIS has been clarified.

29. DOE has changed the legend on the mapped faults figure in Section 3.1.3.2 to label the arrows in the figure as strike-slip faults.

30. DOE believes that it has made the table in Section 3.1.3.2 of the EIS more accurate by removing the word "late" from the column heading related to Quaternary displacement.

31. During EIS preparation, DOE decided to omit a seismicity map in favor of a simpler presentation. The Department made this decision with the understanding that more detailed seismic information is available in the *Yucca Mountain Site Description* (DIRS 151945-CRWMS M&O 2000). With regard to showing faults on a seismic map, seismic events do not correlate with mapped surface traces or Quaternary faults, as indicated in Section 3.1.3.3 of the EIS.

32. DOE believes the paragraph is correct as written. The main point of this paragraph is that the strain rate is significantly less than the rate reported by Wernicke et al. (DIRS 103485-1998), which did not account for the coseismic and postseismic effects of the 1992 Little Skull Mountain earthquake.

33. The EIS presents the results of various investigations on mineral and energy resources. DOE considers the likelihood of finding oil or gas to be low in the vicinity of the proposed repository. Drilling of numerous boreholes to depths beyond 1829 meters (6,000 feet) in the area found no indications or shows of oil of gas. Therefore, DOE decided not to include a detailed discussion of mineral and energy resource potential in the EIS, but rather to refer the reader to the numerous references that discuss these issues. This approach is consistent with the regulations of the Council on Environmental Quality [40 CFR Part 1501.7(a)(3)] that direct agencies to identify and eliminate from detailed study those issues which are not significant.

34. DOE, in cooperation with Nye County, has initiated a program (called the Early Warning Drilling Program) to characterize further the saturated zone along possible groundwater pathways from Yucca Mountain, as well as the relationships among the volcanic, alluvial, and carbonate aquifers. Information from the ongoing site characterization program and from the performance confirmation program (if Yucca Mountain is approved for a repository), would be used in conjunction with that of the Early Warning Drilling Program to refine the Department's understanding of the flow and transport mechanics of the saturated alluvium and valley-fill material south of the proposed repository site, and to update conceptual and numerical models used to estimate waste isolation performance of the repository. When DOE published the Draft EIS, only limited information from the Early Warning Drilling Program was available. Since then, however, this program has gathered additional information (see Section 3.1.4.2.1 of the Final EIS).

35. The EIS describes why the quantity of water moving through the proposed repository would be small compared to other sources of recharge in the region and to the amount of groundwater moving through the area. DOE believes that presenting ranges of infiltration rates in this case would add unnecessary complexity. More information, including temporal and spatial ranges of net infiltration, is in the Water Source and Movement discussion in Section 3.1.4.2.2 of the EIS.

    DOE disagrees that description of an average net infiltration over the area of the repository is misleading. (It should be noted that the EIS now presents a different infiltration estimate due to the results of an updated infiltration study.) The EIS also considers smaller areas of higher and lower infiltration. Section 3.1.4.2.2 identifies infiltration rates over an order of magnitude higher in areas where thin alluvium overlies highly permeable rock. It would be misleading to imply that these higher infiltration rates occur over large areas.

DOE agrees that it is difficult to predict which fractures or faults would act as highly transmissive zones. However, much has been learned from studies, particularly chlorine-36 studies, that have suggested a correlation between subsurface locations where there is evidence of "fast pathways" (less than 50 years) and physical conditions in the mountain and on the surface. The Water Source and Movement discussion in Section 3.1.4.2.2 describes these correlations.

36. Thank you for your comment.

37. DOE acknowledges and appreciates the offer of technical support from the U.S. Department of the Interior and its individual bureaus on the Yucca Mountain Project monitoring programs. Such cooperation will inevitably increase the knowledge base on the local environment and help ensure minimal impacts of the Proposed Action on regional wildlife and other natural resources.

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United States Department of the Interior

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In Reply Refer To:
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Ms. Carol M. Borgstrom
Director, Office of NEPA Policy and Compliance
U.S. Department of Energy
Washington, D.C. 20585

Reference: U.S. Department of Energy's (DOE) Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada

Dear Ms. Borgstrom:

1 Thank you for the opportunity to review the above-referenced supplement to the Draft Environmental Impact Statement (EIS) for the proposed radioactive waste repository at Yucca Mountain. At this time, this Office does not have the technical expertise to evaluate the nature of the environmental impacts that may be expected from the modified design compared to the Draft EIS. If you should have any questions, please contact Andrea McLaughlin of my staff at (202) 452-7717.

Sincerely,

B.R. Hyde, Jr.
Manager, Protection and Response Group

cc: Willie R. Taylor, Director, Office of Environmental Policy and Compliance
Robert Anderson, Deputy Assistant Director, Minerals, Realty, and Resource Protection

MAY 22 2001

EH-42 (1)

RESPONSES TO U.S. DEPARTMENT OF THE INTERIOR COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10066)

1. Thank you for your reply.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

February 11, 2000

Ms. Wendy R. Dixon
EIS Project Director
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307, M/S 010
North Las Vegas, NV 89036-0307

Dear Ms. Dixon:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality's implementing regulations (40 CFR 1500-1508), the Environmental Protection Agency (EPA) is providing you comments on the Draft Environmental Impact Statement (EIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, dated July 1999 (DOE/EIS-0250D, CEQ# 990282).

The Proposed Action addressed in the draft EIS is to construct, operate, monitor, and eventually close a geologic repository at Yucca Mountain in southern Nevada for the disposal of spent nuclear fuel and high-level radioactive waste currently in storage at 72 commercial and five Department of Energy (DOE) sites across the nation.

As outlined in this letter and accompanying detailed comments, EPA is seeking a number of clarifications about and additional data on the environmental impacts of the proposed project. We expect that DOE will be able to provide this information and enable EPA to fully assess the project's impacts. EPA is therefore rating the Yucca Mountain EIS as "EC-2", Environmental Concerns-Insufficient Information. EPA's major issues are summarized below, and our detailed comments are enclosed.

1 EPA commends DOE for what is generally a well-organized and plain English document
2... on a highly complex subject. However, EPA could not always find data or explanations to support the conclusions drawn. A prime example of this is that EPA found insufficient data to support the prediction of the movement of radionuclides in the saturated zone beneath the repository. These data are needed to determine if the facility's performance will satisfy applicable radiation standards designed to protect ground water resources and public water

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2 cont. supplies. As you know, EPA has proposed standards applicable to Yucca Mountain.

The draft EIS acknowledges that on-going studies at the proposed repository site and the continuing investigations of engineered barriers and waste package designs are not scheduled to be completed until after the submission of the final EIS. The continuing site characterization and data collection raise questions about whether a supplemental environmental impact statement will be needed once the final design and waste content are determined. CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when there are substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact.

If the Department's subsequent analysis of design choices indicates that the draft EIS/final EIS bounded the potential impacts, a supplemental draft and/or final EIS may not be needed. However, even if not strictly required by NEPA, a supplemental EIS or another document subject to public review and comment may be advisable given the potentially significant changes in final design and waste content. At a minimum, the final EIS must describe the changes from the draft EIS and update the discussion of impacts on the environment and public health. Our detailed comments provide examples of areas of uncertainty which lead to this conclusion.

3... EPA devoted considerable attention to the no-action alternatives and noted the public controversy about how realistic these are. EPA agrees that aspects of the no-action alternatives are speculative. However, the agency also believes that they provide a basis for comparison with the preferred alternative for the purposes of NEPA. We caution DOE, however, that should the U.S. decide not to proceed with constructing and operating the repository at Yucca Mountain and to pursue another solution, DOE would need to do a full examination of alternatives and their environmental impacts, within the confines of any national legislation.

EPA's review also focused on the national transportation aspects of this project. EPA appreciates that the actual shipments of waste will not likely occur for another 10 years and understands DOE's reluctance to provide additional information on routes for waste transport. However, EPA sees no reason why DOE cannot commit to making this information available as the time for shipments approaches, as the Department is doing now for shipments to the Waste Isolation Pilot Plant in New Mexico. Once DOE has greater certainty about the routes along which waste shipments will travel, the Department will also be able to update and expand upon, if needed, the environmental justice or other route-specific impact analyses. Specifically with regard to tribal governments, EPA encourages DOE to conduct a comprehensive tribal consultation process wherever waste shipments may cross tribal lands.

In addition, EPA suggests that the final EIS provide a section which lays out the responsibilities of various federal, state, local and tribal agencies in regulating, approving and monitoring shipments of radioactive waste. This information should provide additional

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assurance to the public that a national network of controls is in place designed to ensure public safety.

Thank you for the opportunity to review this document. If you have any questions or would like to meet to discuss our comments further, please contact Susan Absher of my staff. She may be reached at 202/564-7151.

Sincerely,

Richard E. Sanderson
Director
Office of Federal Activities

Enclosures: 2
Summary of Rating Definitions
Detailed EPA comments on the draft EIS

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DETAILED EPA COMMENTS on
Draft EIS for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain
(DOE/EIS-0250D, July 1999)

Section 1. Purpose and Need for Agency Action

4 Section 1.2.3, page 1-7. The second full paragraph describes the treatment process for high-level waste from storage in waste tanks through solidification. Part of that process "ordinarily includes separation of the waste into high-activity and low-activity fractions." However, after describing what happens to the "high-activity fraction," there is no mention of what happens with the "low-activity fraction." The low-activity fraction is still high-level waste, and this discussion should include the disposition of the low-activity fraction.

Section 2. Proposed Action and No-action Alternative

No-Action Alternative

3 cont. Section 2.2, page 2-59: This section describes the no-action alternative (no further site characterization at Yucca Mountain) and lays out two scenarios for this alternative: (1) wastes are stored at current locations and monitored/maintained for 10,000 years; or, (2) wastes are maintained for only 100 years, after which they are assumed to be abandoned. The Draft EIS acknowledges (page 2-60) that should there be a decision not to proceed with the repository, neither of these scenarios is likely; rather, the scenarios were chosen to provide a basis of comparison with the proposed action.

EPA agrees that while aspects of the no-action alternatives are speculative, they do provide a basis for comparison with the preferred alternative for the purposes of NEPA. We caution DOE, however, that should the U.S. decide not to proceed with constructing and operating the repository at Yucca Mountain, DOE would need to do a full examination of alternative solutions and their environmental impacts, within the confines of any national legislation.

Evolving Design of the Repository: General Comments

5... Page 2-6 indicates that there are many uncertainties about the final design of the repository and several of its components:

> "This EIS describes and evaluates the current preliminary design concept for repository surface facilities, subsurface facilities and disposal containers."
>
> "Plans for the repository would continue to evolve during the development of the final repository design and as a result of the NRC licensing review."
>
> "For these reasons, DOE developed implementing alternatives and analytical scenarios to bound the environmental impacts likely to result from the Proposed Action."

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5 cont. Page 2-10 states:

> "DOE continues to investigate design options . . . for final repository design; Appendix E identifies design features and alternative design concepts that DOE is considering for the final design (for example, smaller waste packages, a waste package design using two corrosion-resistant materials . . .). . . . DOE has assessed each of the design options still being considered for the expected change it would have on short- and long-term environmental impacts and has compared these impacts to the potential impacts determined for the packaging, thermal load and transportation scenarios evaluated in the EIS. . . DOE has concluded that the analytical scenarios and implementing alternatives evaluated in this EIS provide a representational range of potential environmental impacts the Proposed Action could cause."

The continuing site characterization and data collection raise questions about whether a supplemental environmental impact statement (SEIS) is needed once the final design and waste content are determined. CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when there are substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact.

If the Department's subsequent analysis of design choices indicates that the draft EIS/final EIS bounded the potential impacts, a supplemental may not be needed. However, even if a supplemental is not strictly required by NEPA, a supplemental or other document subject to public review and comment may be advisable given the potentially significant changes in final design and waste content. At a minimum, the final EIS must describe the changes from the draft EIS and update the discussion of impacts on the environment and public health. Examples of areas of uncertainty which lead to this conclusion are given below in the comments referring to pages 2-6, 2-10, 2-32, 2-37 (Section 2.1.2.4), and 2-81.

Evolving Design of the Repository: Specific Comments

6 Page 2-6, final two paragraphs of 2.1.1: The repository performance and dose assessments in the draft EIS are based on models and assumptions in the DOE Viability Assessment Report (DOE/VA - DOE/RW-0508) that are now outdated. For example, the draft EIS analyzes the Module I & II inventory increases which were not part of the DOE/VA. Also, the DOE/VA examined the performance of a waste package design that is now obsolete. The assessments in the final EIS should describe/assess the new EDA II design, particularly those aspects of the new design that modify the performance assessment.

7 Page 2-17, Figure 2-10 does not identify the proposed locations for the cask maintenance facility and landfill. Locations of these need to be identified in order to assess their potential impacts.

8... Page 2-21, 2.1.2.1.5: The second paragraph mentions "water used for cooling tower operations." We found no other description or reference to a cooling tower. The final EIS should explain the purpose of this operation and any possible radiological or chemical contamination from the

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8 cont. cooling tower.

9 Page 2-31: The third full paragraph describes removing materials from the repository during subsurface construction that occurs simultaneously with waste emplacement. What plans does the Department have for monitoring the water and other material being removed during waste emplacement operations? Monitoring should ascertain that no radioactive contamination is being removed. While it is not likely that such contamination will occur, there is always the possibility of contaminants adhering to the surface of waste packages and getting into the water or material being removed, or of an accident occurring.

10 Page 2-32: The second paragraph contains a general description of the waste package used for the performance assessment. The description of the waste package must be updated in the Final EIS.

11 Page 2-37, Section 2.1.2.3. In the final paragraph, the statement that DOE would use institutional controls "to limit or prevent intentional and unintentional activities in and around the closed repository" is problematic. EPA and the National Academy of Sciences maintain that prevention of such activities, including intrusion into the repository, cannot be assumed once active controls are discontinued. Since this paragraph refers to time beyond any reasonable active control period, e.g., more than 100 years, it should be amended to read "to attempt to limit intentional and

12 unintentional activities...." Second, this paragraph states, "Provisions could be added for post-closure monitoring." The final EIS should elaborate on when and how DOE would add post-closure monitoring.

13 Page 2-37, Section 2.1.2.4, first paragraph: When does the Department expect to have a performance confirmation program in place, and how will DOE decide which data to evaluate? We note that this paragraph says that the "performance confirmation programs could include" the listed data types. [emphasis added] EPA recommends using all of these factors to improve the performance assessment.

14 Page 2-40, Section 2.1.3.2, first paragraph: Please confirm whether only heavy-haul trucks will be used from commercial sites, or if legal-weight trucks may also be used.

90 Page 2-58, Section 2.1.4.3: This discussion does little to help the reader understand the design features and alternatives that affect operations and costs. We note that DOE intends to "evaluate the environmental impacts associated with the updated design in the final EIS." This section should be revised to clarify the discussion.

15... Page 2-58, Section 2.1.5: The discussion of "estimated costs" provides broad cost categories without an explanation of how these were derived. Also, there is no indication of how costs occur over time; no indication of the discount rate used to present all costs in 1998 dollars; and no indication of whether these are all direct costs of construction or if they include indirect costs such as that for siting the repository. TRW 1999e, the draft EIS cost summary report, is cited, but the final EIS should provide the reader more detail on costs.

Page 2-67, Section 2.2.3: The comments for section 2.1.5 apply here also. In addition, Table 2-6

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15 cont. provides only limited information and leaves out how storage costs were developed and how these compare to industry estimates.

16 Page 2-74, Section 2.4.3, first paragraph: The last sentence indicates that long-term (100 to 10,000 years) impacts were assessed only where DOE "could establish estimates of impacts." Were there any important impacts which were not assessed for this reason? If so, how does DOE plan to address them? (See 40 CFR § 1502.22)

17 Page 2-80, Table 2-8: It appears that the dose equivalent listed in this table for the maximally exposed member of the public (2.4 rem) is an annual value. If so, EPA assumes this value is listed in error. While EPA does not have transportation standards, compare this value to the limit for exposure to individuals of 0.015 rem per year (40 CFR Part 191) during the post-closure period of a repository.

18 Page 2-80, Section 2.4.4.1, last paragraph: Please explain the conclusions that short-term impacts would be less than a factor of 2 for thermal-load scenarios and that the impacts would be highest for the low thermal load and lowest for the high thermal load scenario.

19 Page 2-81, Section 2.4.4.2, final bullet: This item should refer to the Section 6 discussion of assessing impacts on cultural resources of Native Americans.

Section 3. Affected Environment

General Ground Water Issues

20 Section 3 of the draft EIS provides information about the hydrogeologic conditions in the vicinity of Yucca Mountain. The certainty of this information varies considerably, and it is difficult for the reader to understand how uncertainties will be resolved and how the data still being gathered will affect the design of the repository and the projections for ground water contamination. EPA suggests that the final EIS summarize ongoing studies and their expected impact on design and on ground water quality projections.

21 Most of the ground water studies described in Section 3 were done on a regional scale and may not provide accurate site-specific data for the saturated zone beneath the proposed repository. Section 3 provides general statements about ground water data, but fails to inform the reader about aquifer-specific data, such as the length of time data have been collected on the carbonate aquifer and the number of wells sampled over various periods of time. This information is particularly important for modeling the transport of radionuclides in the saturated zone.

22... EPA has previously discussed with DOE and NRC the calculations used to determine whether applicable radiation standards are met; determining whether the standard is met requires DOE to project the concentration of radionuclides in the water at the point of compliance. In order to do this, DOE must identify various scenarios for the type and quantity of waste released over time, transport path, and the concentrations predicted for the various options for representative volumes

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22 cont. of ground water (e.g. 10 to 1,285 acre feet), at the various distances selected as possible points of compliance. We did not find this data identifiable in the draft EIS and suggest that the final EIS provide a discussion of this information and a summary table.

Section 3.1.4, Specific Hydrology Comments

23 Page 3-41, Section 3.1.4.2.2: This section describes the Topopah Spring tuff unit, in which the repository will be built, as fractured, very permeable, and extensively interconnected; and, perched water forms at its contact with the underlying Calico Hills non-welded unit. Page 3-48 states that water chemistry analysis has found that "perched water reached its current depth with little interaction with rock. This, in turn, provides strong evidence that flow through faults and fractures is the primary source of perched water." The final EIS should address this concern: if seismic activity occurred at these fault zones, water could move faster (or slower) through the faults and fractures, possibly increasing the mounding of perched water. This is different than the "upwelling" referred to on page 3-49.

24 Page 3-46: The final EIS should provide an up-to-date analysis of the chlorine-36 transport data.

25 Page 3-49: Lower carbonate aquifer. Since data are limited, the EIS should not conclude that the lower carbonate aquifer has an upward gradient. Page 3-51 states that there is only one transmissivity value based on tests from a single well. Also, on page 3-52, it seems preliminary to count this aquifer as a possible source of inflow to the volcanic aquifers. The final EIS should acknowledge the limited confidence that can be placed on the gradient interpretation with the data currently available.

26 Page 3-52: The final EIS should provide data from the ongoing investigations on the cause of the potentiometric difference north and south of the site, and it should describe what these data suggest about the potential for water from the north to flood the repository.

27 Page 3-57: In the discussion about water levels in the 7 wells, the significance of their proximity or distance to Fortymile Wash is unclear.

28 Page 3-63, Section 3.1.5.1.4: This section states that "Fortymile Wash and some of its tributaries might be classified as Waters of the U.S..." It is likely that Fortymile Wash is a Water of the U.S., as well as the Amargosa River and its tributaries: Yucca Wash, Drill Hole Wash, Midway Valley Wash, Busted Butte Wash, Solitario Canyon Wash, and Crater Flat. Also, tributaries to the washes stated above may meet the Waters of the U.S. criteria, per U.S. Army Corps of Engineers assessment.

Other Section 3 issues

29 Page 3-31: We are confused about the discussion of the Amargosa River system and the statement that there is a ground water discharge near Beatty, NV. The final EIS should clarify the direction of the ground water flow which, according to Figure 3-13 (page 3-38), does not appear to be in the direction of Beatty.

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30 Page 3-79, Section 3.1.8: The assessments of impacts to the local populations appropriately focus on the current demographics of the area. However, there should also be some consideration given to short-term (~20 years) projections of population and land use, particularly in the area directly south of the repository where potential receptors are located. While the National Academy of Science (NAS) recommends against long term (thousands of years) projections of population characteristics, the changing demographics in the greater region around the site argue for considering a reasonable compromise between long term projections and a static situation, such as extending local planning projections for a decade or two. For example, projections of growth at the 20-kilometer location indicate modest population increases.

31 Page 3-82, second full paragraph: The DOE's value of 0.0005 latent cancer fatalities per person-rem is lower than the Federal Guidance level of 0.000575 latent cancer fatalities per person-rem (Table 7.3, page 174, Federal Guidance Report 13, "Cancer Risk Coefficients for Environmental Exposure to Radionuclides," EPA 402-R-99-001, September 1999). Since DOE was one of the funding, reviewing, and approving agencies for this study, EPA recommends that the Federal guidance level be used.

32 Page 3-142, Section 3.3.3: This section states that, "DOE calculated the river flow past each population center...and used this number in the calculation to determine dose to the population." The final EIS should provide the dose calculation used.

33 Page 3-142, Sections 3.3.2 and 3.3.3: The draft EIS briefly discusses ground and surface water impacts, but we were unable to find an assessment of ground water contamination from a surface spill. The transportation impacts analysis should consider ground water recharge zones and the proximity of transportation corridors to ground water supplies and community water systems.

Section 4. Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure

Section 4.1.3, Impacts to Hydrology

34 Page 4-24: Activity in drainages and washes may require a Section 404 permit if it takes place in Waters of the U.S.

35 Page 4-25, Section 4.1.3.3: The assessment of impacts to ground water should reference the discussion on radionuclide transport in ground water in Section 5.2. Readers may be confused by the page 4-25 discussion which focuses on the impact from spills and the potential for a contaminant to infiltrate and percolate through the unsaturated zone, rather than on the full range of ground water contamination.

Other Ground Water Concerns

36... Container breaches. The final EIS should discuss the expected scenarios for container breaches and the associated impacts on ground water, taking into account ground water contamination

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36 cont. levels at various distances and under various repository loadings. These analyses should cross-reference discussions on impacts to ground water.

37 Impact on ground water from transport spills. The draft EIS assesses the impact of spills on surface water, but the final EIS should also assess ground water contamination from a surface spill. The transportation impacts analysis should consider ground water recharge zones and the proximity of transportation corridors to ground water supplies and community water systems.

Section 4.1.4, Biological Resources

38 Page 4-30, Section 4.1.4.2: This section states that "routine releases of radioactive materials from the repository would consist of radioactive noble gases, principally isotopes of krypton and radon." Does DOE have any examples of where these types of releases are currently occurring? If so, are they monitored and have there been any impacts to biologic communities?

39 Page 4-33: DOE should plan to construct the evaporation ponds with side slopes or a ramp to facilitate wildlife use.

40 Page 4-35: While the impact on the threatened desert tortoise population is unclear (see comment on section 6.3.1.1), EPA questions whether the impact should be rated as low or very low. Some federally listed desert tortoises were killed during site characterization and more will likely be killed during construction, operation and monitoring, and closure. With increased human activity and traffic over the life of the project, the increases may be significant. EPA notes that DOE is obtaining a Biological Opinion from the Fish and Wildlife Service (page 4-33); any mitigation/conditions for protecting the tortoise should be listed in the final EIS.

Section 5. Environmental Consequences of Long-Term Repository Performance

41... Long-Term Repository Performance: General Comment

EPA disagrees with certain aspects of the performance assessment described in Section 5 and in Appendix I. The Total System Performance Assessment, presented in the Viability Assessment for Yucca Mountain and captured in the draft EIS analysis, relies in some instances on extreme performance cases which either omit or overestimate certain effects.

EPA recommends using an approach -- reasonable expectation -- which focuses on a more realistic depiction of repository performance and which recognizes the inherent uncertainties in projecting repository performance over the long term. This more realistic approach projects the expected behavior of the waste containment and isolation system, but avoids extreme assumptions and use of unrealistic performance scenarios.

We believe the final EIS would be strengthened by identifying the more conservative assumptions used in the assessment. Identifying these would give the reader a better sense of the variability inherent in the estimates of repository performance and provide the public with a more balanced

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41 cont. performance projection.

Section 5.1, Inventory for Performance Assessment Calculations

42 Table S-1 on page 5-5 and the related discussion in sections 5.1 and 8.3.1.2.3 (Atmospheric Radioactive Material Impacts) fail to consider post-closure releases of radon from the spent nuclear fuel in the time period beyond 10,000 years. EPA's proposed standards for Yucca Mountain at 40 CFR Part 197 require an analysis of the dose to a reasonably maximally exposed individual for the period beyond 10,000 years through the time of peak dose (64 FR 46976, August 27, 1999). The National Academy of Sciences' Yucca Mountain panel in 1995 estimated that the Yucca Mountain site would be stable on the order of one million years. The final EIS must therefore discuss releases of radon-222 (^{222}Rn), which will result from the decay of the considerable inventory of uranium in the spent nuclear fuel.

43 Section 5.5 (Atmospheric Radiologic Consequences) concludes that carbon-14 (^{14}C) is the only radionuclide that has the potential for transport through the atmosphere. Likewise, section 8.3.1.2 addresses only ^{14}C releases with respect to cumulative impacts. The draft EIS does examine the exposures to workers and offsite individuals from radon as a result of various operations. However, as noted by Sullivan and Pescatore ("Release of Radon Contaminants from Yucca Mountain: The Role of Buoyancy Driven Flow," T.M. Sullivan and C. Pescatore, Brookhaven National Laboratory, BNL-52468, February 1994):

> "Barometric and wind pumping at Yucca Mountain may cause long-term ^{222}Rn removal from the oxidized spent fuel waste. The problem of enhanced ^{222}Rn release to the accessible environment would pose itself later in time (after 20,000 years and peaking in roughly 200,000 years) and would last for as long as unsaturated conditions would prevail at Yucca Mountain."

44 EPA's analysis of spent fuel radionuclide inventories in support of the promulgation of 40 CFR Part 191 (see EPA 520/4-79-007A, 1977) indicates a ^{222}Rn content of about 1 curie per metric ton of heavy metal, at 100,000 years following discharge from a light water reactor. This would imply a repository inventory for ^{222}Rn of about 63,000 curies at about 100,000 years for the currently authorized Yucca Mountain repository. Because of its energetic radiations and numerous daughter radionuclides, ^{222}Rn presents a significantly larger risk per unit of radioactivity than ^{14}C.

45 Section 5.5 also indicates (introductory paragraph) that impacts for the global population were estimated. What value was used for the projected collective dose received by the global population?

46 Page 5-5: The final EIS should explain the statement on page 5-5 that chemically toxic materials were eliminated from consideration because "their total quantity would be very low and dilution in the repository environment would reduce their concentration to below toxic levels before they entered the saturated ground water system."

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47 Page 5-13: Section 5.2.3.4 discusses the different paths radionuclides can take, but should discuss pathways through the alluvial, volcanic and carbonate aquifirs.

Section 5.3. Locations for Impact Estimates

48 Page 5-23: This section states "Because of this pressure difference, water from the volcanic aquifer does not flow into the carbonate aquifer; rather the reverse occurs." This statement relies on just one data point in the carbonate aquifer. In Chapter 3, this uncertainty was noted. One data point does not provide certainty, and the EIS should not assume that the entire carbonate aquifer has an upward gradient, given the amount of fracturing and faulting involved. Nor should the EIS state that no contamination will occur at Ash Meadows, since Chapter 3 noted that it was a discharge point.

49 Page 5-27, second paragraph and Page 5-31, bottom paragraph: Page 5-27 states that 22 acre-feet of water per year infiltrate through the repository, while page 5-31 cites 25 acre-feet. Which value is correct?

50 Page 5-43, Section 5.7.2, second paragraph: It would be helpful to have a graphic representation of the results of the volcanic activity analyses.

51 Page 5-44, first paragraph: It is difficult to understand the first part of this paragraph. Please explain the sentence: "Because of its low velocity, the magma would not be removed from the waste package."

Section 6. Environmental Impacts of Transportation

National Transportation Impacts.

52 Section 6.2.1: This section describes how the EIS bounds the impacts to human health, safety and the environment from transportation by examining the two extremes of transportation possibilities - -mostly rail and mostly legal-weight truck. Based on DOE's analysis, EPA agrees with DOE's overall assessment that radiological impacts to the public from transportation of wastes to Yucca Mountain will be small.

53 In addition, the EIS recognizes the need to prepare for and respond to accidents. Page 6-30 highlights section 180(c) of the Nuclear Waste Policy Act under which DOE will provide technical assistance and funding to state, local and tribal public safety programs on transportation emergencies. This page also describes how transportation contractors must prepare an emergency response plan and take other steps to deal with the consequences of accidents.

54... EPA appreciates that the actual shipments of waste will not likely occur for another 10 years and understands DOE's reluctance to provide additional information on likely routes for waste transport. However, EPA sees no reason why DOE cannot commit to making this information available as the time for shipments approaches. DOE is doing this now for shipments to the

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54 cont. Waste Isolation Pilot Plant in New Mexico. Once DOE has greater certainty about the routes along which waste shipments will travel, the Department will also be able to update and expand upon, if needed, the environmental justice or other impact analyses which are route-specific.

55 In addition, EPA suggests that the final EIS provide a section which lays out the responsibilities of various federal, state, local and tribal agencies in regulating, approving and monitoring shipments of nuclear waste. This information should provide additional assurance to the public that a national network of controls is in place designed to ensure public safety.

56 Page 6-17, Section 6.1.3, second paragraph: The next-to-last sentence says that "an air quality conformity analysis [for carbon monoxide] may be required." If a conformity determination is needed, it should be made before completion of the NEPA process. EPA suggests such information be included in the final EIS.

57 Page 6-20, third bullet: The term "dose risk" is not a standard term. What does it mean when used in the phrase, "to estimate radiological dose risk to populations"?

58 Page 6-38, Section 6.3.1.1: DOE recognizes that desert tortoises will be killed as a result of transportation operations. The Department reaches the conclusion that "any desert tortoises killed by trucks transporting spent nuclear fuel or high-level radioactive waste probably would be only a small fraction of all desert tortoises killed on highways." This may be true, but what is the anticipated impact of this operation relative to the desert tortoise population on the Nevada Test Site (NTS)? The higher concentration of shipments on the NTS could result in a proportionately higher impact than in the general environment. However, it may be possible that the impact on the tortoise population might be less than in the general environment since the NTS has a protection program in place. See also EPA comment on page 4-35.

Section 7. Environmental Impacts of the No-Action Alternative

59 Page 7-38, end of the first partial paragraph: EPA appreciates that for comparison purposes and to avoid the appearance of bias toward the preferred alternative, "DOE did not want to overestimate the impacts from Scenario 2." However, the document should provide an estimate or a range of impacts for the reader.

Section 8. Cumulative Impacts

60 Page 8-27, Section 8.2.2.1.2: This section refers to 40 CFR Part 61 which contains EPA's Clean Air Act regulations for radiological effluents from a variety of facilities; however, this rule is not applicable to Yucca Mountain. More appropriate references are 40 CFR Part 191, Subpart A (Environmental Standards for Management and Storage, 50 FR 38066, September 19, 1985) or proposed 40 CFR Part 197, Subpart A (Environmental Standards for Storage), both of which address airborne radiological releases and external exposures from Yucca Mountain during the operational period.

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61 Page 8-47, Table 8-22: This table and several other tables in section 8 list "MEI dose (millirem)", but do not indicate whether this dose occurs in one year or over the total closure period. Some of the doses are rather large compared to established radioactive waste standards, such as the 58 millirem listed for the MEI dose for Inventory Module 1 or 2. To properly judge the impact, the exposure period must be specified.

62 Page 8-66, Table 8-46: For Inventory Module 1, the gross alpha concentration is missing.

63 Page 8-74, Item 7 and the final paragraph: This item, *Greater Confinement Disposal* (GCD), does not indicate that there is transuranic radioactive (TRU) waste at the Nevada Test Site, in addition to low-level radioactive waste (LLW). The final EIS should so note since the TRU waste has a greater potential for adding to the impact from Yucca Mountain than does the LLW.

64 Page 8-75, Table 8-55: Out of the 9.3 million curies in GCD, tritium and americium are the only ones identified as "major or known isotopes." DOE needs to state the basis for determining a "major isotope."

65 Page 8-77, Section 8.3.2.1.2: This section assumes that the risk of radiological impacts is directly scalable to the radiological content of the waste disposed in the GCD facility. However, the GCD wastes are disposed in a different manner than that contemplated for the Yucca Mountain repository (namely, closer to ground surface) and the source term likely contains a different mixture of radionuclides than anticipated for disposal at Yucca Mountain; therefore, relating the risk of GCD disposal to its inventory is overly simplistic and should be re-examined.

Section 9. Management Actions to Mitigate Potential Adverse Environmental Impacts

Design Changes

66... Pages 9-12 through 9-16, Section 9.2.8: The design alternatives discussed in this section are outdated with the Department's adoption of the EDA II design. The final EIS should discuss the new design of the engineered barrier components (e.g., elements designed to minimize water contact with the packages, increase containment lifetime, or retard radionuclide movement out of the repository); it should also discuss the operational choices (e.g., a prolonged retrievability period) that dictated the design changes and reduced uncertainties in assessing performance of the system.

The final EIS should also contrast significant changes in the engineered barrier performance assessment with the assessments for the older design. For example, the DOE/VA design assumed a juvenile package failure at 1,000 years, a major contributor to the dose calculations within 10,000 years. Estimating the rate and timing of juvenile failures is very difficult since the failure mechanisms are hard to predict. With the addition of drip shields, this uncertainty is effectively eliminated since releases would only occur if a drip shield is breached over a package with a juvenile failure - a very low- probability event.

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66 cont. The performance assessment of the new design should describe the string of processes and events needed to release radionuclides, e.g., the probability that a drip shield would prematurely fail, the probability that a waste package would prematurely fail, the probability that these failures would be co-located, and the probability that a ground water seep would be located over the failed drip shield. A presentation in the final EIS that describes the new design in terms of its expected performance can help justify the design change, support the bounding argument for the older design, and increase confidence in the repository assessments.

Tribal Coordination/Consultation (various sections and appendices)

67 Page 9-22: This section refers to the Yucca Mountain Project Native American Interaction Program for promoting a government-to-government relationship with area tribes. Pages C-7 to C-9 also discuss DOE's interaction with tribal governments on the proposed project. Representatives from the "Consolidated Group of Tribes and Organizations" have met with DOE on a range of issues. The Consolidated Group includes Southern Paiute Tribes, Western Shoshone Tribes, Owens Valley Paiute and Shoshone Tribes, and the Las Vegas Indian Center. EPA commends DOE's efforts to work with Tribes within Nevada and neighboring states, but we also encourage DOE to inform and reach out to other Tribes which may be affected by waste shipments.

Shipments of spent nuclear fuel and/or DOE high-level radioactive waste may cross Tribal lands in various parts of the country, and if DOE has not already done so, we encourage the Department to commence a government-to-government consultation process with such Federally-recognized Tribes. In order to facilitate public and agency disclosure under NEPA, the final EIS should identify those Tribes which may be affected by the transportation of waste across or close to Tribal land. This discussion should also include any potential effects on tribal resources.

68 The draft EIS (Figures 2-26 and 2-27) depicts U.S. interstate and rail routes which are potential corridors for waste proposed for disposal at Yucca Mountain. We recommend that the final EIS provide a modified overlay of these two figures to depict Tribal lands through which waste bound for disposal at Yucca Mountain may pass via road or rail. The Bureau of Indian Affairs (BIA) has a 1993 map for Indian Land Areas in the lower 48 states. This map depicts the location of tribal lands in relationship to the Federal highway network, and may be useful for this effort.

69 Pages 3-68 through 3-70: This section discusses tribal historical and cultural beliefs but provides little information on how Native Americans think the proposed project may affect their cultural resources. Page 3-70 refers to a resource document prepared by the American Indian Writers Subgroup, but does not summarize the concerns therein or explain how to obtain a copy of the document.

70 We also note that while Appendix D indicates that the draft EIS was distributed to the Department of the Interior's Office of Environmental Policy and Compliance (Dr. Willie R. Taylor), it does not appear that a copy was sent directly to the Bureau of Indian Affairs (BIA). We recommend that the Department of Energy provide the BIA with a copy of the final EIS.

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Section 11. Statutory and Other Applicable Requirements

Pages 11-6 and 11-7, Nevada Water Quality Standards

71 It is unclear whether the draft EIS has fully analyzed potential water quality impacts of the proposed project (especially the environmental consequences of long-term repository performance) per Nevada water quality standards. The final EIS should provide this analysis and discuss any needed mitigation.

72 Section 1.3.2 states that waterborne chemically toxic materials that could threaten human health are present in materials disposed of in the repository, the most abundant being uranium, as well as nickel, chromium and molybdenum (used in the waste package). EPA agrees with the analysis on page 5-6 of the conditions under which waste materials disposed at Yucca Mountain could threaten human health: (1) the waste packages and their contents are exposed to water, (2) radionuclides and/or chemically toxic materials in the package materials or wastes become dissolved or mobilized in the water, and (3) radionuclides or chemically toxic materials are transported in water to an aquifer; further, such water must be withdrawn via a well or surface discharge point and used by humans as drinking water or in the human food chain.

73... Pages 11-6 and 11-7 of the Draft EIS highlight several important requirements of the Federal Clean Water Act (CWA) and Nevada's Revised Statutes which were passed to carry out the legislative requirements of the CWA and EPA's regulatory programs. The draft EIS recognizes the CWA Section 313 requirement that any project or activity by a Federal department or agency resulting (or which may result) in the discharge or runoff of pollutants comply with Federal, State, local and interstate water pollution requirements. Water Quality Standards are designed to protect both existing and designated beneficial uses of a water body. The Water Quality Standards adopted by the State of Nevada and approved by U.S. EPA require that:

- The water must be suitable for the watering of livestock without treatment.
- The water must be suitable as habitat for fish and other aquatic life existing in a body of water.
- The water must be suitable for propagation of wildlife and water fowl without treatment.
- The unique ecological or aesthetic value of the water must be maintained.
- The water must support natural enhancement or improvement of water quality in any water which is downstream (see NAC 445A.122, approved by U.S. EPA under authority of the Federal CWA).

Page 3-31 describes the hydrologic system of the Yucca Mountain region, noting that the Amargosa River system drains Yucca Mountain and surrounding areas. The Yucca Mountain regional groundwater system includes "discharge points," defined as "locations where groundwater reaches the surface." The draft EIS notes that groundwater discharges to channels near Beatty, Nevada, south of Tecopa, California, and in southern Death Valley, California. (See also EPA's question about the Beatty discharge point under Section 3 issues.)

Because the Amargosa River flows into Death Valley, California (p. 3-31), it is presumably an interstate water regulated by Nevada water quality standards (NAC 445A.213(5)). These standards provide that "Radioactive materials attributable to municipal, industrial or other controllable sources must be at the minimum concentrations which are physically and

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73 cont. economically feasible to achieve. In no case must materials exceed 1/10 of the 168-hour values for other radioactive substances specified in National Bureau of Standards Handbook 69." Regarding radioactive materials, the Water Quality Standards stipulate that "...concentrations in water must not result in accumulation of radioactivity in plants or animals that result in a hazard to humans or harm to aquatic life" (NAC 445A.121(6)).

California Water Quality Standards

74 Page 3-31 states that ground water reaches the surface at three locations, including one in southern Death Valley, California. However, the draft EIS does not discuss whether any potential migration and subsequent discharge of contaminated groundwater from the project (from repository construction, operation, closure, or long-term performance) would be consistent with the State of California's Water Quality Standards for this geographic area. The final EIS should provide this analysis and discuss any needed mitigation.

75 The relevant California standards are in the Water Quality Control Plan for the Lahontan Region, developed by the California Regional Water Quality Control Board, approved by EPA and last updated in October 1994. This Plan identifies water quality objectives for surface waters; specifically, page 3-6 of the Plan specifies "Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life." The Plan further provides that waters with a designated beneficial use of "MUN" (waters used for community, military or individual water supply systems) shall not contain a concentration of radionuclides in excess of the limits specified in Table 4, Section 64443 (radioactivity) of Title 22 of the California Code of Regulations.

The Plan identifies larger hydrologic units (such as the Amargosa Hydrologic Unit and the Death Valley Hydrologic Area), and geographically smaller subunits (such as the Tecopa Wetlands, and minor surface waters and minor wetlands in the Death Valley Hydrologic Area), and lists specific beneficial uses that must be protected. Beneficial uses for the Tecopa Wetlands include municipal and domestic water supply, freshwater habitat, wildlife habitat, preservation of biological habitats of special significance, habitat for rare, threatened and endangered species, migration of aquatic organisms, and water quality enhancement. Many of these same beneficial uses also apply to the minor surface waters and minor wetlands of Death Valley, which in addition are designated beneficial uses of ground water and fresh water replenishment.

Compliance with Resource Conservation and Recovery Act (RCRA), Page 11-11

76... Mixed radioactive and hazardous waste is subject to RCRA requirements, including applicable permitting requirements. The draft EIS states that DOE will not accept hazardous waste for disposal at Yucca Mountain and that any hazardous or mixed waste which is generated will not be treated or disposed on-site, nor will it be stored for more than 90 days. Accordingly, "DOE does not expect to need a Resource Conservation and Recovery Act permit for its activities at the proposed repository."

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76 cont. Page 1-7 of the draft EIS indicates that high-level wastes from DOE sites would be immobilized through vitrification before shipment to Yucca Mountain. Vitrification meets the RCRA Land Disposal Restriction treatment standard for these wastes. Various DOE documents indicate that organic solvents and hazardous chemicals, in addition to toxic heavy metals, are typically contained in high-level radioactive waste. The final EIS should explain why the high-level waste to be disposed of at Yucca Mountain will not be RCRA regulated.

77 The final EIS should also clarify the applicability of RCRA to the data presented in Table I-10 (page I-15) in Volume II, "Inventory [kilograms] of Chemical Materials Placed in the Repository under the Proposed Action." Under "high-level radioactive waste" the table lists 19,000 kilograms of barium, 43,000 kilograms of cadmium, 2,000 kilograms of lead, 200 kilograms of mercury, and 300 kilograms of selenium. Pursuant to RCRA, EPA has established regulatory levels (mg/L) for barium (100.0 mg/L), cadmium (1.0 mg/L), lead (5.0 mg/L), mercury (0.2 mg/L), and selenium (1.0 mg/L). (See 40 CFR 261.24, Toxicity Characteristics.)

PCBs and Asbestos

78 Section 11 of the draft EIS does not discuss the applicability of the Toxic Substances Control Act or of regulations governing asbestos disposal. The final EIS should clarify whether any waste proposed for disposal at Yucca Mountain is or may be contaminated with PCBs (polychlorinated biphenyls), or whether any radioactive asbestos waste is destined for disposal at Yucca Mountain, and, if so, the regulatory implications of such.

Other Section 11 Comments

79 Page 11-18, Table 11-2: The table should include DOE Order 435.1 which applies to this action unless the requirements of the order "overlap or duplicate" requirements of the Nuclear Regulatory Commission (NRC).

80 Page 11-20, Table 11-3: The table should list 40 CFR Part 191, Subpart A (Environmental Standards for Management and Storage) which applies to certain areas in the vicinity of the proposed Yucca Mountain repository.

Section 14. Glossary

81... Page 14-8, definition of "controlled area": This definition is inconsistent with how this term is used in 40 CFR Part 191 (see 50 FR 38085, September 19, 1985) and in proposed 40 CFR Part 197 (64 FR 47013, August 27, 1999). The definitions in EPA's rules limit the controlled area size to no more than five kilometers from the repository footprint. (There is an additional option in proposed 40 CFR Part 197 with which this definition is also inconsistent.) EPA recognizes that the size of the controlled area for physical control purposes during the active institutional control period might be different than the area used for performance assessment purposes, but if so, the distinction should be clarified on page 14-8 and in the appropriate places in the final EIS.

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82 Page 14-19, definition of "inadvertent intrusion": The word "unintended" needs to be inserted before "disturbance," i.e., "The *unintended* disturbance of a disposal facility ...." As currently written, the definition would include purposeful intrusions.

83 Page 14-19, definition of "institutional control": This definition should distinguish between "active institutional control," which requires the presence of humans to take actions to safeguard and repair the repository, and "passive institutional control," which also includes controls such as permanent markers and land records to warn future generations of dangers from the disposal site.

84 Page 14-22, definition of "maximally exposed individual": The last sentence of this definition equates the maximally exposed individual (MEI) with the "reasonably maximally exposed individual (RMEI)," a term used in the recently proposed 40 CFR Part 197 (see 64 FR 46988 and 47014/47015, August 27, 1999). These two terms are very different. The dose incurred by the MEI is calculated by using the most conservative values (i.e., producing the highest dose) for all parameters needed to calculate the dose to an individual. The dose incurred by the RMEI, on the other hand, assumes that one or a few parameters are at their maximum or most conservative values while the others are at their average values.

Page 14-29, definition of "reasonably maximally exposed individual": See previous comment.

Appendix I. Environmental Consequences of Long-Term Repository Performance

85 Page I-49, fourth full paragraph: The document described in the final sentence should be referred to as Federal Guidance Report No. 11.

86 Page I-111, last reference. Please replace the authors' names in the first column with the EPA report number.

Appendix J. Transportation

87 Page J-8, second full paragraph: This paragraph discussed the methodology used to estimate the radiation impact resulting from accidents. The spectrum of possible accident severity was divided into categories. Then "each category of severity received a conditional probability of occurrence." A release fraction was assigned to each category. Please provide a brief discussion of how values were assigned and a table listing the values.

Appendix K. Long-Term Radiological Impact Analysis for the No-Action Alternative

88 Page K-7, Figure K-3: This map shows failure times for above-ground concrete storage modules. The no-action impact analysis looked at a 100-year time frame, yet Figure K-3 indicates that in some areas of the country, failure could be expected in less than 75 years and, in other areas, between 75-100 years. The final EIS should evaluate the premature failure potential for those areas of the country where such could be expected in less than 100 years.

89... Page K-26, Section K.2.5.2: This section discusses the potential for criticality involving stored

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89 cont. spent fuel. EPA agrees with the assessment that criticality for high-level nuclear waste is impossible, but believes the EIS should expand the assessment of low probability for criticality in stored spent fuel canisters. The text states that only water entry, and its retention in the canisters, would allow a criticality to develop; and, the discussion further acknowledges the possibility of degradation of the concrete storage facilities, allowing water entry. Yet, the text does not assess the probability that dripping water could corrode the fuel containers, allowing water to enter and remain there for some time, potentially causing a criticality.

The text discusses three types of criticality events, but does not connect them to more explicit container corrosion failures scenarios or evaluate the relative probabilities of each failure type. DOE should more explicitly analyze corrosion failures (penetration of the container and corrosion of the internal components) from water entering the storage container and the potential for various criticalities. It is plausible that dripping water could corrode a storage container, allowing water to collect and fill the container (a scenario similar to NRC's performance scenario for a breached waste package in the repository).

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RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT EIS (Comment Document 1632)

1. Thank you for your comment.

2. DOE assumes that the fundamental data referred to in the comment mean such things as aquifer properties, retardation coefficients, hydraulic heads, etc. Such data are detailed in the documents referenced in Appendix I of the EIS.

   Appendix I contains detailed information in support of Chapter 5 of the EIS. As stated in the introduction to Appendix I, the long-term performance analysis was conducted using a TSPA model and supporting data derived from the TSPA models and data that support other Yucca Mountain Project documents. As also stated, the purpose of Appendix I is not to republish the large body of available information but to reference the sources of the information and describe any special additional modeling and data used for the EIS. Some common background material was duplicated as an overview to enhance understanding of the incremental material. Thus, much of the detailed data on saturated zone modeling in this EIS is from the *Total System Performance Assessment for the Site Recommendation* (DIRS 153246-CRWMS M&O 2000) and the *FY 01 Supplemental Science and Performance Analyses* (DIRS 155950-BSC 2001), as referenced in the Final EIS.

   The Final EIS discusses the new Environmental Protection Agency standard (40 CFR Part 197).

3. DOE agrees with the Environmental Protection Agency's assertions regarding future actions should the United States decide to not proceed with construction and operation of a repository at Yucca Mountain. As stated in Section 2.2 of the EIS, if Yucca Mountain was determined to be unsuitable or was not approved by the President or Congress, DOE would prepare a report to Congress. This report, required by the NWPA, would contain DOE recommendations for further action to ensure the safe, permanent disposal of spent-nuclear fuel and high-level radioactive waste, including the need for new legislative authority. Other than this action, the future course that Congress, DOE, and the commercial nuclear utilities would take is uncertain. Several possibilities could be pursued, including centralized interim storage or the study of another location for a a deep geologic repository. However, it would be too speculative to say that any of these actions would be pursued.

4. As explained in the EIS, the purpose of the pretreatment process is to separate the high-activity fraction, which requires the permanent isolation afforded by a repository, from the low-activity fraction. This large volume of low-activity waste is subject to a "waste incidental to reprocessing determination," as provided for in DOE's Radioactive Waste Management Manual (DOE M435.1-1). A waste stream can be managed as low-level waste if the waste incidental to reprocessing determination shows that it meets the following criteria:

   - The key radionuclides are removed to the extent technically and economically practical (this is accomplished by pretreatment).

   - It is managed to meet safety requirements comparable to the performance objectives set out in 10 CFR Part 61, Subpart C, Performance Objectives.

   - It is managed in accordance with the DOE M 435.1-1 low-level waste requirements and is incorporated into a solid physical form at a concentration less than the Class C limits set out in 10 CFR 61.55.

   The Waste Incidental to Reprocessing provision was included in the August 6, 1998, drafts of DOE Order 435.1 and DOE M 435.1-1 that were made available for public comment. DOE has since issued DOE Order 435.1 for implementation.

DOE has modified Section 1.2.3 of the EIS to reflect that low-level waste would be disposed of in accordance with applicable regulations.

5. As the Environmental Protection Agency notes, the Draft EIS evaluated the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) for repository surface facilities, and disposal containers (waste packages). DOE noted in the Draft EIS (in Section 2.1.1.5, for example) that the analyzed designs were preliminary and were likely to evolve in various ways. Since it issued the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The results of the design evolution process was the development of the Science and Engineering Report flexible design. This design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass loading), but the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain are unchanged. DOE evaluated the flexible design in a Supplement to the Draft EIS, which was released for public review and comment in May 2001.

   Aspects of the design in the Supplement to the EIS (as well as this Final EIS) are likely to continue to evolve, particularly in relation to the means of controlling heat generated by spent nuclear fuel and high-level radioactive waste. Under Section 114(a) of the NWPA, DOE must provide a description of the proposed repository, including preliminary design specifications, as part of any Site Recommendation. If the Yucca Mountain site was approved, a more refined flexible design would be determined only at the time of License Application to the Nuclear Regulatory Commission. That design probably would continue to change as a result of the License Application process.

   In this Final EIS, DOE varied design parameters to create lower- and higher-temperature operating modes in such a way to provide the range of potential environmental impacts. DOE believes that the EIS adequately analyzes each design element investigated, the resulting short- and long- term environmental impacts, and mitigation measures. Further, the analyses incorporate conservative assumptions that tend to overestimate impacts, as identified in the EIS. For example, in Section G.1.1 of the EIS the total nonradiological air quality impacts were the sum of the calculated maximum concentrations regardless of wind direction. This conservatively maximized air quality impacts. This type of approach to estimate impacts conservatively was applied to all other resources, as appropriate.

   Because of the various implementing alternatives and scenarios analyzed as well as the conservative nature of the analyses, DOE believes that the analyses represent a realistic upper bound of environmental impact that could occur from the implementation of the Proposed Action.

6. The Draft EIS evaluates the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) for repository surface and subsurface facilities as well as disposal containers (waste packages). It also evaluates the plans for the construction, operation and monitoring, and closure of the repository. DOE recognized before it published the Draft EIS that plans for a repository would continue to evolve during the development of any final repository design and as a result of any licensing review of the repository by the U.S. Nuclear Regulatory Commission. The design evolution is evaluated in the Supplement to the Draft EIS and integrated into the Final EIS. The Supplement to the Draft EIS incorporates new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies.

   As described in the Supplement to the Draft EIS and incorporated into the Final EIS, the waste package has been redesigned to include a thick outer shell of corrosion-resistant high-nickel alloy (Alloy-22) and a thick inner shell of stainless steel for strength. This newer design resists corrosion far better than the design described in the Draft EIS, and has improved the predicted performance of the repository and reduced uncertainties associated with that performance. A description of the flexible design waste package can be found in Section 2.3.4.1 of the Supplement to the Draft EIS and Section 2.1.2.2.2 of the Final EIS.

The type and amount of neutron absorber necessary for a specific waste package design would be determined by DOE prior to receipt of a license from the Nuclear Regulatory Commission to receive and posses spent nuclear fuel and high-level radioactive waste. This would have to be done consistent with a criticality analysis methodology that has been accepted by the Commission. The specifics of that methodology are presented in Disposal Criticality Analysis Methodology Topical Report, which DOE submitted to the Commission in January 1999.

7. DOE has considered onsite and offsite locations for the Cask Maintenance Facility. A site for the landfill has not yet been identified. DOE would identify an appropriately sized landfill at the repository site for nonhazardous and nonradiological construction and sanitary solid waste, and for similar waste generated during operation, monitoring, and closure of the repository. Although the Cask Maintenance Facility may not be located at the Yucca Mountain site (therefore not depicted on current site drawings), the EIS analysis assumed the landfill and the Cask Maintenance Facility would be located at the repository. By doing so, the environmental impacts of these facilities were considered in the EIS. DOE believes that the amount of information in the EIS on these facilities is adequate to determine representative environmental impacts.

8. Figure 2-10 shows the location of the cooling tower at the North Portal Operations Area. DOE would use the cooling tower exclusively for air conditioning of surface facilities at the repository. The tower would not be a source of chemical contamination or radiological emissions. The Final EIS has been revised to state that the cooling tower is not a source of chemical or radiological emissions or contamination.

9. DOE would emplace waste packages in underground tunnels at the same time it was constructing additional tunnels. However, the two areas of operation would be isolated from one another. Section 4.1.3.2 of the EIS discusses potential impacts to surface water from repository construction, operations, maintenance, monitoring, and closure. As stated in that section, DOE would pump water from subsurface construction areas to a lined evaporation pond at the South Portal Operations Area. It would pump water from the emplacement areas, if any, to a lined evaporation pond at the North Portal Operations Area, but only after verifying that it was not contaminated.

   DOE would remove solid materials through mining operations, but only from the development area. Bulkheads would isolate this area from the emplacement side, and the ventilation system would ensure that air leaks would be from the development side to the emplacement side (because it would maintain a lower pressure on the emplacement side).

10. As described in the Supplement to the Draft EIS and incorporated into the Final EIS, the waste package has been redesigned to include a thick outer shell of a corrosion-resistant high-nickel alloy (Alloy-22) and a thick inner shell of stainless steel for strength. This newer design would resist corrosion far better than the design described in the Draft EIS, and would improve the predicted performance of the repository and reduced uncertainties associated with that performance. Section 2.1.2.2.4 of the EIS describes the waste package design.

11. DOE agrees that the limitation or prevention of intentional and unintentional activities around the closed repository could not be guaranteed.

12. DOE would design and implement a postclosure monitoring program in compliance with the Nuclear Regulatory Commission regulations (10 CFR Part 63). Before closure, DOE would submit an application for a license amendment to the Commission for review and approval. The application would include, among other items:

    1. An update of the assessment of the performance of the repository for the period after closure

    2. A description of the postclosure monitoring program

3. A detailed description of measures to regulate or prevent activities that could impair the long-term isolation of the waste, and to preserve relevant information for use by future generations

The application also would describe DOE's proposal for continued oversight to prevent any activity at the site that would pose an unreasonable risk of breaching the repository's engineered barriers, or increase the exposure of individual members of the public to radiation beyond limits allowed by the Nuclear Regulatory Commission. DOE has modified Chapter 9 of the EIS to include the types of monitoring and other institutional controls that would be contemplated. The Department would develop the details of this program during the consideration of the license amendment for closure. This would allow the Department to take advantage of new technological information, as appropriate.

13. DOE agrees that the limitation or prevention of intentional and unintentional activities around the closed repository could not be guaranteed.

14. DOE believes that the mostly rail scenario, in which more than 95 percent of spent nuclear fuel and high-level radioactive waste would be shipped by rail, and the rest by legal-weight truck, would most closely approximate the actual mix of truck and rail shipments. In reaching this conclusion, DOE considered the capabilities of the sites to handle larger (rail) casks, the distances to suitable railheads, and historic experience in actual shipments of nuclear fuel, waste or other large reactor-related components. DOE also considered relevant information published by sources such as the Nuclear Energy Institute and the State of Nevada. In addition, DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada.

15. The EIS focuses on analyses of potential environmental impacts, including impacts to human health and safety. DOE provided the estimated cost information as a point of comparison between the Proposed Action and the No-Action Alternative. The cost estimates in the Draft EIS were in 1998 dollars with no escalation or discount rates. The reference cited in the comment (DIRS 104980-CRWMS M&O 1999) provides the basis for the Proposed Action cost estimate for the period from 2002 to 2116. As stated in that reference, most of the detailed information came from existing cost estimates for the 1999 to 2116 period in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) and from the *Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program* (DIRS 102031-DOE 1998), which both provide detailed year-by-year cost estimates. The EIS estimates include all costs from 2002 forward (when DOE anticipates a decision regarding development of a repository at Yucca Mountain). Costs for the Proposed Action and the No-Action Alternative would be the same up to that time. Costs for siting and characterization of the Yucca Mountain site were not included in the Draft EIS estimates. Section 2.1.5 of the Final EIS provides revised cost estimates for the repository flexible design.

The No-Action Alternative cost estimate in Section 2.2.3 of the EIS is a comparative cost estimate and only includes costs different from the costs of the Proposed Action. For example, the No-Action costs do not include storage costs until 2010 when a repository would first accept spent nuclear fuel and high-level radioactive waste because storage until that point would be required under both the Proposed Action and the No-Action Alternative. The No-Action cost estimate is based on, and consistent with, existing industry experience for dry onsite storage of spent nuclear fuel and high-level radioactive waste. Section 2.2.3 of the Final EIS provides revised cost estimates for the No-Action Alternative.

16. The full quote of the last sentence is:

"Because these projections are based essentially on best available scientific techniques, DOE focused the assessment of long-term impacts on human health, biological resources, surface-water and groundwater resources, and other resource areas for which the analysis determined the information was particularly important and could establish estimates of impacts." (Draft EIS, p. 2-74)

The intent of this statement is that DOE assessed all important impacts in the long-term period. No analyses were omitted because of inability to establish an estimate. Some resource areas (such as noise, utilities, and

services) were deemed to have no foreseeable impact and no detailed analysis was necessary. DOE realizes that even the full quote is confusing and has, therefore, revised the language in the Final EIS.

17. The value of 2.4 rem listed in the table in Section 2.4.4.1 of the EIS would be the dose to a hypothetical person assuming that exposure would be limited to 100 millirem per year. DOE has added a footnote to the table to include this information. Section 6.2.3.1 contains more information.

18. The statement is correct, and the information in Section 4.1 of the Draft EIS supports the conclusions. However, the paragraph in question was out of place in the Draft EIS. Potential impacts of the transportation of spent nuclear fuel would not be related to thermal load scenarios of the Draft EIS or to the flexible design analyzed in the Final EIS. The paragraph in question has been deleted.

19. The purpose of the bullet in Section 2.4.4.2 referred to in this comment is to identify salient conclusions that can be drawn from the information in the summary table in that section. For this reason, DOE has not included modifications or references to other sections in the Final EIS.

20. DOE believes that it has sufficient information and understanding of the hydrologic setting to adequately determine the potential environmental impacts from the Proposed Action. DOE and others have been evaluating and assessing the hydrologic setting and associated characteristics at the Yucca Mountain site and nearby region for many years. DOE's site characterization program has been redirected from time-to-time to reflect and accommodate reviews by independent parties, both internal and external to the Department. Nevertheless, it is clear that the regional and site-specific hydrologic setting is complex and uncertainties remain. Additional information would refine DOE's understanding of, for instance, the regional groundwater flow system, and would further reduce uncertainties associated with flow and transport in the alluvial, volcanic and carbonate aquifers.

    In recognition of these uncertainties, DOE has supported Nye County with its program (called the *Early Warning Drilling Program*) to characterize further the saturated zone along possible groundwater pathways from Yucca Mountain, as well as the relationships among the volcanic, alluvial, and carbonate aquifers. Information from the performance confirmation program (if Yucca Mountain is approved for a repository) could be used in conjunction with that of the Early Warning Drilling Program to refine the Department's understanding of the flow and transport mechanics of the saturated alluvium and valley-fill material south of the proposed repository site, and to update conceptual and numerical models used to estimate waste isolation performance of the repository. When DOE published the Draft EIS, only limited information from the Early Warning Drilling Program was available. Since then, however, this program has gathered additional information (see Section 3.1.4.2.1 of the EIS).

    In addition, DOE has installed a series of test wells along the groundwater flow path between the Yucca Mountain site and the Town of Amargosa Valley as part of an alluvial testing complex. The objective of this program is to better characterize the alluvial deposits beneath Fortymile Wash along the east side of Yucca Mountain. Single- and multi-well tracer tests have begun and the results thus far have strengthened the basis of the site-scale saturated flow and transport model. This program is described in Section 3.1.4.2.1 of the EIS.

    Although DOE has improved its understanding of the hydrologic system, uncertainties would remain given the time frame of concern (waste isolation for thousands of years). If the site was approved, DOE would institute a *performance confirmation and testing program*, elements of which would address the hydrologic system. The purpose of this program would be to evaluate the accuracy and adequacy of the information used to determine whether the repository would be expected to meet long-term performance objectives. The performance confirmation program, which would continue through closure of the repository (possibly as long as 300 years), would offer a means to further understanding of the hydrologic system and reduce uncertainties.

21. DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the

Early Warning Drilling Program. Recent results from this program have been incorporated into this Section 3.1.4.2.1 of the EIS.

Section 3.1.4.2.2 of the EIS refers to large hydraulic gradient north of the site. Specific information related to the saturated zone and carbonate aquifer can be found in the cited references in Section 12 of the EIS. With regard to the saturated zone and the carbonate aquifer, one well (UE 25p #1) penetrated the carbonate aquifer at Yucca Mountain, another well (NC-EWDP-2DB), along the potential flow path in Fortymile Wash, has penetrated the carbonate aquifer and an upward hydraulic gradient was present. Well NC-EWDP-2DP, along with six additional planned wells, will help characterize the carbonate aquifer system near Yucca Mountain as part of the Nye County Early Warning Drilling Program. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Elsewhere in the general area, particularly at the southern end of the Nevada Test Site and eastward from the springs in Ash Meadows, the hydraulic relationship between the lower carbonate aquifer and overlying units is well understood (DIRS 101167-Winograd and Thordarson 1975). The very presence of the springs in Ash Meadows demonstrates the fact of an upward hydraulic gradient in the lower carbonate aquifer. Because the lower carbonate aquifer is buried by some 6,000 feet of unconsolidated deposits in the Amargosa Desert west of the springs in Ash Meadows, no wells have been drilled into this aquifer. Claassen (DIRS 101125-1985) presents the hydraulic and hydrochemical evidence of subsurface discharge from the lower carbonate aquifer to the alluvial fill of the Amargosa Desert to the west of Rock Valley Wash. In addition, several investigations have concluded from hydrologic, chemical, and isotopic evidence that the lower carbonate aquifer is the source of the large springs in Furnace Creek Wash (Death Valley). Thus, the understanding of the flow system and hydraulic relationships of the lower carbonate aquifer are based not only on data from well UE 25p #1 at Yucca Mountain, but on a large body of regional hydrologic and chemical evidence collected over the past 40 years.

22. The Draft EIS reported groundwater concentrations and then compared the results to current Safe Drinking Water Act standards for four points of compliance: 5, 20, 30 and 80 kilometers (3, 12, 19, and 50 miles) from the repository. It reported the concentrations for both the mean and 95th percentile of a set of 100 stochastic realizations of the undisturbed case release scenario, which determines the type and quantity of waste released over time. Chapter 5, Appendix I, and the Viability Assessment (DIRS 101779-DOE 1998) discuss this scenario. The Draft EIS reported results for three thermal load scenarios for the peak occurring within 10,000 years after repository closure.

    DOE did not use the concept of representative volume in the Draft EIS because of the nature of the groundwater model, which was the same as that used for the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998). This model simulates the saturated zone transport as a series of six parallel tubes that follow the general flow of groundwater south through Amargosa Valley to the surface discharge point at Franklin Lake Playa. These one-dimensional tubes have a concentration identified at the repository footprint (that is, all repository footprint water flows through the tubes), a dilution factor characterizes how much dispersion would occur, and a delay factor accounts for sorption. Thus, at the point of compliance the model assumes that groundwater is repository footprint water with a conservative dilution factor and delay time.

    Since publication of the Draft EIS, the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission finalized their environmental protection and licensing criteria regulations (40 CFR Part 197 and 10 CFR Part 63, respectively), which provide an individual protection standard for the proposed Yucca Mountain Repository.

    For the Final EIS, DOE used the definition of the Reasonably Maximally Exposed Individual (RMEI) from 40 CFR 197.21, which defines the individual as a hypothetical person who could meet the following criteria:

    (a) Has a diet and living style representative of the people who are now residing in the Town of Amargosa Valley, Nevada. DOE must use the most accurate projections, which might be based upon surveys of the people residing in the Town of Amargosa Valley, Nevada, to determine their current diets and living styles and use the mean values in the assessments conducted for Sections 197.20 and 197.25.

(b) Drinks 2 liters (0.5 gallon) of water per day from wells drilled into the groundwater at the location where the RMEI lives.

The location of the RMEI described in 40 CFR Part 197 would be where the predominant groundwater flow path crosses the southern boundary of the Nevada Test Site which coincides with the southern boundary of the controlled area as defined in the regulation. This point is approximately 18 kilometers (11 miles) from the proposed repository. DOE has concluded that it is not necessary to analyze in the Final EIS a hypothetical individual at locations closer than approximately 18 kilometers to the repository because it is unreasonable to assume that anyone would reside in this area, because:

- An individual would need to install and operate a water well in volcanic rock at more than 360 meters (1,200 feet) deep to reach the water table at costs significantly above (and likely prohibitive) those that would be incurred several kilometers farther south of the repository where the water tables lies less than 60 meters (200 feet) beneath the surface through sand and gravel. and

- Locations closer than 18 kilometers (11 miles) are within the controlled area defined in the EPA standard for a Yucca Mountain repository and therefore not in the postclosure accessible environment defined by EPA.

The updated analysis in the Final EIS estimates potential groundwater impacts reported for the compliance point prescribed in 40 CFR Part 197 [approximately 18 kilometers (11 miles) from the proposed repository]. As part of a comprehensive presentation of impacts, this EIS is charged with providing groundwater impacts for two other important down gradient locations. These are 30 kilometers (19 miles), where most of the current population in the groundwater path is located, and 60 kilometers (37 miles) where the aquifer discharges to the surface (this location is also known as Franklin Lake Playa). This analysis indicates that for the first 10,000 years there would be only very limited releases, attributable to a small number of early waste package failures (zero to three, and possibly as many as five) due to waste package manufacturing defects, with very small radiological consequences (see Table 5-6). For the first 10,000 years after repository closure, the mean and 95th-percentile peak annual individual dose would be thousands of times less than the Environmental Protection Agency standard, which allows up to 15-millirem-per-year dose rates during the first 10,000 years. The peaks would be even smaller at greater distances.

DOE has revised the definitions of the maximally exposed individual and RMEI in the Final EIS. Chapters 4, 6, and 7 now use the term “maximally exposed individual,” and Chapter 5 uses “individual.” The individual is the “reasonably maximally exposed individual” defined in 40 CFR Part 197.

In addition, the Final EIS updated the groundwater protection analyses consistent with criteria provided at 40 CFR 197.30. The results of these analyses are provided in Tables 5-6 and 5-10 of Chapter 5 of the Final EIS and show that both the mean and 95th percentile estimated radionuclide concentrations during the 10,000 regulatory period are thousands of times less than the regulatory limits.

23. Section 3.1.4.2.2 of the EIS indicates that perched water is formed when water percolating down through the subsurface encounters a zone of lower permeability and, as a result, accumulates. Vertical movement of water probably stills occurs, but at a slower rate below the perched water than above. In the tilted strata at Yucca Mountain, the accumulation of perched water must be accompanied by a feature such as a fault to restrict the lateral movement of water. The surface of the perched water then remains at a fairly stable elevation once the inflow and outflow rates are balanced. At Yucca Mountain this is attributed to less infiltration (a drier climate than when most of the perched water accumulated) and/or the elevation of the perched water reaching a point where the lateral restriction changes and the water “spills” out, or it could just reflect a long-term, steady-state condition.

The commenter is correct that seismic activity could change the rate at which water moves in the unsaturated zone, but it would be much less likely to change the quantity of water moving through the unsaturated zone because quantity is related chiefly to climate. That is, the rate at which water would reach the perched zone might increase for a short period of time as water above it “drained” from the system as a result of increased permeability. But eventually the amount of water reaching the perched water would again be controlled by

the amount of water entering the system (that is, infiltration). For either the short-term increase in flux or the long-term climate-driven flux to cause significant "mounding" of the perched water, the seismic activity would have to result in a decreased permeability below the perched zone and/or an extension (lengthening) of the lateral restriction to flow. A scenario of increased perched water elevation is not addressed in the EIS because neither of these conditions would be expected to occur to any significant extent as a result of seismic activity. Compared to the overlying Topopah Spring welded unit, seismic activity might cause less fracturing in the Calico Hills nonwelded unit (the unit causing the perching condition), but it would not be expected to decrease the latter's permeability. The barrier to lateral flow at faults is believed to be the result of the juxtaposition of a more permeable layer against a less permeable layer caused by the fault displacement. Therefore, to lengthen the barrier, the offset would have to be lengthened. This is an obvious result of displacement, but the greatest displacement in the Yucca Mountain area [32-centimeter (13-inch); Section 3.1.3.3 of the EIS] would be exceeded less than once in 100,000 years. Correspondingly, fault displacement would not be expected to significantly increase the depth of perched water.

DOE has considered hundreds of "what if" scenarios involving features, events, and processes (FEPs) and how they might affect the long-term performance of the repository. Those scenarios not excluded because of low probability or low consequences or for other reasons were subjected to more detailed analysis and included in long-term performance modeling. This process is documented in DOE's FEP database and associated documentation. The FEP process does not specifically address "mounding" of the perched water, but it does cover what is believed to be a more realistic scenario; the relatively rapid draining of the perched water due to seismic activity. In this case, were such an event to take place after containers in the repository had begun to degrade, it could result in a fast pulse of contamination reaching the saturated zone. This scenario was excluded from analysis in the long-term performance modeling because it was reasoned that the volume of water associated with the perched system is not great enough to cause a significant "pulse" to the saturated zone.

24. As part of its site characterization activities, DOE has conducted a variety of investigations into the nature of water falling as precipitation on Yucca Mountain and passing through the unsaturated zone to the groundwater beneath. One such study has been to quantify the concentrations of certain radioisotopes in the Exploratory Studies Facility. Isotopes, such as chlorine-36 and tritium, which occur naturally and as a byproduct of atmospheric nuclear weapons testing, serve as indicators of the rate of flow through the unsaturated zone (see Section 3.1.4.2.2 of the EIS for details).

Results from preliminary studies have identified these isotopes in concentrations that tend to suggest that there are connected pathways through which surface precipitation has percolated to the repository horizon within the last 50 years. However, these isotopes have been found at locations that are generally associated with known, through-going faults and well-developed fracture systems close to the faults at the proposed repository horizon.

To ensure the correct interpretation of this chemical signal, DOE instituted additional studies to determine if independent laboratories and related isotopic studies can corroborate the detection of elevated concentrations of these radioisotopes. Results of the validation studies to this point have not allowed firm conclusions and, thus, the evaluations continue.

DOE believes that these findings do not indicate that the Yucca Mountain site should be declared unsuitable for development as a repository. Most of the water that infiltrates Yucca Mountain moves slowly through the matrix and fracture network of the rock, and isotopic data from water extracted from the rock matrix indicates that residence times might be as long as 10,000 years. Furthermore, after excavating more than 11 kilometers (8.4 miles) of tunnels at Yucca Mountain for the Exploratory Studies Facility, DOE determined that only one fracture was moist (there was no active flow of water). This observation has been confirmed in test alcoves that are not subject to the effects of drying from active ventilation.

Nevertheless, the total system performance assessment incorporates the more conservative water movement data as well as information from other water infiltration and associated hydrogeological studies. As a result of this evaluation, DOE would not expect the repository (combination of natural and engineered barriers) to exceed the prescribed radiation exposure limits during the first 10,000 years after closure.

25. DOE has started a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into this Section 3.1.4.2.1 of the EIS.

    With regard to the saturated zone and the carbonate aquifer, one well (UE 25p #1) penetrated the carbonate aquifer at Yucca Mountain, another well (NC-EWDP-2DB) along the potential flow path in Fortymile Wash penetrated the carbonate aquifer and an upward hydraulic gradient was present. Well NC-EWDP-2DP, along with six additional planned wells, will help characterize the carbonate aquifer system near Yucca Mountain as part of the Nye County Early Warning Drilling Program. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Elsewhere in the general area, particularly at the southern end of the Nevada Test Site and eastward from the springs in Ash Meadows, the hydraulic relationship between the lower carbonate aquifer and overlying units is well understood (DIRS 101167-Winograd and Thordarson 1975). The very presence of the springs in Ash Meadows demonstrates the fact of an upward hydraulic gradient in the lower carbonate aquifer. Because the lower carbonate aquifer is buried by some 6,000 feet of unconsolidated deposits in the Amargosa Desert west of the springs in Ash Meadows, no wells have been drilled into this aquifer. Claassen (DIRS 101125-1985) presents the hydraulic and hydrochemical evidence of subsurface discharge from the lower carbonate aquifer to the alluvial fill of the Amargosa Desert to the west of Rock Valley Wash. In addition, several investigations have concluded from hydrologic, chemical, and isotopic evidence that the lower carbonate aquifer is the source of the large springs in Furnace Creek Wash (Death Valley). Thus, the understanding of the flow system and hydraulic relationships of the lower carbonate aquifer are based not only on data from well UE 25p #1 at Yucca Mountain, but on a large body of regional hydrologic and chemical evidence collected over the past 40 years.

26. Section 3.1.4.2.2 of the EIS refers to the large hydraulic gradient north of the Site. An expert elicitation panel addressed this feature and narrowed its likely cause to two theories: (1) flow through the upper volcanic confining unit or (2) semi-perched water. The consensus of the panel favored the perched-water theory. Whatever the cause, the experts were in agreement that the probability of any large transient change in the configuration of this gradient is extremely low (DIRS 100353-CRWMS M&O 1998). DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrogeologic relationship between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into Section 3.1.4.2.1 of the Final EIS.

27. The reference from which DOE extracted this information does not correlate water-level fluctuations with proximity to Fortymile Wash. The Draft EIS mentioned this only because Fortymile Wash is an area of periodic recharge, which could have a local, temporary affect on the elevation of groundwater (see Section 3.1.4.2.2 of the EIS). The reference to the wells' proximity to Fortymile Wash has been removed.

28. The washes listed in the comment are tributaries to Fortymile Wash, and Fortymile Wash is a tributary to the Amargosa River. Because they are tributaries, the EIS text acknowledges that these washes might be classified as "waters of the United States." At present, there has been no formal designation of these drainage channels. Without such a designation, DOE believes that it is appropriate in the EIS to continue to indicate that these washes might be classified as waters of the United States. The Department will continue to coordinate with the Army Corps of Engineers regarding any possible future designation of these or other affected washes.

29. Section 3.1.4.1.1 of the EIS discusses surface water in the region of Yucca Mountain and indicates that groundwater discharges to the channel of the Amargosa River near the community of Beatty, Nevada. The purpose of this discussion is only to identify areas along the river channel where surface water exists on a regular basis. It is not to identify the source of the groundwater that supplies the flow; this information is included in the discussion of regional groundwater in Section 3.1.4.2.1 of the EIS (which includes

Figure 3-13). In the discussion of Basins in Section 3.1.4.2.1, the description of the Pahute Mesa-Oasis Valley groundwater basin indicates groundwater outflow is southward to the Amargosa Desert. The flow arrow shown in Figure 3-13 of the Draft EIS at the south end of the Pahute Mesa-Oasis Valley basin points southward toward Amargosa Desert and shows the groundwater pathway to be beneath the community of Beatty. Accordingly, groundwater discharged in the area of Beatty comes from the Pahute Mesa-Oasis Valley basin.

30. DOE revised its socioeconomic baseline projections and estimated impacts for the Final EIS incorporating population data available from the State of Nevada and local communities. The revisions include an estimated baseline projection to 2035 for the socioeconomic parameters considered in the EIS. In the Final EIS, the estimated population distribution within 80-kilometers (50-miles) of the repository is also based on projections to 2035 utilizing information available from State and local sources. The allocation of individuals to a particular sector within the 80-kilometer area was based upon surveys conducted in 2000. Figure 3-25 of the EIS provides the population distribution for 2035.

31. The Environmental Protection Agency recently published an age-specific risk factor of 5.75 chances in 10 million per millirem for fatal cancer (DIRS 153733-EPA 2000). However, DOE currently uses the value of 5.0 and 4.0 chances in 10 million per millirem for fatal cancer for members of the public and workers, respectively, as recommended by the International Commission on Radiological Protection (DIRS 101836-ICRP 1991). When recommending these risk factors, the International Commission on Radiological Protection also expressed the desirability, for purposes of radiation protection, to use the same nominal risk factors for both men and women and for a representative population with wide ranges in age. The Commission stated that although there are differences between the sexes and populations of different age-specific mortality rates, these differences are not so large as to necessitate the use of different nominal risk factors. However, the higher risk factor for members of the public compared to that recommended for workers accounts for the fact that children comprise a relatively large part of the population and are more sensitive to the effects of radiation (cancer induction) than adults. Although the embryo-fetus is more radiosensitive (with a radiation risk factor about two times that for the whole population) it is protected by the body of the mother and comprises a small part of the overall population. Pregnant women are not unduly radiosensitive, especially to low levels of radiation.

    Both the Agency and DOE recognize that there are large uncertainties associated with these risk factors, as expressed by the National Council on Radiation Protection and Measurements comment on the result of their uncertainty analysis in the risk coefficients that " … show a range (90 percent confidence intervals) of uncertainty values for the lifetime risk for both a population of all ages and an adult worker population from about a factor of 2.5 to 3 below and above the 50th percentile value" (DIRS 101884-NCRP 1997). The Department believes that the 15-percent difference in these risk factors is well within other uncertainties and would provide little additional information to the decisionmaking process that this document informs. For these reasons, DOE will continue to use risk factors recommended by the International Commission on Radiological Protection in their National Environmental Policy Act documents.

32. Appendix K of the EIS cites reference documents that include the details of the dose calculations. Information on these documents is available at DOE Reading Rooms and on the DOE Internet site (*http://www.ymp.gov*).

33. The EIS sections cited by this comment identify potentially affected waterways and groundwater characteristics pertaining to the 77 commercial and DOE generator sites. Sections 7.2.1.3 and 7.2.2.3 discuss the potential hydrologic impacts associated with the No-Action scenarios.

    With regard to transportation, Sections 3.2.2.1.3 and 3.2.2.2.3 of the EIS provides information on hydrology related to transportation corridors within Nevada. Table 3-37 and 3-39 present surface-water resources and groundwater basins, respectively, along the candidate rail corridors. Table 3-58 and 3-59 do the same for candidate heavy-haul truck routes. For Nevada transportation, potential impacts to hydrology from construction and operations are presented throughout Chapter 6. For example, see Section 6.3.2.2.1. The analyses are based on an identification of surface-water resources within the 400-meter (0.25-mile) corridor

for each alternative and outside the corridor, but within 1 kilometer (0.6 mile). Designated groundwater basins are identified.

DOE does not specifically analyze a transportation accident, such as a spill, involving contamination of surface water or groundwater because the casks are designed to be watertight and spent nuclear fuel and high-level radioactive waste are not easily dispersed in water. While small particles could be generated by the impact forces of an accident, and driven out of a shipping cask by a severe fire, the amount of contamination that could ultimately enter groundwater would be much lower than that which would initially enter surface waters. Factors such as soil sorption of radionuclides, rate of flow into recharge areas, dilution by rain water and surface water, dilution by the large volume of groundwater, and delay associated with infiltration would mitigate and greatly reduce any contamination that could occur. Therefore, water pathway contamination, including subsequent contamination of food and natural resources, would not be a significant contributor to the radiological risks of transporting spent nuclear fuel. DOE has, however, identified potential mitigation measures for surface water and groundwater from the construction and operation of transportation systems. See Sections 9.3.3.1 and 9.3.3.2 of the EIS.

34. DOE agrees with this comment and recognizes the potential need for Section 404 permitting. Section 11.2.2 of the EIS discusses this potentially applicable requirement. As indicated in Section 11.2.2, DOE may need to obtain a permit from the U.S. Army Corps of Engineers if the repository or the transportation facilities requires the discharge of dredge or fill materials into waters of the United States.

35. DOE concurs with this suggestion. Cross-references to Chapter 5 have been added to Section 4.1.3.3 to avoid confusion between short-term preclosure effects and long-term performance after closure.

36. In the analysis of long-term performance, breaches of the containers were not treated as separate scenarios but rather the result of modeling a number of features, processes, and events that then lead to various types of container breaches. As such then, there are no expected scenarios for container breaches. The impacts to groundwater result directly from the overall scenarios considered: nominal or “undisturbed” scenario, volcanic events, and human intrusion. These are clearly differentiated in the Draft EIS and the Final EIS with regard to groundwater impacts. Container breach is merely a process that is component to these broader scenarios. The Final EIS points out that general corrosion is a primary process for failure driving the dose results for the whole post-10,000-year period. Section I.5.1 of the Final EIS discusses waste package failures versus time and discusses the modes of failure and the relationship to the annual dose history.

37. DOE does not specifically analyze a transportation accident, such as a spill, involving contamination of surface water or groundwater because the casks are designed to be water tight and spent-nuclear fuel and high-level radioactive waste are not easily dispersed in water. While small particles could be generated by the impact forces of an accident, and driven out of a shipping cask by a severe fire, the amount of contamination that might ultimately enter groundwater would be much lower than that which would initially enter surface waters. Factors such as soil sorption of radionuclides, rate of flow into recharge areas, dilution by rain water and surface water, dilution by the large volume of ground water, and delay associated with infiltration would mitigate and greatly reduce any contamination that might occur. Although DOE’s analyses in Chapter 6 take into account the proximity of surface waters and ground water basins (see Section 6.3.2.2.1 of the EIS as an example), water pathway contamination, including subsequent contamination of food and natural resources, would not be a significant contributor to the radiological risks of transporting spent-nuclear fuel. Analyses performed in previous EISs (see Section 1.5.3 and Table 1-1) have consistently shown that the airborne pathway has the greatest potential for exposing large numbers of people to radioactive material in the event of transportation accident resulting in the release of radioactive materials. DOE has, however, identified potential mitigation measures for surface water and groundwater from the construction and operation of transportation systems. The reader is referred to Sections 9.3.3.1 and 9.3.3.2.

While DOE believes the information presented in these sections of the EIS are sufficient to assess the relative merits of the alternatives, the Department acknowledges additional environmental reviews would be required to assess the potential impacts of such things as specific alignments through a transportation corridor.

38. Section G.2.3.2 of the EIS discusses releases of noble gases from spent nuclear fuel in repository surface facilities in more detail. Releases of noble gas radionuclides could occur at any commercial nuclear reactor sites that handle spent nuclear fuel. Such releases are documented in annual and semiannual environmental reports and published in a Nuclear Regulatory Commission summary, *Radioactive Materials Released from Nuclear Power Plants* (DIRS 155108-Tichler, Doty, and Lucadamo 1995).

    Krypton and other noble gases do not accumulate in environmental or biological media and, therefore, present little hazard to humans or the environment. Radon is somewhat different because of its decay products, but so little radon is released from spent nuclear fuel that it is almost immediately indistinguishable from naturally occurring radon in the environment. As stated in Section 4.1.4.2 of the EIS, estimated doses to plants and animals would be small and impacts from those doses would be unlikely to affect the population of any species because the doses would be much lower than 100-millirad-per-day. The International Atomic Energy Agency has stated that there is no convincing evidence that chronic exposures of 100 milliard per day will harm plant or animal populations. Neither of these noble gases is typically monitored in biologic communities because the potential for impact is so small.

39. DOE would consider providing escape ramps from trenches, including ponds and basins, as a mitigation measure (see Section 9.2.3.2 of the EIS).

40. The loss of a small number of tortoises along roads and at the repository site would not affect the long-term survival of the local or regional population of desert tortoises. Tortoises are widespread throughout the region and large tracts of undisturbed tortoise habitat surround Yucca Mountain. Research at Yucca Mountain during site characterization confirms that activities similar to those proposed would have little effect on adjacent populations (DIRS 104294-CRWMS M&O 1999). Only five Desert Tortoise deaths have been attributed to site characterization activities. The rate of tortoise mortality would remain comparable to that observed during site characterization because the amount of traffic would be similar. Under the legal-weight truck scenario, the repository would receive about 40 shipments a day of supplies, materials, and equipment (Section J.3.6.1 of the EIS), and up to six shipments of spent nuclear fuel or high-level radioactive waste (Section J.1.2.1 of the EIS). During site characterization, the daily average number of vehicles passing traffic counters in 1993 and 1994 was between 40 and 55 (DIRS 104294-CRWMS M&O 1999). DOE and the U.S. Fish and Wildlife Service have completed consultation on the potential effects of repository construction, operation, and monitoring and closure on threatened and endangered species. In its Biological Opinion, the Fish and Wildlife Service concluded that these actions would not jeopardize the continued existence of the Mojave population of the desert tortoise. That Opinion includes an unlimited take provision of tortoises along roads at Yucca Mountain, in part because deaths due to vehicles are anticipated to be infrequent. (See Appendix O of the EIS for the Biological Opinion.) Section 4.1.4 of the Final EIS has been modified to better explain the conclusion that the Proposed Action would not affect the tortoise population.

41. In general, the uncertainty approach used in the EIS uses realistic ranges of values for inputs and, where possible, acknowledges the uncertainty. In some instances, conservative assumptions are necessary to avoid the possibility of understating the potential impacts of the proposed Yucca Mountain Repository.

    An interesting outcome of a full uncertainty analysis of a system such as the proposed repository is that the use of "expected values" (for example, averages) for all parameters does not actually predict the expected outcome very well. Because of the skewed aspect of many input parameters to the models (a reflection of the real nature of the underlying data), the results predicted using only mean values actually produce a low-probability occurrence, usually in the 90th percentile or above of the outcomes predicted in a full stochastic assessment. Thus, it is more reasonable to perform a full stochastic assessment and report the expected outcome in terms of the statistics computed from the results. DOE did this in the EIS by reporting the mean outcome and the tail probability (95th percentile). However, the EIS has been revised to more clearly and more fully discuss both the modeling uncertainties and the degree of conservatism in the modeling.

42. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

43. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

44. Chapter 5 and Section 8.3.1 of the EIS now include analyses of atmospheric releases of radon-222 to the time of peak dose.

45. The referenced statement in Section 5.5 of the Draft EIS is an error. There was no global population calculation performed for the Draft EIS. The statement has been removed.

46. The overview of the screening process in the Draft EIS referred to a process detailed in Appendix I. DOE believes that Appendix I provided sufficient detail for a full understanding of what was done. In the updated analysis presented in the Final EIS, a different screening process was used due to design changes. This new screening process is detailed in Appendix I and cross-referenced in Chapter 5 of the Final EIS. The discussion in Final EIS Appendix I was designed to provide as clear and comprehensive explanation as possible.

47. The intent of Section 5.2.3.4 of the Draft EIS (Sections I.2.2 and I.2.8 of the Final EIS) is to describe the process models and radionuclide movement tendencies. Section 3.1.4.2.1 provides aquifer and pathway information.

48. DOE recognizes that additional data would further define the flow system and reduce uncertainties about the interactions among the alluvial, volcanic, and carbonate aquifers in the saturated zone. DOE has initiated a program to evaluate the hydrologic processes in the saturated zone, particularly the hydrologic relationships between the volcanic aquifer, alluvial aquifer, and carbonate aquifer. This is currently being addressed through a cooperative agreement between Nye County and DOE, referred to as the Early Warning Drilling Program. Recent results from this program have been incorporated into Section 3.1.4.2.1 of the Final EIS.

    It is correct that only one well penetrates the lower carbonate aquifer at Yucca Mountain. Four other wells at Yucca Mountain, as reported by Luckey et al (DIRS 100465-1996), are believed to indicate the potentiometric level in the carbonate aquifer. Additional wells are being drilled to characterize the carbonate aquifer system near Yucca Mountain as part of the Early Warning Drilling Program. One of the wells drilled under this program, which is about 19 kilometers (12 miles) south of the repository site, also penetrated the carbonate aquifer and shows an upward gradient at that location.

    With regard to the comment on Ash Meadows, groundwater that infiltrates through Yucca Mountain does not discharge at the Devils Hole Protective Withdrawal or in Ash Meadows. The elevation of the water table in the Devils Hole/Ash Meadows area is about 64 meters (210 feet) higher than the water table in the Amargosa Desert to the west and south. This east-to-west decline in the elevation of the water table indicates that groundwater from the carbonate rocks beneath the Devils Hole Hills flows westward across Ash Meadows toward Amargosa Desert--not the other way around. Therefore, contaminants from Yucca Mountain could not discharge at springs in Devils Hole and Ash Meadows nor contaminate the aquifer.

49. This comment identifies the infiltration rates for the high and intermediate thermal loads. The amount of infiltration, or flux, that would go through the proposed repository would vary based on the thermal loads being considered. Sections 5.4.1, 5.4.2, and 5.4.3 of the Draft EIS address the high, intermediate, and low thermal load scenarios, respectively. For each scenario, the footprint of the repository (that is, the size of the repository perpendicular to downward moving infiltration) expands to a larger size to support the lower waste loading. With the high thermal load scenario, the waste would be tightly packed and an estimated 27,000 cubic meters (22 acre-feet) of water would infiltrate through the repository. An estimated 31,000 cubic meters (25 acre-feet) of water would go through the repository under the intermediate thermal load scenario. With a low thermal load repository, the waste would be spread out and an estimated 57,000 cubic meters (46 acre-feet) of water would infiltrate through the repository. The same concept is applicable to the higher-and lower-temperature operating modes, which influence the size of the underground emplacement and, therefore, the estimated quantity of water that would infiltrate.

50. Section 5.7.2 of the Final EIS presents dose history curves for the volcanic scenarios showing the mean and 95th-percentile curves along with lines for the nominal case for comparison to results for various volcanic disturbance scenarios and the undisturbed waterborne release results.

51. This is a valid point. The sentence in question is confusing and has been deleted from the EIS.

52. Thank you for your comment.

53. DOE thanks the Environmental Protection Agency for its input. Information presented in Section M.5.1 of the EIS provides additional information related to emergency response planning and Section M.6 provides additional information on financial assistance programs.

54. If the Yucca Mountain site was approved for development of a repository, shipping routes would be identified at least 4 years before shipments began and Section 180(c) assistance would be made available approximately 4 years prior to shipments through a jurisdiction (see Section M.6 of the EIS). In accordance with 10 CFR 73.37(a)(7), actual route selection and submission to the Nuclear Regulatory Commission would occur 1 or more years before a route's use for shipment (see Section M.3.2.1.2 for more information). At this time, many years before shipments could begin, it is impossible to predict with a reasonable degree of accuracy which highway route or rail lines DOE would use. In the interim, states and tribes may designate alternative preferred highway routes, and highways and rail lines might be constructed or modified. Therefore, for purposes of analysis in this EIS, DOE identified representative highway routes in accordance with U.S. Department of Transportation regulations, which require the use of preferred routes (Interstate System highway, beltway or bypass, and state or tribal designated alternate route) that reduce time in transit (see Figure 6-11). DOE identified rail lines based on current rail practices, as there are no comparable Federal regulations applicable to the selection of rail lines for shipment of radioactive materials (see Figure 6-12).

    In response to public comments, DOE has included, state maps of representative highway routes and rail lines it used for analysis in Appendix J of the EIS (see Section J.4). Section J.4 includes potential health and safety impact estimates associated with shipments for each state through which shipments could pass.

55. Because of the public's interest in transportation, DOE has added to this EIS Appendix M and maps and tables that show the analyzed routes and estimated health and safety impacts for each state through which the shipments would pass. Appendix M provides general background information about transportation-related topics, such as transportation regulations (Section M.2), transportation operations (Section M.3), cask testing (Section M.4), and emergency response (Section M.5).

    DOE has issued a draft Request for Proposals requiring the Regional Servicing Contractor to prepare a transportation plan that describes the Contractor's operational strategy and delineates the steps it would implement to ensure compliance with all regulatory and other DOE requirements. This includes identification of proposed routes and associated routing considerations, coordination and communication with all participating organizations and agencies, including other Regional Servicing Contractor(s), DOE, state, Native American tribal, and local governments, and interactions with appropriate Federal and state organizations. The route and mode determinations would be interactive. If, during the course of the mode or route determinations, one of the previously determined factors changed, the site-specific mode and route analysis would be reevaluated to ensure consistency.

56. The Conformity Review discussions have been updated in all sections. Conformity Review results are summarized in Section 6.3.1.1 of the EIS for the mostly legal-weight truck scenario, in Section 6.3.2.1 for the mostly rail scenario, and in Section 6.3.3.1 for the heavy-haul truck scenario. The Conformity Review was focused on with levels of carbon monoxide and particulate matter (PM_{10}), for which the Las Vegas air basin has been classified as being in "serious nonattainment." Since the Draft EIS was published, the mostly rail scenario has been selected by DOE as the preferred transportation option. The Conformity Review found that more detailed analyses (that is, a Conformity Determination) would be required for the construction phase of a branch rail line in the Valley Modified Corridor, if that rail corridor was selected. The other corridors would not present a conflict with the General Conformity requirements for carbon monoxide and PM_{10}.

Emissions for constructing a branch rail line in the Valley Modified Corridor are estimated in the Conformity Review to be up to 145 metric tons (160 tons) per year (160 percent of the General Conformity threshold level) for carbon monoxide, and up to 120 metric tons (130 tons) per year (190 percent of the General Conformity threshold level) for PM_{10}.

The carbon monoxide emissions within the nonattainment area would result from fuel use by the construction vehicles and vehicle emissions from commuter and supply traffic to the Yucca Mountain site. The PM_{10} releases would include the emissions from disturbing the ground and from fuel combustion of the construction equipment. Dust abatement measures (for example, water applications) would reduce fugitive dust PM_{10} emissions by 70 percent. The emissions estimates could be reduced further by lengthening the construction time or more detailed task planning to reduce the production of emissions.

Emissions from a branch rail line in the Valley Modified Corridor into the nonattainment area would occur during the much longer operations phase, as the locomotive passed through the nonattainment area on its way to the Yucca Mountain site. However, operations phase emissions would not exceed the General Conformity threshold levels. The estimated operations emissions for a branch rail line in the Valley Modified Corridor would be 81 percent of the carbon monoxide General Conformity threshold level and less than 3 percent of the PM_{10} General Conformity threshold levels.

In addition, the Conformity Review compared the Valley Modified Corridor carbon monoxide and PM_{10} release estimates to the Nevada carbon monoxide and PM_{10} State Implementation Plans (DIRS 156706-Clark County 2000; DIRS 155557-Clark County 2001). The construction phase Valley Modified carbon monoxide emissions estimates would be less than 0.2 percent of the total daily carbon monoxide inventory emitted into the nonattainment area. The construction phase Valley Modified PM_{10} emissions estimates would be less than 0.08 percent of the daily and annual PM_{10} inventory emitted into the Las Vegas Valley air basin.

57. DOE defined “dose risk” in a text box in Section 6.1.1 of the EIS as follows:

“Dose risk is the sum of the products of the probabilities (dimensionless) and the consequences (person-rem) of all potential transportation accidents.”

58. DOE and the U.S. Fish and Wildlife Service (see Appendix O of the EIS) have concluded that the loss of a small number of tortoises along roads and at the repository site would not affect the long-term survival of the local or regional population of desert tortoises. Tortoises are widespread throughout the region and large tracts of undisturbed tortoise habitat surround Yucca Mountain. Research at Yucca Mountain during site characterization confirms that activities similar to those proposed would have little effect on adjacent populations. The rate of tortoise mortality would remain comparable to that observed during site characterization because the amount of traffic would be similar. Under the legal-weight truck scenario, the repository would receive about 40 shipments a day of supplies, materials, and equipment (Section J.3.6.1 of the EIS), and six shipments of spent nuclear fuel or high-level radioactive waste (Section J.1.2.1). During site characterization, the daily average number of vehicles passing traffic counters in 1993 and 1994 was between 40 and 55 (DIRS 104294-CRWMS M&O 1999). The U.S. Fish and Wildlife Service has authorized an unlimited take of tortoises along roads at Yucca Mountain during repository construction and monitoring and closure in part because deaths due to vehicles are anticipated to be very infrequent (see Appendix O). Section 4.1 has been modified to better explain the conclusion that the Proposed Action would not affect the tortoise population.

59. As is typical for deterministic analyses such as those performed to evaluate No-Action Scenarios 1 and 2, the EIS analysis used best estimate single-input values to produce a best estimate result. As is also typical with these analyses, a separate analysis (semi-quantitative) addressed the uncertainty associated with the input values and assumptions and provided an assessment of the effects these uncertainties could have on the model results (see Section K.4 of the EIS for details).

However, for Scenario 2 the analysis provided a range of best estimate impact values between regions for collective, as well as individual, impacts (see the tables in Section K.3.1 of the EIS). This was done to illustrate the importance of environmental transport human exposure (exposed population) parameters. Also

under this scenario, a range of accident impacts was provided for high and low populations. Under Scenario 1, impact ranges were not developed because all collective and individual impacts were extrapolated from information provided by the Nuclear Regulatory Commission's environmental assessment of the Calvert Cliffs Independent Spent Fuel Storage Installation (DIRS 101898-NRC 1991).

As stated in Section K.4 of the EIS, DOE attempted to quantify a range of uncertainties associated with mathematical models and input data, and estimated the potential effect these uncertainties could have on collective human health impacts. By summing the uncertainties discussed in Sections K.4.1, K.4.2, and K.4.3 of the EIS where appropriate, DOE estimated that total collective impacts over 10,000 years could have been underestimated by as much as 3 or 4 orders of magnitude. However, because there are large uncertainties in the models used for quantifying the relationship between low doses (that is, less than 10 rem) and the accompanying health impacts, especially under conditions in which the majority of the populations would be exposed at a very low dose rate, the actual collective impact could be zero.

On the other hand, impacts to individuals (human intruders) who could move to the storage sites and live close to the degraded facilities could be severe. During the early period (200 to 400 years after the assumed loss of institutional control), acute exposures to external radiation from the spent nuclear fuel and high-level radioactive waste material could result in prompt fatalities. In addition, after a few thousand years onsite shallow aquifers could become contaminated to such a degree that consumption of water from these aquifers could result in severe adverse health effects, including premature death. Uncertainties associated with these localized impacts relate primarily to the inability to predict accurately how many individuals could be affected at each of the 77 sites over the 10,000-year analysis period. In addition, the uncertainties associated with localized impacts would exist for potential consequences resulting from unusual events, both manmade and natural. Therefore, as discussed in Section K.4 of the EIS, uncertainties resulting from future changes in natural phenomena and human behavior that cannot be predicted, process model uncertainties, and dose-effect relationships, when taken together, could result in overestimating or underestimating the impacts by as much as several orders of magnitude relative to the values listed in Section K.3.

60. DOE referenced 40 CFR Part 61 primarily because it provided a direct comparison to an air quality emission standard. Since publication of the Draft EIS, the Environmental Protection Agency promulgated *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada*, at 40 CFR Part 197, which included an annual dose limit to a member of the public of 15 millirem (40 CFR 197.4). In accordance with requirements of the Energy Policy Act, the Nuclear Regulatory Commission subsequently promulgated Yucca Mountain licensing criteria, which includes a Preclosure Public Health and Environmental Standard at 10 CFR 63.204 of 15 millirem per year to a member of the public. The appropriate sections of the EIS (including those mentioned in Chapter 8) have been updated to reflect a comparison to the recently promulgated standard of 15 millirem.

61. The maximally exposed individual dose values in Table 8-22 of the Draft EIS are the integrated doses over the period of closure; six years each for the high and intermediate thermal-load scenarios and 15 years for the low thermal-load scenario. In Table 8-28 of the Final EIS (the table that corresponds to Table 8-22 of the Draft EIS), the closure period for the Inventory Modules ranges from 12 to 23 years for the higher-temperature and lower-temperature repository operating modes.

62. The Department has revised the table to include the information on gross alpha concentration in Table 8-49 of the Final EIS.

63. As indicated in Section 8.3.2.1, information on Greater Confinement Disposal on the Nevada Test Site is from the *Final Environmental Statement on the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996). DOE included the description as it appears in the Nevada Test Site Final EIS, but DOE did not base its analysis on this description. Rather, the Department relied on the analyses in the Nevada Test Site EIS for input to Chapter 8. The Department acknowledges, however, that transuranic radionuclides are a part of the category of Greater Confinement Disposal, with americium isotopes as one example. The discussion in Section 8.3.2.1 of the Final EIS includes the presence of transuranic radionuclides in this category.

64. As indicated in Section 8.3.2.1, information on Greater Confinement Disposal on the Nevada Test Site is from the *Final Environmental Impact Statement on the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996). The designation of "major known isotopes or wastes" is intended only to give the reader a broad sense of what would be included in the appropriate waste category and does not affect the analysis in this EIS. The Department relied on the analyses in the Nevada Test Site EIS for input to Chapter 8. As a consequence, DOE did not repeat the detailed composition of the radioactivity at the Nevada Test Site in this chapter.

    A footnote to Table 8-53 in the Final EIS clarifies that the table is intended for information purposes only.

65. In response to this comment, DOE has reexamined the discussion of waste subject to Greater Confinement Disposal and has modified Section 8.3.2.1.2 of the EIS to indicate that there is no credible mechanism for the long-term release of materials from the Greater Confinement Disposal to the accessible environment.

    The material subject to Greater Confinement Disposal is placed in boreholes that are approximately 37 meters (120 feet) deep; the waste itself is no closer than approximately 21 meters (70 feet) to the surface. DOE has reviewed previous analyses at the Nevada Test Site and has concluded that there is no credible pathway for long-term release of materials by resuspension of nonvolatile radionuclides because the material is sufficiently far below the surface. In addition, evapotranspiration exceeds precipitation in this region and this, coupled with the fact that the boreholes are sufficiently above the water table, indicates that there is no credible scenario for the Greater Confinement Disposal material to enter the groundwater.

66. As the Environmental Protection Agency notes, the Draft EIS evaluated the preliminary design concept described in the *Viability Assessment of a Repository at Yucca Mountain* (DIRS-101779-DOE 1998) for repository surface facilities, and disposal containers (waste packages). It also evaluated the plans for the construction, operation and monitoring, and closure of the repository. DOE recognized before it published the Draft EIS that plans for a repository would continue to evolve during the development of any final repository design and as a result of any licensing review of the repository by the U.S. Nuclear Regulatory Commission. The design evolution is evaluated in the Supplement to the Draft EIS and integrated into the Final EIS. The Supplement to the Draft EIS incorporates new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies. Section 2.3.4 of the Supplement describes the design modifications (engineered barrier designs) including the addition of drip shields and refined waste packages.

    With regard to the design process, DOE is moving forward with a final design but acknowledges, as noted above and as documented by the Supplement to the Draft EIS, the design could further evolve. The updated design information presented in the Supplement was carried forward to the Final EIS. However, DOE believes the design has progressed to a point that it provides a reasonable basis for estimating the range of potential short- and long- term impacts that would likely result from any final design.

67. As noted by the EPA, DOE has consulted, and will continue to consult, with tribal governments as sovereign entities that possess authority and responsibility for Native American territory. A major objective of these consultations is to ensure that the EIS addresses the full range of Native American cultural and technical concerns related to the Proposed Action. Moreover, in these consultations DOE makes every effort to avoid compromising the interests of individual tribes and, thus, to minimize conflicts between tribes and tribal groups or other local (nontribal) government entities.

    Native Americans have expressed general concern about the impacts of the candidate rail corridors, heavy-haul truck routes, and intermodal transfer station locations. Consistent with its trust responsibilities, DOE does not intend to take action, make decisions, or implement programs without consulting affected tribal governments. In all cases, project decisions will incorporate input from affected tribes.

    DOE prepared the EIS in accordance with Section 2 of the Nuclear Waste Policy Act of 1982, which defines affected Indian Tribes as "…any Indian Tribe—(A) within whose reservation boundaries a monitored

retrievable storage facility, test and evaluation facility, or a repository for high-level waste or spent nuclear fuel is proposed to be located; and (B) whose federally defined possessory or usage rights to other lands outside the reservations boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by locating such a facility: Provided that the Secretary of Interior finds, upon the petition of the appropriate government officials of the Tribe that such effects are both substantial and adverse to the tribe." For this EIS, "Native American" means "Indian" or "American Indian."

68. In response to public comments, DOE has revised Figures 2-25 and 2-26 of the EIS to show Federally recognized tribal lands located along highway and rail routes that could be used for national transportation.

69. DOE has maintained a Native American Interaction Program with 16 tribes and one organization since the mid-1980s. Tribal representatives are named by their respective tribes to sit on a DOE-funded, self-organized committee called the Consolidated Group of Tribes and Organizations, whose charter is to present their respective tribal concerns and perspectives to the Department. The Group meets twice per year and participates in field trips to Yucca Mountain to impart cultural resource protection information and to become more aware of the studies being conducted. While the Group does not support the potential use of Yucca Mountain as a repository, they have agreed to be involved in an honest and participatory process. DOE will continue to support the Group and Native American Interaction Program while carrying out the mission of characterizing the Yucca Mountain site. The DOE also supported an American Indian Writers Subgroup process in the preparation of a report that provides Native American perspectives on the repository to be used in writing the EIS. The Native American Interaction Program is described in Section 3.1.6.2.1 of the EIS. The Native American view of the affected environment is described in Section 3.1.6.2.2 of the EIS and the impacts from the Proposed Action are discussed in Chapter 4 of the EIS. Section 4.1.5.2 of the EIS addresses the Native American viewpoint with regard as to how the proposed project would affect cultural resources in the Yucca Mountain area. Section 4.1.13.4 of the EIS discusses the Native American perspective regarding the proposed repository and the surrounding region. These beliefs have been documented in *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement* (DIRS 102043-AIWS 1998), which has been sent to the commenter.

70. The Department of the Interior's expressed policy is that its bureaus receive National Environmental Policy Act documents through a coordinated distribution from its Office of Environmental Policy and Compliance. In addition, DOE will send a copy of the Final EIS directly to the Bureau of Indian Affairs as recommended.

71. Chapter 5 and Appendix I of the EIS describe environmental consequences (primarily potential groundwater impacts) from the long-term performance of the repository. Section 5.4 of the EIS contains information on the radiological impacts on human health, and Section 5.6 examines the consequences from chemically toxic materials during the first 10,000 years after closure. Environmental Protection Agency regulations (40 CFR Part 197) and Nuclear Regulatory Commission regulations (10 CFR Part 63) require that DOE demonstrate that releases from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep doses resulting from such releases below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    Nevada water-quality regulations (Nevada Administrative Code 445A.119-225), discussed in Section 11.2.2 of the EIS, are not applicable to the long-term performance of the repository. These regulations specify water-quality standards that the Environmental Protection Agency and the State regulate by issuing permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 of the EIS discusses the impacts to surface-water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. DOE would comply with all applicable permit conditions.

72. Thank you for your comment.

73. Chapter 5 and Appendix I of the EIS describe environmental consequences (primarily potential groundwater impacts) from the long-term performance of the repository. Section 5.4 of the EIS contains information on the radiological impacts on human health, and Section 5.6 examines the consequences from chemically toxic materials during the first 10,000 years after closure. Regulations established by the Environmental Protection Agency (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that doses resulting from releases of radionuclides from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep such releases below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    Nevada water quality regulations (Nevada Administrative Code 445A.119-225), discussed in Section 11.2.2 of the EIS, are not applicable to the long-term performance of the repository. These regulations specify water quality standards that the Environmental Protection Agency and the State regulates by issuing permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 of the EIS discusses the impacts to surface water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. However, DOE does not anticipate any impacts from the repository on watering of livestock without treatment, habitat for fish and other aquatic life existing in a body of water, the suitability of the water for propagation of wildlife and waterfowl without treatment, or any unique ecological or aesthetic value of the water. DOE would comply with all applicable permit conditions.

74. Chapter 5 and Appendix I of the EIS describe environmental consequences from the long-term performance of the repository. Regulations established by both the Environmental Protection (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that doses resulting from releases of radionuclides from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep such releases well below the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    The State of California Water Quality Standards are not directly applicable to discharges of groundwater to the surface. Water quality standards established by the Environmental Protection Agency and the states are regulated by the issuance of permits for point-source discharges and runoff to maintain water quality. Section 4.1.3 discusses impacts to surface-water and groundwater hydrology during construction, operation and monitoring, and closure of the proposed repository. DOE does not anticipate any point-source discharges, but has concluded that repository operations would result in minor changes to runoff and infiltration. DOE would comply with all applicable permit conditions.

75. The cited regulations are not directly applicable to the long-term performance of the proposed Yucca Mountain Repository. Regulations established by both the Environmental Protection Agency (40 CFR Part 197) and the Nuclear Regulatory Commission (10 CFR Part 63) require that DOE demonstrate that releases from the repository would not exceed limits specified in those regulations over a 10,000-year period. DOE recognizes that some radionuclides and potentially toxic chemicals would, after long periods, eventually enter the environment outside the repository. Nevertheless, modeling of long-term repository performance indicates that the combination of natural and engineered barriers would keep doses resulting from such releases well within the regulatory limits established by 40 CFR Part 197 and 10 CFR Part 63.

    The concentration of radionuclides at the chief discharge point (Franklin Lake Playa) after 10,000 years would not be deleterious to human heath (see Section 5.4) or to the health of plants or animals (see Section 5.9). Concentrations of radionuclides downgradient from Franklin Lake Playa (farther away from Yucca Mountain) after 10,000 years would be even lower.

76. Under *Waste Acceptance System Requirements Document* (DIRS 110306-DOE 1999), RCRA-regulated high-level radioactive waste would not be accepted for disposal at the Yucca Mountain repository. DOE is aware that the high-level radioactive waste at both the Idaho National Engineering and Environmental Laboratory and the Hanford Site contains listed hazardous wastes that would have to be "delisted" by the Environmental Protection Agency and the appropriate States. The Department would have to petition the Environmental Protection Agency to delist the waste. Petitions to the relevant states could also be required. DOE would work with the states and the Environmental Protection Agency to ensure they have the information they need to evaluate the delisting petitions.

    DOE high-level radioactive waste also exhibits certain characteristics of hazardous waste (specifically corrosivity and toxicity) prior to treatment. The treated waste would not exhibit any of the characteristics of a hazardous waste. Characteristic hazardous wastes do not require a petition and rulemaking by the Environmental Protection Agency to exit the hazardous waste system, although the Department would need to have supporting data and information to demonstrate that the characteristics have been removed from the treated waste form.

    DOE has revised the discussion in Chapter 11 of the Final EIS to clarify these questions.

77. The table in question appears in Section I.3.2 of the Final EIS. A footnote has been added to the table to show that the high-level waste form that would be disposed of in the proposed repository would not exhibit the Characteristic of Toxicity as measured by the Toxicity Characteristic Leaching Procedure. Section 11.2.4 discusses listed waste that would have to be delisted prior to emplacement in the repository. Waste shipped to the repository would not be regulated as hazardous waste under the Resource Conservation and Recovery Act.

78. Asbestos is not used in the manufacture of nuclear fuel, nor is it contained in high-level radioactive waste. Polychlorinated biphenyls (PCBs) are not used in the manufacture of nuclear fuel. While some high-level radioactive wastes are contaminated with PCBs, detectable levels of PCBs are unlikely to remain in the vitrified high-level radioactive waste forms. Therefore, the Toxic Substances Control Act, its implementing regulations, and regulations governing disposal of asbestos (or PCBs) are not applicable to the proposed repository.

79. DOE approved Order 435.1 after it issued the Draft EIS. As a result, it has included DOE Order 435.1 in the Final EIS table (Section 11.3), and has deleted the reference to DOE Order 5820.2A.

80. DOE has revised Table 11-1 of the EIS to include a discussion of the Yucca Mountain-specific radiation standards at 40 CFR Part 197 that would govern surface and subsurface operational activities at the repository. These new standards implement the general requirements of 40 CFR Part 191 for the proposed Yucca Mountain Repository.

81. This comment is correct. DOE has modified the definition of "controlled area" in the Glossary (Chapter 14) to be consistent with 40 CFR Part 197.

82. DOE agrees with this recommendation and has included this change in the EIS Glossary.

83. In EIS Glossary, DOE has modified the definition of institutional control to include the distinction between active and passive control.

84. DOE has revised these definitions in the Final EIS. Chapters 4, 6, and 7 now use the term "maximally exposed individual," and Chapter 5 uses "receptor." The receptor is equivalent to both the "reasonably maximally exposed individual" defined in the Environmental Protection Agency's regulations at 40 CFR Part 197. This change reflects the regulatory definitions and requirements for long-term performance recently promulgated by both agencies.

85. The text and reference cited in this comment do not appear in the Final EIS.

86. The reference format that DOE used in the EIS is consistent with document traceability requirements the Department established for the Yucca Mountain Project. The Environmental Protection Agency report number is part of the reference text.

87. Section J.1.4.2.1 of the EIS contains a discussion of accident severity categories, conditional probabilities, and release fractions. Figure J-9 shows the values for pressurized-water and boiling-water reactor spent nuclear fuel, respectively.

88. Both No-Action scenarios assume that the onsite storage facilities would remain under effective institutional control for the first 100 years. This means that they would be monitored and maintained with repairs being made as necessary to ensure the integrity of the dry storage canisters. DOE recognizes that the weather-protection structures (metal buildings for DOE below-grade storage vaults and reinforced concrete storage modules for commercial spent nuclear fuel), as currently constructed, would not likely remain intact for the 100-year institutional control period without major repairs. Therefore, the Department assumed that a major repair effort would occur 50 years into the 100-year period (see the figure in the introduction to Chapter 7 of the EIS). For purposes of analysis, DOE assumed this major repair effort to require 50 percent of the manpower and materials required to completely replace the facilities. Collective occupational radiation doses were estimated to be 72 and 118 person-rem for the Proposed Action and Module 1 scenarios, respectively (see DIRS 104596-Orthen 1999). Although not reported separately, these impacts have been included in the short-term (first 100 years) impacts for both scenarios, as discussed in Sections 7.2.1 and 7.3.2 of the EIS.

    Although the analysis assumed that under institutional control the storage facilities would be maintained and repaired as necessary, Sections K.4.1.1 and K.4.3.1 of the EIS discuss the uncertainties associated with maintenance of institutional control and uncertainties associated with environmental degradation and corrosion rates along with their potential impacts on the reported results. As stated in Section K.4.1.1, premature failure of effective institutional controls could result in an earlier release of radioactive materials to the accessible environment. However, this scenario would probably increase overall impacts by no more than a factor of 2.

89. DOE agrees that there is some limited potential for a criticality event to occur in degraded spent nuclear fuel canisters. However, DOE believes the discussion in Section K.2.5.2 of the EIS includes the appropriate level of analysis and qualitative description of probability. There are many uncertainties and speculative processes involved in the hypothetical scenario that assumes no effective institutional control after approximately 100 years, as well as the sequence of events that could occur within that scenario. DOE does not believe it is possible to establish defensible probabilities for this No-Action accident scenario or the components of the scenario described in this comment that could lead to potential criticality during extended periods of dry storage with no institutional control (Scenario 2 of the No-Action analysis). Other factors that the analysis would have to quantify to estimate those probabilities would be different climatic conditions around the country, the different types of commercially available dry storage configurations, the range of burnup in the spent nuclear fuel, and the initial enrichment of the fuel.

    Rather than specific probability analyses of the impacts associated with this No-Action scenario, the EIS provides qualitative descriptions of the relative likelihood of criticality events. First, the EIS states that criticality could be possible (in degraded storage canisters) if other conditions were met simultaneously. Those other conditions are a configuration that would allow water to enter but not drain out of the storage canister and fuel containing sufficient fissionable atoms to allow criticality. The second condition would depend on initial enrichment and burnup of the fuel. The EIS also states that a small amount of the spent nuclear fuel would be likely to have the appropriate enrichment burnup combinations, which could enable criticality to occur. Three types of criticality events were acknowledged as possible with only the most energetic type having potential to produce large impacts. That event is possible, but highly unlikely. It could happen only if sufficient amounts of fissionable material were brought together suddenly into a critical configuration. The more likely possibility would be for water to build up around degraded fuel elements. If fissions began to occur, the water would boil away and the criticality would stop. As noted in Section K.2.5.2 of the EIS, even the most energetic criticality would be unlikely to exceed the impacts associated with an aircraft crash onto a degraded dry storage module as evaluated in Section K.2.5.1. Therefore, DOE believes

that further quantification of the probability of such an event would not provide useful information or be defensible.

90. As noted in the comment, DOE indicated in the Draft EIS its intention to evaluate updated designs in the Final EIS. Design updates were first presented and evaluated in the Supplement to the Draft EIS issued in May, 2001 and then integrated into the Final EIS. The Supplement to the Draft EIS presents new information, including an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. The design will continue to evolve in response to additional site characterization information, technological developments, and interactions with oversight agencies.

With regard to the design process, DOE is nearing a final design but acknowledges, as noted above and as documented by the Supplement to the Draft EIS, the design could further evolve. However, DOE believes the design has progressed to a point that it provides a reasonable basis for estimating the range of potential short- and long- term impacts that would likely result from any final design.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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COMPLIANCE ASSURANCE

JUN 28 2001

Dr. Jane R. Summerson, EIS Document Manager
M/S 010
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 30307
North Las Vegas, NV 89036-0307

Dear Dr. Summerson:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality's implementing regulations (40 CFR 1500-1508), the Environmental Protection Agency (EPA) is providing you comments on the Supplement to the Draft Environmental Impact Statement (EIS) for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, dated May 2001 (DOE/EIS-0250D-S, CEQ # 010159).

The Proposed Action addressed in the draft EIS was to construct, operate, monitor, and eventually close a geologic repository at Yucca Mountain in southern Nevada for the disposal of spent nuclear fuel and high-level radioactive waste currently in storage at 72 commercial and five Department of Energy (DOE) sites across the nation. The draft EIS described the potential environmental impacts of constructing, operating, monitoring and closing the repository.

While the fundamental repository concept has not changed from that described in the draft EIS, the design has continued to evolve. That evolution is described in the *Yucca Mountain Science and Engineering Report,* a summary of which was distributed to recipients of the Supplement. The Supplement evaluates the potential impacts of the so-called *flexible design* described in the Science and Engineering Report, and compares these to the impacts described in the draft EIS. EPA commends DOE for preparing the May 2001 Supplement to update the information in the draft EIS.

EPA's comments on the Supplement are detailed in the enclosure. We request additional information to clarify certain information, impacts and conclusions drawn in the Supplement.

1... Because the Supplement is limited in scope, it does not address the comments EPA made on the draft EIS regarding the national transportation aspects of the project, nor does it provide most of

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1 cont. the additional data we requested on the projects's potential environmental impacts. EPA therefore continues to have environmental concerns with the project, per our rating of the draft EIS as "EC-2", Environmental Concerns-Insufficient Information.

EPA also notes that although this Supplement updates the repository design with current information, research at Yucca Mountain continues and DOE expects to make further refinements even after preparing the final EIS. In preparing the EIS at this stage of this complex, long-term project, DOE has determined that the range of operating modes in the current flexible design will produce environmental impacts representative of the range produced by foreseeable future designs and operating modes, and has conservatively estimated the bounds of the potential impacts of the flexible design. DOE is continuing to analyze the performance of the repository under different operating modes in an attempt to further reduce uncertainties and improve its performance.

2 EPA appreciates the benefits of ongoing research and recognizes the desirability of achieving the safest possible repository performance. If ongoing scientific studies support the EIS's bounding information, then the NEPA requirement to disclose the environmental impacts of a project should be satisfied. However, EPA encourages DOE to provide public review of and comment on new information that affects the project's design and operation. And, CEQ regulations (sec. 1502.9) require a supplement to a draft or final EIS when an agency makes substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

3 As a general comment, EPA notes that since this supplement was prepared, the EPA Administrator has signed 40 CFR Part 197, *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada."* The final EIS and any other supplements should reference these standards. Also, any subsequent documents should incorporate the provisions of Part 197 into the discussion and comparisons made in the EIS, e.g., the references to the "postclosure receptor" being located 20 kilometers south of the repository are outdated.

Thank you for the opportunity to review this Supplement. If you have any questions or would like to meet with EPA on these comments, please contact Susan Absher of my staff. She may be reached at 202/564-7151.

Sincerely,

Anne Norton Miller
Acting Director
Office of Federal Activities

Enclosure

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SPECIFIC EPA COMMENTS
Supplement to the Draft EIS for a Geologic Repository for the Disposal of
Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain
(DOE/EIS-0250D-S, May 2001)

4 Page 2-11, Section 2.3.1. This section describes repository closure, but provides no details on post-closure monitoring other than a reference to the NRC proposed rules. The final EIS should provide a more detailed description.

5 Page 2-12, Section 2.3.2.1. In the final sentence of the first paragraph, it is unclear why the "basic facilities for personnel support, warehousing, security, a concrete plant for fabricating and curing precast components and supplying concrete for in-place casting, and transportation (motor pool)" are inside the radiation control area (RCA). If such facilities have radiation concerns, the reasons and impacts should be explained.

6 Page 2-13, Figure 2-4. The "potential commercial spent nuclear fuel aging area" is inside the RCA but apparently outside the security station. What security controls will there be for this area?

7 Page 2-21, Section 2.3.3.2. The second paragraph states that "this low ventilation rate [0.1 cubic meter per second] would permit monitoring of the air stream exhausting from the drifts for leaks of radioactive material, but would not contribute significantly to removal of heat from the emplacement drifts." This is followed by a discussion of the higher ventilation rate [15 cubic meters per second] under the new flexible design, but there is no mention of monitoring. Does this mean that the flexible design does not allow for monitoring of the exhaust air? If so, this raises public health and on-site safety concerns. The final design must include effective monitoring and a system to divert the air into high-efficiency filtering systems in case releases are detected.

8 Page 2-31, Section 2.4. The last two sentences of the fourth paragraph state: "The effect of drift spacing on these related parameters would be less than the effect of waste package spacing in the analytical scenarios presented in this Supplement. Therefore, DOE did not perform a quantitative evaluation of the environmental impacts of variable drift spacing." EPA questions the basis for this statement and conclusion. What about interactions? The distance between waste packages is an independent design factor from the distance between drifts. Therefore, there is a range of potential conditions and impacts that could occur. These impacts should be assessed or a more detailed rationale provided for the statements and conclusion.

9 Page 2-31, Section 2.4. The first sentence of the final paragraph identifies "Uncertainties in future funding profiles or the order of...waste shipments" could affect the construction of the repository. The next sentence states that this approach could "potentially increase confidence in meeting the schedule for waste receipt and emplacement." DOE should explain how uncertainties in funding can result in increased confidence for meeting the schedule.

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10 Page 3-11, Section 3.1.8, Accidents. All of the doses to the maximally exposed individuals exceed by 2.5 to 3.2 times the current radionuclide NESHAPs standards. The information to determine these results should be provided.

11 Page 3-17, Section 3.1.14, Transportation. We note that the transportation impacts are increased for the *flexible design* over the draft EIS design. These increased impacts, as well as those noted in other areas, should be incorporated into the final EIS analysis.

12 Page 3-20, Section 3.2.2. Following Table 3-12 is a statement that the integrating software for the Total System Performance Assessment has changed from that used for the original DEIS to GoldSim®, and that "GoldSim® incorporates much the same performance assessment calculational approach, but with substantial improvements in the user interface and data handling." The final EIS should provide support for this statement because changing the software which integrates the many programs which are used in the Total System Performance Assessment (TSPA) introduces uncertainty into the comparison of previous results.

13 Page 3-21, Table 3-13. This table lists a change in the "Unsaturated zone flow" as "Coupling between thermal, hydrologic, and chemical effects." What is the status of the modeling and research on these coupled processes?

14 Page 22 of the Executive Summary of the Yucca Mountain Science and Engineering Report. Under Performance Confirmation and Monitoring is stated, "Performance confirmation and monitoring activities would continue throughout the preclosure period, which could extend up to 300 years." Does DOE have confidence in such a long performance-monitoring period particularly in light of the statement on page 2-31 of the Supplement about "uncertain funding" for even the relatively shorter term construction of the disposal system and transporting of the waste?

4

RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10231)

1. The Final EIS includes this Comment-Response Document, which identifies and addresses each of the comments received on both the Draft EIS and the Supplement to the Draft EIS. In response to public comments, DOE modified the Final EIS in a variety of ways, including clarifications or changes to the text, updating information, and modifying analyses. The Department considered comments on the Draft EIS in preparation of the Supplement to the Draft EIS (which were appropriately carried forward to the Final EIS). In part, for example, the comments received on the Draft EIS influenced DOE's description of the Science and Engineering Report design elements presented in the Supplement. The Supplement was limited in scope to "aspects of the design that have changed since DOE issued the Draft EIS" (which did not include transportation).

   Consistent with Council and Environmental Quality and DOE regulations, the Department did not release the Comment-Response Document before issuing this Final EIS or hold hearings on the Comment-Response Document or this Final EIS.

2. In response to public comments, DOE modified the Final EIS in a variety of ways, including incorporation of the flexible design (introduced in the Yucca Mountain Science and Engineering Report and the Supplement to the Draft EIS), clarifications or changes to the text, updating information, and modifying analyses. DOE believes that the environmental impacts presented in the Final EIS for the flexible design (and its associated operating modes) bound reasonably foreseeable actions.

   In June 2001, DOE conducted three public hearings on the Supplement to the Draft EIS to provide the public with opportunities to comment on the Project's latest plans for design and operation. In September and October 2001, the Project conducted hearings on key documents that were released in advance of a potential Site Recommendation [*theYucca Mountain Science and Engineering Report* (DIRS 153849-DOE 2001) and the *Preliminary Site Suitability Evaluation* (DIRS 155734-DOE 2001)].

   Upon issuance of the Final EIS, the public will have the opportunity to examine the Comment-Response Document and the Department's response to the public's comments. This approach is consistent with regulations issued by the Council on Environmental Quality and DOE's implementation procedures at 10 CFR 1021.

   Should the Secretary of Energy recommend Yucca Mountain to the President, however, the recommendation would be accompanied by several supporting documents including the Final EIS and its Comment-Response Document. In the event Yucca Mountain was authorized and the project moved forward, DOE would submit a License Application to the Nuclear Regulatory Commission. The Nuclear Regulatory Commission's licensing process would afford the public additional opportunities to review and comment on the specific design elements of the Yucca Mountain repository. In the event that DOE incorporated additional design modifications subsequent to the submittal of a License Application, the Nuclear Regulatory Commission's licensing process would provide additional opportunities for the public to comment on the repository.

3. After DOE issued the Supplement to the Draft EIS in May 2001, both the Environmental Protection Agency standards at 40 CFR Part 197 and the Nuclear Regulatory Commission licensing criteria at 10 CFR Part 63 were promulgated. In addition, in 2001 DOE promulgated its 10 CFR Part 963 guidelines to be consistent with the adopted EPA standards and the NRC licensing criteria. The estimated impacts presented in the Final EIS fully consider, and provide comparisons with, the final standards as promulgated. DOE has modified Chapter 11 of the EIS to include the final regulations.

4. A postclosure monitoring program is required by 10 CFR Part 63. This program would include the monitoring activities that would be conducted around the repository after the facility was closed and sealed. The regulations require that a license amendment be submitted for permanent closure of the repository [10 CFR 63.51(a)(1) and (2)]. This amendment must specifically provide an update of the assessment for the

repository's performance for the period after permanent closure, as well as a description of the program for postclosure monitoring. This program would include continued oversight to prevent any activity at the site that posed an unreasonable risk of breaching the geologic repository's engineered barriers; or increasing the exposure of individual members of the public to radiation beyond allowable limits. The details of this program would be defined during the processing of the license amendment application for permanent closure. Deferring a description of this program until the closure period would allow for the identification of appropriate technology including technology that could become available in the future.

5. The description in the Supplement to the Draft EIS should have read: Other support facilities planned for the North Portal Operations Area include basic facilities for personnel support, warehousing, security, and transportation (motor pool). Section 2.1.2.1.1 of the Final EIS reflects this clarification.

6. To avoid compromise, details of physical security plans are typically not made available to the public. However, DOE believes that security for the spent nuclear fuel surface aging facility would be similar to that required for existing commercial Independent Spent Nuclear Storage Facilities currently licensed by the Nuclear Regulatory Commission. At a minimum, security controls would include positive control on ingress and egress at the facility, as well as periodic surveillance by security personnel. Detailed security requirements for all areas of the proposed repository, including the fuel aging facility, would be included in the construction and operating license approved and issued by the Nuclear Regulatory Commission.

7. The flexible design does include monitoring of the exhaust air and the ability to filter the exhaust stream if radioactive contamination was detected. The design would comply with applicable health and safety requirements.

8. The Final EIS is based on the flexible design described in detail in the Science and Engineering Report (DIRS 153849-DOE 2001). Thermal management of the proposed repository would involve complex, nonlinear relationships among many parameters of the repository system [see the Science and Engineering Report (DIRS 153849-DOE 2001) for further discussion]. The major determinants of the peak temperatures are the age of the fuel at emplacement, the linear heat load along each drift, and the ventilation period after emplacement. By keeping the drift spacing constant, the overall feasibility of the various repository operating modes can be evaluated. The analysis presented in the Science and Engineering Report supports the environmental impact conclusions in the EIS. The Science and Engineering Report recognizes that the thermal load or areal mass loading can be varied also by the liner thermal load (which was done in the Science and Engineering Report), the drift spacing (which was not done in the Science and Engineering Report), or both. By varying the fuel age, waste package spacing, and ventilation, DOE has considered the major factors that would affect temperature variations in the repository. As noted in both the Science and Engineering Report and the Supplement to the Draft EIS, future studies could include variations in drift spacing. At present, DOE does not expect the conclusions drawn from the analysis in the Final EIS to change substantially as a result of variations in drift spacing versus waste package spacing.

9. As mentioned in Section 2.4 of the Supplement to the Draft EIS, uncertainties in future funding or the order of waste shipments might require the repository to be developed in a sequential manner, such as constructing the surface and subsurface facilities in portions or "modules." This approach would incorporate "lessons learned" from initial work into subsequent modules, reduce the initial construction costs and investment risk, and potentially increase confidence in meeting the schedule for waste receipt and emplacement. The intent of this discussion was not to imply that uncertain funding would increase confidence.

10. The information and analyses used to estimate the reasonably maximally exposed individual doses are provided in Appendix H. National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) are applicable only to routine or permitted releases. They do not apply to accidents. Since publication of the Draft EIS, the Environmental Protection Agency promulgated *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada*, at 40 CFR Part 197, which included an annual dose limit to a member of the public of 15 millirem (40 CFR 197.4). In accordance with requirements of the Energy Policy Act, the Nuclear Regulatory Commission subsequently promulgated Yucca Mountain licensing criteria, which includes a Preclosure Public Health and Environmental Standard at 10 CFR 63.204 of 15 millirem per year to a member

of the public. The appropriate sections of the EIS (including those mentioned in Chapter 8) have been updated to reflect a comparison to the recently promulgated standard of 15 millirem.

11. The flexible design presented in the Supplement to the Draft EIS was carried forward to the Final EIS analyses.

12. Golder Associates, Inc., developed both GoldSim (the integrating software used for the Supplement to the Draft EIS and Final EIS) and RIP (the software used for the Draft EIS). GoldSim is a new generation of the RIP program, not an entirely different program. The differences have more to do with user interface convenience and the mechanics of data handling than with the actual modeling. Nevertheless, as part of the production, delivery, and documentation of GoldSim, Golder Associates validated that program against RIP by running similar cases in both. Thus, differences in the integrating software caused no differences between the Draft EIS, the Supplement to the Draft EIS, and the Final EIS.

13. The modeling for the Supplement and the Final EIS for long-term performance analysis includes improved coupling of these processes over the essentially uncoupled versions used for the Draft EIS. Section I.2.3 of the Final EIS and the documents referenced in that chapter discuss these models.

14. As reported in *Nuclear Waste Fund Fee Adequacy: An Assessment* (DIRS 153257-DOE 2001), the nuclear waste fund investments had a market value of $8.5 billion as of September 30, 1999. The analysis in the report found that the current fee of 1 mil (one tenth of 1 cent) per kilowatt hour charged to generators of commercial spent nuclear fuel was adequate to cover projected disposal expenses (including costs associated with packaging and transportation) and recommended that the fee remain unchanged.

    Section 302 of the Nuclear Waste Policy Act of 1982 specifies that funding for disposal of commercial spent nuclear fuel is provided by payment of fees to the Secretary of Energy by the generators of electricity from nuclear power plants. Equivalent amounts are paid by the Federal Government to cover similar costs associated with disposal of spent nuclear fuel or high-level radioactive waste generated or owned by the United States. Utility fees and Federal appropriations are required to be sufficient to offset expenditures associated with repository studies; transportation; and operations and closure of a repository, as determined by an annual review by the Secretary of Energy. In the event that future generations decide that the potential repository should remain open for an extended period (up to 300 years or more), the fee structure could require modification. The statement, about "uncertain funding," was intended to be in the context of funding requirements for those activities (in the relative near-term leading up to the ability to receive and emplace waste (if the site was recommended and approved), and was not intended to reflect doubt about funding once the facility, if approved, became operational.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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February 22, 2000

Dr. Ivan Itkin, Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy, Headquarters
1000 Independence Avenue, S.W.
Washington, DC 20585

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE U.S. DEPARTMENT OF ENERGY DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A GEOLOGIC REPOSITORY FOR THE DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA

Dear Dr. Itkin:

On August 13, 1999, the U.S. Department of Energy (DOE) published a notice of availability in the Federal Register of its draft environmental impact statement (DEIS) for a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nye County, Nevada. In the context of the Nuclear Waste Policy Act, as amended, DOE is the lead agency for considering the environmental impacts for the proposed repository, and the U.S. Nuclear Regulatory Commission (NRC) is to adopt the DOE Final Environmental Impact Statement (FEIS) to the extent practicable as part of NRC's licensing actions for the repository. Consistent with its responsibilities, the NRC has promulgated, in 10 CFR Part 51, criteria it will use to adopt the FEIS. With respect to the DEIS, the NRC is a commenting agency. The NRC comments are enclosed.

In reviewing the DEIS, the NRC based its comments on its judgment regarding environmental issues, guided by: 1) the Council on Environmental Quality (CEQ) regulations (40 CFR Part 1500) implementing the National Environmental Policy Act; 2) guidance prepared by CEQ and the U.S. Environmental Protection Agency; and 3) NRC's criteria in 10 CFR Part 51 for adopting the FEIS.

The enclosed staff comments are organized into three categories. The first category is comprised of four comments that the NRC believes should be addressed by DOE to make the FEIS complete. These four comments concern broad issues in the DEIS, specifically: integration of the Proposed Action, cumulative impacts, transportation, and mitigative measures. When DOE submits an application for a license for the repository, the FEIS should contain sufficient information to allow a reasonable evaluation of the environmental impacts of that Proposed Action.

The remaining comments apply to more specific topical areas within the DEIS. The second category of comments (comments 5 through 8) also addresses issues related to completeness, albeit less directly than those in the first category. Those four comments have less significance than the first four comments, but DOE should address all eight comments to make the FEIS

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1 complete. The final five comments (9 through 13) are offered for DOE's consideration. In preparing the FEIS, NRC also requests that DOE consider relevant technical comments previously submitted by the NRC. The NRC has provided such technical comments in reports on specific technical issues and in comments on DOE's Viability Assessment in June 1999.

The comments on the Viability Assessment also address the issue of quality assurance (QA). DOE's application of a rigorous and effective QA program is crucial to its ability to demonstrate the validity of its findings and analyses in any license application. The NRC staff will continue to evaluate DOE's efforts to implement an effective QA program.

We are available to meet with your staff to discuss our comments and recommendations. Please contact Charlotte Abrams, Team Leader, Environmental Review Team, if you have any questions regarding this letter or the enclosure. Ms. Abrams can be reached at (301) 415-7293.

Sincerely,

William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure: U.S. NRC's Comments on U.S. DOE's
Draft Environmental Impact Statement for
a Geologic Repository for the Disposal of
Spent Nuclear Fuel and High-Level Radioactive
Waste at Yucca Mountain, Nye County, Nevada

cc w/encl: See attached list

Wendy R. Dixon, EIS Project Manager
Yucca Mountain Site Characterization Office
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
P.O. Box 30307, Mail Stop 010
North Las Vegas, NV 89036-0307

2

Letter to Ivan Itkin, U.S. DOE dated: 2/22/2000

EIS001898

cc: R. Loux, State of Nevada
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L. Barrett, DOE/Wash, DC
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D. Shelor, DOE/Wash, DC
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L. Bradshaw, Nye County, NV
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R. Arnold, Pahrump County, NV
J. Lyznicky, AMA
R. Clark, EPA
F. Marcinowski, EPA
R. Anderson, NEI
R. McCullum, NEI
S. Kraft, NEI
J. Kessler, EPRI
G. McKnight, Pahrump, NV
R. Wallace, USGS
R. Craig, USGS
W. Booth, Engineering Svcs, LTD
S. Trubatch, Winston & Strawn

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EIS001898

**U.S. Nuclear Regulatory Commission's Comments on
U.S. Department of Energy's Draft Environmental Impact Statement
for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level
Radioactive Waste at Yucca Mountain, Nye County, Nevada**

This enclosure provides comments by the U.S. Nuclear Regulatory Commission (NRC) staff on the draft environmental impact statement (DEIS) prepared by the U.S. Department of Energy (DOE) for a geologic repository for the disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) at Yucca Mountain, Nye County, Nevada. The DEIS addresses a wide range of possible impacts of this complex project. A significant amount of information, including multiple options for key components of the Proposed Action, is presented in the DEIS.

2 The NRC believes it to be desirable that DOE more clearly define a Proposed Action comprised of a preferred option for each component or a bounding analysis that gives a better understanding of the potential impact of each component. The NRC recognizes the utility of DOE's preserving, to the extent possible, repository design flexibility. Nevertheless, in the interest of improving the focus of its National Environmental Policy Act (NEPA) analysis, the NRC requests DOE to prepare, in the final environmental impact statement (FEIS), an in-depth analysis of a clearly defined Proposed Action, or, at the least, to provide sufficient information and analysis of the various options that it has retained as to demonstrate that the environmental impacts of the repository are bounded. A number of the attached NRC comments relate to the value in defining an integrated Proposed Action.

3 The assessment of long-term radiological impacts is based on the results of site characterization and the development of models describing repository performance. NRC and DOE have had extensive pre-licensing consultations concerning site characterization and NRC staff has provided comments on these matters. Staff's comments in these areas were provided to DOE in reports on specific technical issues (e.g., Issue Resolution Status Reports for Key Technical Issues) and in comments on DOE's viability assessment (VA). These technical comments should be considered during the development of the FEIS.

The enclosed staff comments are organized into three categories. The first category is comprised of four comments that the NRC believes should be addressed by DOE to make the FEIS complete. These four comments concern broad issues in the DEIS, specifically: integration of the Proposed Action, cumulative impacts, transportation, and mitigative measures. When DOE submits an application for a license for the repository, the FEIS should contain sufficient information to allow a reasonable evaluation of the environmental impacts of that Proposed Action.

The remaining comments apply to more specific topical areas within the DEIS. The second category of comments (comments 5 through 8) also addresses issues related to completeness, albeit less directly than those in the first category. Those four comments have less significance than the first four comments, but DOE should address all eight comments to make the FEIS complete. The final five comments (9 through 13) are offered for DOE's consideration. In preparing the FEIS, NRC also requests that DOE consider relevant technical comments previously submitted by the NRC. The NRC has provided such technical comments in reports on specific technical issues and in comments on DOE's Viability Assessment in June 1999.

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COMMENTS

Category 1 -- Comments That Should be Addressed to Ensure the Completeness of the FEIS

INTEGRATION

1. **Comment:**

4... The DEIS discusses five components relating to: 1) construction of the repository and waste handling facilities; 2) preparation of SNF and HLW at 77 sites for transport; 3) transportation of the SNF and HLW to Yucca Mountain by use of a National transportation network and a transportation network in the State of Nevada; 4) repository operations, including packaging, waste emplacement, monitoring and closure; and 5) mitigation and monitoring. The NRC recognizes the utility in DOE preserving, to the maximum extent practicable, design flexibility and therefore understands why DOE has presented a number of options for public consideration for each of these components. However, the DEIS does not identify a preferred option for each component. Further, it does not provide an integrated description of a clearly defined Proposed Action (comprised of the various components) and of the direct, indirect, and cumulative environmental effects of the integrated action. As a result, it is not clear that DOE has bounded the environmental impacts that could arise from the repository. As it prepares the FEIS, we request that DOE prepare an in-depth analysis of a clearly defined Proposed Action, or, at the least, to provide sufficient information and analysis of the various options that it has retained as to demonstrate that the environmental impacts of the repository are bounded.

Basis:

The DEIS describes numerous options for the various components of the repository system. For example, in Appendix F, two potential configurations of waste packaging for shipment were analyzed: uncanistered and canistered. In Chapter 6, two "National-level" transportation scenarios were analyzed (mostly truck and mostly rail) and eleven Nevada transportation alternatives were considered. Additionally, three potential thermal load scenarios and three waste volume options for the repository were considered in Chapters 4 and 5.

Given the number of components and options within those components, the repository system could consist of one of the numerous possible permutations. The DEIS does not select among the various options to identify a single, integrated Proposed Action. Moreover, the DEIS does not present an integrated overall description and impact assessment of any complete combination for the Proposed Action, and it is not clear that the analyses of the various components presented in the DEIS bound the impacts that could result from the Proposed Action, once one is selected. Instead, descriptions and impacts are treated separately, discussed separately, with conclusions drawn separately. Although NRC recognizes the importance of DOE's retaining flexibility to make changes in its design, and of obtaining public input in the selection among the available options, the FEIS should contain sufficient information and analysis of the

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4 cont. various options to cover the Proposed Action that is ultimately selected and to allow a reasonable assessment of the impacts of that Proposed Action.

Concerns identified in this comment are linked to comments on cumulative impacts (see Comment 2), transportation in Nevada (see Comment 3), and mitigation (see Comment 4).

Recommendation:

In the interest of improving its analyses, the NRC recommends that, to the extent choices among options have been refined, DOE identify its Proposed Action in the FEIS. Further, the NRC suggests that DOE use its refined description of the Proposed Action to complete the assessment of the direct, indirect, and cumulative effects of the Proposed Action, making bounding assumptions when necessary or appropriate. At the least, if DOE chooses to retain flexibility in the FEIS, it should show that the indirect, direct and cumulative impacts of the eventual selection have been bounded by the assessments presented in the FEIS.

CUMULATIVE IMPACTS

2. **Comment:**

5... The assessment of cumulative impacts in the DEIS does not fully address the impacts associated with past, present, and reasonably foreseeable future actions relating to groundwater use, land use, and cultural and biological resources.

Basis:

A "cumulative impact" is an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7). A complete cumulative impacts assessment would provide an understanding of whether the Proposed Action (see Comment 1) might push a resource, ecosystem, or human community beyond a critical threshold and preclude sustainability (CEQ, 1997, page 7). Therefore, the FEIS should assess the additional, incremental impacts from the action at hand when added to impacts from past, present, and reasonably foreseeable future actions (40 CFR 1508.7).

Section 4.1.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure — Impact to Hydrology) acknowledges that repository construction and operation will impose water demands on the available supplies at Yucca Mountain and the surrounding area. Similarly, Section 6.3.2.1 (Impacts Common to Nevada Branch Rail Line Implementing Alternatives) acknowledges that water withdrawal will be required to support construction of a branch rail line. These demands could create impacts on water resources, particularly in light of other possible future uses. Creation of a Timbisha Shoshone Tribal Homeland with agricultural water rights is a reasonably foreseeable action that could contribute to exceeding the sustainable yield in the Death Valley National Park region (Buqo, 1999, p. 25). Further, it is foreseeable

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5 cont. that the continued growth of Clark, Nye, and Lincoln Counties and Las Vegas, Pahrump, and Beatty will impact available groundwater resources. An increased cumulative demand for water, particularly when coupled with reduced water supplies resulting from land withdrawal and Federal land acquisition, could lead to aquifer overdrafting, increased pumping costs, and associated socioeconomic impacts. The cumulative impacts on groundwater resources stemming from the Proposed Action and these other actions are not adequately considered in the DEIS.

The cumulative impacts assessment also needs to further evaluate combined impacts to other specific resources (e.g., the desert tortoise, land use, cultural resources). The cumulative impacts of a Proposed Action, coupled with other Federal actions in the area (e.g., activities at NTS, Nellis Air Force Range (AFR)) and impacts from extensive growth in Nye, Lincoln, and Clark Counties, on the ranges and habitats of local fauna, such as the desert tortoise, should be documented. In addition, land withdrawal by DOE in conjunction with Department of Interior limitations on land use in Ash Meadows may result in cumulative impacts related to land use that have not yet been fully assessed. Similarly, the impact that private projects such as the Cortez Gold Mine Pipeline projects and the Apex Bulk Commodities Intermodal Transfer Station have on resources (e.g., biological and cultural resources) may not have been fully considered.

Recommendation:

DOE should complete its analysis of cumulative impacts for resources, ecosystems, and human communities by augmenting analyses already performed for individual components for the proposal. The analysis should consider all past, present, and reasonably foreseeable future actions, both Federal and non-Federal, within appropriate spatial and temporal boundaries.

References:

Buqo, T.S. *Nye County Perspective: Potential Impacts Associated with Long Term Presence of a Nuclear Depository at Yucca Mountain, Nye County, Nevada.* June 1999.

Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act*, CEQ, January 1997.

TRANSPORTATION

3. **Comment:**

6... In the absence of a preferred route and mode of transportation, it is unclear whether the non-radiological impacts related to transportation of SNF and HLW within Nevada, including impacts from construction and operation of intermodal transfer stations and rail lines, have been bounded.

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6 cont. **Basis:**

The DEIS identifies the transportation of SNF and HLW as one of the components necessary for a repository. As such, transportation is a connected action (40 CFR 1508.25(a)(1)) and should be considered an integral part of the Yucca Mountain project. The NRC understands that DOE would like to benefit from public input, through comments on the DEIS, when considering preferred transportation modes and routes. However, an integrated impact assessment that connects transportation to disposal needs to be included as part of any evaluation of the Proposed Action in the FEIS.

The current analysis for transportation within the State of Nevada provides a general discussion of impacts, but does not fully assess the non-radiological impacts. Further, it is not apparent that the transportation analysis in the DEIS bounds the non-radiological impacts (e.g., socioeconomic impacts and impacts to air quality, cultural and biological resources, and land and water use). Moreover, although DOE has identified a number of options, it has not clearly defined which options (e.g., rail line construction, mode of transportation, need for intermodal transfer stations, preferred routing within the State of Nevada, and type of trucks) it will use to support the Proposed Action.

As noted in Comment 1, the FEIS should show that, once decisions on transportation routes and modes are made, no new information or circumstances exist that could result in significant changes to the impacts assessed in the FEIS.

Recommendation:

Transportation impacts (including non-radiological and cumulative impacts) should be discussed in sufficient detail to support selection of a Proposed Action. The FEIS should contain either a complete, integrated assessment of the connected transportation actions or sufficient information and analyses on the various options to show that the impacts of the Proposed Action have been bounded.

MITIGATION OF ACTIONS

4. **Comment:**

7... The DEIS does not include a thorough discussion of mitigative measures or of long-term environmental monitoring to measure the impacts on the environment.

Basis:

As noted in Comment 1, the DEIS does not identify what options will be combined for a Proposed Action. Public comments on the DEIS can be used by DOE to help in the selection of those options that will form the Proposed Action, refine its analysis of environmental impacts, and evaluate the need for particular mitigative measures. In this connection, it is important to ensure that all environmental impacts have been identified or bounded in order to provide a basis for decisions for mitigative measures. Mitigative strategies currently address dust suppression, the desert tortoise, and occupational health and safety. In addition, the FEIS needs to evaluate the need for mitigative

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7 cont. strategies for water use, economic, social, cultural, biological, or public health and safety impacts.

For example, the discussion in Chapter 9 (Management Actions to Mitigate the Potential for Environmental Impacts) of the DEIS does not fully address mitigative measures for Native American interests, including several measures presented by the AIRD (American Indian Writers Subgroup, 1998), such as ways to alleviate the severity of the effects on Native American cultural, religious, subsistence, recreational, ceremonial and associated uses of Yucca Mountain. The suggested mitigation actions in the AIRD include providing emergency preparedness training, establishing emergency medical facilities, and providing controlled access to sacred or ceremonial areas or resources.

Further, it is not apparent that a complete monitoring program for mitigative strategies has been clearly defined. The FEIS should include monitoring as a way of evaluating the effectiveness of any mitigative measures, such as measures to reduce impacts from transportation or waste handling at intermodal or site surface-based facilities (40 CFR 1505.2(c)).

Recommendation:

The FEIS should provide reasonable mitigative strategies to address potentially significant adverse impacts from the Proposed Action. Mitigative measures which comprise these strategies should be implementable and effective in reducing environmental impacts. Moreover, the FEIS should discuss monitoring to assess the environmental impacts and the effectiveness of planned mitigative measures. As appropriate, this monitoring could be integrated with DOE's long-term performance confirmation monitoring.

References

American Indian Writers Subgroup. *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement.* American Indian Resource Document MOL 19980420.0041. Las Vegas, NV: American Indian Writers Subgroup, Consolidated Group of Tribes and Organizations. 1998.

Category 2 -- Additional Comments Related to Completeness

ENVIRONMENTAL JUSTICE

5. **Comment:**

8... The DEIS discussion of the impacts on minority and low income communities is restricted to the Bureau of the Census block group data. The discussion does not provide sufficient specificity with respect to community locations within the relevant census block groups or adequately identify potentially unique community characteristics. This information would facilitate the assessment of any potential for disproportionately

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8 cont high and adverse human health and environmental effects of the Proposed Action upon these communities.

Basis:

The discussion of Environmental Justice in the DEIS does not specifically identify where minority or low-income communities are located within each census block group. This problem is compounded by the relatively large geographic size of the Nevada census block groups analyzed in the DEIS. Determining the specific locations of the potentially affected communities in each relevant census block group would facilitate evaluation of the disproportionate impacts of the Proposed Action. DOE may find that state, local, and tribal governments possess demographic information relevant to the location of these communities.

DOE's conclusion that the Proposed Action will have no significant impact on the general population, and thus no significant impact on minority and low-income communities, appears not to address the possibility that cultural, social, historical, or economic factors associated with minority and low income communities may amplify the effect of the Proposed Action and produce disproportionately high and adverse impacts upon these communities. The FEIS should discuss whether such factors exist and whether the consideration of such factors leads to the identification of significant effects that would otherwise be diluted by examination of the general population. This information could also be useful in identifying appropriate mitigative measures to address any disproportionate impacts resulting from the Proposed Action.

The NRC also notes that Section 3.1.13 (Environmental Justice) of the DEIS identifies Native Americans as having concerns about disproportionate impacts. The NRC's analysis of census data has found that there may also be African American and Hispanic minority groups in the affected area. It is not clear from the analysis in the DEIS whether these other minority groups were considered in determining if the Proposed Action has a potential disproportionate impact upon these communities.

Recommendation:

The FEIS discussion of environmental justice should identify the location and unique characteristics of minority and low income communities with sufficient specificity to enable a complete assessment of any disproportionate impacts upon those communities resulting from the Proposed Action.

WATER USE

6. **Comment:**

9... DOE should correct areas of discrepancy in water use data and provide clarifying information regarding the potential for and impacts from overdrafts of groundwater in the FEIS.

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Basis:

9 cont. Table 3-11 notes that the figures for current water appropriations do not include Federal reserved water rights (FRRs) for the NTS and Nellis AFR. These FRRs should be added to the total appropriations for a more accurate measure of committed resources.

Table 3-11 and DEIS Section 3.1.4.2.1 (Affected Environment - Regional Groundwater) suggest that ample water is available for new appropriations to support the Proposed Action because average annual withdrawals (actual use) are well below the appropriation limits. Although the use of average withdrawals may be appropriate, it is possible that this could be misleading because users are entitled to withdraw or sell their full appropriations.

When discussing the water demands expected during performance confirmation in Section 4.1.3.1 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Hydrology from Performance Confirmation) the DEIS omits mention of NTS and Nellis AFR wells in the area. The pumpage from those wells should be added to that from J-11 and J-12 and the C-well complex in the proposed land withdrawal area for an improved estimate of the water demand. The wide range in the perennial yield figures (880 to 4000 acre-feet for Area 227a) should be explained. The perennial yield and committed resources figures for Area 227a in Nevada Division of Water Planning (1992) do not agree with Table 3-11. DOE should provide additional justification for the perennial yield figures, considering the variance from information in other sources, to support its assessment of potential overdraft in the region.

The discussion of water demand during construction, operation and monitoring, and closure in Section 4.1.3.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Groundwater from Construction, Operation and Monitoring, and Closure) of the DEIS also should be clarified. This discussion should make clear where the water will be obtained to meet the combined water demand for the repository, the NTS, and Nellis AFR. Under one scenario, the perennial yield of Area 227a would be exceeded. The text should be clarified to explain the impacts of any possible overdraft.

The discussion in DEIS Section 4.1.3.3 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure - Impacts to Groundwater from Construction, Operation and Monitoring, and Closure) includes at least one scenario where the Jackass Flats basin would be in overdraft status. In addition, Table 3-11 presents the Amargosa Desert Area 230 in a potential overdraft situation. DOE (1996) confirms that historic data show that DOE withdrawals at Yucca Flats have annually exceeded the perennial yield. The potential impacts of these overdrafts should be discussed.

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Recommendation:

9 cont. DOE should correct discrepancies in water-use discussions and data in the FEIS. The evaluation of groundwater use during construction, operation, and monitoring should include a discussion of the potential for overdrafts.

References:

Nevada Division of Water Planning. *Nevada Water Facts, 1992.* 241353. Carson City, NV: Nevada Division of Water Planning. 1992.

U. S. Department of Energy. *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada.* DOE/EIS-0243-F,239895. Las Vegas, NV: U. S. Department of Energy. 1996.

LAND USE

7. **Comment:**

10 Although flexibility exists in the amount of land that is to be withdrawn for the geologic repository operations area and the post-closure controlled area, the extent of the land withdrawal influences the type and magnitude of impacts that should be considered in the impact statement. The DEIS does not provide a clear basis for determining the extent of the proposed land withdrawal nor does it assess the full range of impacts associated with the land withdrawal (e.g., socioeconomic, water use, cultural).

Basis:

According to DEIS Section 1.4.1 (Purpose and Need for Agency Action—Yucca Mountain Site), the area needed for development of the surface repository is approximately 3.5 km^2 with up to approximately another 600 km^2 set aside as a buffer zone. However, the severity of impacts is dependent on the area to be withdrawn.

The FEIS should include an assessment of the potential impacts of removing a large area (e.g., 600 km^2 is used as the size of the potential land withdrawal on pages 2-1 and 2-2 of the DEIS) from other possible uses. The withdrawal would preclude or limit use of the land at any time for other purposes by the public or by Native Americans. Development of water resources on this land by private individuals, businesses, industry, or the State of Nevada might also be prohibited. These impacts are not fully assessed in the DEIS.

Recommendation:

The impacts associated with the land withdrawal should be discussed systematically in the FEIS, including impacts on cultural resources and land use.

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BIOLOGICAL RESOURCES

8. **Comment:**

11 The DEIS may not adequately bound the uncertainty in the predictions of heat generated from radioactive decay during long-term repository performance and the potential effects of this heat generation on fauna.

Basis:

Although most vertebrate species have genetically fixed sex determination, it is now known that chelonians (tortoises and turtles) undergo temperature dependent sex determination (TSD). Spotila (1994) shows that the desert tortoise (*Gopherus agassizii*), a federally listed threatened species of the Mojave Desert, is subject to this effect. Research shows that the temperature that produces a 50:50 sex ratio is 31.8 °C. Desert tortoise eggs have good hatching success between 28 and 33 °C, but suffer high mortality at temperatures below 26 or above 35.3 °C. Temperatures between 26.0 and 30.6 °C produce mostly males (temperatures 28 °C and below produce 100 percent males) and temperatures between 32.8 and 35.3 °C produce mostly females (temperatures above 33 °C produce 100 percent females) (Spotila et al., 1998). Lewis-Winokur and Winokur (1995) confirm that the pivotal temperature is between 31 and 32 °C and indicated that a lowering of 1.6 °C (from 31 to 29.4 °C) resulted in all male hatchlings.

The modeling of surface soil temperature for the proposed site produces uncertain results. TRW Environmental Safety Systems, Inc. (1999, page 44) states "...current predictions are somewhat uncertain due to uncertainties in the thermal properties of the soil, particularly thermal conductivity and, hence, thermal diffusivity." This source further states that "analyses based on conventional soil heat-conduction models indicate that the original time scale of the measurements collected at the site (weekly to monthly) could not be used to accurately estimate the soil thermal conductivity for the sampling depths chosen (15, 30 and 45 cm)." However, substantial temperature effects on desert tortoise sex determination have been shown to occur within a range of plus or minus 3 °C. Therefore, it is important for the FEIS to clarify the range of soil temperatures associated with the geologic repository and discuss impacts, if any, on protected or endangered species.

Recommendation:

The assessment of the contribution of thermal loading on increased soil temperature should be refined in the FEIS. Soil temperature modeling should take into account the substantial uncertainties in thermal conductivity in Yucca Mountain soils thereby enabling an assessment of the potential impacts to the desert tortoise from increased soil temperatures.

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11...

References:

Lewis-Winokur,V., and R.M. Winokur. *Incubation temperature affects sexual differentiation, incubation time, and posthatching survival in desert tortoises [Gopherus agassizi (sic)]. Canadian Journal of Zoology* 73(11): 2091–2097. 1995.

Spotilla, J.R., L.C. Zimmerman, C.A. Binckley, J.S. Grumbles, D.C. Rostal, A. List, Jr., E.C. Beyer, K.M. Philips, and S.J. Kemp. *Effects of incubation conditions on sex determination, hatching success, and growth of hatchling desert tortoise, Gopherus agassizii. Herpetological Monographs* 8: 103–116. 1994.

TRW Environmental Safety Systems, Inc. *Impact of Radioactive Waste Heat on Soil Temperatures.* BA0000000–01717–5700–00030. Revision 0. Las Vegas, NV: TRW Environmental Safety Systems, Inc.: 37–44. 1999.

Category 3 -- Less significant Issues

DOCUMENTATION OF QUALITATIVE JUDGMENTS ON IMPACTS AND INCONSISTENCIES

9. **Comment:**

intro for 12, 13, 14, 15

Additional documentation or analysis should be provided in the FEIS to support the characterization of impacts and the description of environmental parameters in some areas of the FEIS.

Basis:

Additional documentation or analyses would be useful in the following areas:

12

- The DEIS assessments of impacts on faunal resources in Section 4.1.4 (Environmental Consequences of Repository Construction Operation and Monitoring and Closure—Impacts to Biological Resources and Soils) that are classified as "low," "very small," or "minimal and largely undetectable" are not supported by quantitative data. Individuals of a population that occur near the edge of its range (e.g., desert tortoises in the vicinity of Yucca Mountain) are living in marginal conditions, and therefore environmental stressors caused by the Proposed Action might have amplified effects in these edge areas.

13...

- Section 4.1.6.2.1 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Impacts to Employment), page 4-41 states "[i]f the present economic growth continued in the region of influence, it could absorb declines in the repository workforce." To assess the adequacy of this statement, the assumptions used to generate the Regional Economic Models, Inc. (REMI) (Treyz et al., 1992) baseline results should be provided. The conclusion appears to require the assumption that the skills of displaced workers are compatible with the employment growth and needs of other sectors.

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14 • Section 6.3.2.2.1 (Environmental Impacts of Transportation—Caliente Rail Corridor Implementing Alternative—Socioeconomics) states "[t]he projected length of the corridor—513 kilometers—is the most important factor for determining the number of workers (560) that would be required." This statement is repeated for all corridors, but more specific information is needed to support this conclusion. Terrain and other factors might have significant impact, because productivity per worker (km/worker) varies considerably by route (e.g., 1.04 km/worker on the Carlin route, 0.53 km/worker on the Jean route).

15... • Section H.2.1.3 (Potential Repository Accident Scenarios: Analytical Methods and Results—External Events) of the DEIS concludes that 3 cm is the maximum thickness of volcanic tephra that could be deposited on repository facilities from a basaltic volcano that erupts within the area around the proposed repository site. The basis for this conclusion is a statement (DOE, 1998) that 3 cm of volcanic tephra is the worst-case event being considered. The conclusion appears not to be supported by data or analyses.

Recommendation:

The FEIS should improve the documentation and support for qualitative conclusions or assumptions related to impacts, as appropriate.

13 cont. **References:**

Treyz, G.I., D.S. Rickman, and G. Shao. The REMI economic-demographic forecasting and simulation model. *International Regional Science Review* 14(3): 221–253. 1992.

15 cont. U. S. Department of Energy. Viability assessment of a repository at Yucca Mountain. *Volume 2: Preliminary Design Concept for the Repository and Waste Package*. DOE/RW–0508. Washington, DC: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. 1998.

CULTURAL RESOURCES

10. **Comment:**

16... Documentation and analyses for the assessment of impacts to cultural resources are incomplete.

Basis:

Some DEIS conclusions regarding cultural resource impacts lack supporting analyses or reference material. Moreover, methods used to conduct the analyses and reach conclusions are not presented. The following are examples:

• Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) states that a field survey of a 44-km^2 (11,000 acres) parcel was conducted.

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16 cont.

Clarifying information needs to be provided, including (i) the type of survey (e.g., walk-over); (ii) the percentage of coverage for the 44-km^2 area; (iii) the relationship of the survey area to the entire land withdrawal area; (iv) the relationship of this survey to the "additional archaeological surveys" conducted in Midway Valley, Yucca Wash, and lower Fortymile Canyon; (v) the extent and techniques used for these additional surveys; (vi) specification of the total survey area; and (vii) the extent to which sites have been identified for the complete land withdrawal area.

- Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) of the DEIS states that "826 archeological sites have been discovered in the analyzed land withdrawal area." This statement requires clarification. It is not clear whether the entire 600 km^2 parcel has been surveyed or whether the number of sites is on a smaller parcel of land. It is difficult to assess site density and cultural resources impacts without knowing the extent of the land area that has been surveyed.

- Section 3.1.6.1 (Affected Environment—Archeological and Historic Resources) states that limited test excavations were conducted at 29 sites. Clarification is required regarding the criteria used to select sites for testing and the representativeness of these sites for the potentially affected area.

- The Western Shoshone occupied the Yucca Mountain region into historic times and were engaged in mining, ranching, and other activities. The DEIS is unclear whether any of the historic sites are associated with the Western Shoshone or Paiute peoples or whether these sites are considered to be related only to non-Native American occupation activities.

Recommendation:

The FEIS should provide additional data and descriptions of methods used to assess impacts on cultural resources, including a description of the area of study used in assessing the distribution and types of cultural resources. If the entire land withdrawal area or the entire potential disturbed area was not surveyed for cultural resources, the rationale for not doing so should be presented.

LONG-TERM REPOSITORY PERFORMANCE

11. **Comment:**

17...

The methodology for estimating the environmental impacts from the release and transport of toxic materials should be well documented in the FEIS. The estimates should incorporate the current waste package materials and design.

Basis:

The release and transport of toxic materials (chromium (Cr) and molybdenum (Mo)) from waste package corrosion to a receptor group was modeled using the EQ6

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17 cont. geochemical speciation code (Figure I-1). It is unclear how this code was used to estimate the corrosion products or the corrosion rate for toxic materials.

The assumed dissolution rates and mineral formation kinetics are critical to substantiating the claim that release and eventual exposure of a receptor group to the potentially toxic waste package corrosion products (e.g., chromate, molybdate) is minimal as stated in Section 5.6 (Environmental Consequences from Long-Term Repository Performance—Consequences from Chemically Toxic Materials).

We understand that DOE is expected to select Enhanced Design Alternative II (EDA-II) for the potential license application in the near term (TRW, 1999). EDA-II includes an outer overpack of 5 cm thick Alloy-22. The DEIS design includes a 2 cm thick inner overpack of Alloy-22, so the quantities of Alloy-22 will more than double, even assuming constant numbers of waste packages, if the EDA-II design is used. Because Alloy-22 is approximately 56 percent Ni by weight, the volume of Ni present in the repository is considerably more than the amount of Cr and Mo present. In addition, nickel (Ni) will also likely dissolve at roughly the same rate as Cr and Mo during corrosion. The FEIS should document that Ni does not pose a health risk.

Recommendation:

The discussion of toxic materials should be consistent with the current waste package design at the time of the FEIS. DOE should provide the technical basis for waste package corrosion rates, and should provide technical support for claims that exposure to potentially toxic materials released by waste package corrosion is minimal.

Reference

TRW Environmental Safety Systems, Inc. *License Application Design Selection Report.* B00000000-01717-4600-00123. Revision 01. Las Vegas, NV: TRW Environmental Safety Systems Inc. May 28, 1999.

REPOSITORY CONSTRUCTION, OPERATION AND MONITORING, AND CLOSURE

12. **Comment:**

18... Inconsistencies concerning the appropriate range for ^{222}Rn concentration should be remedied and impacts of thermal loading on radon release and worker safety should be explained in the FEIS.

Basis:

The median and range of ^{222}Rn concentrations used for radiological impact calculations are not consistent throughout the DEIS. Sections 3.1.8.2 (Affected Environment—Radiation Environment in the Yucca Mountain region) and F.1.1.6 (Human Health Impacts Primer and Details for Estimating Health Impacts to Workers from Yucca Mountain Repository Operations—Exposures from Naturally Occurring Radionuclides in the Subsurface Environment) of the DEIS report that radon

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18 cont. concentrations in the Exploratory Studies Facility (ESF) during working hours (with active ventilation) range from 0.22 to 72 pCi/L, with a median concentration of 6.5 pCi/L. Sections 4.1.2.2.2 (Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Radiological Impacts to Air quality from Construction) and G.2.3.1 (Air Quality—Release of Radon-222 and Radon Decay Products from the Subsurface Facility) of the DEIS report that radon concentrations in the ESF during working hours with the ventilation system on range from 0.65 to 163 pCi/L, with a median concentration of 24 pCi/L. The difference is a factor of 2-3 in the range and a factor of approximately 4 for the median.

Section 4.1.7.3.1 [Environmental Consequences of Repository Construction, Operation and Monitoring, and Closure—Occupational Impacts (Involved and Non-Involved Workers)] of the DEIS states that "radiological health impacts to surface workers would be independent of the thermal load scenarios." However, it is not apparent whether there was any consideration of higher heat loadings increasing the radon release rate from the wall surfaces. Table G-48 of the DEIS reports that the annual average radon releases during the 24-yr operation period are expected to be 880 Ci, 1000 Ci, and 1900 Ci for the high, intermediate, and low thermal loads. It also appears that these source terms did not take into account the relative volume of the repository under each heat loading alternative.

Recommendation:

The FEIS should explain or address inconsistencies related to the appropriate range for ^{222}Rn concentration. The FEIS should also discuss the effects of the various heat loading scenarios on total radon release and provide a technical basis for the conclusion that radiological health impacts are independent of thermal load scenarios.

19... **NO ACTION ALTERNATIVE**

13. **Comment:**

The DEIS presents two scenarios, both of which DOE recognizes as unlikely, as a baseline to address the uncertainty associated with the management of SNF and HLW in the absence of a Yucca Mountain repository. Scenario 1 is a status quo of maintaining storage facilities continuously for the next 10,000 years. Scenario 2 proposes that these storage facilities would be maintained for 100 years, after which the 77 sites would be left without further management. Scenario 2 is not reasonable and, therefore, DOE should explain that it includes this scenario only to allow comparison with the analysis of the postclosure performance of the potential repository, which similarly is based on the highly unlikely and unreasonable assumption that institutional controls will be maintained only for 100 years.

Basis:

Scenario 2 assumes that, after a 100 year period, the Federal Government would permit SNF and HLW to be abandoned. This is not a reasonable assumption. The Federal

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19 cont. Government would continue to control licensed material and HLW under its authority for as long as necessary for public health and safety considerations.

Recommendation:

DOE should explain the basis for its identification of Scenario 2 as a potential no-action alternative.

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RESPONSES TO U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE DRAFT EIS (Comment Document 1898)

1. DOE has an ongoing program to address Nuclear Regulatory Commission comments on the Viability Assessment and other technical issues, largely as they have been translated into its comprehensive listing of scientific modeling issues in the Commission's Issue Resolution Status Reports (see, for example, DIRS 135160-Bell 1996; DIRS 154605-NRC 2000). Not all technical issues raised by the Commission are closed, but DOE has made and will continue to make a good faith effort to address each issue to the extent practicable. As reported in the Final EIS, the Department has made a number of modifications to the design of the repository and to the Total System Performance Assessment model that address Commission concerns. As of September 2001, the Key Technical Issues have all been declared "Closed-Pending" by the Commission.

   DOE has made a similar best effort to address the status of model validation and data quality assurance. The Department recognizes that it needs to apply a rigorous and effective quality assurance program, and that doing so will be crucial to demonstrating the validity of findings and analyses in any License Application. In response to previous Nuclear Regulatory Commission comments in this area, DOE has established a schedule for achieving quality assurance goals by the time of the License Application, if Yucca Mountain is found suitable and approved for development of a repository. DOE has met interim quality assurance goals for the Site Recommendation phase.

   In the September 6, 2001, Quarterly Meeting with the Nuclear Regulatory Commission, DOE outlined the transition plans for the respective quality assurance programs which would support becoming a licensee. The Commission indicated further evaluation of implementation of these plans would take place in approximately 6 months.

2. In the Final EIS, DOE has identified and analyzed a higher-temperature operating mode and a range of lower-temperature operating modes. Chapter 2 and other related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the operating mode are package spacing, drift temperatures, length of active ventilation, and age of the fuel being emplaced. The range of variances in these parameters basically determine the extent of the repository design that will be utilized for the emplacement of the 70,000 metric tons of waste and fuel; the higher-temperature operating mode would require only the main central segment of the repository; several of the lower-temperature operating modes would use that segment and the western extension, while the "ultra" low-temperature operating modes would require use of the entire planned initial design. In this way, DOE has focused its analysis on a more clearly defined proposal, and demonstrated that the environmental impacts of the construction and operation of the proposed repository would not be likely to exceed the upper range of the estimated impacts. Tables in Chapter 2 of the EIS demonstrate the bounding nature of the flexible operating modes within construct of a fixed design.

3. The Final EIS addresses the relevant technical issues DOE received in comments from the Nuclear Regulatory Commission relative to specific technical issues and the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998).

4. In the Draft EIS and the Supplement to the Draft EIS, DOE analyzed a variety of scenarios that offer a range of options for implementing the Proposed Action to construct, operate (including transportation) and monitor, and eventually close a repository at Yucca Mountain. These scenarios, which reflect potential design considerations, waste packaging approaches, and modes for transporting spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site, considered the range of the environmental impacts likely to result from the Proposed Action.

   In the Final EIS, DOE has identified and analyzed a range of operating modes from higher- to lower-temperature. The lower-temperature analytical scenario considered six cases. Chapter 2 of the EIS and other

related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the flexible operating modes are package spacing, drift temperatures, length of active ventilation, and age of the fuel being emplaced. The range of variances in these parameters basically determine the extent of the repository design that will be utilized for emplacement of 70,000 metric tons of heavy metal of spent nuclear fuel and high-level radioactive waste; the higher-temperature operating mode would require only the main central segment of the repository; the lower-temperature operating mode could use that segment and the western extension, and could possibly require use of the entire available emplacement area. DOE has focused its analysis on a more clearly defined proposal, and demonstrated that the environmental impacts of the construction and operation of the proposed repository would not be likely to exceed the upper range of the estimated impacts.

DOE believes that the information in the EIS on the potential direct, indirect, and cumulative impacts that could result from the Proposed Action is sufficient. This belief is based on the level of information and analysis, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts that could occur, and the use of "bounding assumptions" if information is incomplete or unavailable and if uncertainties exist.

For the same reasons, DOE believes that the EIS provides the information necessary to make decisions on the basic approaches to transporting spent nuclear fuel and high-level radioactive waste (such as mostly rail or mostly truck shipments), as well as the choice between alternative rail corridors in Nevada. However, follow-up implementing decisions, such as the selection of a specific alignment in a corridor, the specific location of an intermodal transfer station, or the need to upgrade heavy-haul truck routes, would require field surveys, State and local government consultations, environmental and engineering analyses, and National Environmental Policy Act reviews.

5. Since the issuance of the Draft EIS, the Department has continued to evaluate actions in the region of influence that could pose a potential cumulative impact. As a result of these reviews, the Department identified several new actions for which information was not available for the Draft EIS. These actions come from several agencies and private companies. For instance, Section 8.1.2.2 of the Final EIS contains an expanded discussion of the Timbisha Shoshone Homeland Act, along with possible implications to groundwater rights. Chapter 8 also contains discussions of other actions by the Bureau of Land Management (e.g., the Ivanpah Cargo Airport, the Moapa Paiute Energy Center); these actions were considered when evaluating the cumulative impacts for the technical discipline areas.

   As part of the updated analyses, the Department has expanded the land-use discussion in Chapter 8 to address specifically the known actions that have been identified since the publication of the Draft EIS. Where possible, the Department has identified changes in land use along with estimates of area to be disturbed and possible impacts with other actions in the area. In addition, all discipline areas (for example, biological resources and cultural resources) were reviewed to ensure that the appropriate level of discussion was included to address the potential cumulative impacts of all the actions. However, not all actions could be evaluated to the same level of detail because information was not always available to allow an in-depth evaluation.

6. DOE believes that the EIS adequately analyzes the environmental impacts that could result from the Proposed Action. This belief is based on the level of information and analysis, the analytical methods and approaches used to represent conservatively the reasonably foreseeable impacts, and the use of bounding assumptions where information is incomplete or unavailable, or where uncertainties exist. The use of widely accepted analytical tools, latest reasonably available information, and cautious but reasonable assumptions offer the most appropriate means to arrive at conservative estimates of transportation-related impacts.

   For the reasons discussed above, DOE believes that the EIS provides the environmental impact information necessary to make certain broad transportation-related decisions, namely the choice of a national mode of transportation outside Nevada (mostly rail or mostly legal-weight truck), the choice among alternative transportation modes in Nevada (mostly rail, mostly legal-weight truck, or heavy-haul truck with use of an associated intermodal transfer station), and the choice among alternative rail corridors or heavy-haul truck

routes with use of an associated intermodal transfer station in Nevada. DOE has identified mostly rail as its preferred mode of transportation, both nationally and in Nevada. At this time, however, the Department has not identified a preference among the five candidate rail corridors in Nevada.

If the Yucca Mountain site was approved, DOE would issue at some future date, a Record of Decision to select a mode of transportation. If, for example, mostly rail was selected (both nationally and in Nevada), DOE would identify a preference for one of the rail corridors in consultation with affected stakeholders, particularly the State of Nevada. In this example, DOE would announce a preferred corridor in the *Federal Register* and other media. No sooner than 30 days after the announcement of a preference, DOE would publish its selection of a rail corridor in a Record of Decision. A similar process would occur in the event that DOE selected heavy-haul truck as its mode of transportation in Nevada. Other transportation decisions, such as the selection of a specific rail alignment within a corridor, would require additional field surveys, State and local government and Native American tribal consultations, environmental and engineering analyses, and appropriate National Environmental Policy Act reviews.

In this EIS, DOE has used computer models it has used in previous EISs and other studies. These models are widely accepted by the national and international scientific and regulatory communities. For instance, DOE selected the RADTRAN 5 computer program to estimate radiological impacts to populations from incident-free transportation and from accidents. RADTRAN, which was originally developed by Sandia National Laboratories in the late 1970s, has been used in many other previous DOE EISs, and it has undergone periodic review and revision. In 1995, an independent validation review of RADTRAN 4 (immediate predecessor to RADTRAN 5) demonstrated that it yielded acceptable results when compared to "hand" calculations. More recently, an independent review found that RADTRAN 5 overestimates the measured radiation dose to an individual from moving radiation sources.

To ensure that the EIS analyses reflect the best latest reasonably available information, DOE has either incorporated information that has become available since the publication of the Draft EIS or modified existing information to accommodate conditions likely to be encountered over the life of the Proposed Action. For example, the analysis in the Draft EIS relies on population information from the 1990 Census. In this Final EIS, DOE has scaled impacts upward to reflect the relative state-by-state population growth to 2035, using 2000 Census data.

Although the EIS analyses are based on the best latest reasonably available information and state-of-the-art analytical tools, not all aspects of incident-free transportation or accident conditions can be known with absolute certainty. In such instances, DOE has relied on conservative assumptions that tend to overestimate impacts. For instance, DOE assumed that the radiation dose external to each vehicle carrying a cask during routine transportation would be the maximum allowed by U.S. Department of Transportation regulations. Similarly, DOE assumed that an individual, the "maximally exposed individual," would be a resident living 30 meters (100 feet) from a point where all truck shipments, or 200 meters (660 feet) from a point where all rail shipments would pass. Under these circumstances, the maximally exposed individual would receive a dose of about 6 millirem from exposure to all truck shipments, and a dose of about 2 millirem from exposure to all rail shipments (6 millirem represents an increased probability of contracting a fatal cancer of 3 in 1 million). Although it can be argued that individuals could live closer to these shipments, it is highly unlikely that an individual would be exposed to all shipments over the 24-year period of shipments to the repository, even though DOE incorporated this highly conservative assumption in the analysis.

7. At present, DOE does not have definitive information on specific tracts of land or community elements that the Proposed Action could affect, so it is premature to identify specific mitigation measures categorically. If the repository was approved, however, DOE would have discussions with potentially affected units of local government and consider appropriate support and mitigation measures. DOE would also continue its ongoing interactions with Native American tribes. In addition, specific mitigation measures could be part of a Mitigation Action Plan or similar plan, such as terms and conditions to Biological Opinions from the U.S. Fish and Wildlife Service and Nuclear Regulatory Commission licensing conditions. DOE, in submitting an application to construct and operate a repository, would identify relevant mitigation measures to the Commission for its consideration, and could reasonably expect a comprehensive set of mitigation measures or conditions of approval to be part of any licensing process. At this time, DOE has not decided whether to

prepare a Mitigation Action Plan. As described in Chapter 9 of the EIS, DOE intends to commit to reasonable management actions required to mitigate potential adverse environmental impacts. The Department would develop mitigation actions in cooperation with potentially affected units of local government

Section 116(c)(2)(A)(i) and (ii) of the NWPA state that "the Secretary shall provide financial and technical assistance to the State of Nevada and any affected unit of local government…to mitigate the impact on such State [Nevada] or affected unit of local government of the development of [a] repository and the characterization of [the Yucca Mountain] site." Such assistance can be given to mitigate likely "economic, social, public health and safety, and environmental impacts." Within that broad framework, neither Section 116 nor any other provision of the NWPA limits the impacts that are subject to assistance under Section 116 to the environmental impacts considered in this EIS. This section also allows payments to the State of Nevada and to any affected unit of local government equal to taxes they would have received if the activity was performed by a non-Federal entity.

Under the NWPA, the Section 116 impact assistance review process and the Yucca Mountain Repository EIS process are distinct from one another, and the implementation of one would not depend on the implementation of the other. Thus, the provision of assistance under Section 116 would not be limited either by the impacts identified in this EIS or by its findings on such impacts. A decision to provide assistance under Section 116 would be based on an evaluation of a report submitted by an affected unit of local government or the State of Nevada pursuant to Section 116 to document likely economic, social, public health and safety, and environmental impacts. Similarly, Section 180(c) of the NWPA requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of local government and Native American tribes through whose jurisdictions DOE would transport spent nuclear fuel and high-level radioactive waste.

Mitigation measures discussed in the EIS include those for water use (Sections 9.2.3 and 9.3.3), cultural resources (Sections 9.2.5 and 9.3.5), biological resources (Sections 9.2.4 and 9.3.4); and public health and safety (Sections 9.2.6 and 9.3.6). Chapter 9 discusses impacts in addition to the areas mentioned in this comment. Conversely, DOE has generally not proposed mitigation measures in areas where analyses did not identify consequential impacts. In some instances, an analysis might reveal impacts for which there would be no practical mitigation measures. Decisionmakers would consider the unmitigated consequences in weighing the need for the project against the potential for adverse consequences.

With regard to this comment's example of mitigative measures for Native American interests, DOE supported the preparation of the American Indian Writers Subgroup document (DIRS 102043-AIWS 1998) and used it as a primary reference to the EIS (see Sections 3.1.6.2.2 and 4.1.13.4). DOE would include avoidance of significant archaeological sites as a mitigative action where feasible. If avoidance was not feasible, a data recovery effort would preserve the archaeological data. In addition, DOE would implement Section 180(c) of the NWPA, which requires the Secretary of Energy to provide technical assistance and funds for training public safety officials of appropriate units of government and Native American tribes through whose jurisdictions transportation of spent nuclear fuel and high-level radioactive waste would occur. The training would cover procedures for safe routine transportation and for dealing with emergency response situations.

Since issuing the Draft EIS, DOE has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and would improve operational safety and efficiency. The result of the design evolution process was the development of the flexible design (which the Supplement to the Draft EIS called the Science and Engineering Report Flexible Design). Although this design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass loading) the basic elements of the Proposed Action to construct, operate and monitor, and eventually close a geologic repository at Yucca Mountain remain unchanged.

DOE would monitor impacts during the construction and operation of the repository. A postclosure monitoring program, required by 10 CFR Part 63, would include monitoring activities around the repository after closure. The regulation requires submittal of a license amendment for permanent closure of the repository [10 CFR 63.51(a)(1) and (2)]. This amendment must provide an update of the assessment for repository performance for the period after permanent closure, as well as a description of the program for postclosure monitoring. This

program would include continued oversight to prevent any activity at the site that posed an unreasonable risk of breaching the repository's engineered barriers or increasing the exposure of individual members of the public to radiation beyond allowable limits. The details of this program would be defined during the processing of the license amendment for permanent closure. Deferring final development of this program until the closure period would enable a more complete understanding of the circumstances of the repository at closure and incorporation and use of new technologies that could become available by closure.

8. DOE determined that it is not necessary to examine the composition of the general population residing along existing spent nuclear fuel and high-level radioactive waste transportation corridors before DOE can reasonably conclude that there would be no disproportionately high and adverse impacts to minority and low-income populations from the transportation of radioactive materials. In addition, as described in Chapter 6 of the EIS, incident-free transportation and the risks from transportation accidents (the maximum reasonably foreseeable accident scenario would have 2.3 chances in 10 million of occurring per year would not present a large health and safety risk to the population as a whole, or to workers or individuals along national transportation routes. The low effect on the population as a whole also would be likely for any segment of the population, including minorities, low-income groups, and members of Native American tribes.

   In response to comments, DOE also considered locations at which individuals could reside nearer to the candidate rail corridors and heavy-haul truck routes in Nevada as a way of representing conditions that could exist anywhere in potentially affected communities. For purposes of analysis, DOE assumed that a maximally exposed individual could reside or work as close as 4.9 meters (16 feet) to a potential heavy-haul truck route and 30 meters (98 feet) to a rail corridor. During the 24-year period of repository operations, if every shipment of spent nuclear fuel and high-level radioactive waste passed by these maximally exposed individuals, the would receive an estimated dose ranging from about 2 millirem (increased fatal cancer probability of 1 in 1 million) for rail shipment to about 29 millirem (increased fatal cancer probability of 2 in 100,000) for heavy-haul shipments.

   These exposures would be well below those received from natural background radiation, would not be discernible even if corresponding doses could be measured, and would not add measurably to other impacts that an individual could incur. For comparison, the lifetime likelihood of an individual incurring a fatal cancer from all other causes is about 1 in 4.

   However, the Final EIS examines the composition of the population along candidate rail corridors in Nevada. Selecting among alternative new routes may offer opportunities to avoid high and adverse impacts that would fall disproportionately on low-income or minority populations relative to the general population that would not be present when considering existing transportation corridors. Therefore, even though the health effects from exposure to radioactive materials from transportation activities would not implicate environmental justice concerns in selecting new routes, other factors such as the impacts of the construction and use of a newly created route on land use, socioeconomics, noise, air quality, and esthetics may vary by location. In response to comments, DOE has updated and refined information germane to the environmental justice analysis. For example, the EIS now includes additional and more detailed mapping and information that describes the proximity of tribal lands to rail corridors in Nevada. Section 6.3.4 of the Final EIS presents the analysis of environmental justice impacts in Nevada.

9. Federal Reserve Water Rights are noted in the footnote to Table 3-11, but are not quantified because they are not directly comparable to water appropriations authorized by the State of Nevada. As stated in the *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada* (DIRS 101811-DOE 1996), the Federal Reserve Water Rights position is that the Nevada Test Site is "…entitled to withdraw the quantity of water necessary to support the NTS missions." The Nevada Test Site EIS does not quantify or limit these rights, except for their purpose, and the repository EIS concurs with this view. With respect to identifying committed water resources, the repository EIS is obligated to identify cumulative impacts of other Federal and non-Federal actions. Chapter 8 discusses the past, present, and foreseeable future actions and associated water demands. In this manner, the EIS does indirectly identify quantities of water expected to be associated with reserved water rights (that is, if their impacts would be cumulative with those of the Proposed Action).

The purpose of Table 3-11 of the Draft EIS and its associated text is not to suggest that ample water is available. The intent is only to describe existing groundwater resources and use in the region of Yucca Mountain. DOE agrees that average withdrawals do not tell the entire story when looking at groundwater resources and their availability. This is the reason that both water appropriations and estimates of perennial yield are also shown in the table. In addition, DOE understands, though not expressed in the EIS, that the State Engineer must consider factors in addition to those shown in the table when considering requests for water appropriations.

Chapter 8 of the EIS describes the cumulative impacts of groundwater use by the Nevada Test Site, Nellis Air Force Range, and the proposed repository. Additional text has been added to Section 8.2.3.2 to better address other uses of groundwater in the area. As identified in Section 4.1.3.3, the peak projected annual water demand for the proposed action [360,000 cubic meters (290 acre-feet)], when combined with projected demand from the Nevada Test Site [350,000 cubic meters (280 acre-feet)], would approach, but would not exceed, the lowest estimate of perennial yield for the western two-thirds of the Jackass Flats hydrographic area [720,000 cubic meters (580 acre-feet)]. The corresponding discussion in Section 4.1.3.1 of the EIS (impacts from performance confirmation) is intentionally brief because of the relatively small annual water demand projected for that phase of the project. The evaluation in this section compares projected water demand to the perennial yield estimates and shows them to be minor. The addition of the Nevada Test Site demand would still put projected water withdrawals well below the lowest estimates of perennial yield, which were not mentioned.

With respect to the wide range of perennial yield figures identified for hydrographic area 227a, an explanation of the origin and basis for each of these numbers is beyond the scope of the EIS. A partial answer is that estimates of recharge are difficult and vary widely in this area where evapotranspiration is high and quantities of surface water are low. An order of magnitude difference between recharge estimates for the same study area is not unusual in the literature. The source of the perennial yield information presented in Table 3-11 of the Draft EIS is in a footnote to the table. The cited source identifies the studies from which the perennial yield values are taken and discusses those studies. The EIS recognizes that the Nevada Division of Water Planning uses an estimate of perennial yield that is not totally consistent with those listed in Table 3-11. Tables 3-35 and 3-43 of the Draft EIS both include a footnote indicating that the Nevada Division of Water Planning uses a combined perennial yield of 30 million cubic meters (24,000 acre-feet) for hydrographic areas 225 through 230. This estimate was not used in the tables because it has not been divided into the individual areas. DOE thought it important to give estimates and discuss perennial yield based on these smaller areas, so it used the best available data (on an individual hydrographic area basis). DOE believes that the EIS considers a wide range of perennial yield values, particularly for hydrographic area 227a (Jackass Flats), and that this is appropriate and conservative. The fact that the Nevada Division of Water Planing uses different values for some of the committed resources is due to the use of a more recent reference in the EIS (DIRS 103406-NDWP 1992).

As indicated above, Chapter 8 of the EIS discusses other (nonrepository) water demands in the Yucca Mountain region. However, Section 4.1.3.3 does clearly indicate that there would be an ongoing Nevada Test Site water demand from the same hydrographic area from which the Yucca Mountain Site Characterization Project would be withdrawing water. This section does not mention water demands for the Nellis Air Force Range because there are no demands in this hydrographic area. It does discuss the potential for overdraft of this hydrographic area. This hydrographic area (227a – Jackass Flats) is not an isolated basin. It receives water both from the surface (recharge from precipitation) and as underflow from upgradient areas. It also loses water as underflow to downgradient areas. As described in the EIS, withdrawing only slightly more water than the low estimate of perennial yield (which is based solely on recharge from local precipitation) would be unlikely to cause a depletion of the reservoir because of the higher quantities estimated to be moving through as underflow. However, it would probably result in a minor shifting of the general groundwater flow patterns to compensate. Since the publication of the Draft EIS, two groundwater modeling efforts have been completed to simulate the effects of the projected water demands by the repository on the groundwater flow system. The Final EIS has been modified to discuss the results of these efforts, which are consistent with the general impacts discussed above.

As indicated above, effects of overdrafting within Jackass Flats are discussed in this EIS and modifications have been added to the Final EIS to address the results of applicable modeling efforts. With respect to the Amargosa Desert, Section 4.1.3.3 of the EIS states that water demand associated with the proposed repository would have only a small impact on water availability in Amargosa Desert. That is, actual or potential overdrafting of

groundwater in the Amargosa Desert would be attributed predominantly to pumping in that area and would not be substantially affected by the amount of water needed to support the repository. Accordingly, possible impacts from overdrafting in Amargosa Desert are not discussed in the EIS. Overdrafting at Yucca Flat is not described in the EIS because it does not have a direct connection to the Proposed Action. Figure 3-13 of the Draft EIS shows that Yucca Flat is within the Ash Meadows Groundwater Basin and the direction of groundwater flow from there is toward Frenchman Flat and eventually to the Ash Meadows area and, if remaining as underflow, to the Amargosa Desert. This is consistent with the State of Nevada report *Water for Nevada* (DIRS 103016-State of Nevada 1971), which shows no groundwater inflow to this hydrographic area (area 159 – Yucca Flat), but does show its groundwater outflow going to Frenchman Flat, which also receives underflow from adjacent areas. The Nevada Test Site withdraws water from Frenchman Flat (hydrographic area 160), but at quantities far below its perennial yield (DIRS 101811-DOE 1996). Based on this picture of groundwater flow conditions, overdrafting at Yucca Flat would be expected to result in very localized conditions, probably not even extending far into Frenchman Flat because the combined water use for these two areas (Yucca and Frenchman Flats) is only a small fraction of their combined perennial yield [1.8 million cubic meters (1,400 acre-feet) of peak annual water demand versus 16,350 acre-feet of perennial yield (DIRS 101811-DOE 1996)]. Any affects on the groundwater flow from Yucca Flat overdrafting would surely be lost by the time groundwater flow reaches the southern end of the Amargosa Desert where impacts could be cumulative with those of the Proposed Action. Accordingly, Chapter 8 discusses impacts of the total water demand and cumulative impacts from the Nevada Test Site and the Proposed Action and does not address noncumulative issues that are internal to the Test Site.

10. The EIS identified a land withdrawal area in Section 3.1.1.3 to comply with regulations issued by the Nuclear Regulatory Commission concerning land ownership and control for a repository at Yucca Mountain (10 CFR Part 63). The safety of the repository requires DOE to demonstrate with a reasonable expectation that the long-term performance of the repository can meet the environmental radiation-protection standards established by the Environmental Protection Agency (40 CFR Part 197). Essentially all of the land identified for withdrawal (that is, about 229 out of 230 square miles) is Federal land. About 1 square kilometer at the southern end is private land. There is no State land or tribal land within the withdrawal area. If Congress withdrew the land for a repository as discussed in Section 4.1.1.1 of the EIS, it could specify conditions for other land uses as part of the withdrawal. The land withdrawal could eliminate currently existing opportunities for multiple use, including recreation, mineral exploration and mining. Because the lands within the withdrawal area do not have unique characteristics that have historically attracted the public, and because large tracts of public land occur nearby, DOE believes that the impacts to people who use this land would be negligible. DOE acknowledges in the EIS that Native Americans consider the intrusive nature of the repository to be an adverse impact to all elements of the natural and physical environment.

11. The statement in the Draft EIS on page 5-47, “There is considerable uncertainty in the estimates of soil temperature increases due to uncertainties in the thermal properties of the soil…” is misleading. There are some uncertainties in the thermal properties of the soil but these do not cause “considerable uncertainty” in the estimates of soil temperature increase. DOE has revised the text of the EIS to reflect this. While the Department acknowledges that some uncertainties exist in thermal properties of Yucca Mountain soils, the EIS modeling effort used the best available information for predicting average soil temperature increases. The model did not use the weekly to monthly soil temperatures to which the commenter refers because the time scale “could not be used to accurately estimate the soil thermal conductivity” (DIRS 103618-CRWMS M&O 1999). Rather, it used only hourly soil temperature measurements, which allowed the use of diurnal fluctuations to estimate the thermal diffusivity of the soil and provided a calibration for the thermal diffusivities modeled for wet, dry, and nominal soils. The thermal diffusivity obtained from the hourly soil temperature measurements was similar to that estimated for soils under wet conditions. Therefore, the thermal diffusivity estimated for dry soil represents a conservative value on predicted soil temperature increase, and the “available data suggest very modest temperature rises due to repository heat effects” (DIRS 103618-CRWMS M&O 1999). DOE has revised the EIS to clarify the reasons why dry soil thermal conductivity provides a conservative prediction of soil temperature increase. Temperature changes used to evaluate impacts were based on dry soils, and therefore cover the range of possible effects of soil warming on desert tortoises and other biological resources.

As described in Section 5.9 of the EIS, based on these conservative calculations, the predicted increase in soil temperature at the shallow depth at which tortoises lay eggs would be very small compared to the range of natural variation in soil temperatures at Yucca Mountain (DIRS 105031-CRWMS M&O 1999) and the range of temperatures at which desert tortoise eggs have been successfully incubated. This small change in temperature, therefore, should have no adverse affect on tortoise eggs. Because of this and the small size of the affected area [about 3 square kilometers (740 acres)], DOE believes that impacts to the desert tortoise from heat generated by the proposed repository would be minimal.

12. DOE does not believe that quantitative analysis is either missing or required to conclude that the Proposed Action would have little effect on biological resources at Yucca Mountain. As stated in Section 4.1.4 of the EIS, the most important impacts of repository construction and operation on desert plants and animals would be the disturbance of about 3 to 7 square kilometers (about 800 to 1,700 acres) of land and the continuation of traffic and human presence. These activities would occur in a region with few other disturbances and would affect species that are common and widespread throughout the region. DOE based the conclusion that the Proposed Action would have little effect on desert tortoises on detailed site-specific research on the tortoise populations at Yucca Mountain during site characterization. That research confirmed that activities similar to those proposed have little effect on adjacent populations. DOE has modified Sections 4.1.4.1 and 4.1.4.2 of the EIS to better explain its conclusions about impacts to desert tortoises.

    The withdrawal of land surrounding the repository would protect a substantial area near the edge of the range of the tortoise from potential stressors that could occur if the land in the withdrawal area was developed for other uses.

13. The Final EIS presents the baseline information for economic measures to 2035. The intent of the cited statement in Section 4.1.6.2.1 is that there would not be a significant decline in the economy due to the closure of the repository. It does not indicate that individual workers might not be absorbed into the local economy fully using their "repository skills." This would be no different than the closure of any workplace, such as a manufacturing facility, where displaced employees might have to change occupations or move, although the impacts to the local economy might be small.

14. This comment takes issue with Section 6.3.2.2.1 of the EIS, which indicates "[t]he projected length of the corridor – 513 kilometers (319 miles) – is the most important factor for determining the number of workers [560] that would be required." Because DOE based the identification of the alternative corridors on a range of factors including land ownership, engineering, and terrain or steepness of grade, the length of the corridor inherently reflects of the weighing and balancing of these other factors. As a consequence, the length of a branch rail line would influence the number of workers required and worker productivity because of the engineering requirements and possible routing constraints in the initial layout of the corridor.

    With regard to the socioeconomic analyses in which the cited statement appears, the number of workers is the fundamental parameter for estimating other potential changes to the economy such as Gross Regional Product, disposable income, and State and local spending.

15. The EIS evaluated potential impacts from a regional volcanic eruption. Section H.2.1.3 of the EIS concludes that 3 centimeters (about 1.2 inches) is the maximum thickness of tephra (solid material; ash) from a "regional volcanic eruption, which is more likely," that could be deposited on repository facilities. Analyses to date indicate that such an event would not affect structures such as the Waste Handling Building, where DOE would process casks.

    The EIS analysis used a thickness-versus-distance curve from Miller et al. (DIRS 152166-1982). This curve shows that ash from the Long Valley Caldera/Mono-Inyo Volcanic area [about 250 kilometers (155 miles) west of Yucca Mountain] would deposit about 1 centimeter (0.4 inch) of ash at the proposed repository. The same volume of material from an eruption in the closer Coso Volcanic Field [about 150 kilometers (93 miles) southeast of Yucca Mountain] would deposit 2 to 3 centimeters (0.8 to 1.2 inches) of volcanic ash at the repository (DIRS 102889-Perry and Crow 1990).

16. Supporting analyses or references related to issues in this comment are available in the *Environmental Baseline File: Archaeological Resources* (DIRS 104997-CRWMS M&O 1999). That document includes a bibliography of cultural resource reports that contain specific details requested by the commenter. These documents are available from the Yucca Mountain Project Public Reading Room. DOE believes the level of information provided in the EIS is sufficient for decisionmakers to understand the issues and potential for impacts on archaeological and cultural resources.

    Archaeological field studies in support of the Yucca Mountain Project have been conducted since 1982 by the staff of the Desert Research Institute. Based on project needs during this period, several methodologies have been employed to characterize and protect archaeological sites and data. These include (1) use of existing archaeological data from previous projects, (2) intensive archaeological field surveys and limited subsurface testing, (3) preactivity surveys at areas ahead of planned ground-disturbing activities for areas lying outside of the acreage surveyed under the previous category, (4) data recovery, (5) random sample unit surveys for larger tracts outside the withdrawal area, and (6) archaeological site monitoring to assess changes to significant sites over time.

    Specific field methods and techniques employed at Yucca Mountain are outlined in the following documents:

    1. *Programmatic Agreement Among the United States Department of Energy, The Advisory Council on Historic Preservation and the Nevada State Historic Preservation Officer for the First Nuclear Waste Deep Geologic Repository Program, Yucca Mountain, Nevada*. (DIRS 157145-Gertz 1988)

    2. *Research Design and Data Recovery Plan for Yucca Mountain Site Characterization Project* (DIRS 103196-DOE 1990)

    3. *Environmental Field Activity Plan for Archaeological Resources* (DIRS 103198-YMP 1992)

    4. *Branch Technical Procedures: Field Archaeology* (DIRS 157150-DRI 1990)

    In addition to these generic documents, several project-specific individual research designs have been prepared for individual field survey, testing, and data recovery efforts undertaken by the Desert Research Institute. Copies of these documents are available from the Desert Research Institute, DOE, and the State Historic Preservation Officer.

    DOE used the combined information derived from implementation of the methods noted above to provide the summarization for the EIS. While precise figures (number of acres) have not been compiled for the entire land withdrawal area, all areas associated with the repository site that have either been disturbed by past site characterization activities or that are proposed for disturbance during repository construction and operation have been inventoried for archaeological resources. Archaeological data for other parts of the larger withdrawal area have received varying levels of archaeological study, ranging from random sample unit surveys to intensive coverage associated with preactivity activities away from the repository site. In some instances, known archaeological site data also are derived from surveys conducted by other agencies and/or projects (for example, Bureau of Land Management, Nellis Air Force Base, and the Nevada Test Site) on lands not currently managed by the Yucca Mountain Project.

    All of the historic sites discussed in Section 3.1.6 of the EIS are associated with non-Native American occupation and use of the area. Section 3.1.6.2.2 discusses historic-period Native American sites, which are documented in the Native American resource document prepared by the Consolidated Group of Tribes and Organizations' American Indian Writers Subgroup (DIRS 102043-AIWS 1998).

17. The Draft EIS methodology for estimating source concentrations was detailed in Appendix I on pages I-15 to I-18 (Section I.3.2.3.1). This section describes in detail how the values in Tables I-11 and I-12 were developed using the EQ3/6 software. The values in Tables I-11 and I-12 were then used to develop the screening information in Table I-13 as explained in section I.3.2.3.2 (pages I-18 to I-19). This screening process determined which elements required more rigorous analysis (taking into account many other mitigating processes). Chemicals eliminated in the screening process demonstrated such low potential concentrations, in

these calculations, that more rigorous analysis (which would account for additional mitigating processes) was unnecessary to establish there would be no significant impacts. In the screening analysis, EQ6 simulations of the reaction of the solution resulting from corrosion with the host rock demonstrated that nearly all the dissolved nickel would precipitate (resulting in a concentration of only about 0.0001 milligram per liter) upon contact with the crushed tuff invert (see Draft EIS Table I-12 and accompanying discussion). For this reason, nickel was not considered further in the impact analyses. Detailed analysis for those chemicals not screened out are described in Section I.6 of the Draft EIS. This material was referred to in Chapter 5 of the Draft EIS on page 5-39.

The Final EIS analyzes the new waste package design (Alloy-22 outer shell with stainless-steel sleeve). The new analysis conservatively assumes the nickel reaction with tuff would not take place. As detailed in Section I.6 of the Final EIS, bounding calculations (not taking into account many mitigating processes) still indicate a nickel concentration producing only a small fraction of the oral reference dose for nickel.

18. These sections differed because some addressed exposure of workers during working hours, while others addressed the continuous exposure of members of the public. Sections 3.1.8.2 and F.1.1.6 are specifically concerned with the potential exposure of workers. Radon concentrations at points of exposure within the repository and several kilometers from repository ventilation exhaust are considerably different. The use in the Draft EIS was consistent and appropriate.

    The Final EIS uses more recent repository radon flux information that has become available since the Draft EIS was published. This new information has replaced much of the information used as the basis of estimates in the Draft EIS. Dose estimates to subsurface workers from radon decay products now use Working Level estimates made for the flexible design (DIRS 154176-CRWMS M&O 2000). Section F.1.1.6 of the Final EIS describes these dose estimates. Working Level estimates can be converted to estimates of dose using a published conversion factor (DIRS 103279-ICRP 1994). Dose estimates for members of the public are also based on new estimates of radon release from the repository, which take advantage of new analyses of ventilation and radon flux from the repository walls (DIRS 150246-CRWMS M&O 2000; DIRS 154176-CRWMS M&O 2000). Section 4.1.2 reports revised dose estimates for the public from radon.

    Information was not available for the Draft EIS to take into account the effect of heating of the emplacement drift walls by the waste packages. The analyses noted above have addressed the effect of heating (DIRS 154176-CRWMS M&O 2000), and the Final EIS takes this factor into account. All analysis scenarios for the Draft and Final EIS account for the effects of different repository sizes or volumes. A larger repository has a correspondingly larger radon release. However, the radon flux from repository walls and total radon release is not directly proportional to the total repository volume. Radon flux and release depend on the specific characteristics of the repository, including the relative quantity of larger-diameter excavations such as access mains, 5.5-meter (18-foot)-diameter excavations such as emplacement drifts, and smaller excavations such as ventilation raises. Radon release also depends upon the project phase, and whether or not a specific excavation would have a concrete liner (which would reduce radon flux).

    The statement in Section 4.1.7.3.1 of the Draft EIS that radiological health impacts in the “surface” facilities are independent of thermal load scenarios is unrelated to subsurface radon release. The bulk of dose to surface workers is due to handling of spent nuclear fuel, which depends on the facility throughput, (that is, 63,000 metric tons of heavy metal for the Proposed Action). The dose contribution from radon released from the subsurface is negligible. These statements remain correct for the Flexible Design evaluated in the Final EIS. Additional clarification on the contribution of subsurface radon to workers doses has been added.

    Sections G.2 and F.1.1.6 have been extensively revised in the Final EIS to present the new information noted above, as have the corresponding impacts in Sections 4.1.2 and 4.1.7.

19. DOE recognizes that neither No-Action scenario is likely to occur (see Section 2.2 and the introduction to Chapter 7 of the EIS). However, they were identified to provide a basis for comparison to the Proposed Action and because they reflect a range of potential impacts that could occur from the continued storage of material at these sites. For example, the impacts associated with the first 100 years of effective institutional control (either Scenario 1 or Scenario 2 of the No-Action Alternative) enable a direct comparison to the impacts of the

Proposed Action during the first 100 years after closure of the repository. For purposes of analysis and to be consistent with the Proposed Action, Scenario 2 does not assume credit for institutional control after approximately 100 years. Under this scenario storage facilities and spent nuclear fuel and high-level radioactive waste would degrade, and radioactive material would eventually enter the accessible environment. This assumption is based upon a review of generally applicable Environmental Protection Agency regulations for the disposal of spent nuclear fuel and high-level radioactive waste (40 CFR Part 191) and the National Academy of Sciences review of standards for the proposed Yucca Mountain Repository (DIRS 100018-National Research Council 1995). Each of these references generally discounts the consideration of institutional control for longer periods of performance assessments for geologic repositories.

Section K.4.1.1 of the EIS discusses the uncertainties associated with changes in societal values that could lead to the loss of institutional controls. Although these conditions might be difficult to imagine happening in the United States, they are not unlike what has occurred recently in the former Soviet Union and Germany prior to the end of World War II. The evaluation of Scenario 2 was not included in the EIS as a scare tactic. In fact, DOE took extreme care to avoid overestimating any impact from the No-Action Alternative. By intentionally using a realistic best estimate modeling approach (see Section K.1) and by not including all potential human exposure pathways (see Section K.3.1), DOE concludes that the impacts of such a scenario might have been underestimated by several orders of magnitude (Section K.4).

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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June 29, 2001

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Mr. Lake H. Barrett, Acting Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy, Headquarters
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Mr. Barrett:

As you know, the U.S. Department of Energy (DOE) published a notice of availability, in the Federal Register on May 4, 2001, of a supplement to its draft environmental impact statement (DEIS) (hereafter referred to as the SDEIS), for a proposed geologic repository for the disposal of spent nuclear fuel and other high-level radioactive waste (HLW) at Yucca Mountain in Nevada. In the context of the Nuclear Waste Policy Act (NWPA), as amended, DOE is the lead agency for developing the proposed repository and considering potential environmental impacts. For its part, NRC is to adopt DOE's final environmental impact statement (FEIS), to the extent practicable, as part of any potential NRC licensing action related to the repository.

Consistent with its NWPA responsibilities and its role as a DEIS commenting agency, the NRC provided comments to DOE on its DEIS in a letter dated February 22, 2000. NRC's comments on the recently published SDEIS are enclosed. The enclosed comments and NRC's February 2000 comments on the DEIS are provided to ensure that the FEIS is more complete.

Please contact Charlotte E. Abrams, of my staff, if you have any questions about this letter or the enclosure. Ms. Abrams can be reached at (301) 415-7293.

Sincerely,

Martin J. Virgilio, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure:
"U.S. NRC's Comments on U.S. DOE's Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada"

cc: Dr. Jane R. Summerson

See attached list

Letter to L.H. Barrett from M. Virgilio dated: June 29, 2001 **010248**

cc:

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L. Fiorenzi, Eureka County, NV	T. Story, NV Congressional Delegation
A. Johnson, Eureka County, NV	J. Reynoldson, NV Congressional Delegation

2

A. Remus, Inyo County, CA
M. Yarbro, Lander County, NV
S. Joya, NV Congressional Delegation
J. Pegues, City of Las Vegas, NV

2001-04-09

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U.S. NUCLEAR REGULATORY COMMISSION'S COMMENTS ON THE U.S. DEPARTMENT OF ENERGY'S "SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A GEOLOGIC REPOSITORY FOR THE DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA"

This enclosure provides comments, by the U.S. Nuclear Regulatory Commission (NRC) staff, on the May 2001 supplement to the draft environmental impact statement (DEIS) (hereafter referred to as the SDEIS) prepared by the U.S. Department of Energy (DOE) for a proposed geologic repository for the disposal of spent nuclear fuel (SNF) and other high-level radioactive waste (HLW) at Yucca Mountain (Nye County), Nevada.

In its review of the SDEIS, NRC has four comments, as noted below, that address the following areas: identification of a Proposed Action; impacts from the design options; new or modified facilities associated with the Science and Engineering Report (S&ER) flexible design; and the assessment of radiological impacts associated with the S&ER flexible design.

Comment No. 1

1 Consistent with its February 2000 comments on the DEIS, the NRC staff believes that DOE's final environmental impact statement (FEIS) should more clearly define a Proposed Action for each component of the proposed activity.

Basis:

The environmental impact statement development process is intended to address a wide range of possible impacts of this complex geotechnical project. A significant amount of information, including multiple options for key components of the Proposed Action, was presented in the August 1999 DEIS (U.S. Department of Energy, 1999). However, as noted in its February 2000 comments on the DEIS, the NRC staff continues to believe that DOE's final environmental impact statement (FEIS) should more clearly define a Proposed Action comprised of: (i) a preferred option for each component; or (ii) a bounding analysis that provides a better understanding of the potential impact of each component, as well as their combined impacts. NRC recognizes the utility of DOE's preserving, to the extent possible, repository design flexibility, as outlined recently in the S&ER supporting the DEIS and the SDEIS. However, the DEIS did not identify a preferred option for each component of a possible geologic repository and the SDEIS does not define a preferred option for the design of a repository. Consequently, it is not clear that environmental impacts that could arise from a repository have been bounded.

Recommendation

In the interest of improving the focus of its National Environmental Policy Act analysis in its FEIS, DOE should prepare an appropriate analysis of a clearly defined Proposed Action, or provide sufficient information and analysis of the various operational approaches to demonstrate that the environmental impacts of the proposed repository are bounded.

Enclosure

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Comment No. 2

2... The SDEIS provides several new design and operational features proposed to meet thermal criteria. DOE should ensure that sufficient information is provided to enable assessment of the direct, indirect, and cumulative impacts.

Basis

In the SDEIS, DOE describes two thermal operational approaches to control temperature at the drift pillars and the waste package surface. For the high-temperature operation mode, at least some portion of the drift pillars would have temperatures above the boiling point of water. The low-temperature operating mode is designed to ensure temperatures below the boiling point at all times and waste package surface temperatures below 85 degrees Centigrade. To achieve either temperature scenario, DOE describes five potential operational approaches: increased drift spacing, increased preclosure ventilation, surface aging of commercial fuel, fuel blending, and variable line loading. Depending on the approaches selected, the operational and monitoring period may extend beyond 300 years, with as long as 50 years allowed for waste emplacement.

NRC recognizes the value of maintaining flexibility in selecting operational approaches to enhance repository performance. However, many combinations of the operational approaches are likely to achieve the overall thermal goals, and each combination is likely to have a different set of impacts. For example, lower rates of ventilation may require larger spacing between waste packages, which may, in turn, lead to a larger repository with a greater volume of excavated rock and an expansion of the repository closer to key features such as the high ground-water gradient area to the north and across an additional fault zone. Similarly, the flexible pre-closure ventilation design could increase radon release through the use of forced ventilation. Without a clear description of the preferred option or without estimating impacts explicitly for each option, there is no basis for concluding that the full range of impacts has been presented in the DOE analyses.

Several of the flexible design operational approaches include new features not considered in the DEIS. In some instances, the SDEIS analyses multiply DEIS impacts by a proportionality constant to obtain impacts associated with the S&ER flexible design. Because many of the impacts cited in the SDEIS are the result of new design features (e.g., surface-aging facility, titanium drip shields) and altered time frames in the various flexible operational approaches, an adequate technical basis is required for use of the proportionality constants. For example, it is not clear that the thermal effects imposed by the flexible design would be linear and therefore amenable to quantification based on a proportionality constant. Similarly, impacts from constructing and operating the surface-aging facility may be spread over as many as 50 years, and include the construction of concrete pads covering 200 acres, and fabricating and placing up to 4500 dry-storage canisters and casks on these pads (Mattsson, 2000; U.S. Department of Energy, 2001a, Table 3-11). These new features are substantive modifications of the DEIS design and individual and cumulative impacts may not scale in a linear fashion .

The full range of impacts of the new operational approaches are not addressed. Waste package emplacement is discussed in detail in the SDEIS (Section 2.3.3.3), but certain potential activities are not discussed. They include, for example: (i) loading dry storage canisters and casks for the SNF aging facility; (ii) removing pallets and waste packages for repair and re-emplacement; (iii) maintaining drifts, waste packages, and other engineered barriers; (iv) moving waste packages to adjust thermal load; (v) retrieving waste packages; (vi) installing and maintaining drip shields; and (vii) constructing and using performance-confirmation drifts. It is also not clear whether the impact assessments include off-normal

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2 cont. events, accidents, or other events outside of the base case. For example, the impacts from manufacturing and shipping as much as 60,000 metric tons of fabricated titanium drip shields are not fully addressed, nor is the potential for worker injury or exposure during drip-shield emplacement. The drip shield is a new design feature and is not addressed in the offsite impact analyses included in the DEIS.

Recommendation
The FEIS should include an analysis of impacts associated with all potential operational activities related to a preferred design option. As an alternative, the FEIS could estimate impacts separately for a suite of proposed operational approaches. The specific environmental concerns associated with each primary impact indicator should be identified. The FEIS should also provide a technical basis to demonstrate that the full range of direct, indirect, and cumulative impacts has been included in the analyses. In addition, the FEIS should improve the technical justification for the use of linear thermal load proportionality factors.

3 **Comment No. 3**
The S&ER flexible design includes new or modified facilities, land uses, and changes in infrastructure. Environmental impacts from construction and operation of these repository features are not included in the SDEIS. A more thorough impact assessment is necessary for major changes incorporated in the S&ER flexible design.

Basis
The SDEIS (Table S-2) indicates that environmental impacts associated with the S&ER flexible design include potentially significant changes in ground use, radon release, peak electrical power requirements, fossil fuel requirements, construction and demolition debris, and waste generation. Although the SDEIS provides a relatively thorough description of the different approaches to the potential design and operating bounds of the proposed S&ER flexible design, a detailed description of these new facilities and analyses of their environmental impacts has not been included.

Foremost among the new facilities is the proposed separate, at-surface fuel-aging area. As part of the lower-temperature, flexible-design operating mode, DOE has proposed placing younger fuel in a surface-aging area, to allow heat dissipation before underground disposal, as a method of controlling repository temperatures (U.S. Department of Energy, 2001a, p. 2-8). This facility would age as much as 40,000 MTHM (metric tons of heavy metal) of SNF (or about 60 percent of repository-destined waste) over a 50-year period (Id.). Aging time is directly related to potential impacts associated with surface storage of SNF; however, only limited impact analysis of this new design feature has been provided in either the SDEIS or the S&ER. There is a similar concern regarding the proposed blending pool in the waste-handling building with a proposed design capacity of 5000 MTHM (p. 2-15). It is not apparent that DOE has prepared an impact analysis of this major new design feature.

Other examples of new design features that lack adequate descriptions and impact assessments (i.e., land and water use, impact on ground-water quality) include the solar power generating facility, and the wind farm. The environmental impacts of all features of a proposed design, as well as alternatives, need to be identified and evaluated.

Recommendation
DOE should expand the description and environmental impact analyses for major new features of the S&ER flexible design in the FEIS.

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Comment No. 4

4 Estimates of the radiological impacts of the flexible design require additional technical basis.

Basis

The SDEIS (U.S. Department of Energy, 2001a, Section 3.1.7) states that "[e]xposed workers include both radiation workers and some general employees.... DOE used the total number of exposed worker-years to estimate potential impacts from the radiation dose received from this exposure, namely the number of latent cancer fatalities...." The SDEIS does not define the number of general employees, the lengths of their exposures, or the exposure levels associated with different phases of operation that were applied in estimating latent cancer fatalities.

In addition, the lower-temperature design option may require preclosure ventilation for a period beyond 300 years. Ensuring that the emplacement drifts remain clear and unobstructed from rockfall or drift collapse during this period is therefore important. The SDEIS does not appear to address the impacts of drift support system maintenance on worker exposure.

Recommendation

The FEIS should provide a more complete assessment of the radiological impacts of the flexible design, including maintenance activities associated with an extended preclosure period.

References

Mattsson, C.G., "Repository Surface Design Engineering Files Letter Report – Non-Boiling Repository Surface Facilities Conceptual Design," Letter from C.G. Mattsson (Civilian Radioactive Waste Management System Management and Operating Contractor) to K.J. Skipper (DOE/Yucca Mountain Site Characterization Office), July 21, 2000.

U.S. Department of Energy, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS–0250D, North Las Vegas, NV: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 1999.

U.S. Department of Energy, "Supplement to the Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," DOE/EIS–0250D–S. North Las Vegas, NV: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 2001a.

U.S. Department of Energy, "Yucca Mountain Science and Engineering Report: Technical Information Supporting Site Recommendation Consideration. DOE/RW–0539. Washington, DC: Office of Civilian Radioactive Waste Management, U.S. Department of Energy, 2001b.

U.S. Nuclear Regulatory Commission, "U.S. Nuclear Regulatory Commission's Comments on U.S. Department of Energy's Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-level Radioactive Waste at Yucca Mountain, Nye County, Nevada," Washington, DC: U.S. Nuclear Regulatory Commission, 1999.

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RESPONSES TO U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE SUPPLEMENT TO THE DRAFT EIS (Comment Document 10248)

1. In the Draft EIS and the Supplement to the Draft EIS, DOE analyzed a variety of scenarios and implementing alternatives that it could deploy to construct, operate and monitor, and eventually close a repository at Yucca Mountain. The purpose of these scenarios and implementing alternatives, which reflect potential design considerations, waste packaging approaches, and modes for transporting spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site, was to: (1) provide the full range of potential environmental impacts of the Proposed Action and No-Action Alternative; (2) reflect potential decisions, such as the mode of transport, that the EIS would support; and (3) retain flexibility in the design of the repository to maintain the ability to reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The design and operation enhancements presented in the Supplement have been carried forward to the Final EIS.

   Many of the issues relating to how a repository would be operated and how the spent nuclear fuel and high-level radioactive waste would be packaged would be resolved only in the context of developing the detailed design for a possible license application. DOE cannot predict with certainty how it would eventually resolve these issues. However, to enable an improved understanding of the potential environmental impacts from a more specifically defined Proposed Action, DOE has identified its preferred alternatives, simplified aspects of the Proposed Action, and modified its analyses and presentation of information to illustrate the full range of potential environmental impacts likely to occur under any foreseeable mode of transportation, or repository design and operating mode. Thus, for example, DOE has identified rail as its preferred mode of transport both nationally and in Nevada, and demonstrated through analysis that the mostly truck and mostly rail national transportation scenarios provide the full range of environmental impacts.

   In the Final EIS, DOE has identified and analyzed a range of operating modes from higher- to lower-temperature. Chapter 2 of the EIS and other related sections of the Final EIS have been revised to reflect this refinement in design selection, which basically is an establishment of design fundamentals such as drift layout, drift spacing, depth and location of emplacement areas, and location of ventilation raises. The Final EIS describes a design for the repository with variations on the operating mode. The key parameters defining the flexible operating modes are waste package spacing, length of active ventilation, and waste package loading (principally the age of the fuel being emplaced). The range of variances in these parameters basically determine the extent of the repository design that will be utilized for emplacement of 70,000 metric tons of waste and fuel; the higher-temperature operating mode would require only the main central segment of the repository, several of the lower-temperature operating modes would use that segment and the western extension, while the “ultra” low-temperature operating mode would require use of the entire planned initial design.

2. In the Draft EIS, DOE evaluated a preliminary design based on the *Viability Assessment of a Repository at Yucca Mountain* (DIRS 101779-DOE 1998) that focused on the amount of spent nuclear fuel (and associated thermal output) that DOE would emplace per unit area of the repository (called areal mass loading). Areal mass loading was represented for analytical purposes in the Draft EIS by three thermal load scenarios: a high thermal load of 85 metric tons of heavy metal (MTHM) per acre, an intermediate thermal load of 60 MTHM per acre, and a low thermal load of 25 MTHM per acre. DOE selected these analytical scenarios to represent the range of foreseeable design features and operating modes, and to ensure that it considered the associated range of potential environmental impacts within the framework of a design the central feature of which was areal mass loading.

   Since DOE issued the Draft EIS, it has continued to evaluate design features and operating modes that would reduce uncertainties in or improve long-term repository performance, and improve operational safety and efficiency. The result of the design evolution process was the development of the flexible design that was evaluated in the Supplement to the Draft EIS and is evaluated in this Final EIS. This design focuses on controlling the temperature of the rock between the waste emplacement drifts (as opposed to areal mass

loading) by varying other parameters such as the heat output per unit length of the emplacement drift and the distances between waste packages. Within this design framework of controlling the temperature of the rock, DOE selected these lower- and higher-temperature operating modes to represent the range of foreseeable design features and operating modes, and to ensure that it considered the associated range of potential environmental impacts (DOE recognizes that many of the short-term impacts tended to increase over those discussed in the Draft EIS).

In this Final EIS, DOE varied design parameters to create scenarios to illustrate lower- and higher-temperature operating modes in such a way as to provide the range of potential environmental impacts. Furthermore, to not underestimate the environmental impacts that could result from implementing any of the lower- or higher-temperature operating modes, DOE has relied on conservative, yet realistic, assumptions when uncertainties remain.

3. In this Final EIS, DOE has updated and expanded the description of the flexible design and associated facilities, as well as performed a complete analysis to describe the range of potential environmental impacts that could occur under the Proposed Action. The tables in Section 2.4 of the Final EIS demonstrate the bounding nature of the flexible operating modes within the construct of a fixed design.

4. In the Supplement to the Draft EIS total worker years are used as a primary impact indicator for occupational health and safety impacts. As noted on page 3-1, "The Department used the ratio of primary impact indicators to specific impacts in the Draft EIS to determine the Supplement impact estimates." Therefore, in the analysis the base ratio of involved (including radiation workers) workers to noninvolved (including general employees) workers was the kept the same as for the Draft EIS. The exposure [dose] levels used were the same as described in Appendix F of the Draft EIS. The total dose to each of these worker populations was changed accordingly for the total length flexible design being considered as compared to the Draft EIS high thermal load scenario. The additional time needed for repository monitoring and maintenance was included in the Supplement estimates. A complete analysis of worker impacts under the flexible design operating modes is presented in Section 4.1.7 of the Final EIS. Section 4.1.7.5 shows that over the duration of the project construction, operation and monitoring, and closure phases the dose to the maximally exposed worker is about the same as shown for the thermal load scenarios in the Draft EIS.

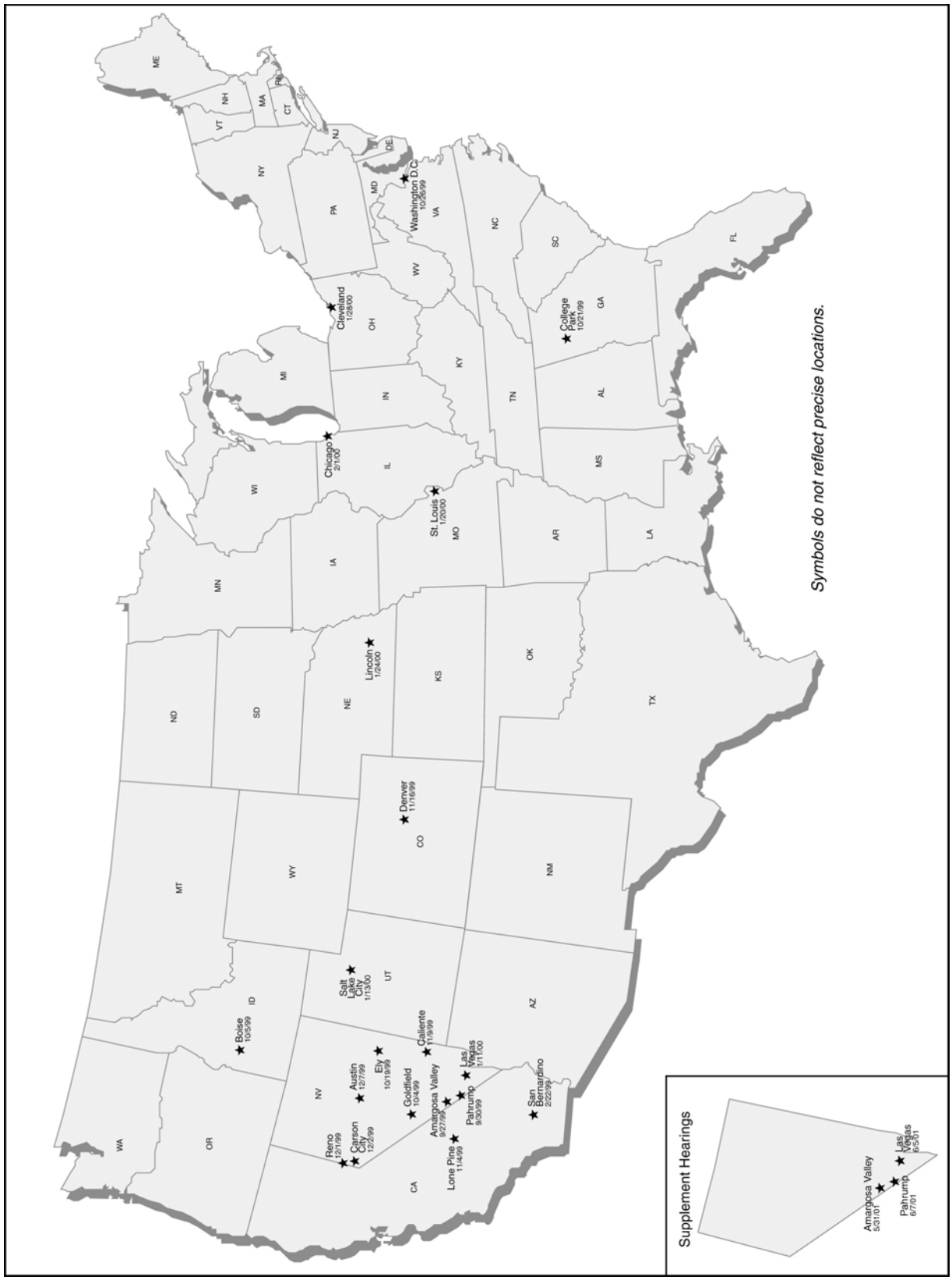

Figure CR-1. Locations of public hearings on Yucca Mountain Repository Draft EIS and Supplement to the Draft EIS.