

# Final Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada

Volume 3  
(Comment Response Document)



**NNSA**

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office

**AVAILABILITY OF THE FINAL SITE-WIDE  
ENVIRONMENTAL IMPACT STATEMENT FOR THE  
CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/  
NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN  
THE STATE OF NEVADA (NNSS SWEIS)**

For further information on this final SWEIS, or to request a copy  
of the SWEIS or references, please contact:

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# Reader's Guide

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This Comment Response Document (CRD) portion of the *Final Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (NNSS SWEIS)* consists of three sections:

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

This section describes the public comment process for the *Draft NNSS SWEIS*; the format used in the public hearings on the draft SWEIS; the organization of this CRD and how to use the document; and the changes made by the U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) to the *Final NNSS SWEIS* in response to the public comments and recent developments that occurred since publication of the *Draft NNSS SWEIS*.

- **Section 2 – Public Comments and DOE/NNSA Responses**

This section presents a side-by-side display of all of the comments received by DOE/NNSA on the *Draft NNSS SWEIS* and DOE/NNSA's response to each comment. The comments were obtained at five public hearings on the *Draft NNSS SWEIS* and via telephone, fax, email, and U.S. mail.

- **Section 3 – References**

This section contains the references cited in this CRD.

## To Find a Specific Comment and DOE/NNSA Response

Refer to the “List of Commentors” immediately following the Table of Contents. This list is organized alphabetically by commentor name and shows the corresponding page number(s) where commentors can find their comment(s).

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



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William Belknap	Tina Frisch	Elaine Manio	Marrjorie Sill
Bob	Robert Furtek	Peter Marozik	Malcolm Simpson
Howard Booth	Evelyn Gajowski	Bruce Mason	Noel Smith
Ann Brauer	Presley Garrett	Joan Maurer	Eugene Souza
Garth Brown	Sally Greensill	Curt McCormick	Ron Stauffer
Michele Burkett	Linda Gregg	Leona Merrin	Jason Steadmon
Tom Burtntte	Chance Hannon	Marija Minic	Mary Stoll
L. Busch	Margery Hanson	Thomas R. Mirkovich	Rose Strickland
John S. Cheney	Juanita Heffington	Keith Morrison	Rosemary Swartz
Warren Clark	Brendan Hughes	Mayra Moya	Bob Tregilus
Chris Clarke	Mary Humann	Robert Mulle	Judy Treichel
Brian and Rita Cohen	Eleanor Clinton Issa	Stephanie Myers	Vera Vann-Wilson
Clarence Collins	MJ Kammerer	Anthony Parent	Rainer Vogel
Alison Conley	KN	Gary A. Patton	Zach
Tim Cooper	Steve Kossack	Thereick Pearis	Julie Zimmerman
Laura Cunningham	Constance Kosuda	L. Pelmeri	Carl Zimmerman
Jennifer Edwards	Joshua Kruger	Kay Peters	Adrian Zupp
Brian Fadie	William Kuehl	Larry Pringle	
Jane Feldman	Ron Lew	TC Reinertson	
Alfredo Fernandez	Megan Little	Justice B. Rwechungura	

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Robert A. Conway	Greg Esposito	Jack Mallory	Eric Rubbeck
James Cooksey	Donny Grayman	Mark Mizzoni	Cordell Sanders
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Rev. James Conn	C. E. Pretzer	Phoebe Anne Thomas	Anne Welsh
Adrienne Fong	Mark Pringle	Sorgen	
Lilias Gorden	Kennon B. Raines	Midgene Spatz	
Lorraine Henry	Rosalie G. Riegle	April Tatro-Medlin	

## **ACRONYMS, ABBREVIATIONS, AND CONVERSION CHARTS**

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## **ACRONYMS, ABBREVIATIONS, AND CONVERSION CHARTS**

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AIWS	American Indian Writers Subgroup
BEEF	Big Explosives Experimental Facility
BEIR	Biological Effects of Ionizing Radiation
BLM	Bureau of Land Management
CAS	Corrective Action Site
CAU	Corrective Action Unit
CEMP	Community Environmental Monitoring Program
CEQ	Council on Environmental Quality
CERD	Committee on the Elimination of Racial Discrimination
CFR	<i>Code of Federal Regulations</i>
CGTO	Consolidated Group of Tribes and Organizations
CRD	Comment Response Document
CSP	Concentrating Solar Power
DAF	Device Assembly Facility
DETR	Department of Employment, Training, and Rehabilitation
DHS	U.S. Department of Homeland Security
DNWR	Desert National Wildlife Range
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOT	U.S. Department of Transportation
EA	environmental assessment
EIS	environmental impact statement
EMAD	Engine Maintenance and Disassembly Facility
EPA	U.S. Environmental Protection Agency
EPWG	Emergency Preparedness Working Group
FFACO	Federal Facility Agreement and Consent Order
FMP	Fluid Management Plan
FMS	Fluid Management Strategy
FR	<i>Federal Register</i>
GTCC	greater-than-Class C
HLW	high-level radioactive waste
HRCQ	Highway Route Controlled Quantities
IDA	intentional destructive acts
ISCORS	Interagency Steering Committee on Radiation Standards
JASPER	Joint Actinide Shock Physics Experimental Facility
LLC	limited liability company
LLW	low-level radioactive waste
MEI	maximally exposed individual
MLLW	mixed low-level radioactive waste
NDEP	Nevada Division of Environmental Protection

NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutant
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NPS	National Park Service
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NRC	U.S. Nuclear Regulatory Commission
NSO	Nevada Site Office
NTTR	Nevada Test and Training Range
PEIS	Programmatic Environmental Impact Statement
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
ROI	region of influence
RREM	Routine Radiological Environmental Monitoring
RWMC	Radioactive Waste Management Complex
SDWA	Safe Drinking Water Act
SEIS	supplemental environmental impact statement
SNF	spent nuclear fuel
SR	State Route
SWEIS	site-wide environmental impact statement
TRU	transuranic
TTR	Tonapah Test Range
UGTA	Underground Test Area
USAF	U.S. Air Force
USFWS	U.S. Fish and Wildlife Service
U.S.C.	United States Code
VOC	volatile organic compounds
WAC	waste acceptance criteria
WMP	Waste Management Plan

## CONVERSIONS

METRIC TO ENGLISH			ENGLISH TO METRIC		
Multiply	by	To get	Multiply	by	To get
<b>Area</b>					
Square meters	10.764	Square feet	Square feet	0.092903	Square meters
Square kilometers	247.1	Acres	Acres	0.0040469	Square kilometers
Square kilometers	0.3861	Square miles	Square miles	2.59	Square kilometers
Hectares	2.471	Acres	Acres	0.40469	Hectares
<b>Concentration</b>					
Kilograms/square meter	0.16667	Tons/acre	Tons/acre	0.5999	Kilograms/square meter
Milligrams/liter	1 <sup>a</sup>	Parts/million	Parts/million	1 <sup>a</sup>	Milligrams/liter
Micrograms/liter	1 <sup>a</sup>	Parts/billion	Parts/billion	1 <sup>a</sup>	Micrograms/liter
Micrograms/cubic meter	1 <sup>a</sup>	Parts/trillion	Parts/trillion	1 <sup>a</sup>	Micrograms/cubic meter
<b>Density</b>					
Grams/cubic centimeter	62.428	Pounds/cubic feet	Pounds/cubic feet	0.016018	Grams/cubic centimeter
Grams/cubic meter	0.0000624	Pounds/cubic feet	Pounds/cubic feet	16,025.6	Grams/cubic meter
<b>Length</b>					
Centimeters	0.3937	Inches	Inches	2.54	Centimeters
Meters	3.2808	Feet	Feet	0.3048	Meters
Kilometers	0.62137	Miles	Miles	1.6093	Kilometers
<b>Temperature</b>					
<i>Absolute</i>					
Degrees Celsius + 17.78	1.8	Degrees Fahrenheit	Degrees Fahrenheit - 32	0.55556	Degrees Celsius
<i>Relative</i>					
Degrees Celsius	1.8	Degrees Fahrenheit	Degrees Fahrenheit	0.55556	Degrees Celsius
<b>Velocity/Rate</b>					
Cubic meters/second	2118.9	Cubic feet/minute	Cubic feet/minute	0.00047195	Cubic meters/second
Grams/second	7.9366	Pounds/hour	Pounds/hour	0.126	Grams/second
Meters/second	2.237	Miles/hour	Miles/hour	0.44704	Meters/second
<b>Volume</b>					
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
<b>Weight/Mass</b>					
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
<b>ENGLISH TO ENGLISH</b>					
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

<sup>a</sup> This conversion is only valid for concentrations of contaminants (or other materials) in water.

## METRIC PREFIXES

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



## **SECTION 1**

### **OVERVIEW OF THE PUBLIC COMMENT PROCESS**

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## 1.0 OVERVIEW OF THE PUBLIC COMMENT PROCESS

This section of this Comment Response Document (CRD) describes the public comment process for the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (NNSS SWEIS)*, as well as the procedures used to respond to those comments. Section 1.1 describes the public comment process and the means through which comments on the *NNSS SWEIS* were received. It also identifies the comment period and the locations and dates of the public hearings on the *Draft NNSS SWEIS*. Section 1.2 addresses the public hearing format. Section 1.3 describes the organization of this document, including how the comments were categorized, addressed, and documented. Section 1.4 summarizes the changes made to the draft site-wide environmental impact statement (draft SWEIS) that resulted from the public comment process. Section 1.5 summarizes the next steps the U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) will take after publication of this *Final NNSS SWEIS*.

**Comment Document** – A communication in the form of a transcript from a public hearing, a letter, an electronic communication (e-mail, fax), or a transcription of a recorded phone message that contains comments from a sovereign nation, government agency, organization, or member of the public regarding the *Draft NNSS SWEIS*.

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

### 1.1 Public Comment Process

DOE/NNSA prepared this *NNSS SWEIS* in accordance with the National Environmental Policy Act of 1969 (NEPA) and Council on Environmental Quality (CEQ) and the U.S. Department of Energy (DOE) NEPA regulations (40 CFR Parts 1500 – 1508 and 10 CFR Part 1021, respectively). An important part of the NEPA process is solicitation of public comments on a draft environmental impact statement (EIS) and consideration of those comments in preparing a final EIS. DOE/NNSA distributed copies of the *Draft NNSS SWEIS* to those organizations, government officials, and individuals who were known to have an interest in the Nevada National Security Site (NNSS), as well as those organizations and individuals who requested a copy. Copies also were made available on the Internet and in regional DOE public document reading rooms and public libraries.

On July 29, 2011, DOE/NNSA published a notice in the *Federal Register* (FR) (76 FR 45548) announcing the availability of the *Draft NNSS SWEIS*, the duration of the comment period, the location and timing of the public hearings, and the various methods for submitting comments. DOE/NNSA announced a 90-day comment period, from July 29, 2011 to October 27, 2011, to provide time for interested parties to review the *Draft NNSS SWEIS*. In response to requests for additional review time, the comment period was extended by 36 days, through December 2, 2011, giving commentors a total review and comment period of 126 days (76 FR 65508).

During the public comment period, five public hearings were held, as well as informational meetings elsewhere, to provide interested members of the public with opportunities to learn more about the content of the draft SWEIS from exhibits, factsheets, and other materials; to hear DOE/NNSA representatives present the results of the SWEIS analyses; to ask clarifying questions; and to provide oral or written comments. A website ([www.nv.energy.gov/sweis](http://www.nv.energy.gov/sweis)) was established to further inform the public about the draft SWEIS, how to submit comments, and other pertinent information. Members of the public who expressed interest and are on the DOE/NNSA mailing list for the *Draft NNSS SWEIS* were notified by U.S. mail regarding hearing dates, times, and locations.

**Table 1–1** lists the locations, estimated numbers of attendees, and number of commentors at each hearing. The attendance estimates are based on the number of registration forms completed and returned, as well as a rough “head count” of the audience.

**Table 1–1 Public Hearing Locations, Attendance, and Comments Received**

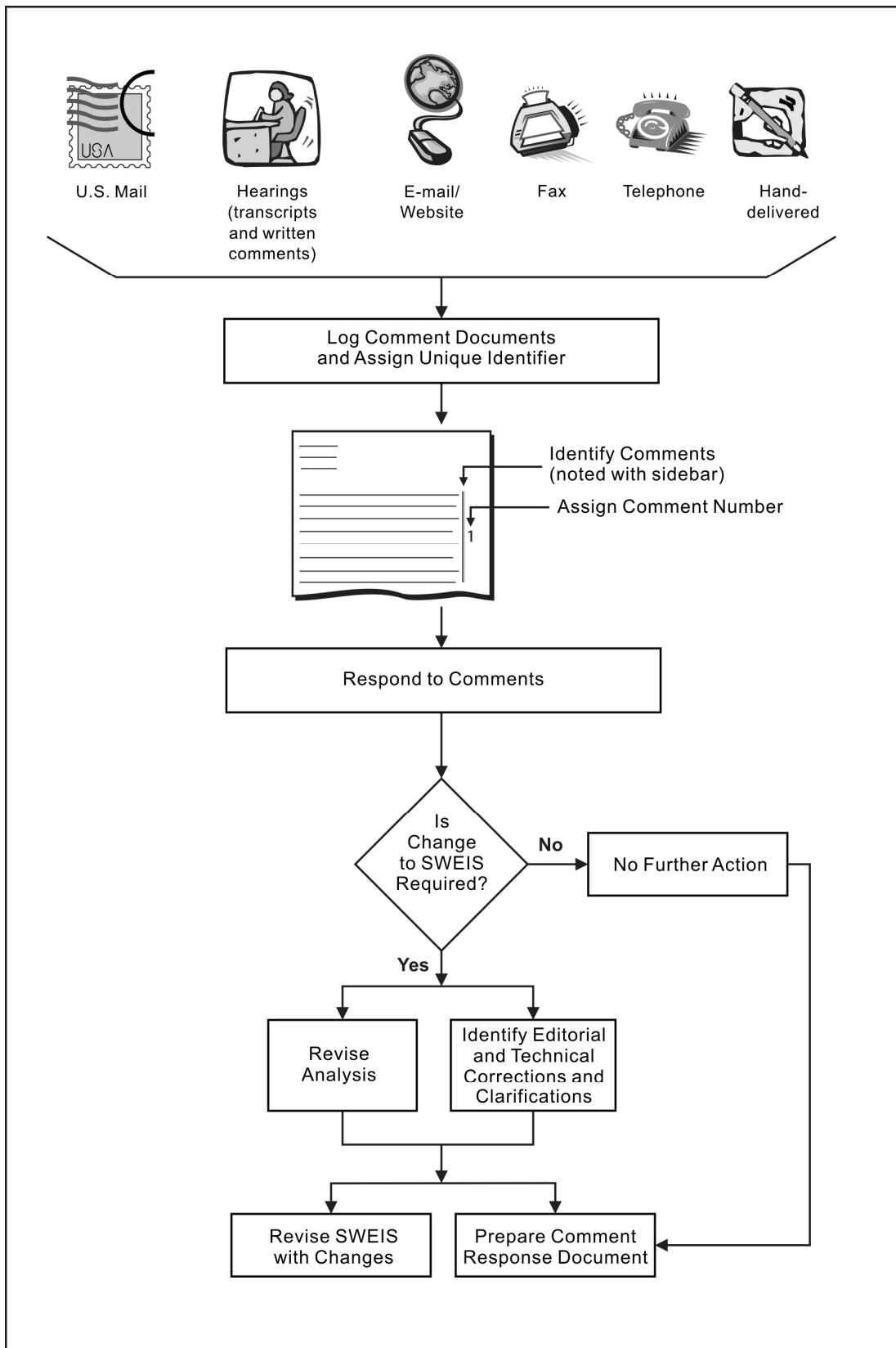
<i>Location</i>	<i>Date</i>	<i>Estimated Attendance</i>	<i>Number of Commentors</i>
Las Vegas, Nevada	September 20, 2011	47	11
Pahrump, Nevada	September 21, 2011	47	8
St. George, Utah	September 22, 2011	25	5
Tonopah, Nevada	September 27, 2011	12	2
Carson City, Nevada	September 28, 2011	19	7
Total		150	33

In addition, Federal agencies, state and local governmental entities, American Indian tribal governments, and members of the public were encouraged to submit comments via the U.S. mail, email, a toll-free telephone number, and a toll-free fax line. DOE/NNSA considered all comments, including those received after the comment period ended. **Table 1–2** lists the numbers of comment documents received by each method of submission.

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

<i>Method of Submission</i>	<i>Number of Comment Documents</i>
Toll-free telephone number	1
E-Mail	150
Toll-free fax line	11
U.S. mail	33
Public hearings (oral and written)	48
<b>Total</b>	<b>243</b>

Upon receipt, all written comment documents were assigned a document number for tracking during the comment response process. Oral comments received by toll-free telephone, as well as those transcribed by the court reporter or entered into a computer at the public meetings, were assigned document numbers. The transcript from each public hearing also was assigned a document number. All comment documents were then processed through the comment analysis and response sequence for inclusion in this document, and the originally submitted documentation was maintained. The text of each comment document was analyzed to identify individual comments, which were numbered sequentially. The comments were re-evaluated throughout the course of the response process as new information became available and as the *Final NNSS SWEIS* was developed. All comments received by DOE/NNSA were considered in preparing this *Final NNSS SWEIS*. Comments determined not to be within the scope of the SWEIS were acknowledged as such in this CRD. The remaining comments were then reviewed and responded to by policy experts, subject matter experts, and NEPA specialists, as appropriate. **Figure 1–1** illustrates the process used for collecting, tracking, and responding to the comments.



**Figure 1–1 NNSS SWEIS Comment Response Process**

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

Integration of the comment response process into preparation of this *Final NNSS SWEIS* served to focus revision efforts and ensure consistency throughout the final document. The comments assisted in determining whether the alternatives and analyses presented in the *Draft NNSS SWEIS* should be modified or augmented; whether information presented in the draft SWEIS needed to be corrected or updated; and whether additional clarification was necessary to facilitate better understanding of certain issues. Change bars are presented alongside the text in Volume 1 of this *Final NNSS SWEIS* to indicate where substantive changes were made and where text was added or deleted. Editorial changes were not marked.

## **1.2 Public Hearing Format**

The public hearings were organized to encourage public comments on the draft SWEIS and to provide members of the public with information about the NEPA process and the proposed actions. A court reporter was present at each hearing to record and prepare a transcript of the comments spoken publicly at the hearing. These transcripts are included in Section 2 of this CRD. Written comments were also collected at the hearings. Comment forms were available at the hearings for anyone wishing to use them.

At each of the public hearings, there were poster displays staffed by DOE/NNSA subject matter experts. Members of the public were invited to view the displays and ask questions of the subject matter experts either before or after the formal hearings were conducted. The displays addressed the NEPA process and the alternatives included in the SWEIS.

Management representatives from DOE/NNSA opened the hearings with welcoming remarks. The DOE EIS Document Manager then provided an overview of the draft SWEIS and the NEPA process. Following the overview presentation, a meeting facilitator opened the public comment session. To ensure that everyone interested in speaking had the opportunity, a time limit was established based on the number of people who had indicated a desire to speak. As part of the comment response process, the transcripts and written comments collected at the hearings were reviewed for comments on the draft SWEIS, as described in Section 1.1 of this CRD.

## **1.3 Organization of this Comment Response Document**

This CRD is organized into the following sections:

- Section 1 describes the public comment process, the public hearing format, the organization of this document, and the changes made to the *Draft NNSS SWEIS* before publication of the *Final NNSS SWEIS*.
- Section 2 presents transcripts of the oral comments, computer-recorded comments, and scanned copies of the comment documents received during the five public hearings, as well as additional comments received via U.S. mail, email, toll-free telephone number, and toll-free fax line, side-by-side with DOE/NNSA's comment-specific responses.
- Section 3 lists the references cited in this volume.

## 1.4 Changes from the Draft Site-Wide Environmental Impact Statement

In preparing this *Final NNSS SWEIS*, DOE/NNSA revised the SWEIS in response to public comments. Additional environmental baseline information was provided, as well as new and revised analyses including, but not limited to, the following:

- DOE/NNSA added information (figures and supporting text) regarding current and projected levels of surface soil and groundwater contamination.
- DOE/NNSA enhanced its cumulative effects analysis by including the remediation of the former Yucca Mountain Repository site as a reasonably foreseeable future action.
- DOE/NNSA has included a human health impacts analysis for an alternate maximally exposed individual based upon a “subsistence consumer” lifestyle pattern.
- DOE/NNSA included an analysis of potential impacts associated with wildland fire events.
- DOE/NNSA has updated its analysis of transportation risks, including an accident scenario whereby a 12-hour dose to the public occurs, but without an associated release of container contents.
- DOE/NNSA has included new information regarding existing environmental conditions based upon more-recent, routine sampling and field data collection (e.g., groundwater contaminant sampling).

DOE/NNSA also corrected inaccuracies, made editorial corrections, and clarified text.

## 1.5 Next Steps

No decision will be made any sooner than 30 days after the U.S. Environmental Protection Agency issues the Notice of Availability for this *Final NNSS SWEIS*. The decision will explain all factors considered by DOE/NNSA, including environmental impacts. The decision also will identify the environmentally preferred alternative or alternatives. If mitigation measures, monitoring, or other conditions are adopted as part of DOE/NNSA’s decision, these would be described and summarized in the decision, as applicable, and would be included in a mitigation action plan that would be prepared following issuance of the decision. The mitigation action plan would explain how and when any mitigation measures would be implemented and how DOE/NNSA would monitor the mitigation measures over time to judge their effectiveness.

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**SECTION 2**

**PUBLIC COMMENTS AND NNSA RESPONSES**

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## **2.0 PUBLIC COMMENTS AND NNSA RESPONSES**

This section presents a side-by-side display of the comments received by the National Nuclear Security Administration (NNSA) on the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (NNSS SWEIS)* and NNSA's response to each comment. To find a specific commentator or comment in the following pages, refer to the "List of Commentors" immediately following the Table of Contents. This list is organized alphabetically by commentator name and shows the corresponding page number(s) where commentors can find their comment(s).

If a commentator provided comments through a postcard, form letter campaign, or petition, that commentator is referred to a copy of that postcard or form letter. This section only contains one representative copy of each postcard, form letter, or petition.

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**Commentor No. 1: Kathleen Bienenstein, Chair**  
**Nevada Site Specific Advisory Board**



**Nevada Site Specific Advisory Board**

October 20, 2011

Mr. Scott Wade  
 Assistant Manager for Environmental Management  
 U.S. Department of Energy, Nevada Site Office  
 P.O. Box 98518  
 Las Vegas, NV 89193-8518

SUBJECT: Draft Nevada Site-Wide Environmental Impact Statement

Dear Mr. Wade,

The Nevada Site Specific Advisory Board formed a subcommittee to review the Nevada National Security Site (NNSS) Draft Site-Wide Environmental Impact Statement (SWEIS). The subcommittee developed a number of comments on the Draft SWEIS and those transmitted with this letter were adopted by the Full Board. The Nevada Site Specific Advisory Board offers the following recommendations and comments for consideration by the Department of Energy (DOE).

1. The NNSS Draft SWEIS describes approximately forty Mission Based Program Activities for the three alternatives (No Action, Expanded Action, and Reduced Operations). For roughly half of these forty Mission Based Program Activities, there is either no difference or no significant difference between the three alternatives, or, no difference between the No Action and Reduced Operations alternatives. Differences between the alternatives exist and are evaluated for the numbers of specific types of tests for each alternative, additions of new facilities to support new missions, and the types and amounts of waste and facilities needed. While these activities have impacts, they are not, with the possible exception of the significant increase in Low Level Waste (LLW) volumes, of such major impact that they could not have been handled in a supplement to the Environmental Impact Statement.

What is more significant, however, is the fact that there are numerous new activities, likely with potentially meaningful environmental impacts, considered in all three alternatives, for which impacts are not assessed. These new missions, which have the potential to be major federal actions, include renewable energy projects, a commercial-scale solar power generation facility, new and expanded training facilities, new nonproliferation and counterterrorism facilities, a high-speed road, a short section of full-scale railroad line, a simulated seaport facility, and a mock urban area, nuclear rocket motor development, including sequestering radionuclides released as part of emissions from tests, test beds to support research and development for sensors, high-power microwaves, and high-power lasers, a geothermal demonstration project, a geothermal research center, and the reconfiguration of Mercury.

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 Phone: 702-657-9088 • Fax: 702-295-5300  
 E-mail: NSSAB@nv.doe.gov • Website Home Page: <http://www.nv.energy.gov/NSSAB>

- I-1** As defined in U.S. Department of Energy (DOE) National Environmental Policy Act (NEPA) Implementing Procedures (10 U.S.C. *et seq.* [Code of Federal Regulations] Part 1021), a “site-wide NEPA document means a broad-scope EIS [environmental impact statement] or EA [environmental assessment] that is programmatic in nature and identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site.” This *Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Offsite Locations in the State of Nevada (NNSS SWEIS)* considers potential activities at U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) facilities in Nevada over the next 10 years.

The nature of ongoing activities and their associated environmental impacts are well understood. In contrast, the nature of some proposed activities is less well known. In the interest of fully disclosing potential environmental impacts that could occur at the NNSS and offsite locations over the next 10 years, the alternatives in this *NNSS SWEIS* include well-understood, ongoing activities, as well as activities that are more conceptual in nature.

To assess the potential environmental impacts of all such activities, it was necessary for DOE/NNSA to estimate at a programmatic level certain aspects of the more conceptual proposed activities, such as the potential area of land disturbance or amount of groundwater that may be required. DOE/NNSA incorporated these programmatic-level estimates, along with more-detailed information on ongoing and better-understood proposed activities, into the analysis of impacts. For instance, estimated areas of land disturbance, for both potential future activities and well-defined activities, were used in estimating potential impacts on resources such as soils (area of disturbance and erosion), cultural resources (number of sites potentially affected), and biology (vegetation/habitat loss, number of tortoises affected).

DOE/NNSA understands that the level of analysis conducted for some proposed future activities may not be sufficient at this time to permit implementation, and such activities could require additional NEPA analysis. These activities are identified in Chapter 3 and Appendix A. DOE/NNSA will conduct NEPA reviews for these activities, as appropriate, in the future. Chapter 1, Section 1.3; Chapter 3, Section 3.0; and Chapter 5, Section 5.0, of this *Final NNSS SWEIS* have been modified to clarify this point.

**Commentor No. 1 (cont'd): Kathleen Bienenstein, Chair**  
**Nevada Site Specific Advisory Board**

2-4

Draft Nevada Site-Wide Environmental Impact Statement  
 October 20, 2011  
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For each of these activities, the NNSS Draft SWEIS states that additional National Environmental Policy Act (NEPA) analysis would be required before the work could be conducted. It is difficult to understand how the Draft SWEIS meets the requirements of the NEPA when so many new Mission Based Program Activities that have the characteristics of major federal actions can be included as future activities for the NNSS and not be fully evaluated, at least at a programmatic level in the Draft SWEIS.

2. The air space above Area 25 is restricted. This is an impediment to developing commercial solar facilities. That and the current U.S. Air Force use restrictions on adjacent land seem to preclude development of a tower facility, which is the most meaningful type of facility in an area where private water supplies are oversubscribed, and the NNSS water permits are restricted to weapons related activities.
3. The NNSS Draft SWEIS does not recognize that certain elements of the Reduced Operations Alternative would have an impact on Environmental Management activities. For example, under the Reduced Operations Alternative, road maintenance on Pahute Mesa would be curtailed, effectively limiting access to the Underground Test Area monitoring wells.
4. The NNSS Draft SWEIS does not provide sufficient detail to allow meaningful evaluation of transportation shipping routes, such as the source of and the number of shipments proposed for each alternative transportation route under the constrained and unconstrained options, for each of the three alternative scenarios.

The unconstrained case is not evaluated in sufficient detail to allow independent evaluation of the associated impacts. The NNSS Waste Acceptance Criteria prohibit transportation through Las Vegas, over Hoover Dam, or over the O'Callahan-Tillman Bridge. If those criteria are meaningful requirements, they should not be changed unilaterally. Further, ongoing construction defeats any advantage that could be gained by routing wastes through the Las Vegas valley. Examples include: future modification of the I-15 / U.S. 95 interchange; continuing construction of overpasses; poorly designed interchanges at the I-215 bypasses; and a new bridge planned for the Charleston underpass. Public reaction to shipping wastes to the NNSS via the I-15 / U.S. 95 interchange, essentially through downtown Las Vegas is likely to be negative.

The Draft SWEIS includes an analysis of LLW/Mixed Low-Level Waste (MLLW) shipping routes, but notes that decisions on routing would not be made as part of this NEPA process (see comment 1). This analysis apparently was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste through and around metropolitan Las Vegas and to inform any highway routing revisions to NNSS's waste acceptance criteria.

Because the NNSS Draft SWEIS is not forthcoming about whether or not this route is seriously under consideration, meaningful comments that allow a complete assessment of impacts are not likely to be generated.

5. The current Administration's position, which is reflected in the NNSS Draft SWEIS, is that the Yucca Mountain project has been canceled. If the Yucca Mountain program has been canceled, the existing Memorandum of Understanding between the Nevada Site Office and the Office of Civilian Radioactive Waste Management, which states that the Environmental Management Program is responsible for the necessary remediation activities, must be considered. NNSS Draft SWEIS does not evaluate the impacts of remediating the Yucca Mountain site. While the document notes that "Until DOE receives appropriations for remediation of the infrastructure and buildings of the former Yucca Mountain Project, NNSA will maintain the infrastructure and buildings and provide security and support to DOE to remain compliant with Federal and state regulations pursuant to existing site permits. Upon receipt of appropriations, DOE will remediate and close the infrastructure and buildings as required by law, regulations, and applicable agreements. At the completion of site closure, DOE will initiate a long-term surveillance program;" this is more than a funding issue.

**I-1  
cont'd**

**I-2**

**I-3**

**I-4**

**I-5**

- 1-2 At this time, there are no proposals from private-sector entities to construct a solar power facility at the NNSS, and DOE/NNSA would not pursue or allow construction of a large-scale facility without such a proposal. If a proposal for a solar power facility were received in the future, it would be subject to future NEPA review to address potential issues to all resources including, but not limited to water availability, airspace, and compatibility with other existing land uses and activities. NNSA will not approve any activities that would negatively affect national security.
- 1-3 Under the Reduced Operations Alternative, environmental restoration activities would continue in accordance with the most recent version of the Federal Facility Agreement and Consent Order (FFACO). While maintenance levels on roads and other infrastructure in the northwest portion of the NNSS would be reduced relative to other alternatives, access to sites necessary to continue environmental restoration activities would be maintained. Chapter 3, Section 3.3.3.1, of this *Final NNSS SWEIS* has been edited to clarify this point.
- 1-4 In Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*, DOE/NNSA analyzed shipments of low-level and mixed low-level radioactive waste (LLW/MLLW) for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the 1996 *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada [1996 NTS EIS]* (DOE EIS-0243, August 1996) (DOE 1996) was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS waste acceptance criteria (WAC). Revisions to the WAC are undertaken in coordination with the Nevada Division of Environmental Protection (NDEP), pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA Nevada Site Office (NSO) (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases,

**Commentor No. 1 (cont'd): Kathleen Bienenstein, Chair**  
**Nevada Site Specific Advisory Board**

Draft Nevada Site-Wide Environmental Impact Statement  
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 Page 3

- Remediation of the Yucca Mountain site will be a major federal action. It is appropriate to evaluate the impacts of this action in this SWEIS so that not only can the true costs of closing the Yucca Mountain project be understood by decision makers, but that reviewers of this SWEIS can evaluate the impacts of remediating the site.
6. We understand DOE is considering the use of the NNSS for disposal of Greater than Class C waste (in fact, NNSS is a leading candidate for this disposal) and the treatment of MLLW. The impacts of these Mission Based Program Activities are not addressed in the SWEIS.
  7. Our understanding of the current NNSS land withdrawal restrictions for the NNSS suggests they are not consistent with some land uses envisioned for several potential actions described in the SWEIS, e.g. commercial solar power generation. We request DOE explain how they intend to modify the land withdrawal restrictions that need to be changed for every expanded use, and the process for making needed changes to the NNSS land withdrawal.
  8. There are a number of miscellaneous comments identifying inaccuracies and needed clarifications provided in the attached notes.

The Nevada Site Specific Advisory Board thanks you for the opportunity to comment on the Nevada National Security Site Draft Site-Wide Environmental Impact Statement. We hope that these comments will be beneficial as DOE moves forward in planning for the future of the Nevada National Security Site. A representative of the Nevada Site Specific Advisory Board is available to discuss any of these issues with DOE staff, if you so desire.

Sincerely,

Kathleen Bienenstein  
 Chair

Enclosure

cc: M. Nielsen, DOE/HQ (EM-13) FORS  
 C. Alexander Brennan, DOE/HQ (EM-13) FORS  
 A. Clark, DOE/HQ (EM-13) FORS  
 L. Cohn, SWEIS Document Manager  
 K. Snyder, PSG, NNSA/NSO, Las Vegas, NV  
 C. Lockwood, PSG, NNSA/NSO, Las Vegas, NV  
 D. Rupp, N-I, Las Vegas, NV  
 NSSAB Members and Liaisons

**I-5**  
*cont'd*

**I-6**

**I-7**

the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

The transportation analysis used a regional approach because waste generators that have not historically transported waste to NNSS may do so in the future and there is uncertainty regarding the waste volumes to be received from identified waste generators, as discussed in Appendix E, Section E.4.1. Table E-3 shows the radioactive waste generators and site-specific waste volumes used to estimate the number of waste shipments. Section E.4.2 discusses the assumptions used to develop the shipment inventories and the truck or rail external dose rates. Figures E-3 through E-9 shows the transportation routes that were analyzed. Tables E-11, E-12, and E-13 show the estimated number of shipments of radioactive wastes and materials originating from each region of the country for the Constrained Case under each alternative. Notwithstanding the first part of this response, Table E-17 show the estimated number of shipments for the Unconstrained Case. Note that an Unconstrained Case was evaluated for comparative purposes and was only evaluated for the number of shipments under the Expanded Operations Alternative.

**I-5** DOE recognizes that it has an obligation to remediate lands disturbed by its past activities, including those associated with the former Yucca Mountain Repository Project. Accordingly, DOE has evaluated the potential cumulative impacts of remediating the lands and closing the infrastructure and buildings at Yucca Mountain (see Chapter 6 of this SWEIS). Chapter 1, Table 1-2, and Chapter 2, Section 2.5.2, have been clarified in this regard.

**I-6** DOE is preparing an *Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste (GTCC EIS)* (DOE/EIS-0375) that evaluates the potential impacts of a variety of technologies, as well as locations for the disposal of greater-than-class C (GTCC) LLW and DOE GTCC-like waste. A Notice of Availability of the *Draft GTCC EIS* for public comment was published in the *Federal Register* on February 25, 2011 (76 FR 10574). The NNSS is one of the candidate sites evaluated in the *Draft GTCC EIS*. DOE has not yet made a decision regarding GTCC waste disposition. Therefore, rather than evaluating GTCC waste management at the NNSS as a mission

**Commentor No. 1 (cont'd): Kathleen Bienenstein, Chair**  
**Nevada Site Specific Advisory Board**

## SWEIS Committee Comments

Number	Page	Section	Comment
<b>1. Purpose / No Preferred Alternative</b>			
1-1	1-3	1.2	There does not seem to be any significant purpose and need for this EIS other than statement on page 1-3 as follows: "The purpose and need for agency action is to support NNSA's core missions established by Congress and the President." There should be a major federal action proposed that requires this EIS to support a "decision" but there does not appear to be any true decision to be made. It is more of a "Goldilocks" question: Is the use of the Site too much? (We should reduce activities); too little? (we should increase activities); or is it "just right"? (We should continue existing activities). If there are true alternatives to reduce or increase activities, then specific activities to be reduced or increased should be named. This document appears to be nothing but a baseline statement of the known conditions and programs at the various on and off-site locations that is being prepared to justify any possible future decision in advance.
1-2	1-12 and 13	1.4	Since no preferred alternative is chosen in this document, it makes it a little hard to comment on the overall SWEIS. Since NNSA can choose to implement any alternative, that leaves the EIS very "open-ended".
1-3	1-12	1.4 (paragraph 7)	This information must include an assessment of impacts.
1-4	3-78	3.6	This precludes reviewers from commenting intelligently on the proposed missions.
<b>2. If Preferred Alternative, additional comment period needed</b>			
2-1	1-21	Table 1-2, Alternatives, 2nd comment	It is difficult to comment intelligently when there is no basis for weighting concern about an alternative. Yes, it is legal, but what is the literal intent of allowing it? Will DOE allow comments on the final SWEIS before the ROD is issued?
<b>3. Solar and Geothermal</b>			
3-1	1-1 and 1-3	1.1	None of the land withdrawal actions or the Administrative Orders or Public laws allows for the Nevada National Security Site to be used for commercial activities such as electrical power generation.

10/04/11

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assigned to the NSO, it is discussed as a reasonably foreseeable future action in Chapter 6, “Cumulative Impacts.” Section 6.2.1.2 includes a description of the facility, and Section 6.3 presents the cumulative impacts of the activities evaluated in this *NNSS SWEIS*, as well as other activities, including construction and operation of a GTCC waste disposal facility.

Regarding MLLW, DOE/NSSA currently treats onsite-generated MLLW at NSSS in accordance with a Resource Conservation and Recovery Act (RCRA) treatment plan that has been approved by NDEP. To date, DOE/NSO has not submitted an application to NDEP to treat offsite MLLW, although such treatment is proposed under the Expanded Operations Alternative.

**1-7** DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. With respect to potential use of NNSS land for commercial solar power development, DOE would fully coordinate with the Bureau of Land Management (BLM) before such a decision would be made.

**1-8** As noted in the response to comment 1-1 above, a “site-wide NEPA document means a broad-scope EIS or EA that is programmatic in nature and identifies and assesses

the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site.” Because the NNSS and other DOE/NNSA facilities in Nevada support multiple missions, programs, and projects and this *NNSS SWEIS* is a “site-wide NEPA document,” the purpose and need for agency action is necessarily broadly

wide NEFA document, the purpose and need for agency action is necessarily broadly stated. Although not specifically stated in Chapter 1, Section 1.2, one of the purposes of this SWEIS is to provide information that DOE/NNSA management will consider when making decisions regarding the continued operation of the NNSS over the next 10 years. Those decisions include potential levels of operations for various activities, as well as potential development of new facilities for conducting tests, experiments, and other activities. The specific levels of activities and new facilities are described in Chapter 3 and Appendix A of this *NNSS SWEIS*.

**1-9** This comment is similar in nature to comments 1-11 and 1-12, below. This response is intended to address all three of these comments. As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS, but in no event later than the final EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this

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Number	Page	Section	Comment
3-2	1-3 and 1-4	1.2	NNSS was not established to serve as a waste disposal site for off-site generated defense wastes, or commercial generation of electrical power. See p1-20 for land withdrawal scoping comments. 1996 EIS comments: concurrence to use the NNSS for any other activity outside of research, development, and testing of nuclear weapons was never formally considered, as required by law. Nevada officials do not concur that DOE has the authority under the existing withdrawal, nor has completed the required analysis under NEPA, to support a major waste disposal program at NTS. Department of Energy/EIS-0200-F PEIS WM should have taken care of the disposal part of this. Executive Orders 13212 and 13514, and the 2005 EnPAct only direct conservation, not change NNSS mission. So, there is no justification for commercial use of NNSS for electricity generation, but power generation for use on NNSS is probably justified.
3-3	1-4	1.3	There is no justification for commercial use of NNSS for electricity generation, but power generation for use on NNSS is probably justified.
3-4	1-27	Table 1-2, Renewable Energy, last comment response	There are two issues here. One is commercial power production masquerading as demonstration of the viability of cutting-edge technologies. The other is preparing an Environmental Impact Statement for future missions of the Nevada National Security Site and not adequately addressing impacts. It is not possible to comment on the SWEIS when assessing the impacts of the missions that lead to impacts are postponed.
3-5	3-40 and 3-41	3.2.3.2	This is not consistent with Nevada National Security Site land withdrawals. There is no Section 3.1.4.2. How then can you include a new transmission line without assessing the impacts of developing it. It took years to get the "new" existing line in.
3-6	3-77	3.5.4	It is unclear if this section is intended to address the same issue as 3.2.3.2., specifically the proposed solar project. If so, the SWEIS seems inconsistent in its discussion of this issue. It is agreed that the issue should be addressed as stated in 3.2.3.2, i.e., a separate more detailed analysis.
3-7	4-3	4.1.1.1 (4th paragraph on page)	Without such a PEIS, how can commercial solar be included in this SWEIS – that is assuming that somehow the Land Withdrawals can legally be amended?
3-8	4-7 and 4-9	4.1.1.3 (1-8 paragraphs)	It is not clear that commercial development for solar, or geothermal for that matter, should be legally any different from the public access and mining restrictions .
3-9	4-12	4.1.1.5 (3rd paragraph)	The airspace is restricted – how then can the Department of Energy allow commercial use?

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*Final NNSS SWEIS.* DOE/NNSA will not make a decision based on this *NNSS SWEIS* until at least 30 days following its issuance (see 40 CFR 1506.10). During that minimum 30-day period, interested parties may submit comments to DOE/NNSA for consideration in its decisionmaking.

- 1-10 DOE/NNSA has conducted an assessment of potential environmental effects, as documented in Chapter 5 of this SWEIS, to support the decision elements described in Chapter 1, Section 1.4.
- 1-11 Please see response to comment 1-9, above.
- 1-12 Please see response to comment 1-9, above.
- 1-13 DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. Supporting renewable energy efforts is an important part of DOE's Nondefense Mission.
- 1-14 DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. With respect to LLW management (as described in Chapter 4, Section 4.1.1.3), as part of the April 1997 Settlement Agreement resolving State of Nevada litigation regarding radioactive waste disposal at the Nevada Test Site (now the NNSS), DOE committed to initiate "consultation with the United States Department of the Interior (DOI) concerning the status of the existing land withdrawals for the NTS with regard to low-level waste storage/disposal activities." The consultation process with the U.S. Department of the Interior (DOI) was initiated by DOE shortly thereafter and concluded in November 2009, with NNSA's acceptance of custody and control of the approximately 740 acres constituting the NNSS Area 5 Radioactive Waste Management Complex (Area 5 RWMC). As required by the Settlement Agreement, DOE conveyed the results of its consultation to the State of Nevada in a letter dated December 18, 2008. These actions relative to the status of land withdrawals and LLW storage/disposal activities satisfy the provisions of the Settlement Agreement between DOE and the State of Nevada. Please see the response to comment 1-16 for a discussion of renewable energy development on the NNSS.
- 1-15 The commentator is referring to the Concentrating Solar Power (CSP) Validation Project described in Chapter 6, Section 6.2.1.1, of the *Draft NNSS SWEIS*. Since publication of the *Draft NNSS SWEIS*, the CSP Validation Project has been put on indefinite hold and the environmental assessment cancelled. The CSP Validation Project has been removed from this *Final NNSS SWEIS*. If a similar project is proposed in the future, appropriate NEPA review will be performed at that time.

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Number	Page	Section	Comment
3-10	4-56	4.1.5.2.6	I think there should have been cross references between this section and 3.2.3.2.
3-11	D-63	D.2.2.1	Mention is made that the construction emissions for the proposed power generation facility were scaled based on generating capacity from the Amargosa Farm Road Energy Project. However, the numbers for these emissions from the various proposed NNSS solar facilities are not shown in this entire discussion about emissions under the Expanded Operations Alternative.
3-12	D-68	D.2.2.2.1	Similar to above comment, the emissions from construction of the proposed solar power generation facility under the Reduced Operations Alternative do not appear to be listed anywhere.
<b>4. Reduced Operations</b>			
4-1	3-24, 3-49, A-49, and A-52	3.1.2.2, Table 3.3, A.3, and A.3.2	No Action Alternative – UGTA paragraph states that up to 50 new groundwater characterization and monitoring wells would be developed over the next 10 years. Paragraph A.3.2, pg. A-52, states that EM activities under the Reduced Operations Alternative would be the same as under the No Action Alternative. Table 3-3, on page 3-49, reiterates that under the Reduced Operations Alternative the Environmental Management Program would be the same as under the No Action Alternative. However, in ¶ A.3, pg. A-49 the statement is made that under the Reduced Operations Alternative maintenance of roads on Pahute Mesa, Stockade Wash, and Buckboard Mesa would be terminated. These two statements regarding continuing UGTA activities vs termination of maintenance on the roads necessary to get to the current and new well sites appear to be incompatible.
4-2	8-6	8.1.3.1.2	It does not appear to be true that a significant reduction in site mission would not adversely impact EM mission. If all else at site is reduced, overhead cost to EM will skyrocket and ability to accomplish mission may be in jeopardy.
<b>5. Transportation</b>			
5-1	1-12	1.4 (paragraphs 5 and 6)	"informing any highway routing revisions" without analyzing the potential impacts seems inconsistent with NEPA requirements.
5-2	1-12 and 1-13	1.4	Why will no decision be made as to recommended transportation routes for waste shipped to the NNSS?
5-3	1-23	Table 1-2, Waste Disposal, 2nd comment	Non-responsive - the purpose of this Environmental Impact Statement ought to be to understand the impacts based on known history of shipments.

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For response to the commentor's second issue, refer to the response to comment 1-1 above.

1-16 DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. Supporting renewable energy efforts is an important part of DOE's Nondefense Mission.

This NNSS SWEIS analyzes the potential environmental effects of a commercial solar power generation facility located in Area 25 of the NNSS. At this time, there are no active proposals from private-sector entities to construct a solar power generation facility at the NNSS, and DOE/NNSA would not pursue or allow construction of a facility without such a proposal. If a private-sector proposal for a solar power generation facility were received in the future, it would be subject to future NEPA review to address issues such as water availability and compatibility with other existing land uses and activities. While the potential impacts associated with a transmission line segment were analyzed in Chapter 3, Section 3.1.3.2, of the *Draft NNSS SWEIS*, future NEPA reviews would also include further analyses of transmission line development.

The reference to Chapter 3, Section 3.1.4.2, on page 3-41 of the *Draft NNSS SWEIS* was in error, and should have referred to Section 3.1.3.2. This has been corrected in this *Final NNSS SWEIS*.

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Chapter 3, Section 3.6, discusses potential alternatives that were eliminated from detailed study and were not further evaluated in this SWEIS. Chapter 3, Section 3.6.4, notes that DOE/NNSA previously considered a separate, stand-alone alternative focused on renewable energy development. However, as stated in Section 3.6.4, during the scoping process, DOE/NNSA received several suggestions that renewable energy should be considered in all alternatives, rather than be addressed in a separate alternative. DOE/NNSA agreed and analyzed renewable energy activities under each of the three alternatives in this NNSS SWEIS.

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The BLM and DOE *Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar Energy Development PEIS)* was described in Chapter 6, Section 6.2.4.1, of the *Draft NNSS SWEIS*. On July 27, 2012, BLM and DOE published in the *Federal Register* a Notice of Availability for the *Final Solar Energy Development PEIS* (77 FR 44267). In this *Final NNSS SWEIS*, DOE/NNSA updated its discussion of the *Solar Energy Development PEIS* and considered and included relevant information (e.g., locations of nearby designated Solar Energy

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Number	Page	Section	Comment
5-4	3-38	3.2.2.1	The statement about rail-to-truck transloading facilities seems to assume that commercial vendors would establish such a facility if the 'Expanded Action' alternative is chosen. Do the various analyses of increased transportation requirements, discussed later in the EIS, include the increased truck traffic if such a facility is not established?
5-5	3-51	Table 3-3	The transportation fatalities don't seem to scale with the increase in the number of shipments.
5-6	4-25 and 4-26	4.1.3.2.1 (2nd sentence)	This is incorrect. Also, the following Map shows 160 as the most commonly used truck route.
5-7	4-32 and 5-67	Tables 4-11 and 5-19	7.7 miles east of 372 with 8,900 cars passing, is roughly 3 miles from the point that is 0.6 miles east of the Clark – Nye county line with 1,600 cars passing. It is inconceivable that 8,900 – 1,600 = 7,300 cars find something to do in this relatively uninhabited region of the country.
5-8	A-41	A.2.2.1	Table A-6. The Expanded Operations Alternative calls for an additional waste generation of 11,000,000 cubic feet of waste from TTR. This waste would come from cleanup of sites Clean Slates 1, 2, & 3, Project 57 and Small Boy. How will this waste be transported to the NNSS for disposal at Area 5 (or 3)? This information is not readily apparent in the EIS.
<b>6. Yucca Mountain</b>			
6-1	2-13	2.5.2 (3rd paragraph)	Inconsistent action. If the site project is closed, then Department of Energy must remediate the site. There are in excess of 600,000 yd <sup>3</sup> of excavated rock in piles that need to be reclaimed, in addition to roads and pads. The impacts of these activities can be assessed regardless of whether or not the DOE has funds appropriated for it. Also, the operation of the Yucca Mountain project as a part of the Nevada National Security Site mission was raised in scoping as an ongoing program. The Department of Energy dropping it allowed no opportunity for the public to comment on the impacts of remediation of the disturbed land, let alone the issue of no location to dispose of wastes.
6-2	4-9	4.1.1.3 (Yucca Mountain paragraph)	The Department of Energy is responsible for returning the land to original conditions - this is a condition of existing MOUs and the impacts ought to be included in the SWEIS.
6-3	6-32	6.3.3 (1st paragraph)	Development of the Yucca Mountain Project Gateway Area assumed and Yucca Mountain is assumed to be canceled.
<b>7. Inaccuracies and Clarifications</b>			
7-1	viii	Table of Contents	Chapter 3 pages 3-1 to 3-10 are omitted from TOC.

Zones) from the *Solar Energy Development PEIS*. Within this SWEIS, DOE/NNSA considered the potential environmental effects of a commercial solar power generation facility located in Area 25 of the NNSS; however, DOE/NNSA recognizes that there are no proposals from a private entity at this time, and DOE/NNSA would not pursue or allow a large-scale solar facility in the absence of a private sector proposal. If a proposal for a commercial solar power generation facility were received in the future, it would be subject to future NEPA review and analysis to address issues such as water availability and compatibility with other existing land uses and activities.

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I-19 The commentor's opinion regarding commercial solar development is noted.

I-20 The U.S. Air Force (USAF) is a cooperating agency on this SWEIS and has reviewed all proposed activities, including those for a commercial solar power facility, to ensure that they are compatible with USAF mission requirements. The USAF did not identify any airspace or other conflicts with the location or configuration (parabolic mirror arrays) of the solar power facility described in this SWEIS. At this time, there are no active proposals from private-sector entities to construct a solar power facility at the NNSS, and DOE/NNSA would not pursue or allow construction of a facility without such a proposal. If a private-sector proposal for a solar power facility were received in the future, it would be subject to future NEPA review to address issues such as water availability and compatibility with other existing land uses and activities.

I-21 Chapter 4 of this SWEIS describes the affected environment for the NNSS and other offsite locations in the State of Nevada. The intent of Chapter 4 is to describe existing conditions, rather than proposed activities or their potential effects. The references in Chapter 4 of this SWEIS to geothermal power systems were intended as a general description to aid the reader in understanding the potential for bedrock formations on the NNSS to support geothermal power systems and were not referring to any specific proposals.

I-22 The emissions associated with the construction of the proposed NNSS solar facilities under the Expanded Operations Alternative are discussed in Chapter 5, Section 5.1.8.2.1, of this NNSS SWEIS. The emissions associated with the construction of the solar power generation facility are explicitly reported in Table 5-38 for each criteria pollutant and for volatile organic compounds (VOCs). Emissions associated with the construction of the solar facility under the Reduced Operations Alternative are found in Section 5.1.8.3.1 and are reported for individual criteria pollutants and VOCs in Table 5-43.

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Number	Page	Section	Comment
7-2	1-3	sidebar	The last paragraph of the sidebar text box about American Indian prospective, should be the first paragraph, and would probably be better if it was a separate sidebar. A reader should not have to get to the last paragraph before being told this was text prepared by others and not a government position.
7-3	1-6	1.3.2	There should be some mention of the possibility of siting a GTCC disposal facility at the NNSS. This subject is discussed further in the SWEIS, but an initial reference should be made here.
7-4	1-17 and 1-23	1.5 and Table 1-2, Waste Disposal, 1st comment	Why doesn't the SWEIS fully consider the impacts of disposal of Greater Than Class C wastes? It is not identified as a future mission of the Nevada National Security Site. NNSS is, however, a leading candidate for the disposal site in the GTCC EIS.
7-5	1-22	Table 1-2, Nye County Impacts	It is not possible to figure out if this is addressed.
7-6	1-23	Table 1-2, Waste Disposal, Final comment	This is Greater Than Class C and should be treated explicitly.
7-7	1-28	Table 1-2, Potential Impacts, 1st comment	Disagree. It is not possible to comment on the SWEIS when assessing the impacts of the missions that lead to impacts are postponed. Preparing an Environmental Impact Statement for future missions of the Nevada National Security Site and not adequately addressing impacts does not result in an acceptable SWEIS.
7-8	2-1	2.0 and Table 1-1	Regarding a return to nuclear testing - Table 1-1 shows this is not analyzed in the SWEIS.
7-9	2-14	Chapter 2, 2.5.3, bullet 2	This bullet implies that BEEF was planned and analyzed in 1996 SWEIS and then constructed. Actually BEEF went on line in 1994, and as such is not a change since 1996. Furthermore, for all of these bullets of "changes since 1996 EIS" I recommend that the date of first operation be added.
7-10	3-20 and 4-153	3.1.2.1 and 4.1.11.1.2	"Under the no action alternative, offsite generated MLLW would not be treated at the NNSS." DOE/NV has already applied for a permit from NDEP to treat MLLW at the NNSS. This is discussed further in the EIS and this statement should be corrected. See also pg. 4-153, ¶4.1.11.1.2 The DOE has already submitted an application to NDEP for the MLLW treatment permit.

- I-37** 1-23 See response to comment 1-3.
- I-38** 1-24 DOE/NNSA has not identified any scenarios under the Reduced Operations Alternative that would prevent the accomplishment of DOE Office of Environmental Management activities and goals, or directly or indirectly result in unavoidable adverse impacts, as defined under 40 CFR 1502.16. DOE/NNSA would continue to comply with the terms of the most recent FFACO regarding environmental contamination.
- I-39** 1-25 The approach to the transportation analysis performed for this *NNSS SWEIS* is consistent with analyses performed for other DOE/NNSA NEPA analyses. As stated in Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*, DOE/NNSA has analyzed two transportation cases: one that reflects the existing commitment (Constrained Case) and one that permits shipments through greater metropolitan Las Vegas, Nevada (Unconstrained Case). This analysis was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste along the analyzed routes, including through and around metropolitan Las Vegas, by comparing the impacts that would occur under different alternatives. Conservative assumptions were used throughout the analysis to prevent an understatement of the potential impacts. While the transportation analysis was performed in a relatively generic way, the results provided a reasonable estimate of the relative magnitude of the impacts that could occur. Although an analysis of LLW/MLLW shipping routes is included in this SWEIS, individual decisions on routing will not be made as part of this NEPA process; such decisions are developed in accordance with DOE/NNSA's standard practices, which include consultation with the State of Nevada, and, when finalized, become publicly available through publication on the NNSS website.
- I-40** 1-26 DOE/NNSA never intended for there to be routing decisions as a direct outcome of the preparation of this *NNSS SWEIS*. As stated in Chapter 1, Section 1.4, the analysis was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste through metropolitan Las Vegas, Nevada, and to inform any highway routing revisions to DOE/NNSA's WAC. The Unconstrained Case was developed within the Expanded Operations Alternative to provide information on the sensitivity of calculated impacts to changes in routes and use of different transportation modes (i.e., truck versus rail). Any future decisions on routing of LLW/MLLW would be developed in accordance with DOE/NNSA's standard practices, which include consultation with the State of Nevada.
- I-41** 1-27 Historical data regarding waste received at NNSS for disposal were incorporated into the transportation analysis. As described in Appendix E, Section E.4.2,
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- I-45**

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Number	Page	Section	Comment
7-11	3-20, 3-38, and 3-39	3.1.2.1 (LLW and MLLW management), 3.2.2.1 (1st paragraph), 3.2.2.2 (last sentence)	This is 11,000,000 ft <sup>3</sup> of additional wastes. Unable to determine if it was included.
7-12	3-47	3.3.2	The waste management program is not addressed under the reduced operations alternative.
7-13	3-77	3.5.5	A table presenting the differences in assumptions between the 1996 and the current document would have been useful.
7-14	4-1	4.1 and 4.1.1	Both sections state the site is 57 miles from Las Vegas in different terms. 4.1.1 is better, use of term overland miles in 4.1 may be confused with road miles, and the 57 miles is direct line of site. Recommend either deleting the redundant distance sentence from one of the paragraphs, or make the use of terms, and "downtown starting point" the same.
7-15	4-14	4.1.2.1.1	Facilities: avoid exact count of buildings and trailers, these numbers change frequently, and will not be same from time of draft input to final issue date. Further down in paragraph, data is clarified with "as of November 2009" that should perhaps lead the paragraph.
7-16	4-35	Table 4-12	The table of Clark County Largest Employers is misleading. The source is NV Energy who has split up employers by billable locations or power accounts. Find a better source of data. The decision on how to group employers does not seem to be consistent. For example: All of County Government workers are grouped together with the exception of UMC where all workers are also County employees. It seems arbitrary to split up the employees that work for major hotel/casino companies by property. All MGM properties should be grouped (MGM Grand, Bellagio, numerous City Center hotels, Mirage, Luxor, etc) likewise, all Caesar's Entertainment properties (ally's Caesar's Palace, Harrah's, Flamingo, etc.). If all Station Casino were grouped together they also would make the list. Likewise, all U.S. government including military, civilian, VA hospitals, Postal Service, FAA, BLM etcetera should be totaled and put on the list.
7-17	4-36	Table 4-13	It is disingenuous to refer to NSTEC and Wackenhut as Nye County employers.
7-18	4-63 and 4-94	4.1.6.1	The first sentence of Surface Water Characteristics appears to contradict the American Indian Perspective of Water Resources on page 4-94. The present nature of the analysis should be highlighted. Apart from that, I though the hydrology section was particularly well written.
7-19	4-84	4.1.6.2	There is no mention of the small amount of PU found in one of the wells on Pahute Mesa.

- 1-46 historical information applied to the analysis included the types of containers used for transporting radioactive materials and wastes (all alternatives), as well as the waste volumes that have been received (when determining the number of shipments associated with the No Action Alternative). The number of shipments of LLW/MLLW estimated for the No Action Alternative reflects the number of shipments that are actually received. As described in Section E.4.2, historical information regarding the radionuclide quantities that have been received from waste generators was used to determine a conservative basis for the radionuclide inventory in the shipments for transportation accident analysis. Additionally, the analyzed routes for LLW/MLLW shipments in this *NNSS SWEIS* are the most commonly used transportation routes, as shown in Figures E-3 and E-4.
- 1-47
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- 1-28 The description of the use of rail-to-truck transfer stations in this *NNSS SWEIS* assumes the use of existing stations in the vicinity of southern Nevada. Use of rail shipments was not intended to convey the development and construction of new locations for performing the rail-to-truck transfer. The description of the activity in Chapter 3, Section 3.2.2.1, was revised to more clearly convey that these types of facilities already exist. Use of rail to transport LLW and MLLW would not eliminate the use of trucks. The same number of trucks would be needed to transport waste from the rail-to-truck transfer station to the NNSS.
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- 1-29 The number of traffic fatalities estimated for each alternative does not precisely depend on the total number of shipments, but on the distance over which the waste and material were transported and the average fatality rate per kilometer traveled, which differs depending on the mode of transport (truck or rail) and the states through which the material is transported. That is, the average fatality rate per kilometer is different for truck transport versus rail transport and different for each state. Thus, although the total number of shipments of waste and material may increase under the Expanded Operations Alternative compared to the No Action Alternative (e.g., see Chapter 5, Tables 5-9 and 5-10), the number of fatalities under each alternative depends on whether the shipments occur via truck or rail transport and the total distances the waste and material are transported under each alternative from each region of the country.
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- 1-30 The majority of NNSS workers are employed by the management and operating contractor. Based on the locations of contractor employee residences, DOE/NNSA determined the geographic distribution of the NNSS workforce and estimated current commuting patterns. DOE/NNSA estimates that approximately 70 percent of the traffic volume is from commuters in privately owned vehicles arriving at

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Number	Page	Section	Comment
7-20	4-85	Footnote	Pretty sloppy referencing.
7-21	4-91 and 4-92	UGTA and RREM Plan	This is disingenuous and indicates that the Department of Energy has a bad monitoring program if it has 10.7 max on site and 62.5% off site (conveniently not expressed as a percentage).
7-22	4-163 and 4-164	4.1.12.5	Accident History. Not all significant accidents seem to be included off the top of my head I can think of two: About 1990 two workers died in a vehicle roll over coming off Pahute Mesa in the snow late at night having worked late, and; August 1998 in U16b a tunnel worker was almost killed (heart stopped and then revived) in industrial accident. If I can think of 2 then there are likely more, this section should be given some thought and attention to completeness. If I was a relative of one of these workers and found the case omitted there is an implication my "loved one" was not "noteworthy" which could be interpreted as non-caring or insulting to their memory.
7-23	5-23, 5-24 and 5-25	5.1.2.1.2 and Table 5-4	Expanded Operations land use discussion should contain some comment re use of land for potential GTCC disposal. This use should also be included in Table 5-4, "Proposed New Infrastructure ----".
7-24	5-258	5.4.6.1.2.2	The statement that impacts would be similar to those described under the No Action Alternative is a bit of an understatement, or perhaps just misleading.
7-25	7-11	Mitigation Measure 6	The discussion of actions in the event of discovery of human remains is too presumptive that any remains found are American Indian. If remains are discovered one should first determine not a recent death (say in the last 75 years) and not a crime scene, body dump, previously unknown missing worker or trespasser, etc. After law enforcement and Nye County Coroner have completed their investigations, then anthropologist can determine if its remains of Native American or perhaps an 18th Century European explorer or 19th Century rancher/prospector.
7-26	8-2	8.1.1.1.2	After reams and reams of pages leading up to this section there is not very much here. This re-emphasizes the comment of "what's the point?"
7-27	9-3	Table	The heading "Human Health" should be renamed or a different heading of "Safety" is needed. Many of the right column citations have nothing to do with "health" and are in fact safety documents. DOE Safety and Health staff should be able to better describe the difference between safety and human health for SWEIS writers. Examples of safety but not health documents are 10CFR820, 10CFR830, DOE Order 5480.20A, and DOE Orders 420.1B, 4251.D, 433.1D, 440, (458 is protection of public health and protection of environment).

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- NNSS via U.S. Route 95 from the east (e.g., from the Las Vegas, Nevada, area), and approximately 20 percent of the traffic volume is commuters in privately owned vehicles arriving at NNSS via U.S. Route 95 from the west (from Pahrump, Beatty, and Amargosa Valley). DOE/NNSA estimates that the remaining NNSS-related traffic results from trucks and buses, with approximately 7 and 3 percent on U.S. Route 95 from the east and west, respectively. The sentence in question was revised to more accurately reflect the estimated distribution of NNSS-bound traffic. The legends of Figures 4–6 and 4–7 in Chapter 4, which show transportation routes, were revised to clarify that the green-highlighted routes are the most common routes used for transport of LLW.
- 1-31 The annual average daily traffic volumes and location of traffic monitoring stations identified in Chapter 4, Table 4–11, and Chapter 5, Table 5–19, were provided by the Nevada Department of Transportation. The Nevada Department of Transportation has acknowledged that "east" and "west" in the location descriptions of the monitoring stations for Nevada State Route 160 (Nye County) were incorrectly described in the traffic report and should be corrected to "north" and "south," respectively, to reflect the correct locations. The monitoring station that recorded an annual average daily traffic volume of 8,900 is located 0.3 miles north of the Clark-Nye county line; the station that recorded an annual average daily traffic volume of 1,600 is located 7.7 miles north of Nevada State Route 372. The stretch of State Route 160 between these two stations is the prime location of many commercial businesses, hotels, restaurants, and casinos, which attract relatively high daily traffic volumes. The location descriptions of the traffic monitoring stations were reviewed and have been corrected in Tables 4–11 and 5–19.
- 1-32 The impacts analysis in the *Draft NNSS SWEIS* was based on the assumption that the waste would be transported to the NNSS via U.S. Route 6 to U.S. Route 95. In response to this comment, DOE has revised Appendix E, Section E.4.1, to state that wastes would be transported from the Tonopah Test Range (TTR) along this route.
- 1-33 Please see response to comment 1-5 above.
- 1-34 Please see response to comment 1-5 above.
- 1-35 As described in Chapter 6, Section 6.2.9.3, the *Yucca Mountain Project Gateway Area Concept Plan* (DOE 2007) presents a multi-phase land use plan proposed by Nye County to ensure that land development in the area occurs in an orderly manner, as well as to increase opportunities for industrial and commercial development and other activities along the U.S. Route 95 Technology Corridor, consistent with NNSS-

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Number	Page	Section	Comment
7-28	A-43	A.2.2.2	Environmental Restoration Program – Soils Project, does not mention the Double Track site. Does this mean that this site is considered remediated to acceptable standards?
7-29	D-86	D.2.5.2.1	This section does not appear to account for ground disturbance nor increased truck traffic caused by cleanup of Clean Slates 1, 2, 3, etc. (See also Table 3-6, page 3-72.)
7-30	G-2 and G-3	G.1.1.1	Why are the “traditional units” of radiation and radioactivity, i.e. curie, rad, and rem, used instead of the currently accepted International System Units of becquerels, grays, and sieverts?
7-31	G-3 and G-4	G.1.1.2 and Table G-1	The discussions in this paragraph and table are somewhat misleading. There should be some statement that “averages” vary greatly over the US. For example, radon is not a problem in the Western US, but is a big problem in the East. Air travel average is truly meaningless, since only those people who actually fly get any dose and that dose is considerably more than 1 millirem per year. The air travel dose could be expressed as the dose for a coast-to-coast flight, which would be more meaningful than the average dose. There should be some discussion that these average doses vary greatly across the US and from person-to-person.
7-32	G-42	G.3.7.1	Table G-16 (NNSS Radiological and Chemical Facility Accidents) lists plutonium source terms for accidents in the Area 5 Waste Management facility. What is the source of this plutonium? The NSSAB has been informed that all of the TRU waste at NNSS has been shipped to WIPP.
7-33		Various	Examples of citations from the Draft Site Wide Site Environmental Impact Statement that illustrate major federal actions planned or considered for the Nevada National Security Site that require additional NEPA analyses.
7-33a			Although an analysis of LLW/MLLW shipping routes is included in this SWEIS, decisions on routing would not be made as part of this NEPA process. This analysis was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste through and around metropolitan Las Vegas and to inform any highway routing revisions to NNSA's waste acceptance criteria. P1-12

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related activities. As a multi-phase land use and development plan, DOE/NNSA has determined that the plan presents a reasonably foreseeable future action.

In contrast, DOE is not required, nor does it intend, to construct or operate a repository at Yucca Mountain. Accordingly, in the absence of a DOE proposal to construct and operate a repository, NEPA review of the former Yucca Mountain Repository Project in this SWEIS is not required. However, DOE/NNSA considers the potential remediation of the former Yucca Mountain site to be a reasonably foreseeable future action and has included it in the assessment of cumulative impacts in Chapter 6.

- 1-36 Chapter 3, “Description of Alternatives,” Section 3.0, contains an introduction to the chapter. In this *Final NNSS SWEIS*, the Table of Contents has been amended to reflect Section 3.0 beginning on page 3-1.
- 1-37 The Consolidated Group of Tribes and Organizations (CGTO) has agreed to reorder the text box mentioned.
- 1-38 The section of the *Draft NNSS SWEIS* noted in the comment is in Chapter 1, which provides a general introduction and discussion of the purpose and need for agency action. The specific section is a very brief summary of the Expanded Operations Alternative. In the discussion of the *Draft GTCC EIS* (DOE/EIS-0375-D) in Section 1.5 of this *NNSS SWEIS*, it is noted that the NNSS is one of seven alternative locations being considered by DOE for a GTCC waste disposal facility. The potential development of a GTCC waste disposal facility at NNSS is located in Chapter 6, Section 6.2.1.2, of this *NNSS SWEIS*, and the potential impacts are analyzed in Section 6.3.
- 1-39 As addressed in the response to comment 1-6, although DOE is preparing a *Draft GTCC EIS* (DOE/EIS-0375) that evaluates the potential impacts of a variety of technologies and locations for the disposal of GTCC LLW and DOE GTCC-like waste and the NNSS is one of the candidate sites evaluated in the *Draft GTCC EIS*, DOE has not yet made a decision regarding GTCC waste disposition. A Notice of Availability of the *Draft GTCC EIS* for public comment was published in the *Federal Register* on February 25, 2011 (76 FR 10574). Therefore, rather than evaluating GTCC waste management at the NNSS as a mission assigned to the NSO, it is discussed as a reasonably foreseeable future action in this *NNSS SWEIS* in Chapter 6, “Cumulative Impacts.” Section 6.2.1.2 includes a description of the facility, and Section 6.3 presents the cumulative impacts evaluated in this *NNSS SWEIS*, including construction and operation of a GTCC waste disposal facility.

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Number	Page	Section	Comment
7-33b			<i>Final Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky, Site (DOE/EIS-0359) (DOE 2004d) – This environmental impact statement (EIS), tiered from the Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride (DOE/EIS-0269) (DOE 1999c), considered the potential environmental impacts of construction, operation, maintenance, and decontamination and decommissioning of a proposed facility for converting depleted uranium hexafluoride to a more-stable chemical form at alternative locations within the Paducah Site. DOE evaluated transportation of the depleted uranium conversion product to a commercial facility or the NNSS for disposal as LLW. The July 27, 2004, ROD (69 FR 44654) stated that DOE planned to decide the specific disposal location(s) after further NEPA review. 1-14</i>
7-33c			<i>This NNSS SWEIS would not provide the basis for a DOE programmatic decision, but would provide the basis for site specific implementation of programmatic decisions that have already been made in existing programmatic EISs and other NEPA documents. DOE NEPA regulations (10 CFR 1021.330(c)) require that large, multiple-facility DOE sites, such as the NNSS, prepare SWEISs. This Nevada National Security Site SWEIS addresses the full range of missions, programs, capabilities, projects, and activities under the purview of NNSA in Nevada. Table 1-2</i>
7-33d			<i>Response: Each of the three alternatives includes renewable energy projects. Each alternative includes a commercial solar power generation facility that varies among the alternatives in terms of electricity-generating capacity, as described in Chapter 3. All the commercial solar projects would be located in Area 25 of the NNSS. In addition, the Expanded Use Alternative includes a project to install a photovoltaic system in Area 6 and a project to demonstrate the feasibility of enhanced geothermal electricity-generating systems in other locations on the NNSS. In the cumulative impacts chapter (Chapter 6), a Concentrating Solar Power Validation Project for solar research and development is also evaluated. This project is intended to demonstrate the viability of cutting-edge technologies for commercial power production. Because there are no proposals for the commercial scale solar power generation facilities or geothermal electricity generation, additional NEPA review would be required if a specific proposal is considered by NNSA. Table 1-2</i>

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- 1-40 The commentor is referring to Nye County's scoping comments for this *NNSS SWEIS*, which are summarized as follows: (1) Nye County believes that significant adverse impacts and losses of natural resources have occurred that must be mitigated; (2) environmental monitoring will not suffice as a mitigation measure; and (3) this SWEIS must address the legacy of environmental insult that has occurred and define appropriate measures to mitigate the massive loss of natural resources. Because the impacts alluded to by Nye County are primarily based upon past actions on the part of DOE/NNSA and its predecessors, this *NNSS SWEIS* addresses them in Chapter 6, "Cumulative Impacts." Although not specifically noted as Nye County concerns in the cumulative impacts analysis, all applicable resources are addressed, including impacts on groundwater and geologic media from underground nuclear testing and impacts associated with lack of access to potential mineral deposits. In addition, as the host county of the NNSS and a Cooperating Agency in this *NNSS SWEIS*, Nye County provided its perspective, which is included in this *NNSS SWEIS* in Section 6.2.9.4, Nye County Input for this Site-Wide Environmental Impact Statement. DOE/NNSA does not generally employ environmental monitoring as a mitigation measure. DOE/NNSA does use environmental monitoring, however, to ensure its activities are not threatening public health and safety or the environment outside of the NNSS and to ascertain the effectiveness of mitigation and other measures designed to protect the public and/or environment.
- 1-41 GTCC waste is commercial waste. DOE/NNSA does not consider sealed sources recovered and owned by DOE/NNSA under the Offsite Source Recovery Project to be GTCC waste—rather, they are considered materials. DOE/NNSA takes ownership of sealed sources as needed to avert a potential threat to health, safety, and national security. Efforts are made to reuse the sealed sources (e.g., by transfer to an authorized or licensed party such as a manufacturer of devices containing sealed sources). If no reuse of the sealed sources is identified, DOE/NNSA may declare them to be waste and dispose them accordingly. DOE/NNSA notes that the provisions for disposal of GTCC waste under Section 3(b)(1)(D) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 do not apply to waste owned or generated by DOE. DOE/NNSA also notes that commercially generated or -owned LLW would be classified as GTCC waste only if the waste contains one or more of a limited number of radioisotopes in sufficient concentrations, where waste concentrations are determined considering the volume or mass of the final waste form.
- 1-42 Please see the response to comment 1-1.

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7-33e			<b>Response:</b> NNSA concurs with the U.S. Environmental Protection Agency comments addressing renewable energy. However, the renewable energy projects in this SWEIS are not sufficiently defined to include this level of detail and would require additional NEPA analysis before being implemented. <i>Ch 3</i>
7-33f			If a commercial solar power project were proposed at the NNSS in the future, additional project-specific NEPA analysis would be required.
			Therefore, additional NEPA analysis would be required to identify, analyze, and document project-specific impacts if such a commercial-scale solar power generation facility were proposed. P 3-28
7-33g			Training facilities. These new and expanded facilities projects are conceptual at this time and would require an appropriate level of NEPA analysis before they could be implemented. P 3-44
7-33h			<b>Nonproliferation- and counterterrorism-related activities –</b> NNSA nonproliferation- and counterterrorism-related activities would include four related areas: arms control, nonproliferation, nuclear forensics, and counterterrorism. Although the purpose of nonproliferation- and counterterrorism related activities would be the same as that under the No Action Alternative, new nonproliferation and counterterrorism facilities, described below, would be constructed at various locations on the NNSS to undertake enhanced activities. Because the new nonproliferation and counterterrorism facilities (Arms Control Treaty Verification Test Bed, nonproliferation test bed, and Urban Warfare Complex) are still conceptual in nature and their locations are unknown, they are not fully analyzed in this SWEIS, and an appropriate level of NEPA analysis would be required before they could be implemented. O3-34

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- 1-43 The commentor is correct. This *NNSS SWEIS* addresses the impacts of maintaining the readiness to conduct an underground nuclear test, but not the actual conduct of such a test. For informational purposes only, Appendix H to this *NNSS SWEIS* includes a general description of underground nuclear testing and the environmental impacts of conducting a test.
- 1-44 The commentor is correct that the Big Explosives Experimental Facility (BEEF) began operations in 1994. Expansion of BEEF capabilities was analyzed in the *1996 NTS EIS* (DOE EIS-0243, August 1996). The SWEIS has been corrected to include information on the expansion and to indicate operations began in 1994. Operational dates also have been added to the final SWEIS as requested.
- 1-45 The cited statements in Chapter 3, Section 3.1.2.1, and Chapter 4, Section 4.1.11.1.2, are correct. DOE/NNSA currently treats onsite-generated MLLW at the NNSS under a RCRA treatment plan approved by NDEP. Such treatment is addressed in this *NNSS SWEIS* under the No Action and Reduced Operations Alternatives. To date, DOE/NSO has not submitted an application to NDEP to treat offsite-generated MLLW, although such treatment is addressed in this *NNSS SWEIS* under the Expanded Operations Alternative.
- 1-46 The cited 11,000,000 cubic feet of LLW assumed to be generated from excavating a number of contaminated soil sites is included with the rest of the LLW addressed under the Expanded Operations Alternative. The text in Chapter 3, Section 3.2.2.1, refers the reader to Appendix A, Section A.2.2.1, which provides a description of the basis for the estimated waste volumes to be managed under the Expanded Operations Alternative. Additionally, the footnote in Chapter 5, Table 5-49, indicates that the 11,000,000 cubic feet of LLW is included in the Expanded Operations waste volume.
- 1-47 Chapter 3, Section 3.3.2, Environmental Management Mission, describes the Waste Management Program in terms of the differences between the Reduced Operations Alternative and the No Action Alternative.
- 1-48 Chapter 1, Table 1-1, Comparison of the *1996 NTS EIS* Expanded Use Alternative and this *NNSS SWEIS* No Action Alternative, provides the comparison that the commentor is requesting. A reference to Table 1-1 has been added to Chapter 3, Section 3.6.5.
- 1-49 Chapter 4, Section 4.1, has been edited to delete the term “overland,” which the commentor suggests could be confusing.

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7-33i			DHS counterterrorism operations support would include construction of new training facilities (about 10,000 square feet of floor space). In addition, RNCTEC would be operated up to the level of a Hazard Category 2 nonreactor nuclear facility, which would allow larger amounts of radioactive material in alternative configurations to be used in tests and experiments. A high-speed road, a short section of full-scale railroad line, a simulated seaport facility, and a mock urban area would also be added to RNCTEC (DOE 2004f), requiring about 125 acres of additional land in Area 6. These new facilities are still conceptual in nature and their potential locations have not been identified. An appropriate level of additional NEPA analysis (beyond this SWEIS) would be required before NNSA makes any decision regarding these facilities. P 3-35
7-33j			<b>Support for NASA</b> – NNSA would support NASA nuclear rocket motor development, including using existing boreholes to examine for proof of concept the use of deep alluvial basins for sequestering radionuclides released as part of emissions from tests of a yet-to-be-developed prototype nuclear rocket motor. Over about a 10-year period, NASA would not likely test a nuclear rocket motor, but may conduct proof-of-concept tests using a surrogate, such as spiked xenon, in a borehole to evaluate the effectiveness of the alluvium for this purpose. NNSA would identify and comply with all applicable regulatory requirements for both proof-of-concept experiments and any actual test of a nuclear rocket motor. If NASA proposes to test an actual nuclear rocket motor, additional NEPA analysis would be prepared. 3-35
7-33k			<b>New test beds</b> – Additional test beds would be developed to support research and development for sensors, high-power microwaves, and high-power lasers. New test beds (including approximately 50,000 square feet of new building spaces) would be constructed at various locations on the NNSS and would disturb approximately 200 acres of previously undisturbed land. Because there are no specific plans for construction of these new test beds at this time, additional NEPA analysis would be necessary before they could be implemented. 3-37
7-33l			Under the Expanded Operations Alternative, Mercury would be reconfigured to provide the modern facilities and infrastructure necessary to support advanced experimentation and production at the NNSS. Because the reconfiguration of Mercury is conceptual in nature, an appropriate level of NEPA analysis and documentation would be required before it could be implemented. 3-40

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- 1-50 Although subject to change, counts of buildings and other infrastructure elements are provided to give readers a sense of scale on these issues. The date reference has been moved to the beginning of the paragraph as suggested.
- 1-51 These data were obtained from NV Energy (who obtained the information from the State of Nevada Department of Employment, Training, and Rehabilitation [DETR], an official source of employment information). DOE/NNSA has obtained an updated listing of the top 20 employers in Clark and Nye Counties for 2011 from DETR. Chapter 4, Table 4-12, of this SWEIS has been updated accordingly. Regarding the grouping of employers, DOE/NNSA is grouping employers per the source (DETR). DETR has stated that most Las Vegas casinos report their information under separate limited liability companies (LLCs) at the facility level (e.g., MGM Grand Hotel, LLC); therefore, no change has been made to the grouping of employers.
- 1-52 These data were obtained from the DETR, an official source of employment information. DOE/NNSA has obtained an updated listing of the top 20 employers in Clark and Nye Counties for 2011 from DETR and Chapter 4, Table 4-13, in this SWEIS has been updated accordingly. NSTec, LLC, is no longer on the list of top 20 employers; however, Wackenhut remains in the no. 5 position.
- 1-53 DOE/NNSA recognizes that information presented in the American Indian Writers Subgroup (AIWS) text boxes are based on unique cultural perspectives and may be inconsistent with other information in the SWEIS. In this case, different perspectives on the nature of water movement and the relationship of groundwater basins have been presented. No changes have been made to this SWEIS or the AIWS text to reconcile those perspectives.
- 1-54 As reported by Kersting et al. (1998), groundwater samples taken at well ER-20-5 in 1997 contained low concentrations (from 0.0085 to 0.63 picocuries per liter, or about 4.2 percent of the Safe Drinking Water Act (SDWA) limit of 15 picocuries per liter) of plutonium, apparently associated with colloids. Well ER-20-5 is located on the southwestern part of Pahute Mesa, about 4,265 feet south of the Benham underground nuclear test and 984 feet west of the Tybo underground nuclear test. Analysis of the plutonium in the groundwater samples demonstrated that it was from the Benham test, rather than the Tybo test. Kersting et al. noted, "this is the first time Pu has been shown to be transported by groundwater and for a significant distance." A low concentration of plutonium (0.42 picocurie per liter, which is well below the EPA's SDWA limit of 15 picocuries per liter) was found in samples taken from well ER-20-5 #1 in 2004 (Eaton et al. 2007). In a study subsequent to the discovery of plutonium at

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7-33m			The analysis in this SWEIS is based on assumptions for a representative commercial solar project (West 2010). Because there is no specific proposal for a commercial solar power-generating project, additional NEPA analysis would be required to evaluate any such proposals in the future. 3-41
7-33n			Because there are no specific proposals for geothermal exploration or development on the NNSS at this time, additional NEPA analysis would be required before such work could be conducted. 3-41

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well EC-20-5, Smith et al. (2003) noted that, “general experience from the U.S. nuclear testing program based on radiochemical diagnostic data collected from a variety of test matrices suggest that only a small fraction (5 to 10 percent) of the total plutonium from an underground nuclear detonation would be available for transport in groundwater.” More-detailed information regarding the potential for plutonium migration in groundwater in and around Pahute Mesa at the NNSS has been added to Chapter 4, Section 4.1.6.2.

- 1-55 The footnotes to Chapter 4, Table 4-31, in the *Draft NNSS SWEIS* erroneously referred to a 1993, rather than 1992, sampling date. However, DOE/NNSA has since identified more-recent raw water chemistry data that have been included in this *Final NNSS SWEIS*.
- 1-56 DOE/NNSA is committed to its groundwater monitoring program and continues to expand the programs by installing new wells to be routinely sampled to gather further data for the establishment of a long-term monitoring system. To ensure public health and safety, groundwater monitoring is expected to continue for the foreseeable future. Chapter 4, Table 4-34, includes tritium analysis results from both onsite (monitoring and potable wells) and offsite wells. Note that the values in Table 4-34, consistent with the purpose of the Routine Radiological Environmental Monitoring (RREM) Program, are not meant to illustrate maximum onsite tritium concentrations. The RREM Program is focused on identifying changes in contaminant concentrations and potential movement of contaminants that could indicate threats to water supply wells. Some wells that have known high levels of radiological contamination and are not expected to change in the near term are not sampled through the RREM Program.
- 1-57 DOE/NNSA agrees that there are many more accidents than listed. Rather than list specific accidents and miss identifying important ones, this section was revised to identify the types and ranges of accidents that have occurred.
- 1-58 While the NNSS is being considered as one potential disposal site for GTCC LLW and DOE GTCC-like waste in the analyses performed for the *Draft GTCC EIS*, no decision has been made regarding disposal locations. Therefore, disposal of GTCC waste, as well as any infrastructure required to accommodate disposal, is not proposed under any alternative in this SWEIS. GTCC waste disposal is discussed in Chapter 6, “Cumulative Effects,” in this SWEIS as a reasonably foreseeable future action that would require additional NEPA review and documentation.
- 1-59 As stated in Chapter 3, Section 3.2.2.2, under the Expanded Operations Alternative, the Industrial Sites Project would operate as was described under the No Action

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Alternative, though the pace of cleanup activities could be accelerated. Thus, the draft SWEIS text in Chapter 5, Section 5.4.6.1.2.2, Environmental Restoration Program – Industrial Sites Project, is correct in stating that impacts would be similar in nature (activities would occur at the same locations, using the same processes) to the No Action Alternative, though an accelerated pace of activities could exacerbate them. The same is true for the Soils Project. As noted in numerous places within this *NNSS SWEIS*, the Environmental Restoration Program is driven by the FFACO. For this reason, the extent of characterization, cleanup, and monitoring is essentially the same under all alternatives in this *NNSS SWEIS*. The Expanded Operations Alternative does assume cleanup to background levels at several soils sites on the Nevada Test and Training Range, primarily for purposes of estimating the maximum amount of LLW that may be generated by the Soils Project.

- 1-60 In accordance with Federal and state laws, the DOE/NNSA NSO takes precautions to determine whether human remains are recent, of American Indian descent, or of European or other non-American Indian descent. The DOE/NNSA NSO has included additional information to Mitigation Measure 6 indicating that, if human remains are found and determined to be American Indian, DOE/NNSA would follow the requirements of the Native American Graves Protection and Repatriation Act and other applicable Federal laws.
- Additionally, DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.
- 1-61 As indicated in the response to comment 1-1 above, DOE's NEPA Implementing Procedures require preparation of a SWEIS, a broad-scope document that identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions for certain large multiple-facility DOE sites such as the NNSS. In accordance with 10 CFR Part 1021, an evaluation of a SWEIS is required every 5 years. DOE/NNSA determines whether an existing SWEIS remains adequate or a new SWEIS or supplement to the existing SWEIS is needed. After DOE/NNSA's initial 5-year evaluation of the *1996 NTS EIS*, a determination was made that the document continued to adequately address the environmental conditions, activities, and impacts of DOE/NNSA facilities in the State of Nevada. After conducting the second periodic evaluation of the *1996 NTS EIS*, DOE/NNSA determined that there were

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sufficient new circumstances, including environmental conditions and new potential activities, to warrant preparation of a new site-wide EIS. DOE/NNSA has prepared this SWEIS to comply with NEPA and CEQ regulations and DOE NEPA Implementing Procedures.

- 1-62 The commentor is correct that a number of the listed documents deal with safety rather than health; therefore, the heading was revised to Human Health and Safety.
- 1-63 Information regarding the Double Tracks site may be found as part of the description of Soils Project sites in Chapter 4, Section 4.1.5.4.1, of this *NNSS SWEIS*. Double Tracks is the site of a nuclear weapons safety test located on Nevada Test and Training Range about 14 miles east of the town of Goldfield, Nevada. It was remediated in 1996 to a level of less than 400 picocuries per gram of soil. This level of remediation is considered appropriate for current land use in the area. DOE/NNSA plans to conduct characterization work at the Double Tracks and the Clean Slate 1 and 3 sites during spring 2012. DOE/NNSA has and will continue to meet with the USAF and NDEP to determine the final closure scenarios for the Double Tracks and Clean Slate sites. Additional information regarding the major soils sites on the NNSS, TTR, and Nevada Test and Training Range has been added in Appendix A.
- 1-64 Emissions associated with ground disturbance from cleanup operations at TTR and Nevada Test and Training Range (including the Clean Slate 2 and 3, Project 57, and Small Boy sites) are included within the estimate of emissions from stationary sources. Note that corrective action activities at Clean Slate 1 have been completed. The potential for radiological air quality impacts associated with these cleanup operations are addressed in Chapter 5, Section 5.4.8.2.2. Emissions associated with LLW transport trucks (for disposal at the NNSS) are included within the analysis for the NNSS in Section 5.4.8, along with truck emissions originating from all other generator sites.
- 1-65 DOE uses the units of curie and rem in this *NNSS SWEIS* because they are still in common use throughout DOE and much of the radioactive materials and radiation protection profession in the United States. Additionally, their historical use makes them more familiar to the general public and facilitates the communication intended in the SWEIS. Appendix G, Section G.1.1.1, includes a conversion chart for converting traditional units to International System units.
- 1-66 DOE/NNSA acknowledges that doses from natural and manmade sources of radiation vary due to a number of factors. The data presented in this *NNSS SWEIS*, including

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the doses from radon exposure and air travel, are represented as averages among the U.S. population (NCRP 2009). The footnote to Appendix G, Table G-1, and the descriptive paragraphs in Section G.1.1.2 state that these are average doses to a person living in the United States. The footnote addressing medical exposures states that the doses vary over a wide range, depending on the procedure, and that the reported values are averages among the U.S. population. Nonetheless, Appendix G, Section G.1.1.2, was revised to indicate more clearly that the sources of background radiation vary.

- 1-67 The backlog of transuranic (TRU) waste that had been stored at the Area 5 RWMC has been shipped to the Waste Isolation Pilot Plant. The TRU waste inventory reflected in the accident analysis is not from waste, but from nuclear materials that are temporarily stored in Area 5.
- 1-68 As noted in the response to comment 1-1, above, this *NNSS SWEIS* considers potential activities at DOE/NNSA facilities in Nevada over the next 10 years. Those range from well-understood ongoing activities to potential activities that are more conceptual in nature. DOE/NNSA analyzed the more conceptual proposed actions at a programmatic level and acknowledges for each such activity that an appropriate level of NEPA review would be necessary before these actions could be implemented.

***Commentor No. 2: Peter Bergel,  
Center for Energy Research***

**Submitted:** Wednesday, August 31, 2011 - 19:10

**Name:** Peter Bergel

**E-mail (optional):** pbergel@igc.org

**Organization:** Center for Energy Research

**Comment:**

We have long believed that this site should be used for two functions:

1. Experimental procedures seeking the best way to neutralize nuclear waste for the astronomical lengths of time necessary.
2. Solar and wind installations to produce renewable energy for use in Southern Nevada. If NTS were used this way, it could begin to rectify the enormous damage the above- and below-ground testing of nuclear weapons there did for many decades.

2-1

2-1

DOE/NNSA notes the preferences of the commentor for use of the NNSS. As stated in Chapter 1, Section 1.2, the purpose and need for continued operation of the NNSS and offsite facilities in Nevada is to support DOE/NNSA's core missions established by Congress and the President. DOE/NNSA needs to meet its obligations to ensure a safe and reliable nuclear weapons stockpile, support other national security programs, characterize and/or remediate areas of the NNSS and offsite locations previously contaminated as a result of the Nation's nuclear weapons testing program, and provide for the disposal of LLW and MLLW from across the DOE complex. In addition, DOE/NNSA must meet the mandates of Executive Orders 13212, *Actions to Expedite Energy-Related Projects*, and 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, as well as the Energy Independence and Security Act of 2007 (P.L. 109-58). Accordingly, DOE/NNSA's purpose and need also is to satisfy the requirements of these Executive Orders and comply with congressional mandates to promote, expedite, and advance the production of environmentally sound energy resources, including renewable energy resources such as solar and geothermal energy systems. Although implementing the commentor's limitations for activities at the NNSS would not meet DOE/NNSA's purpose and need, it is important to note that the preferred activities are compatible with it.

**Commentor No. 3: Jeni L Martell**

**Submitted:** Saturday, September 17, 2011 - 10:41

**Name:** Jeni L Martell

**E-mail (optional):** jlmartell74@aol.com

**Organization:** US Citizen

**Comment:**

Please use common sense, undercut greed and make the environment the priority! || 3-1

Thank you, Jeni

3-1 DOE/NNSA considers the NEPA process, and consideration of the environmental effects of proposed activities, to be a crucial component in its decisionmaking process.

**Commentor No. 4: Jeannie Jackson**

**Submitted:** Saturday, September 17, 2011 - 14:57

**Name:** Jeannie Jackson

**E-mail (optional):** jjackson4444@yahoo.com

**Organization:** not much

**Comment:**

Could you also please stop sending America's finest to die in the Middle East?  
After 17 years, God gave me a miracle of the world's best son (that's alive and here on earth) and Obama has sent him to die in the world's war zone (Afghanistan) for his fourth trip. One of these days the military intelligence in the Middle East is going to be par with ours, and we're in big trouble.

4-1

4-1 This comment is not within the scope of this SWEIS.

**Commentor No. 5: Craig Houx**

**Submitted:** Friday, December 2, 2011 - 15:06

**Name:** Craig Houx

**E-mail (optional):**

**Organization:**

**Comment:**

It is imperative that the Nevada Test Site be decommissioned, and not used for future weapons testing. The contamination to the planet from seventy- five years of atomic, nuclear, and other weapons testing has contributed to the severe degradation of the air, water, and land on this earth.

|||  
5-1

5-1

The commentor's opposition to nuclear weapons testing and concerns regarding environmental contamination are noted.

**Commentor No. 6: Jack Valero**

**Submitted:** Saturday, September 17, 2011 - 10:51

**Name:** Jack Valero

**E-mail (optional):**

**Organization:**

**Comment:**

Gentlemen,

I believe extending the deadline for 90 days longer will stimulate more conversation as regards to the DOE/NNSA use of the site and perhaps other potential ideas that are appropriate. Rather than continue to use it as a site to test explosive devices, continuing to kick radiation laden dust into the atmosphere, it is time to consider a national test site for alternative energy. Large scale solar experiments could be accomplished at the site, please consider such an idea. Just as the site was used during the Cold War to protect America's security, today's security requires less use of fossil fuels and this site could again lead the way. Thank you.

Sincerely,

Jack Valero

6-1

6-1 DOE/NNSA recognizes the importance of renewable energy sources to our Nation. The stated purpose and need for agency action discussed in Chapter 1, Section 1.2, of this SWEIS, includes a significant commitment to satisfy the requirements of Executive Orders 13212, *Actions to Expedite Energy-Related Projects*, and 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, as well as the Energy Independence and Security Act of 2007 (P.L. 109-58) to promote, expedite, and advance the production of environmentally sound energy resources, including renewable energy resources such as solar and geothermal energy systems. Chapter 4, Section 4.1.2.2.4, describes DOE/NNSA's Conservation and Renewable Energy Program at the NNSS. As stated in Sections 3.1.3.2, 3.2.3.2, and 3.3.3.2, DOE/NNSA is committed to continuing to further the conservation and renewable energy goals of the Nation. Further, under the Expanded Operations Alternative, DOE/NNSA proposes to construct a 5-megawatt photovoltaic power generation facility at the NNSS to provide a renewable energy source for its activities and provide an opportunity for development of an enhanced Geothermal Demonstration Project at the NNSS. Although a commercial entity has not proposed to do so, in the interest of furthering renewable energy development, this NNSS SWEIS analyzes potential commercial solar power generation facility construction and operation in Area 25 of the NNSS under each of the alternatives considered.

**Commentor No. 7: Vickie Gibbs**

**Submitted:** Saturday, September 17, 2011 - 14:49

**Name:** Vickie Gibbs

**E-mail (optional):**

**Organization:**

**Comment:**

I support this

II 7-1

7-1 Comment noted.

**Commentor No. 8: Robert B. Elliott,  
Sierra Club**

**Submitted:** Saturday, September 17, 2011 - 14:33

**Name:** Robert B. Elliott

**E-mail (optional):** creator3@live.com

**Organization:** Sierra Club

**Comment:**

Let's be sure we get it right.

|| 8-1

8-1 Comment noted.

**Commentor No. 9: Valerie**

**Submitted:** Saturday, September 17, 2011 - 13:55

**Name:** Valerie

**E-mail (optional):** Dorismlm@aol.com

**Organization:**

**Comment:**

Pls. sign this.

|| 9-1

9-1 No specific comment was found in this transmittal.

***Commentor No. 10: Richard Lai***  
***Nevada Desert Experience***



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

*Thank you for your work & the opportunity for  
public comment.*

*Please extend the public comment period by  
at least three months as the draft EIS is  
a large document - needs thoughtful consideration.*

*Please do not disturb previously undisturbed areas.*

*Please make the previous EIS widely available  
online & physically.*

*Please adopt the reduced use option or some combination  
that favors toward reduced use.*

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Richard Lai

Organization: Nevada Desert Experience

Mailing Address: 1400 Q #13

Sacramento CA 95811

E-mail (optional): RKMLAI@NevadaDesertExperience.org

Comment forms can be submitted by mail to:

NNSA Nevada Operations Office

NNSS SWEIS Document Manager

P.O. Box 98518

Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105

Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

- || **10-1** The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.
- || **10-2** DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).
- || **10-3** The commentator's preference for the Reduced Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Commentor No. 11: Danielle Montague-Judd**

**Submitted:** Sunday, September 18, 2011 - 22:02

**Name:** Danielle Montague-Judd

**E-mail (optional):**

**Organization:**

**Comment:**

As a concerned U.S. citizen, I ask that you please never again allow nuclear weapons testing in Nevada or anywhere else in the United States.

Thank you for considering my comment.

Sincerely,

Danielle Wanship, UT

11-1

- 11-1 Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

**Commentor No. 12: Lisa Rutherford****Submitted:** Sunday, September 18, 2011 - 19:12**Name:** Lisa Rutherford**E-mail (optional):****Organization:****Comment:**

Resumed weapons testing in Nevada is not an option most of us who live in Southern Utah will support. In fact, the majority of Utahns seems against weapons testing. We have received the effects of this in the past and do not want it anymore. The people who stand to gain from this are not the American citizens in general since we have more weapons than we hopefully will ever need. Only those who work at the facility, perhaps surrounding communities and a few other entities will benefit. There are other options for this site from what I recollect from an earlier public meeting held in the St. George area where several options for the facility were presented. I'm not against the facility completely but weapons testing - below or above ground - that could affect the quality of life for citizens who live close enough to possibly be affected is not something I support. Given our current debt crisis, there are many areas where we should look to save money, and this is one of them. Perhaps some will argue that jobs will be lost, but that will be the result of saving money in some cases. For that I am sorry. But these are times that demand tough decisions. I suppose that the people who have worked at this facility have made good money during their time there and perhaps have been wise enough to plan for a future when they are not working there. I worked for an oil company and was faced with layoffs over many years, off and on, before I left. Because of that, I planned for the possibility that I might not have that job. All people should be planning along those lines in this economic environment.

**12-1**

**12-1** Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

**12-2**

**12-2** Comment noted.

**12-3**

**12-3** While the Stockpile Stewardship and Management Program would remain prominent under all three alternatives, DOE/NNSA also considers a range of other national defense-related activities (e.g., counterterrorism, military training) in this SWEIS, as well as environmental restoration activities; renewable energy research, development, and production; and research and development programs sponsored by other governmental and private entities, including academic institutions. See the response to comment 12-1 regarding nuclear weapons testing.

**12-4**

**12-4** Comment noted.

**Commentor No. 13: Thomas Zimmerman**

**Submitted:** Sunday, September 18, 2011 - 15:20

**Name:** Thomas Zimmerman

**E-mail (optional):** tomzimmerman06@gmail.com

**Organization:**

**Comment:**

I wanted to voice my strong opposition to renewed nuclear testing in NV (or anywhere else). The ill-effects of nuclear testing have been well documented, if not well-publicized; we don't need any more "downwinders" here in Utah, and I imagine the citizens of Nevada feel the same way. Ultimately, these weapons are senselessly powerful tools for such a myopic species; their continued use, to me, marks a departure from logic, compassion and humanity.

Thank you-Thomas Zimmerman NREMT!

13-1

- 13-1 Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*.

**Commentor No. 14: Stephanie Greene**  
**Sierra Club**

**Submitted:** Sunday, September 18, 2011 - 11:11

**Name:** Stephanie Greene

**E-mail (optional):** steph-greene@hotmail.com

**Organization:** Sierra

**Comment:**

Don't you think we already have enough waste in our environment without continually adding to it. When is it going to stop. I think it's time to take action to clean it up other than to keep adding to it. I'd like to think that it could change for the benifit for our children & grandchidren. Not to mention the animals on this planet. We all have a need for food & water. How much more contamination are you going to add. Once again it's about money & the pocket that's getting filled with it.

14-1

14-1

The commentor's concerns regarding waste generation and contamination are noted. As noted in Chapter 4, Section 4.1.11.3, DOE/NNSA's pollution prevention and waste minimization initiatives entail processes to reduce the volume and toxicity of waste generated at the NNSS and offsite facilities in Nevada. The processes also ensure that proposed methods of treatment, storage, and disposal minimize potential threats to human health and the environment. These initiatives address the requirements of several Federal and state regulations applicable to DOE/NNSA operations. The goals are to minimize the generation, release, and disposal of pollutants to the environment by implementing cost-effective pollution protection technologies, practices, and policies. Pollution prevention and waste minimization components include source reduction, recycling, reuse, affirmative procurement, and employee and public awareness.

In addition to DOE/NNSA's efforts to minimize the generation of waste generation from its operations, it is important to understand that the volumes of radioactive waste considered for disposal at the NNSS are primarily from decommissioning and decontamination activities at DOE/NNSA sites, not from operational activities. Further, DOE Order 435.1, *Radioactive Waste Management*, requires that all DOE radioactive waste generators implement a Waste Minimization and Pollution Prevention Program to minimize the generation of waste.

The commentor also notes the need to clean up contamination from past activities. DOE/NNSA's Environmental Restoration Program, in compliance with the Federal Facility Agreement and Consent Order and in consultation with the Nevada Division of Environmental Protection, actively pursues characterization, remediation, as necessary, and monitoring of sites and environmental media contaminated by past nuclear weapons testing activities. Environmental Restoration Program activities are part of each of the alternatives addressed in this NNSS SWEIS.

***Commentor No. 15: Bob Brister***

**Submitted:** Tuesday, September 20, 2011 - 12:01

**Name:** Bob Brister

**E-mail (optional):** bbrister@q.com

**Organization:** Individual

**Comment:**

End nuclear weapons testing now. The possession of nuclear weapons is an international crime.

|| 15-1

**15-1**

The United States has not conducted nuclear weapons testing since September 1992. Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

***Commentor No. 16: Joann Hess***

**Submitted:** Monday, September 19, 2011 - 17:08

**Name:** Joann Hess

**E-mail (optional):**

**Organization:**

**Comment:**

More tests here make no sense. We live here! Let's use the area for something positive, like renewable solar energy!

16-1

**16-1** DOE/NNSA recognizes the importance of renewable energy sources to our Nation, and as described in Chapter 3, Sections 3.1.3.2, 3.2.3.2, and 3.3.3.2, has included renewable energy-related activities under each alternative in this SWEIS.

**Commentor No. 17: Michael J. McFarland**

**Submitted:** Monday, September 19, 2011 - 16:20

**Name:** Michael J. McFarland

**E-mail (optional):**

**Organization:**

**Comment:**

I favor Nuclear testing for both weapons and power, but only if all airborn contamination and potential subterainian contamination can be contained, to protect against water and down wind contamination.

17-1

17-1 The comment regarding nuclear-related activities and contamination control is noted.

***Commentor No. 18: Austin Somerville***

**Submitted:** Monday, September 19, 2011 - 13:21

**Name:** Austin Somerville

**E-mail (optional):** ams442@bajabb.com

**Organization:** SunRiver, St. George Retire

**Comment:**

Our neighborhood, 3,200 people, does not want any neuclear testing in Nevada.  
Please do not allow this to happen.

Austin Somerville  
4568 Cinnamon Field Cir.  
St. George, Ut. 84790

18-1

- 18-1 Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

2-38

**Commentor No. 19: J. Copyak**

**Submitted: Monday, September 19, 2011 - 01:48**

**Name:** j copyak

**E-mail (optional):**

**Organization:**

**Comment:**

please no more nuclear testing in nevada i live in st. george part of the year the other in bountiful.....my kids say no way,,my neighbors etc. our thyroids cancer etc loved ones dead please dont do this

19-1

19-1

Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

***Commentor No. 20: Gregory Voge***

**Submitted:** Tuesday, September 20, 2011 - 15:53

**Name:** Gregory Voge

**E-mail (optional):** gmvoge@yahoo.com

**Organization:** Sun River St. George resident

**Comment:**

Dear Sir/Madam,

I'm writing to express my opposition to any nuclear testing in Nevada, or elsewhere in the USA, for that matter. Please test, if you must, in some foreign country where people don't value their lives very highly. Perhaps you could evacuate an island in the Pacific, such as Bikini Atoll, and do your testing there. I'm sure the native people would welcome the intrusion of Americans there as liberators.

Sincerely,

Greg Voge

20-1

20-1 Comment noted.

**Commentor No. 21: Kent Ferrel**

**Submitted:** Tuesday, September 20, 2011 - 23:41

**Name:** Kent Ferrel

**E-mail (optional):** kferrel@sunrivertoday.com

**Organization:** Retiree & resident of St George

**Comment:**

NOT A CHANCE IN XXXX!

|| 21-1

21-1 Comment noted.

***Commentor No. 22: Tracy Moore***

**Submitted:** Wednesday, September 28, 2011 - 14:25

**Name:** tracy moore

**E-mail (optional):** zenbly27@hotmail.com

**Organization:** private citizen

**Comment:**

i urge the DOE/NNSA to utilize the Nevada National Security Site for renewable energy pursuits, especially solar. Nevada's cloudless skies are perfect for such energy generation, and the NNSS is an obviously perfect location. thank you

||| 22-1

22-1

DOE/NNSA recognizes the importance of renewable energy sources to our Nation and, as described in Chapter 3, Sections 3.1.3.2, 3.2.3.2, and 3.3.3.2, has included renewable energy-related activities under each alternative in this SWEIS.

***Commentor No. 23: Ilene Hacker***

**Submitted:** Monday, September 26, 2011 - 20:55

**Name:** Ilene Hacker

**E-mail (optional):** hacker@infowest.com

**Organization:** Downwinders of Southern Utah

**Comment:**

I am against any further nuclear testing of any kind at the Nevada National Security Site. I was unable to attend the meeting in St. George, Utah on 9-22-11. My father, Orvil D. Wardle, died of Pancreatic Cancer due to the fallout from the Nevada Test Site ib 01-18-78. The check from the government issued to my mother did not bring my father back. This small token did nothing to change the fact that we lost this wonderful man. Please stop testing, stop allowing your radiation to destroy mankind and the environment; the risk is too high. I have lost faith in your promises to keep us safe in our area. We all realize your meetings are just a smoke screen. We have grown tired of the lies from our own government.

What are you going to do to help those people currently suffering the effects of tests in the past at the NTS; many are now very ill and need help to pay their medical expenses. How can they get funding from the government to pay for their mounting bills due to negligence of the US government?

It is so disappointing to be unable to trust our own government. I'm sure you've heard this all before. We have all grown tired....I am sure you are tired too, of listening to our complaints.

Let's get some funding for those currently suffering the ill effects of tests from the past. Please stop testing at the NNSS now to prevent any further health problems and death.

23-1

23-1 Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

23-2

23-2 Congress has implemented the Radiation Exposure Compensation Act on October 5, 1990. The act's scope of coverage was broadened in 2000. The act presents an apology and monetary compensation to individuals who contracted certain cancers and other serious diseases following their exposure to radiation released during atmospheric nuclear weapons tests. Under this act, people who lived or worked downwind of aboveground nuclear weapons tests in certain counties in Utah, Nevada, and Arizona for at least 2 years during certain periods between 1951 and 1962, and who later develop certain medical conditions, may be entitled to a payment of \$50,000.

***Commentor No. 24: Richard Lai***  
***Nevada Desert Experience***

**Submitted:** Monday, September 26, 2011 - 16:58

**Name:** Richard Lai

**E-mail (optional):** rkmlai@nevadadesertexperience.org

**Organization:** Nevada Desert Experience

**Comment:**

- 1) Please extend the comment period as few currently even know about the comment period (ending October 27th) and the Statewide Environmental Impact Statement for the Nevada National Security Site (formerly the Nevada Test Site) is a large document at almost 1,700 pages.
- 2) Please do not disturb previously undisturbed lands,
- 3) Please make the previous EIS available on the internet and physically,
- 4) Please choose the "Reduced Operations Alternative The Reduced Operations Alternative reflects diminished activity levels, as well as decommissioned facilities and areas at the NNSS and other offsite locations in Nevada. The Reduced Operations Alternative includes continued implementation of previous NEPA decisions, but may not retain all capabilities from those decisions. No new projects or facilities are proposed under the Reduced Operations Alternative. Operational levels would be reduced relative to the No Action Alternative, and geographical and organizational constraints would be placed upon some activities under the Reduced Operations Alternative." or even
- 5) Please respect the Treaty of Ruby Valley [http://en.wikipedia.org/w/index.php?title=Treaty\\_of\\_Ruby\\_Valley\\_%281863%29&oldid=377521689](http://en.wikipedia.org/w/index.php?title=Treaty_of_Ruby_Valley_%281863%29&oldid=377521689) by cleaning up the test site and leaving.

24-1

24-2

24-3

24-4

- 24-1** The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.
- 24-2** DOE/NNSA has made the *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (1996 NTS EIS)* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).
- 24-3** The commentor's preference for the Reduced Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *NNSS SWEIS*.
- 24-4** As described in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2, DOE/NNSA, in coordination with NDEP, would continue to comply with the FFACO to characterize, monitor, and remediate contaminated areas, facilities, soils, and groundwater on the NNSS. In the *1996 NTS EIS*, DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In its December 9, 1996, *NTS EIS ROD* (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities other than LLW/MLLW management, which was to continue under the Continue Current Operations Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Based on these previous decisions and the ongoing need to conduct a wide range of activities at the NNSS in support DOE/NNSA's and other agencies' missions and programs, closing the NNSS and leaving is not considered a reasonable action.

2-44

**Commentor No. 25: Elizabeth Bancroft**

**Submitted:** Friday, September 23, 2011 - 11:40

**Name:** Elizabeth Bancroft

**E-mail (optional):** betsy.bancroft@suu.edu

**Organization:**

**Comment:**

Please consider the health of my young daughter and all children in Iron County, Utah and do not choose the Expanded Operations Alternative. I know many people throughout Southwestern Utah who were negatively affected by nuclear tests in Nevada and I have no wish to join them. Please do not expand operations at the DOE/NNSA Nevada National Security Site or other off-site locations.

25-1

- 25-1** As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Commentor No. 26: Janet Webb**

**Submitted:** Saturday, July 23, 2011 - 11:56

**Name:** Janet Webb

**E-mail (optional):** airedalemom@gmail.com

**Organization:** self

**Comment:**

I support the NNSS Draft SWEIS.

|| 26-1

26-1 Comment noted.

2-46

**Commentor No. 27: Cathleen**

**Submitted:** Tuesday, July 26, 2011 - 18:21

**Name:** Cathleen

**E-mail (optional):**

**Organization:**

**Comment:**

On page S-2, in the gray box, you might want to reword the first sentence. Really, "Since the beginning of time..." As a geologist, I know that the beginning of time was 4.5 billion years ago. Were the first Native Americans really here then? This sentence should say something along the lines of "Since xx,xxx years ago..." I'm sure you can find someone in your organization that can give you a better number.

27-1

- 27-1 The text in the gray boxes was developed by the Consolidated Group of Tribes and Organizations (CGTO) and represents their unique cultural perspectives. DOE has agreed not to change the CGTO text so that those cultural viewpoints can be accurately reflected and considered.

**Commentor No. 28: Jeremy Maxand**

**Submitted:** Friday, October 28, 2011 - 15:19

**Name:** Jeremy Maxand

**E-mail (optional):** jmaxand@hotmail.com

**Organization:**

**Comment:**

The NNSA should decommission the Nevada Test Site. No future nuclear weapons testing should be conducted at the NTS. Closing the test site would send the right message to other countries, save national resources, protect the public by ensuring contamination isn't deployed by future activity, and move us closer to ending an era of nuclear proliferation. The US has failed to take responsibility for the health impacts to US citizens for past nuclear weapons testing and to continue to pump money into the NTS, without compensating downwinders, is immoral, unethical, and should be criminal. Close the NTS.

28-1

28-2

**28-1** In the *1996 NTS EIS* (DOE EIS-0243, August 1996), DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In the *1996 NTS EIS*, DOE also considered discontinuing all defense-related and most Work for Others Program activities at the NNSS (Alternate Use of Withdrawn Lands Alternative). Because discontinuing operations at the NNSS was previously considered and DOE decided in 1996 to continue to operate the NNSS at an expanded level, in addition to the continuing need for the NNSS for National Security/Defense Mission programs, both closing the NNSS and discontinuing National Security/Defense Mission programs, projects, and activities are considered unreasonable alternatives at this time. Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0. Although conducting a nuclear weapon test is not included as part of any alternative in this *NNSS SWEIS*, many of the other evolving DOE/NNSA missions and programs at the NNSS are critical to national security.

**28-2** Congress implemented the Radiation Exposure Compensation Act on October 5, 1990. The act's scope of coverage was broadened in 2000. The act presents an apology and monetary compensation to individuals who contracted certain cancers and other serious diseases following their exposure to radiation released during atmospheric nuclear weapons tests. Under this act, people who lived or worked downwind of aboveground nuclear weapons tests in certain counties in Utah, Nevada, and Arizona for at least 2 years during certain periods between 1951 and 1962, and who later develop certain medical conditions, may be entitled to a payment of \$50,000.

### Commentor No. 29: Kennon B. Raines

**Submitted:** Monday, October 24, 2011 - 04:45

**Name:** Kennon B. Raines

**E-mail (optional):**

**Organization:** Human Family and American Citizen

**Comment:**

Follow positions of the Consolidated Group of Tribes & Organizations; Draft SWEIS should be supplemented to provide necessary info that is missing IE: current levels of Test Site contamination, Provide Test Site Budget figures, Provide info on plans to address range fires and flash flooding to prevent off-site contamination; & DO NOT DISTURB new lands or contaminated areas. I support all Tribal demands for use/access and environmental protections. STOP ALL NUCLEAR TESTING & TRANSPORTATION...LEARN FROM FUKISHIMA!!!!!!!!!!!!!!

29-1

29-2

29-3

**29-1** American Indian groups were invited to participate in the preparation of this SWEIS, in accordance with DOE Order 144.1, *Department of Energy American Indian Tribal Government Interactions and Policy*. As part of the DOE/NNSA NSO American Indian Consultation Program, DOE/NNSA has for many years worked closely with American Indian tribes with cultural affiliations with the NNSS through the Consolidated Group of Tribes and Organizations (CGTO). DOE/NNSA carefully reviews and considers CGTO recommendations to evaluate compatibility with DOE missions and proposed undertakings. The DOE/NNSA NSO responds and/or incorporates CGTO recommendations to the extent practicable as part of this long-standing American Indian Consultation Program. Additional information regarding tribal involvement is included in Chapter 1, Section 1.6, Cooperating Agencies/Tribal Involvement.

**29-2** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe the current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively.

Chapter 6, Section 6.3.6.2, also has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires.

As described in Chapter 4, Section 4.1.6.1, of this *NNSS SWEIS*, most of the NNSS surface drainage is in closed basins (i.e., Yucca Flat and Frenchman Flat) and remains on site. The primary portions of the NNSS that have drainage that may flow off site in the event of a large precipitation event or series of events are the western

***Commentor No. 29 (cont'd): Kennon B. Raines***

and far southwestern portions of the site. There are no areas of substantial surface contamination within this drainage area. Chapter 5, Sections 5.1.6.1.1, 5.1.6.1.2, and 5.1.6.3, have been revised to more clearly describe the potential for offsite impacts on surface waters from DOE/NNSA activities at the NNSS.

DOE/NNSA's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, DOE/NNSA tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

- 29-3 DOE/NNSA appreciates the interest and evaluates input from CGTO in undertakings that occur on the NNSS. Since the inception of the DOE/NNSA NSO American Indian Consultation Program, CGTO has submitted recommendations collectively to the DOE/NNSA NSO, which in turn reviews each recommendation carefully for implementation whenever possible. DOE/NNSA provides access to CGTO tribal members for visits to the NNSS and its many culturally significant locations. These visits have included overnight camping at areas identified by CGTO for further study. Such visits will continue to be provided as part of the American Indian Consultation Program under the safeguards and security protocols of DOE/NNSA, which are designed to allow public visitation of the NNSS without hindering its national security activities while continuing to protect the offsite public. Environmental protection and cleanup of previously contaminated areas continues to be a high priority at NNSS. Since 1992, no nuclear weapons testing has occurred at the NNSS. Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

***Commentor No. 30: George T. Rowe, Chairman  
Board of County Commissioners, Lincoln County, Nevada***



***Board of County Commissioners***

***Lincoln County, Nevada***

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**COUNTY COMMISSIONERS**

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**DISTRICT ATTORNEY**

Daniel M. Hooge

**COUNTY CLERK**

Lisa C. Lloyd

December 5, 2011

Attn: Linda M Cohn, SWEIS Document Manager  
NNSA Nevada Site Office  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

RE: Comments on the Draft Site-Wide Environmental Impact Statement (EIS) for the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) Nevada National Security Site (NNSS) and Offsite Locations in the State of Nevada

Dear Ms Cohn:

The Board of Lincoln County Commissioners has reviewed the Draft Site-Wide Environmental Impact Statement (EIS) for the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) Nevada National Security Site (NNSS) and Offsite Locations in the State of Nevada and offers the following comments thereto. At the outset it is important to note that for many decades Lincoln County has maintained an excellent working relationship with the Department of Energy and its predecessor agencies. The County has strived to establish a similar relationship with the NNSSA. The comments offered by Lincoln County are intended to assist DOE/NNSA to design and implement critical energy and national security initiatives at the Nevada Test Site which improve the well-being of our great Nation while also protecting the health and welfare of Lincoln County residents. Finally, Lincoln County seeks to work with DOE/NNSA to develop and implement strategies which seek to maximize the economic and fiscal benefits to Lincoln County from activities at the Nevada Test Site.

Lincoln County's specific comments to the Draft Site-Wide EIS follow:

1. S.1.2 States the purpose and need for agency actions is to support NNSS core mission established by Congress and the President. The Lincoln County Commission supports the basic mission.

**30-1**

**30-1** The comment has been noted and DOE/NNSA looks forward to continue to work with Lincoln County in a mutually beneficial association.

**30-2**

**30-2** The commentator's support for the continuation of the agency mission is noted.

**Commentor No. 30 (cont'd): George T. Rowe, Chairman  
Board of County Commissioners, Lincoln County, Nevada**

2. The Expanded Operations Alternative to Land Use Zones as illustrated in Figure S 3 of the summary changes Area 15 from reserved to research. The Zone change includes research, testing and experiments. The Lincoln County Commission believes that the Land Use Change should include the National Energy Park Concept. Projects should include Research, Engineering, Testing, Demonstration, and include Feasibility and Cost Analysis. Project focus needs to highlight production of cost effective, clean energy that requires low water consumption. Research should include Clean Coal technology and Low Water consumption Nuclear Power generation.
3. The Lincoln County Commission Supports the Expanded Option Alternative for the development of Areas 5 and 3, while not specifically endorsing the expansion of low-level and mixed waste disposal operations. These areas would be used to dispose of 48 million cubic feet of Low Level radioactive waste and 4 million cubic feet of mixed low level radioactive waste. The expansion will diversify Nevada job opportunities by providing a minimum of 625 new full time jobs.
4. Lincoln County strongly supports the unique national security capabilities of the NNSS. In this regard, the EIS should consider expansion of Research and Development (R&D) activities specifically including one or more small research reactors, perhaps co-located with one or more linear accelerator and radiochemistry laboratories. This would enable the expansion of existing missions and creation of new missions. This expansion of research and development activities should include support of deep space missions by developing improved Radioisotope Thermal Generators (RTGs) and improved propulsion systems and production of the materials needed to power these systems. In addition, these same and other capabilities could support expanded R&D involving the production of a range of isotopes for medical, national security, and industrial purposes.
5. The expanded mission should also include utilization of existing facilities to the maximum extent possible, specifically facilities that are currently scheduled for Dismantle and Disposal (D&D). This would include the Engine Maintenance and Disassembly facility (EMAD) which is perhaps the largest hot cell in the world and would cost billions of dollars to replace. The suitability for repairing and improving EMAD for use in support of national security missions including expansion of nuclear separations research and processes should be thoroughly analyzed in this EIS. The use of EMAD and other facilities for a wide range of activities including nuclear forensics, cargo imaging and radiography, accelerator transmutation research, and coupled research involving accelerators and research reactors should also be included in the Expanded Operations Alternative.
6. The Expanded Operations Alternative under Waste Management 6.3.11 allows for a total of 52 million cubic feet of Low Level waste and Mixed Low-Level radioactive waste to be received on the NNSS for disposal. The amount of truck shipments will increase dramatically. Routes through densely populated areas of Southern Nevada would create risk of increased congestion and accidents. Inter-Modal (mostly rail to truck) from an area near Caliente, moving west on US Highway 93 to Nevada Highway 375 near Crystal Springs and onto areas 3 and 5 by a route through the Nevada National Test and Training Range would impact the fewest people. The road leaving 375 into the Nevada

- 30-3 As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*. The land use zones depicted in this *NNSS SWEIS* are intended to set priorities for categories of potential uses, but do not preclude other, nonconflicting uses. In addition to the land use zone designations, a number of other factors help to determine the location of any particular activity on the NNSS. Although DOE/NNSA provides land and infrastructure and other support for a wide range of tests and experiments and would support a "National Energy Park Concept" at the NNSS, there are currently no proposals for such a facility. Further, the location of any facility or activity would be subject to a number of siting criteria, such as the need for access to public roadways, access to secure areas by uncleared personnel, terrain issues, and potential conflicting activities.
- 30-4 Comment noted.
- 30-5 The activities described under the three alternatives in this *NNSS SWEIS* represent the range of activities and operating levels that may occur at the NNSS over the next 10 years. At this time, there are no plans for development of the capabilities envisioned in the comment. If such capabilities are proposed in the future, they would be subject to NEPA review.
- 30-6 The DOE/NNSA NSO's policy is to place new projects in facilities, if the facility meets the project requirements or can be modified with reasonable effort to meet the requirements of a new project. When there are projects that have specific requirements that cannot be met by locating them in an existing facility, DOE/NNSA would propose development of a new facility and undertake all appropriate evaluations, including National Environmental Policy Act review, before proceeding with implementation.
- DOE/NNSA appreciates the commentor's suggestions for potential uses of the Engine Maintenance and Disassembly Facility (EMAD). EMAD is currently in cold and dark status (i.e., no utilities are operating and power has been shut off). DOE/NNSA has conducted some minor remediation activities, including asbestos removal and draining of liquid from process lines, within the EMAD. Full investigation and demolition activities are currently planned to start in fiscal year (FY) 2018 and be completed in FY 2021. Until that time frame, EMAD remains available if an approved alternative use can be identified.

The Expanded Operations Alternative includes the currently envisioned upper range of activities that may be undertaken at the NNSS and other DOE/NNSA facilities within

***Commentor No. 30 (cont'd): George T. Rowe, Chairman  
Board of County Commissioners, Lincoln County, Nevada***

Test Range would require an upgrade of the surface with asphalt or cement to accommodate heavy haul trucks. Consideration of this route through central Nevada, either through the Range Complex, or around the northern side of the Range would address risk concerns and perceived risks, and would save money and time and provide a safe secure route to areas 3 and 5.

7. Significant resources should be made available to local emergency responders and public safety officials for training and associated equipment necessary to properly respond to emergencies that may be associated with NNSS activities and transportation programs. Resources should also be made available from shipping sites to compensate for the burden associated with this activity. These resources should be used for technology oriented economic diversification both on and off the Site and in support of the University Of Nevada Research and Development including technology to mitigate the risk associated with waste disposal operations.

8. Support for expanded low-level and mixed waste activities may be possible if DOE takes the appropriate advance and continuing actions to mitigate risks and address concerns of the general public, emergency responders, public safety officers, environmental and regulatory officials and others such as technical experts now available within the University of Nevada system. This would include the use of transportation routes and modes that minimize risks and transportation through populated areas and the use of advanced technologies for waste stabilization and disposal.

9. The Lincoln County Commission is concerned about possible health effects that could occur and have occurred in the past. The Draft EIS states that monitoring data is gathered concerning releases of radionuclides to the environment from all sources. Collected data estimates that maximally exposed individual doses have ranged from 2.0 to 2.9 millirems per year. This amounts to only a small dose of about 310 millirems than an individual receives from background sources of radiation. On the surface this seems to be a relatively small exposure to the people of Lincoln County. The Lincoln County Commission suggests an accurate assessment of risk can be made unless a complete Baseline Health Risk Assessment is made in Lincoln County that includes atmospheric and underground testing that began in the 1950s. Soils testing needs to be completed in order to establish accurate data that takes Down-Winder contamination into consideration.

10. DOE should engage major stake holders in research that will confirm and dispel years of misconceptions and myths about the Nevada Test Site/NNSS. A program that involves the Nuclear Waste Oversight Program of Lincoln County should be funded to contract independent research on Down-Winder issues and other issues that are important to establish cumulative impacts of the NNSS. This should be accomplished through Consultation and funding of Cooperating Agency Status programs for Lincoln County.

11. The major concern of the Lincoln County Commission is the safety of the people we represent. Through positive engagement we believe that our people can safely participate in the economic advantages at the NNSS. Lincoln County wants to be part of the solution for safe growth and development of real job diversification.

**30-7  
cont'd**

**30-7**

the State of Nevada over the next 10 years. Those activities include nuclear forensics, tests and experiments for development of cargo imaging and radiography, and many other activities to support national security. Although none of these potential activities are proposed for EMAD, they could be conducted at other existing NNSS facilities.

**30-8**

As described in Chapter 1, Section 1.4, although an analysis of LLW/MLLW shipping routes is included in this SWEIS, decisions on routing will not be made as part of this NEPA process. DOE/NNSA sought to understand the differences in potential environmental effects between different routing options that incorporated changes to local transportation infrastructure since the 1996 NTS EIS (DOE EIS-0243, August 1996), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. Analyses of a Constrained Case (current routing protocol) and an Unconstrained Case (utilizing all routes within the Las Vegas Valley), as well as increased use of rail transport and rail-to-truck transfer stations, was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste through metropolitan Las Vegas, Nevada. Any future changes to transportation routings will be made by revisions to DOE/NNSA's waste acceptance criteria. Section 1.4 has been clarified in this regard.

**30-9**

DOE/NNSA also notes that, for safety and security reasons, the USAF restricts vehicle movement on the Nevada Test and Training Range; therefore, a route across the range would not be allowed.

**30-10**

**30-8** DOE/NNSA recognizes the increased burden placed on local community emergency responders by its transportation of radioactive wastes and materials and has established a mechanism to mitigate those burdens. For over a decade, DOE/NNSA has placed a surcharge on each cubic foot of radioactive waste that is shipped to the NNSS for disposal. Those monies are provided to the State of Nevada for distribution as grants to six counties, including Lincoln County (the commentator). The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada. Additional information has been provided in Chapter 6, Section 6.3.3, to address the cumulative impacts on local governments.

**30-11**

**30-12**

***Commentor No. 30 (cont'd): George T. Rowe, Chairman  
Board of County Commissioners, Lincoln County, Nevada***

I trust these comments to be of assistance in helping DOE/NNSA to continue its important operations in a manner mutually beneficial to Lincoln County, the State of Nevada, and the United States of America.

Sincerely,



George T. Rowe  
Chairman

Cc:  
 Senator Harry Reid  
 Senator Dean Heller  
 Congressman Joe Heck  
 Congressman Mark Amodei  
 Congresswoman Shelley Berkley  
 Stacy Crowley, Director Nevada Energy Office  
 Steve Hill, Director Nevada Economic Development Board  
 Scott Wade, Nevada National Security Site  
 Dr. Stephen Younger, National Security Technologies  
 Dr. Michael Mohar, National Security Technologies  
 Dr. Raymond Juzaitis, President National Security Technologies

**30-9** The commentor's conditional support for expanded LLW/MLLW activities is noted.

**30-10** DOE/NNSA recognizes that historical activities at the NNSS, such as atmospheric nuclear weapons tests, have resulted in exposures of offsite populations to radioactive materials. Chapter 4, Section 4.1.12.4, summarizes studies that have evaluated the doses and potential impacts of past site activities. This *NNSS SWEIS* also looks forward and evaluates potential environmental impacts associated with continued operation of the NNSS and other DOE/NNSA locations in Nevada. As a starting point, Chapter 4 presents information on the existing affected environment. In characterizing the existing human health environment, DOE/NNSA used information provided in the annual site environmental reports (available at [www.nv.doe.gov/library/publications/aser.aspx](http://www.nv.doe.gov/library/publications/aser.aspx)). The annual site environmental reports present a dose to a hypothetical maximally exposed individual (MEI) (a hypothetical individual at the offsite location that would result in the maximum radiological impact). The dose is based on exposure data collected at onsite locations and includes exposures that would result from direct exposure and radionuclides from past testing that could become airborne. These onsite locations were selected to ensure any estimated doses would exceed those that could be received by an offsite member of the public.

Additionally, DOE/NNSA supports a Community Environmental Monitoring Program (CEMP), which is administered by the Desert Research Institute (information at [www.cemp.dri.edu](http://www.cemp.dri.edu)). There are 29 CEMP monitoring stations in communities around the NNSS, including one each in Alamo, Caliente, and Pioche, Nevada. Results of the monitoring are reported on the CEMP website and in the NNSS annual site environmental reports. As reported in the annual site environmental reports, the data show no measurable evidence of offsite impact from radionuclides originating on the NNSS.

**30-11** DOE/NNSA acknowledges the commentor's offer to provide services through the Nuclear Waste Oversight Program of Lincoln County. Although not identified as a cooperating agency in this *NNSS SWEIS*, the Lincoln County Nuclear Waste Oversight Program may submit for consideration proposals to the appropriate DOE/NNSA offices for studies it believes may be useful to furthering the knowledge and understanding of past, present, and potential future impacts from DOE/NNSA activities.

**30-12** DOE agrees with the county's comment concerning the importance of the safety of the people and has implemented numerous safeguards to protect the public.

**Commentor No. 31: Robert J. Halstead, Executive Director  
State of Nevada, Agency for Nuclear Projects, Office of the Governor**

STATEMENT OF  
ROBERT J. HALSTEAD  
EXECUTIVE DIRECTOR  
STATE OF NEVADA  
AGENCY FOR NUCLEAR PROJECTS  
OFFICE OF THE GOVERNOR  
AT THE  
PUBLIC HEARING ON  
DOE'S DRAFT SITE-WIDE  
ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF  
THE DOE/NNSA NEVADA NATIONAL SECURITY SITE  
AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA  
Carson City, Nevada  
September 28, 2011

My name is Robert Halstead and I am the Executive Director for the State of Nevada Agency for Nuclear Projects. I appreciate the opportunity to provide comments on DOE's draft site-wide EIS for the Nevada National Security Site this evening. I would like to thank the DOE Nevada Site Office for scheduling a hearing here in Carson City in order to afford the residents of northern Nevada and key State of Nevada agencies the opportunity to make preliminary comments on this important draft document. My comments this evening will be brief and focus on one key issue that is of significant concern to the State of Nevada. My Agency, in conjunction with the Nevada Attorney General's Office, will be submitting detailed written comments prior to the close of the public comment period.

The State of Nevada is very concerned that the draft EIS appears to be setting the stage for abandonment by DOE of a long-standing agreement between the State and DOE whereby low-level radioactive waste (LLW) and mixed hazardous and low-level radioactive waste (MLLW) are required to be transported to the NNSS using highway routes that avoid the heavily populated Las Vegas metropolitan area. The original agreement between then-Governor Kenny Guinn and then-Secretary of Energy Bill Richardson also banned waste shipments over Hoover Dam. However, that has since become moot due to security restrictions put in place following 9/11 that ban such shipments from traversing the Dam. Under the "unconstrained routing scenario" evaluated in the draft EIS, DOE is proposing to abandon this agreement and begin shipping LLW and MLLW directly through the Las Vegas Valley using I-15, the I-15/US 95 interchange (known as the Spaghetti Bowl), and the Las Vegas Beltway. In addition, the unconstrained routing scenario would allow waste to be shipped over the new Hoover Dam bypass bridge and funnel waste into the Las Vegas metro area from the south.

I would like at this time to read a letter sent by Governor Brian Sandoval to Energy Secretary Steven Chu that addresses this issue and ask that the letter be made part of the record for this hearing.

31-1

31-1 The attachment that the commenter refers to is included as document number 34 in this Comment Response Document. In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**Commentor No. 31 (cont'd): Robert J. Halstead, Executive Director  
State of Nevada, Agency for Nuclear Projects, Office of the Governor**

[Text of the attached letter to be made part of the record]

Nevada believes that it is essential for the 1999 routing agreement to remain in place. In addition, we are proposing that the routing restrictions on LLW and MLLW shipments destined for the NNSS disposal facility be extended to include a ban on shipments through the Reno-Sparks-Carson City metro area for the same reasons that waste shipments are restricted from Las Vegas. An accident or incident involving such shipments in a major metro area of the state could have significant public health and economic consequences. The use of existing alternative routes for waste shipments to NNSS has worked exceedingly well for the past 12 years, and Nevada expects DOE/NNSA to live up to the agreement made between Governor Guinn and Secretary Richardson.

Thank you for the opportunity to comment at this hearing. The State of Nevada will be providing additional detailed comments prior to the end of the public comment period.

31-1  
cont'd

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***Commentor No. 31 (cont'd): Robert J. Halstead, Executive Director  
State of Nevada, Agency for Nuclear Projects, Office of the Governor***

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**Office of the Governor**  
September 16, 2011

**RECEIVED**

SEP 20 2011

Agency for Nuclear Projects

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Re: Transportation of Low-Level, Mixed Hazardous and Radioactive Waste

Dear Secretary Chu:

In 1999, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed that shipments of low-level radioactive waste (LLW) and mixed hazardous and radioactive waste (MLLW) being imported to the Nevada Test Site (now known as the Nevada National Security Site –NNSS) for disposal from other U.S. Department of Energy (DOE) facilities would use highway routes that avoid the heavily populated metropolitan Las Vegas area, including the interchange known as the "Spaghetti Bowl" where Interstate 15 and US 95 meet. (At the time, DOE also agreed to keep LLW and MLLW shipments off Hoover Dam, but that has since become moot because of Homeland Security restrictions that were instituted following 9/11.) This arrangement was part of a larger, albeit informal, agreement whereby Governor Guinn agreed not to challenge the Record of Decision for DOE's Waste Management Programmatic Environmental Impact Statement designating NNSS/NTS as a regional disposal site for LLW and MLLW resulting from clean-up activities at other DOE locations. In exchange, Secretary Richardson agreed to certain "equity considerations" on the part of DOE, a key one of which was the highway routing concession.

To implement the agreement, DOE instituted certain extra-regulatory mechanisms to assure that waste shipments would stay out of metro-Las Vegas and off of Hoover Dam. DOE amended its waste acceptance criteria for NNSS to specifically require that waste slated for disposal at the site must be transported there using only the agreed-upon routes. In addition, DOE increased the fee charged to waste generators for disposing material at NNSS by fifty cents per cubic foot, with the additional monies dedicated a special fund for rural local governments located along shipping routes. Those funds are used by these local governments to create and enhance their emergency preparedness and response capabilities.

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***Commentor No. 31 (cont'd): Robert J. Halstead, Executive Director  
State of Nevada, Agency for Nuclear Projects, Office of the Governor***

Hon. Steven Chu, Ph.D.  
Secretary of Energy  
U.S. Department of Energy  
Page 2 of 2

For over 12 years this arrangement has worked to the mutual benefit of DOE and the state of Nevada. Now, however, it appears that DOE/NNSS, through the vehicle of the site-wide environmental impact statement (EIS) for the test site, is considering abandoning its long-standing agreement. The draft of the EIS that was released for public comment on July 29<sup>th</sup> contains an "unconstrained" transportation scenario that assumes renewed shipments of waste along through the Las Vegas metro area along I-15, the Las Vegas beltway, the Spaghetti Bowl and the new Hoover Dam bypass bridge.

The rationale for this proposed action appears to be financial. The draft EIS postulates the use of intermodal shipments of waste to NNSS, with the material being transported from DOE's generator sites by rail and then off-loaded onto trucks at locations proximate to Interstate 15 for the last leg of the trip to NNSS. The draft EIS asserts that using I-15 and the Las Vegas beltway through metro Las Vegas is now acceptable because of improvements to the area's highway system that were not in place when the original agreement was made. This is emphatically not the case. Since 1999, the population of the Las Vegas metro area has increased exponentially. While I-15 and the beltway have undergone almost constant reconstruction over the past decade in an effort to mitigate ever-increasing traffic, congestion and gridlock continue to be major problems.

I am deeply concerned that DOE/NNSS appears to be setting the stage for abandoning the extremely successful agreement that has served the interests of both DOE and the State of Nevada exceeding well for over twelve years. I am asking that you reaffirm DOE's commitment to the routing arrangement for LLW and MLLW shipments originally agreed to by Governor Guinn and Secretary Richardson in 1999. I very much appreciate your attention to this matter.

Sincere regards,  
  
BRIAN SANDOVAL  
Governor

*Response side of this page intentionally left blank.*

***Commentor No. 32: HOME  
(Healing Ourselves and Mother Earth)***



**TEST SITE FUTURE VISION**

**TALKING POINTS ABOUT ENVIRONMENTAL IMPACTS**

**THE SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS) AND THE COMMENT PROCESS**

The comment period should be extended to allow reasonable and thorough responses.

This comment process is a welcome opening and an important opportunity for the public to help fundamentally change the direction of activities at the Nevada Test Site (now called the Nevada National Security Site, or NNSS). However, the comment period should be extended to at least 120 days to allow the public to fully explore complex issues, as well as to locate information only available in many additional referenced documents. Also, since the Dept. of Energy (DOE) does not identify their Preferred Alternative, it is more difficult to analyze the SWEIS. It should be noted that DOE did the same in 1996, but later chose the Expanded Ops Alternative in every program.

**The SWEIS structure does not provide adequate information about current environmental impacts.**

The reader needs to know all of the enormous impacts of past and current Test Site activities to the soil, water and air quality in order to quantify what "more" or "less" activity as defined in the SWI-IS would really mean.

**Cross program analysis and cost data is needed to understand and evaluate priorities.**

The SWEIS should provide enough financial budget information for the reader to evaluate the significance of specific programs, both within the Test Site mission, and relative to our economically devastated nation as a whole. There is no data in the SWEIS that shows the resource allocation in cost for each of the programs. For instance, the public has no idea what costs are incurred for the various Stockpile Stewardship experiments, or for environmental restoration projects. The SWEIS under the National Environmental Policy Act (NEPA) should provide sufficient information for an evaluation of the alternatives, and to determine whether there is an alternative that still needs to be considered, and whether a dropped alternative is justified.

**SITE-WIDE LAND USE ISSUES**

**Whenever possible, new lands should not be disturbed. Dangerous areas should also not be disturbed.**  
The Nevada desert and its inhabitants are slowly healing from over 60 years of immensely toxic and destructive human activities. Whenever not toxic to employees and others, all activities, trainings and installations should be conducted on previously disturbed lands. Undamaged land and endangered species habitat should be protected. Conversely, care must be taken to minimize disturbance where below-surface contamination would be exposed.

**Safe groundwater standards must include the needs of all living species at the Test Site.**

The document states that contaminated groundwater is acceptable, since human beings can buy bottled water.

**Shoshone and Paiute land rights, access and inclusion in decisions must be respected.**

HOME continues to insist that the U.S. follow federal and international laws in upholding the Western Shoshone Treaty of Ruby Valley, ratified by Congress in 1863. Additionally, Shoshone oppose any further ground disturbance on their treaty lands. Whenever safe, access to sacred, cultural and resource sites must be provided for traditional Native use. Tribal entities must be included in land and resource management, including historic and cultural resources.

1 | For more information, go to [www.h-o-m-e.org](http://www.h-o-m-e.org) or Facebook/HOME.MotherEarth

- 32-1 As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS, but in no event later than the final EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.
- 32-2 DOE/NNSA believes that the analyses in this *NNSS SWEIS* are sufficient to provide its decisionmakers with adequate information for making a selection among the alternatives. Chapter 4, "Affected Environment," of this SWEIS describes the current environmental conditions at the NNSS and offsite DOE/NNSA facilities in Nevada, including the residual impacts from past nuclear weapons testing activities, on all environmental resource areas. The potential impacts on the existing environment from ongoing and proposed activities are addressed in Chapter 5, "Environmental Consequences." Chapter 6, "Cumulative Effects," addresses the effects of past activities at the NNSS and nearby areas when combined with impacts from proposed and other reasonably foreseeable future actions. As discussed in more detail in responses to other specific comments by this commentator, additional information has been provided in each of these chapters to improve the reader's understanding of current environmental conditions, impacts of proposed actions, and cumulative impacts.
- 32-3 DOE/NNSA believes that cost and budget data are not necessary or useful in understanding and evaluating the environmental impacts of actions addressed in this SWEIS. Future budgets for the NNSS and its various programs are uncertain, and the costs of some future activities have not been defined yet. Therefore, budget and cost data do not provide a meaningful method for defining and distinguishing between alternatives in this SWEIS. DOE/NNSA has presented a detailed description of the activities included under each alternative, as well as the potential environmental consequences associated with implementing those activities.
- 32-4 The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology

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***TEST SITE DEFENSE MISSION - WEAPONS TESTING, DEVELOPMENT & DISMANTLING***

**Nuclear weapons programs should continue to be scaled back until eliminated completely.** The SWEIS states "The primary purpose of continuing operation of the [Test Site] is to provide support for NNSA's nuclear weapons stockpile and stewardship missions." However, these activities have been declining in recent years, and this downward trend should continue or increase. Congress has repeatedly rejected paying for new nuclear weapons designs and expanded plutonium pit production, and there has been much public discussion recently about the U.S. adopting the long-term national security goal of a nuclear weapons-free future. Further environmental damage and federal expenditure on nuclear programs is inconsistent with that goal. However, verification of compliance with international weapons treaties and reducing and dismantling aging U.S. arsenals is important, and consistent with U.S. goals.

**Expanded explosives testing and release of dangerous contaminants should not be considered.**

No resumption of nuclear or any other explosives testing should be considered, until previous contamination to soil and groundwater is fully characterized, mapped out and thoroughly analyzed. The Reduced Operations Alternative, which would disturb the soils, plant life, wildlife and surface drainage of only 430 acres for "explosive", "dynamic" and "biological" experiments, is far preferable to Current Operations at 700 acres, or Expanded Operations, which would disturb 3,335 acres. 120 additional acres should not be destroyed by the use of Depleted Uranium (DU) munitions. DU is proven to cause significant health problems worldwide, especially among children, and its use should be banned. Contamination from biological warfare experiments of training is completely unacceptable.

***ENVIRONMENTAL MANAGEMENT MISSION - NTS RESTORATION***

**A primary emphasis must be to fully characterize historical contamination and seek clean-up actions.** The amount of contamination at the Nevada Test Site and off-site locations (NTS) from the overt nuclear testing period 1952 to 1992 is enormous. Estimates of the extent of manmade radioactive contamination are on the order of 2,000–3,000 curies in the soil and 130 million curies in the groundwater. (One curie is 37 billion radiation particles per second – a dangerously high exposure). Thus, it remains an important, if not the most important program at the Test Site to fully characterize and to endeavor to clean-up the contamination.

**The surface contamination needs to be clearly illustrated.**

As the primary public document on the NTS, the SWEIS should give the public a clear picture of the level of contamination and its distribution about the NTS. The general public does not have the luxury of time to review the numerous citations within the SWEIS to track down where the contamination is. Thus, DOE must provide clear maps to show areas of contamination and the nature of that contamination. For those sites where characterization is incomplete there should be a marker to show that, so that the public knows what has yet to be done. These maps and associated text should allow a layperson to understand where is the contamination, how much, and what has yet to be analyzed. Section 4 of the SWEIS should be revised to include this information.

**The SWEIS needs to evaluate an alternative of restoring "clean" lands to public use.**

It is unclear from the SWEIS whether all of the withdrawn land is still needed for the existing missions of the NTS, and whether those missions are still important to the public. However, in order to make this assessment, information is needed regarding the contamination and if any areas are clean and suitable for public use. For example, according to the SWEIS there are about 100 radioactive soils sites and that roughly one-fifth have been "closed." Section 4 of the SWEIS does not show where the 100 sites are and which have been closed. There is some discussion of the contamination of some locations, but the picture is incomplete. It is also not explained what closed means – what is the level of clean-up at a closed site? The SWEIS should explain the nature of the soils analysis. Are samples drawn from various depths per sampling location and, if so, which elements are part of the analysis? There is mention of gamma ray monitoring; which radioactive elements does this detect?

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32-7

and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. The DOE/NNSA NSO agrees that undamaged land and endangered species habitat should be protected, and exposure of below-surface contamination should be avoided where practical, with the exception of characterization and cleanup activities.

32-8

32-5 The SWEIS does not state (or infer) that contaminated groundwater is acceptable because human beings can buy bottled water. DOE/NNSA is committed to addressing existing groundwater contamination and limiting future impacts to the maximum extent practicable. DOE/NNSA's commitment is displayed through the operation of the Routine Radiological Environmental Monitoring (RREM) Program, which samples wells, springs, and surface-water sites to ensure radionuclide levels do not exceed Safe Drinking Water Act (SDWA) standards; the Underground Test Area (UGTA) Project, which samples a network of deep wells to help determine where contaminants are present in groundwater, what direction these contaminants are moving, and how quickly; and the Community Environmental Monitoring Program (CEMP), which performs independent, annual monitoring of springs and water supplies in communities surrounding the NNSS. DOE/NNSA abides by all applicable groundwater regulations and standards.

32-9

32-6 The DOE/NNSA NSO American Indian Consultation Program works closely with Consolidated Group of Tribes and Organizations (CGTO), whose membership includes 16 culturally affiliated Western Shoshone, Southern Paiute, and Owens Valley Paiute/Shoshone Tribes. The DOE/NNSA NSO values and respects tribal recommendations presented directly to the DOE/NNSA NSO by CGTO for review prior to implementation. Those recommendations relating to access and management of cultural resources are evaluated and accommodated when practicable.

32-10

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

32-11

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**Groundwater contamination must be fully understood, defined and disclosed.**

The situation with groundwater contamination at NTS from the underground testing is similar to the soils analysis, but probably less understood. DOE has information on the initial "source term" (how much of each chemical, radioactive or not) created for a few underground explosions. This data is used to estimate the total "source term," i.e. all the underground tests, which is how the estimated 130 million curies was determined. The SWEIS does not give any data on the source term, or break down the 130 million curies into the various radioactive elements that are estimated to still exist in the groundwater.

**DOE needs to evaluate the potential spread of radioactivity from the underground explosions.**

It is unclear from the SWEIS if the DOE knows how much the contamination from the underground (and below the water table) explosions has spread. Source term data is obtained by drilling a test well near to where the underground explosion was done, so this only gives information at that location. There is a map showing the locations of the underground tests and the five "Corrective Action Units," which are groupings of these tests, so the locations of initial contamination are known. However, the SWEIS does not show to what extent the radioactive elements from these tests may have spread – being carried by groundwater movement. Tritium (radioactive hydrogen, and the fast moving contaminant) is the only radioactive element that has been measured moving from these tests near the boundary of the NTS (north western). But what of other contaminants?

**Groundwater sampling information must be clearly illustrated.**

There are a number of underground sampling wells around the NTS, which are listed in the SWEIS, and appear to be routinely tested for tritium (radioactive hydrogen) and gross alpha and beta radiation, but there is no map to show where the samples are taken. Again, good visuals are needed here so the public can clearly see where the data is taken and from which aquifer. Then, DOE can give water analysis data for the wells (perhaps in an appendix), which the public can connect to the physical location, to understand the extent of contamination based on the well system. In addition, the Underground Testing Area Project (UGTA) program discussed in the SWEIS has not produced a contamination mapping of the groundwater (like a topographical map, but with radioactive contaminants).

**DOE should verify its assumption that tritium is the only radioactive element of concern from the underground testing.**

Other than tritium, DOE appears not to have any knowledge of other contaminants from the underground tests moving in the groundwater. In fact, it is the opinion of the DOE that only tritium has significantly migrated away from the underground test locations. Thus, DOE appears to have no intention, and to our knowledge has not attempted, to test this assumption on a single underground nuclear explosion shot. Any good scientific analysis would require an experiment to confirm or refute existing theory, and this should be part of the UGTA program.

**Overall, the SWEIS should supply as complete a picture of the existing contamination in a form that is understandable.**

In general there needs to be more information in the SWEIS, even if in summary form, about the extent of contamination at NTS and off-site locations, areas of uncertainty or unknown, what actions are necessary to clean-up known contamination, and the cost for characterization and clean-up. Maps that show sampling locations and calculated results of contamination in map form should be presented. It is vital that the public has a digestible assessment of the contamination, and actions to remedy, if possible, such contamination.

**The Expanded Operations Alternative should include increased programs for Environmental Restoration.**

The NTS/NNSS region is prone to flash flooding and wild- fire that can carry contamination off-site. The SWEIS did not, but should have addressed the issue of wildfire. In the Expanded Operations Alternative there are no proposals for new or expanded Environmental Restoration activities. Additional cleanup and environmental restoration would decrease the danger of surface contamination being carried off-site in smoke from fires.

3 | For more information, go to [www.h-o-m-e.org](http://www.h-o-m-e.org) or Facebook/HOME.MotherEarth

32-12

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**32-7** DOE/NNSA acknowledges the commentor's support for treaty compliance verification activities and the potential to dismantle nuclear weapons. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*. As stated in Chapter 1, Section 1.2, Purpose and Need for Agency Action, DOE/NNSA supports the core missions established by Congress and the President. Through the NSO, DOE/NNSA needs to meet its obligations to ensure a safe and reliable nuclear weapons stockpile and support other national security programs. The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*.

**32-8** DOE/NNSA acknowledges the preference of the commentor. As noted in the response to comment 32-7 above, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative in this *Final NNSS SWEIS*. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

This *NNSS SWEIS* addresses the impacts of maintaining the readiness to conduct an underground nuclear test, but not the actual conduct of such a test. Conducting such a test is not a proposed activity under any of the alternatives in this SWEIS. DOE/NNSA would not conduct explosives or other ground-disturbing tests or experiments in areas of the NNSS that are considered to be radiologically contaminated. With regard to tests and experiments with depleted uranium and explosives, as stated in Chapter 5, Section 5.1.8.2.2, Radiological Air Quality: "Before conducting any activity that is designed to include an atmospheric release of radiological materials, NNSA/NSO would model the potential releases using CAP-88 (at a minimum, additional models may be used) and, if the results indicate a potential dose exceeding 0.1 millirem at the nearest boundary, NNSA/NSO would submit an application to construct to Nevada Bureau of Air Pollution Control (with a copy to EPA) in compliance with 40 CFR Part 61 Subpart H (Section 61.96). NNSA/NSO would ensure that the cumulative annual dose to the nearest offsite individual remains within the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) standard of 10 millirem per year."

DOE/NNSA would not use or allow the use of biological warfare agents at the NNSS. Appendix A, Section A.1.1.3, contains a more-detailed description of the use

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***ENVIRONMENTAL MANAGEMENT MISSION – WASTE TRANSPORTATION & STORAGE***

These issues are linked because cleanup involves collecting contaminated soils, equipment, etc., safely containing it, and placing it in a storage facility. The low-level waste sites at the Test Site contain much waste that has been collected and contained from the site itself. Cleanup and restoration activities at the Test Site should continue and be expanded so as to contain and isolate radiation contamination on the site and reduce the possibility of releases from the site to air and water.

However, the majority of waste stored or disposed there is from other DOE weapons complex sites nationwide. The SWEIS mentions over 20,000 truckloads in recent years. In the interest of avoiding Las Vegas, these shipments have major impacts on the small rural roads leading to the Test Site. Estimates of future waste disposal, based on 1997-2010 current levels (for both Test Site and transported waste from other DOE nuclear weapons sites), is 15 million cubic feet of Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste.

Test Site low-level waste sites should accept wastes from cleanup activities, rather than being available to take waste generated by new waste-producing projects. The Expanded Operations Alternative proposes new projects that will create more waste, and also increases the current waste production from on-going projects. The Test Site should not be seen as an unlimited waste dumping area that encourages future waste production.

***NON-DEFENSE MISSION – ENERGY USE, ALTERNATIVE ENERGY RESEARCH AND FACILITIES***

***Energy Conservation***

Research projects as well as installations of systems that conserve energy will have long-term economic, employment, and academic value. Each alternative has some level of this activity that will have benefits to the Test Site, the Western U.S., and the world. The Expanded Operations Alternative is preferred.

***Renewable Energy Research & On-Site Renewable Energy Projects***

The recommendation of using Test Site lands for small-scale energy research projects not possible elsewhere seems like a good idea. Increased demonstration projects will provide electricity that can be utilized without extending transmission lines. Research and development programs for solar power that minimize water usage are especially important to the Western U.S. These on-site development projects can also help increase development of new decentralized power sources that reduce the need for transmission lines elsewhere.

Geothermal energy production is a source of major water pollution as well as degradation of Native sacred sites. Solar and wind energy are far more appropriate for development in Nevada. We oppose geothermal development.

***Commercial Solar Energy Development***

While we support renewable energy development, large scale facilities with major transmission lines are not generally the best approach. Solar panels should be installed on NTS/NSS rooftops, over parking areas, and previously disturbed ground surfaces wherever possible. Future ground disturbance at NTS/NSS must be minimized because some areas have below-surface contamination that would be exposed. Additionally, Native Americans oppose any further ground disturbance on these desert lands treaty lands. These issues will be addressed in Solar Project-specific EIS documents in the future.

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| 32-18 |  | of biological simulants (i.e., a biologically derived substance or microorganism that shares at least one physical or biological characteristic of the biological agent it is simulating, has been shown to be nonpathogenic, and can replace the biological agent in testing, experiments, and training).  |
| 32-9  |  | DOE/NNSA agrees that Environmental Restoration is an important program at the NNSS. DOE/NNSA manages the Environmental Restoration Program at the NNSS, which includes the Soils, Underground Test Area, and Industrial Sites Projects. The current status of contaminated sites and media is presented in Chapter 4, Sections 4.1.5.4.1 and 4.1.6.2, of this SWEIS. Those sections also contain updated information regarding the current knowledge of the extent of contaminated soils and groundwater, respectively. As discussed in Chapter 1, Section 1.4, and Chapter 3, Section 3.1.2.2, these Environmental Restoration Program projects are conducted pursuant to the Federal Facility Agreement and Consent Order (FFACO) in consultation with the Nevada Division of Environmental Protection. The FFACO, among other things, provides the process for identifying and prioritizing sites that have potential historic contamination, implementing state-approved corrective actions, and instituting closure actions. Additional information concerning the NNSS Environmental Restoration Program is provided at the following website: <a href="http://www.nvenergy.gov/envmgt">www.nvenergy.gov/envmgt</a> . |
| 32-19 |  |   |
| 32-20 |  |   |
| 32-21 |  |   |
| 32-22 |  | As noted in the response to comment 32-8, above, DOE/NNSA has revised this <i>Final NNSS SWEIS</i> to enable the public to better understand the extent of surface soils contaminated by historic nuclear weapons testing on the NNSS and TTR.  |
| 32-23 |  | 32-11 Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and sensitive activities on site.<br><br>Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.   |

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As noted in the response to comment 32-8, above, DOE/NNSA has revised Chapter 4, Sections 4.1.5.4.1 and 4.1.6.2, of this *Final NNSS SWEIS* to provide further information on the current extent of knowledge of radiologically contaminated soil and groundwater at the NNSS.

- 32-12** As noted in the response to comment 32-8, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS.

As noted in Chapter 6, Section 6.3.6.2, Groundwater, the most recent estimate of the underground source term at the NNSS was about 132 million curies as of September 22, 1992, based on a 2001 study by Bowen, et al. Only a portion of this source term would be available as part of the hydrologic source term. The hydrologic source term is that portion of the overall underground source term that is available for transport in the groundwater. As noted in Appendix H, Section H.2, between 30 and 38 percent of underground nuclear tests were conducted close enough to the groundwater to potentially contribute to the hydrologic source term. Of the radionuclides produced by an underground nuclear detonation, only those that are readily soluble in water and/or are available to be transported (i.e., those not encapsulated within the melt glass in the detonation cavity or otherwise immobile) may become part of the hydrologic source term.

- 32-13** As discussed in Chapter 4, Section 4.1.6.2, DOE/NNSA samples groundwater from a large number of wells and springs both on and off of the NNSS. Groundwater samples are analyzed for a wide range of underground-nuclear-test-related radionuclides in addition to tritium. The wells that are sampled on the NNSS are located both at and near underground detonation sites (i.e., near-field) and farther downgradient, where they are strategically placed to intercept any contamination plumes originating from the underground tests.

As noted in the response to comment 32-8, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the current knowledge of the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. In addition to changes in Chapter 4, Section 4.1.6.2, Chapter 6, Section 6.3.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. Please see the response to comment 32-15 below regarding radioactive contaminants other than tritium monitored by DOE/NNSS at the NNSS.

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- 32-14** As noted in the response to comment 32-8, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS.
- 32-15** Tritium is not the only radioactive element of concern in groundwater monitoring and characterization at the NNSS, but because it was the radioactive species created in the greatest quantities during underground nuclear testing and is widely believed to be the most mobile in groundwater, it is the primary target analyte for both the UGTA Project and the RREM Program. For this reason, tritium is the primary radionuclide discussed in this *NNSS SWEIS*. However, both the UGTA Project and RREM Program analyze water samples for a wide range of underground-nuclear-test-associated radionuclides. Chapter 4, Section 4.1.6.2, has been revised to provide additional information regarding DOE/NNSA groundwater characterization and monitoring activities, including a list of specific radioactive elements for which groundwater samples are analyzed (under the subheading “Analytes Monitored by the RREM and UGTA”).
- 32-16** As noted in the response to comment 32-8, above, DOE/NNSA has included in this *Final NNSS SWEIS* additional discussion and figures related to surface soils and groundwater contamination at the NNSS.
- As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, the U.S. Department of Defense (DoD), and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NNSA, under the NNSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing and monitoring locations and resources that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing. There are a large number of contaminated sites on the NNSS, TTR, and Nevada Test and Training Range. The contaminated sites have been organized into groups called corrective action units (CAUs). Each CAU is composed of multiple corrective action sites (CASs). For each CAU/CAS, DOE/NNSA and NDEP develop specific strategies to reach an agreed-upon set of objectives to consider the CAU/CAS closed. Many CASs have already been closed, and the remainder is at some stage of the FFACO process. Figures 4–9 and 4–10 have been added to Chapter 4, Section 4.1.5.4.1, of this *Final NNSS SWEIS* to display, respectively, the approximate location of CASs that have

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been closed under the FFACO and CASs that are not yet closed under the FFACO. Figure 4–10 has been added to Chapter 4 in this *Final NNSS SWEIS* to display those CASs that have not been closed to date.

Providing specific information on remediation strategies and the status for each CAS managed under the DOE/NNSA Environmental Management Program in this *NNSS SWEIS* would not be reasonable because of the sheer volume of information. However, NDEP maintains a publicly available copy of the FFACO on its website at [www.ndep.nv.gov/boff/ffco.htm](http://www.ndep.nv.gov/boff/ffco.htm).

Although the cost of any project or activity is a factor in decisionmaking, it is not a useful discriminator of environmental impacts and is not addressed in this *NNSS SWEIS*. The actual activities that are undertaken within the NNSS Environmental Restoration Program are driven by the FFACO, but the pace of accomplishment may be affected by the level of funding appropriated by Congress.

- 32-17** As noted in numerous places within this *NNSS SWEIS*, the NNSS Environmental Restoration Program is driven by the FFACO. For this reason, the extent of characterization, cleanup, and monitoring is essentially the same under all three alternatives in this *NNSS SWEIS* (although the Expanded Operations Alternative does assume cleanup to background levels at several soils sites on the Nevada Test and Training Range, primarily for purposes of estimating the maximum amount of LLW that may be generated by the Soils Project). The pace of fulfilling the goals and requirements established in the FFACO is driven in part by the availability of funding provided by Congress.

Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires.

- 32-18** As addressed in this *NNSS SWEIS* (e.g., see Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2, as well as Appendix A, Sections A.1.2.2, A.2.2.2, and A.3.2), DOE/NNSA is conducting environmental restoration at NNSS in accordance with Federal and state statutes and regulations, including the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. The NNSS Environmental Restoration Program is organized into three projects: the UGTA Project, Soils Project, and Industrial Sites Project. The Environmental Restoration Program also addresses DOE/NNSA's Borehole Management Program. Environmental restoration

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activities would continue under all alternatives, although the pace of cleanup could be accelerated under the Expanded Operations Alternative. Under the No Action and Reduced Operations Alternatives, DOE/NSO would continue implementing the UGTA Project to characterize and monitor groundwater, develop groundwater flow and transport models, develop closure strategies, and develop up to 50 new groundwater and monitoring wells; close all identified Soils Project sites under the FFACO by the end of 2022; complete remediation, decontamination, and decommissioning of FFACO industrial sites by the end of 2018; and plug all unneeded boreholes by the end of 2013. Environmental restoration activities under the Expanded Operations Alternative include an examination of the impacts of implementing a stricter cleanup standard for certain Soils Project sites than that assumed under the No Action Alternative. The impacts include the possible generation of up to approximately 11,000,000 cubic feet of additional LLW that was assumed to be disposed at the NNSS.

- 32-19** DOE/NNSA is committed to reducing impacts associated with LLW/MLLW transportation to the NNSS.

The transportation of radioactive waste typically would occur on Federal and state highways when required. To mitigate impacts on affected Nevada counties, a grant program was established. This program is funded by DOE and administrated by the State of Nevada. The program aids the affected counties in preparing for all kinds of emergencies.

- 32-20** Disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant to the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (WM PEIS)* (DOE/EIS-0200). In accordance with the *WM PEIS* ROD (65 FR 10061) issued on February 25, 2000, DOE decided to continue onsite disposal of LLW at NNSS and certain other DOE sites and to establish regional disposal capacity at the NNSS and the Hanford Site. Specifically, in addition to disposing their own LLW, the NNSS and the Hanford Site would dispose LLW generated at other DOE sites, provided the waste met their respective WAC. DOE decided to treat MLLW at a number of DOE sites, with disposal at either the NNSS or the Hanford Site. Neither decision precludes DOE's use of commercial disposal facilities consistent with DOE Orders and policy. Only a small percentage of the LLW/MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW/MLLW is disposed of at the site where they are generated. About half of the remaining quantities are disposed of at commercial facilities.

**Commentor No. 32 (cont'd): HOME  
(Healing Ourselves and Mother Earth)**

The increase in the volume of LLW/MLLW between the No Action and Expanded Operations Alternatives is largely due to sources other than new NNSS projects or increased levels of operation at the NNSS. As shown in Chapter 5, Table 5–50, the volume of onsite-generated waste increases by 300,000 cubic feet between the No Action and Expanded Operations Alternatives. The large difference in waste disposal volumes between the two alternatives is from an assumed extensive removal of contaminated soil from cleanup activities at Nevada locations outside NNSS, with shipment to the NNSS for disposal, and to increased projections of wastes that may be shipped to NNSS from authorized out-of-state generators. The text in Chapter 3, Section 3.2.2.1, was revised to more clearly indicate the sources of the larger quantity of waste that would be disposed of under the Expanded Operations Alternative.

As addressed in Chapter 5, Section 5.1.11.2.1, of this *NNSS SWEIS*, there may be other options for addressing the soil contamination other than removing it and shipping it to the NNSS for disposal. In accordance with agreements between DOE and other Federal and state agencies, these options may include stabilization in place or use of environmental restoration disposal sites established nearer the points of contamination. The projections of wastes from out-of-state sources are considered upper-bound estimates, and their generation would depend on programmatic and regulatory decisions, funding, and other considerations that are outside the scope of this *NNSS SWEIS*. DOE Order 435.1, *Radioactive Waste Management*, requires that all DOE radioactive waste generators implement a Waste Minimization and Pollution Prevention Program to minimize the generation of waste. Although, for purposes of conservative NEPA analysis, it was assumed that the out-of-state wastes would all be disposed at NNSS, waste managers at DOE sites proactively seek to use commercial disposal facilities if the facilities are compliant, cost-effective, and have WAC under which they are able to accept the DOE waste.

- 32-21 As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.
- 32-22 The commentor's support for solar and wind energy systems that minimize the use of water and large-scale transmission lines and opposition to geothermal energy projects at the NNSS are noted. The pilot-scale "enhanced geothermal system" described under the Expanded Operations Alternative would not tap into or affect hot springs or hot groundwater (none of which have been identified on the NNSS), and thus would not be a source of water pollution or degradation of American Indian sacred

***Commentor No. 32 (cont'd): HOME  
(Healing Ourselves and Mother Earth)***

sites where hot springs emerge. The theoretical system, as described in Appendix A, Section A.2.3.2, would involve the injection of water into boreholes penetrating deep “dry” hot rock (i.e., over 356 degrees Fahrenheit) that naturally contains no mobile water, then recovering the injected water after it is heated, passing it through a steam turbine engine to generate electrical energy, and then recirculating the water back through the hot rock for reheating (i.e., a closed-loop system). As mentioned in Chapter 3, Section 3.2.3.2, and Section A.2.3.2, because there are no specific proposals for geothermal exploration or development on the NNSS at this time, additional NEPA review would be required before such work could be conducted.

- 32-23** DOE/NNSA will continue to support energy efficiency measures and smaller onsite renewable energy projects (e.g., solar-powered lighting for pedestrian walkways) at the NNSS and other facilities. Examples of such measures can be found in Chapter 4, Section 4.1.2.2.4, and Chapter 5, Section 5.1.2.2.1, of this SWEIS. DOE/NNSA has also proposed a small-scale photovoltaic energy project in Area 6 of the NNSS under the Expanded Operations Alternative. DOE/NNSA recognizes that construction and operation of commercial-scale solar power facilities can result in adverse environmental impacts and has evaluated the potential impacts resulting from several different sizes of production facilities in this SWEIS. DOE/NNSA would consider the potential environmental impacts in any future decisions related to siting a commercial solar facility at the NNSS. In addition, any commercial proposal would require additional NEPA review prior to approval to proceed. Please see the response to comment 32-4 above for DOE/NNSA’s policy regarding preferential siting of new facilities in previously disturbed areas.

**Commentor No. 33: Matt Lydon**  
**Local #525: Plumbers, Pipefitters, and HVAC Technicians**

SEP. 27, 2011 4:58PM NSTec Labor Relations NV

NO. 486 P. 1

**NNSA**  
National Nuclear Security Administration

**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

To Whom It May Concern:

I am a Business Agent for Local #525: Plumbers, Pipefitters, and HVAC Technicians. I represent approximately 2,200 piping professionals. We want to encourage the expanded operations agenda. Our membership has been a vital part of the ongoing operations and work that has taken place at the former Nevada Test Site (NTS) and now known as the Nevada National Security Site (NNSS). We believe that expanding the operations at NNSS would be vital in aiding the economic recovery in Southern Nevada by providing some long term employment.

Our members have witnessed the responsible actions of the contractors and labs that have performed work at NNSS through EPA compliance and stringent oversight by mitigating changes necessary to comply with current laws.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.  
Name: Matt Lydon  
Organization: Local #525: Plumbers, Pipefitters, and HVAC Technicians  
Mailing Address: 760 N Lamb Blvd Las Vegas, NV 89110

E-mail (optional): matt@local525.org

Comment forms can be submitted by mail to: NNSA Nevada Operations Office NNSS SWEIS Document Manager P.O. Box 96618 Las Vegas, NV 89193-8518	Comments can also be submitted by: Phone (toll-free number): 877-781-6105 Fax: 702-295-6300
--	---

DOE/NNSA will accept comments until October 27, 2011.

33-1

- The commentor's preference for the Expanded Operations Alternative and the contractors and national laboratories operating at the NNSS is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

***Commentor No. 34: Brian Sandoval, Governor  
State of Nevada***

ONE HUNDRED ONE NORTH CARSON STREET  
CARSON CITY, NEVADA 89701  
OFFICE: (775) 684-5670  
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555 EAST WASHINGTON AVENUE, SUITE 5100  
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**RECEIVED**

SEP 20 2011

Agency for Nuclear Projects

**Office of the Governor**

September 16, 2011

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Re: Transportation of Low-Level, Mixed Hazardous and Radioactive Waste

Dear Secretary Chu:

In 1999, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed that shipments of low-level radioactive waste (LLW) and mixed hazardous and radioactive waste (MLLW) being imported to the Nevada Test Site (now known as the Nevada National Security Site –NNSS) for disposal from other U.S. Department of Energy (DOE) facilities would use highway routes that avoid the heavily populated metropolitan Las Vegas area, including the interchange known as the ‘Spaghetti Bowl’ where Interstate 15 and US 95 meet. (At the time, DOE also agreed to keep LLW and MLLW shipments off Hoover Dam, but that has since become moot because of Homeland Security restrictions that were instituted following 9/11.) This arrangement was part of a larger, albeit informal, agreement whereby Governor Guinn agreed not to challenge the Record of Decision for DOE’s Waste Management Programmatic Environmental Impact Statement designating NNSS/NTS as a regional disposal site for LLW and MLLW resulting from clean-up activities at other DOE locations. In exchange, Secretary Richardson agreed to certain “equity considerations” on the part of DOE, a key one of which was the highway routing concession.

To implement the agreement, DOE instituted certain extra-regulatory mechanisms to assure that waste shipments would stay out of metro-Las Vegas and off of Hoover Dam. DOE amended its waste acceptance criteria for NNSS to specifically require that waste slated for disposal at the site must be transported there using only the agreed-upon routes. In addition, DOE increased the fee charged to waste generators for disposing material at NNSS by fifty cents per cubic foot, with the additional monies dedicated a special fund for rural local governments located along shipping routes. Those funds are used by these local governments to create and enhance their emergency preparedness and response capabilities.

34-1

34-1 In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA’s environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

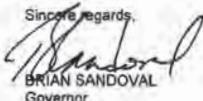
**Commentor No. 34 (cont'd): Brian Sandoval, Governor**  
**State of Nevada**

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
Page 2 of 2

For over 12 years this arrangement has worked to the mutual benefit of DOE and the state of Nevada. Now, however, it appears that DOE/NNSS, through the vehicle of the site-wide environmental impact statement (EIS) for the test site, is considering abandoning its long-standing agreement. The draft of the EIS that was released for public comment on July 29<sup>th</sup> contains an "unconstrained" transportation scenario that assumes renewed shipments of waste along through the Las Vegas metro area along I-15, the Las Vegas beltway, the Spaghetti Bowl and the new Hoover Dam bypass bridge.

The rationale for this proposed action appears to be financial. The draft EIS postulates the use of intermodal shipments of waste to NNSS, with the material being transported from DOE's generator sites by rail and then off-loaded onto trucks at locations proximate to Interstate 15 for the last leg of the trip to NNSS. The draft EIS asserts that using I-15 and the Las Vegas beltway through metro Las Vegas is now acceptable because of improvements to the area's highway system that were not in place when the original agreement was made. This is emphatically not the case. Since 1999, the population of the Las Vegas metro area has increased exponentially. While I-15 and the beltway have undergone almost constant reconstruction over the past decade in an effort to mitigate ever-increasing traffic, congestion and gridlock continue to be major problems.

I am deeply concerned that DOE/NNSS appears to be setting the stage for abandoning the extremely successful agreement that has served the interests of both DOE and the State of Nevada exceeding well for over twelve years. I am asking that you reaffirm DOE's commitment to the routing arrangement for LLW and MLLW shipments originally agreed to by Governor Guinn and Secretary Richardson in 1999. I very much appreciate your attention to this matter.

Sincerely regards,  
  
BRIAN SANDOVAL  
Governor

34-I  
cont'd

*Response side of this page intentionally left blank.*

**Commentor No. 35: Marta Adams, Chief Deputy Attorney General**  
**Office of the Nevada Attorney General**

**STATEMENT OF MARTA ADAMS, CHIEF DEPUTY ATTORNEY GENERAL  
OFFICE OF THE NEVADA ATTORNEY GENERAL  
AT THE  
PUBLIC HEARING ON DOE'S DRAFT SITE-WIDE  
ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED  
OPERATION OF THE DOE/NSSA NEVADA NATIONAL SECURITY SITE  
AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA  
Carson City, Nevada  
September 28, 2011**

My name is Marta Adams, and I am a Chief Deputy Attorney General for the State of Nevada. I appreciate the opportunity to provide the U.S. Department of Energy (DOE) with comments on the draft site-wide environmental impact statement (EIS) for the Nevada National Security Site (NNSS). My comments this evening will be brief. The Office of the Nevada Attorney General, in conjunction with the Governor's Office Agency for Nuclear Projects and other involved state agencies, will be submitting more detailed written comments prior to the end of the comment period.

First, I would like to thank DOE for holding this hearing in Carson City where it is more easily accessible to state agencies and the public here in northern Nevada. Because the draft site-wide EIS is so complex and so important in terms of charting future directions for the NNSS and for state-DOE relationships involving NNSS over the next 10 years, my Office is asking that the deadline for submitting comments on the draft document be extended for another 60 days. It seems to us that given the importance of the issues addressed in the draft EIS and the breadth and range of activities and issues covered by the various alternatives, allowing sufficient time for public comments is certainly in the interests of both DOE and the State of Nevada.

Second, a cursory review of the draft EIS indicates that critically important information may be missing from the analyses. Specifically, the discussion of groundwater contamination from past NTS/NNSS activities does not appear to be sufficient to assess the cumulative loss of this resource as a result of those activities. Nor does the information provide an adequate basis for evaluating the value of the groundwater resource which is – and will be – lost to present and future generations as a result of past, present and future contamination.

Notably, the 2011 Nevada Legislature passed a resolution tasking the Attorney General's Office, the State Department of Conservation and Natural Resources, and the Governor's Office Agency for Nuclear Projects to prepare a report for the 2013 Legislature addressing "whether Nevada could potentially receive monetary compensation from the Federal Government for contamination of the environment in Nevada with radioactive and other hazardous contaminants as a result of military

- 35-1 This *NNSS SWEIS* provides a description of groundwater at the NNSS in Chapter 4, Section 4.1.6.2, including current knowledge of the extent of radiological contamination. As discussed in Chapter 5, Section 5.1.6.2, groundwater quality would not be impacted by any of the activities proposed under any of the alternatives in this *NNSS SWEIS*. Because it is not a proposed activity in this SWEIS, DOE/NSSA analyzes the impact of past nuclear weapons testing on groundwater as a cumulative impact in Chapter 6, Section 6.3.6.2. That analysis provides a sufficient basis for differentiating among the alternatives considered for continued operation of the NNSS. In Chapter 6, Section 6.3.6.2, DOE/NSSA provides its estimation of potential cumulative environmental impacts on groundwater resources resulting from past nuclear weapons testing on the NNSS.
- Although DOE/NSSA believes the groundwater analyses in the *Draft NNSS SWEIS* provide a sufficient basis for differentiating among alternatives, in response to a number of requests, this *Final NNSS SWEIS* has been revised to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively.
- Because of the new information provided in Chapter 4, Section 4.1.6.2, DOE/NSSA has also revised the discussion of potential cumulative impacts from radiologically contaminated groundwater at the NNSS (see Chapter 6, Section 6.3.6.2).
- DOE/NSSA, in consultation with NDEP, developed a UGTA Corrective Action Strategy to address the contamination created by the testing of nuclear devices in shafts and tunnels at the NNSS. The UGTA Corrective Action Strategy is discussed in detail in Chapter 4, Section 4.1.6.2, of this *NNSS SWEIS*.
- 35-2 Groundwater resources at the NNSS, including groundwater use, depth to groundwater, recharge and discharge, water supply systems, and groundwater monitoring and quality, are described in Chapter 4, Section 4.1.6.2, of the SWEIS. Chapter 5, Section 5.1.6.2, provides estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic

**Commentor No. 35 (cont'd): Marta Adams, Chief Deputy Attorney General, Office of the Nevada Attorney General**

exercises, nuclear weapons testing and other activities conducted by the Federal Government in Nevada." Contamination from NTS/NNSS activities will of necessity be a major focus of this investigation, and the information contained in the final EIS must be such that it provides a full and complete picture of the groundwater resource that has been removed from the public domain, the level and distribution of contamination of that resource, and potential, if any, for future uses of the resource.

I would once again ask that the deadline for comments be extended to assure a full airing of the information contained in the draft EIS and adequate opportunity for State and public review and comment.

Thank you again for the opportunity to provide comments at this hearing tonight. The Attorney General's Office will be providing more detailed written comments prior to the end of the public comment period.

35-2  
cont'd

and projected future demands on this groundwater to support ongoing and proposed projects and activities under each alternative. Chapter 6, Section 6.3.6.2, analyzes the potential cumulative impacts of past nuclear weapons testing on groundwater. When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintain a Federal reserved water right at the NNSS to support its mission requirements, one of which includes complying with the FFACO to characterize and monitor locations that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

As noted in the response to comment 35-1 above, Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. As described in Chapter 3, Section 3.1.2.2, and Chapter 4, Section 4.1.6.2, groundwater characterization under the UGTA Project is a continuing effort, and information regarding groundwater contamination on the NNSS will be refined as more information is collected in the future.

**Commentor No. 36: Robin Pagewkopp**

**PLZ SCAN & EMAIL**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

My daughter is 37 years old & has lived in Las Vegas, NV for the last 10 years. She has been diagnosed with 3 times the amount of uranium than the national population. She was so ill that she has been unable to work, sleep or eat the last 3 months. She is now receiving tx of chelation and is 80% better but will need tx for many months. Her MD stated "Welcome to So. NV" when we asked where she acquired this.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Robin Pagewkopp

Organization:

Mailing Address: 9420 Water Flow Ct  
Las Vegas, NV 89134

E-mail (optional): robin.pagewkopp@abv.com

Comment forms can be submitted by mail to:

NNSA Nevada Operations Office  
NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

**36-1**

- 36-1** DOE/NNSA appreciates your sharing your daughter's experience and hopes that she continues to recover.

2-74

Commentor No. 37: William Fragosa

PLZ SCAN & E-MAIL \*



COMMENT FORM

DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA

Please print clearly

Blessings ~ Good to see more information available to the public. I can see that over the years, some (many) of the concerns we've addressed are being studied w/ implementation of programs for remediation, waste management, transportation etc... i still have concerns w/ transportation & waste management, but i will add that it seems we have been listened to over the years, and hope that public input will be highly considered when plans are made and implemented

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: William Fragosa

Organization:

Mailing Address: Po Box 53  
Tecopa CA  
93389

E-mail (optional): Wili.vegas@yahoo.com

Comment forms can be submitted by mail to:

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NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

37-1

37-1 DOE/NNSA has a sincere interest in public outreach regarding its programs and activities, as well as in receiving public input in its decisionmaking processes.

**Commentor No. 38: Darren Enns**  
**Southern Nevada Building and Construction Trades Council**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

My Name is Darren Enns. I Represent the Southern Nevada Building and Construction Trades Council. I Would Like the Record to Reflect That the Building trades is Very Much in Favor of Expanded operations at the Nevada National Security Site. The Site has been built up over the Years and Could be a Very Valuable asset If it Were used More and it would also help to employ Nevadans and others in an Economic time of Crisis. There are many uses that the Site would be Perfect for and We Support Expanded Operations.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Darren Enns

Organization: SNBCTC

Mailing Address: 1701 whitney mesa dr. Ht NV

E-mail (optional): daren@SNBCTC.org

Comment forms can be submitted by mail to:

NNSA Nevada Operations Office

NNSS SWEIS Document Manager

P.O. Box 98518

Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105

Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

38-1

- The commentator's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

**Commentator No. 39: Alfonso N. Lopez**  
**Sheet Metal Workers Local 88**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

*Southern Nevada is in desperate need of several things, but the #1 item on everyone's mind is JOBS. This state has a unique opportunity to migrate industry to boost the economy, acquire desperately needed revenue, and to give local construction workers badly needed jobs. Those are temporary in which will lead to over 600 Permanent Jobs.*

*The state for I strongly urge the DOE to support the Expanded Operations Alternative and give history a chance to repeat itself as it did during the depression when Hoover Dam was built which helped people get out of poverty. Southern Nevadans in this need to return to work.*

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Alfonso N. Lopez

Organization: Sheet Metal Workers Local 88

Mailing Address: 2560 Marco St. Las Vegas, NV. 89115

E-mail (optional): alopez@smw88.org

Comment forms can be submitted by mail to:  
NNSS Nevada Operations Office  
NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:  
Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSS will accept comments until October 27, 2011.

**39-1**

- The commentator's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this NNSS SWEIS, DOE/NNSS considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSS's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

**Commentor No. 40: Ian Zabarte, Principal Man for Foreign Affairs  
Western Shoshone Government**

Comments of the Western Shoshone Government Provided by

Ian Zabarte, Principal Man for Foreign Affairs on the

Draft Site-Wide Environmental Impact Statement for the Continued Operation of the

Department of Energy/National Nuclear Security Administration Nevada National Security Site

and Off-Site Locations in the State of Nevada

Presented September 20, 2011

Cashman Field, Las Vegas, NV

*Response side of this page intentionally left blank.*

**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

My name is Ian Zabarte. I am the Principal Man for Foreign Affairs of the government of Newe Sogobia, the land of people that has existed in the Great Basin for thousands of years. Newe Sogobia is the embodiment of the Western Shoshone people with the land.

The purpose of these comments by the government of Newe Sogobia is to provide the United States Department of Energy/National Nuclear Security Administration direction and interpretation of law, relevant to the mission established by Congress for continued management and operation of the Nevada National Security Site (formerly known as the Nevada Test Site) and other United States Department of Energy/National Nuclear Security Administration managed sites in Nevada, including the Tonopah Test Range, and environmental restoration areas on the United States Air Force Nevada Test and Training Range.

In 1863 the United States government was engaged in a civil war. The government of Newe Sogobia allied itself with the United States government to allow rights of passage across Newe Sogobia to facilitate the transportation of gold east. The Treaty of Ruby Valley (18 Statute 689) is an instrument of International Law employed as a purchase agreement for the rights sought by the United States government that were owned by Newe Sogobia. In Article 7 of the Treaty of Ruby Valley the United States acknowledged and agreed to pay for the interests owned by the government of Newe Sogobia. No other rights title or interests were sought or acknowledged to be transferred to the United States government.

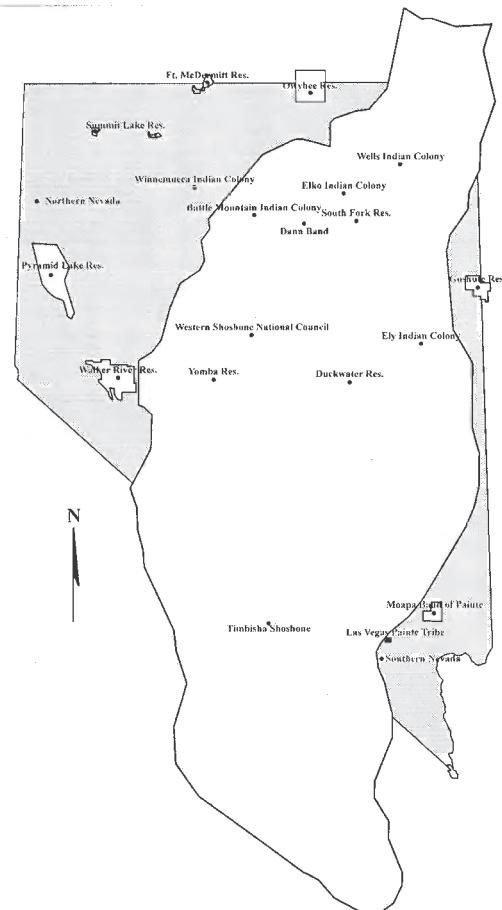
Newe Sogobia does not consent to inclusion of any part of Newe Sogobia into the boundaries or jurisdiction of any state or territory. Attached to these comments are a map and 28 pages listing of Western Shoshone lands by state, meridian, township and range (for reference purposes only and do not imply that the lands are actually a part of any state or territory) that conform to the boundaries of Article 5 of the Treaty of Ruby Valley. Any claim of right, title or interest that does not conform to the "supreme law of the land" vis a vis the treaty, are not legitimate and a violation of the organic law of the states involved.

The Western Shoshone people have a long history of experience to adverse consequence as a result of the United States aboveground and underground nuclear testing and other nuclear and nonnuclear activities conducted in support of national security objectives. It is the unfortunate experience of the Western Shoshone people that, the very measures put into place to safeguard America, subsequently mistreat Western Shoshone land and people. No single overt act or collective acts encompasses the impact to Newe Sogobia. The cumulative effect can best be characterized as negligence. The United States has engaged in a systematic process intended to dismantle the living culture of Newe Sogobia. The use of such methods in policy and practice with a disproportionate burden born by the Western Shoshone people is a serious violation of International Humanitarian Law and the Proxmire Act of 1987. The government of Newe Sogobia seeks to end, correct and prevent the continued maltreatment of Western Shoshone land and people and seeks to engage with the United States in a dialogue on the current Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site proposal to that end.

40-1

Comment noted. The DOE/NNSA NSO maintains an American Indian Consultation Program that concentrates on the protection of cultural resources and promotes government-to-government relationships with tribes and organizations (represented by CGTO, which includes 16 culturally affiliated Western Shoshone, Southern Paiute, and Owens Valley Paiute/Shoshone Tribes). The DOE/NNSA NSO values and respects tribal recommendations presented directly to the DOE/NNSA NSO by CGTO for review prior to implementation. Those recommendations relating to access and management of cultural resources are evaluated and accommodated when practicable. DOE/NNSA has provided funds for activities such as ethnographic interviews and studies, as well as monitoring of cultural resource surveys and updates on NNSS projects and activities. In addition, DOE/NNSA provides funds to enable the AIWS of CGTO to prepare evaluations and recommendations, the most recent of which appear throughout this SWEIS.

Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government



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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**LISTING OF WESTERN SHOSHONE LANDS  
BY STATE, MERIDIAN, TOWNSHIP, AND RANGE**

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH**

**RANGE 31 E.**

T. 12 N., R. 31 E.	T. 12 N., R. 31 1/2 E.	T. 13 N., R. 31 E.
T. 13 N., R. 31 1/2 E.	T. 14 N., R. 31 E.	T. 14 N., R. 31 1/2 E.
T. 15 N., R. 31 E.	T. 15 N., R. 31 1/2 E.	

**RANGE 32 E.**

T. 1 N., R. 32 E.	T. 11 N., R. 32 E.	T. 12 N., R. 32 E.
T. 13 N., R. 32 E.	T. 14 N., R. 32 E.	T. 15 N., R. 32 E.

**RANGE 33 E.**

T. 1 N., R. 33 E.	T. 2 N., R. 33 E.	T. 3 N., R. 33 E.
T. 4 N., R. 33 E.	T. 5 N., R. 33 E.	T. 6 N., R. 33 E.
T. 7 N., R. 33 E.	T. 8 N., R. 33 E.	T. 9 N., R. 33 E.
T. 10 N., R. 33 E.	T. 11 N., R. 33 E.	T. 12 N., R. 33 E.
T. 13 N., R. 33 E.	T. 14 N., R. 33 E.	T. 15 N., R. 33 E.

**RANGE 34 E.**

T. 1 N., R. 34 E.	T. 2 N., R. 34 E.	T. 3 N., R. 34 E.
T. 4 N., R. 34 E.	T. 5 N., R. 34 E.	T. 6 N., R. 34 E.
T. 7 N., R. 34 E.	T. 8 N., R. 34 E.	T. 9 N., R. 34 E.
T. 10 N., R. 34 E.	T. 11 N., R. 34 E.	T. 12 N., R. 34 E.
T. 13 N., R. 34 E.	T. 14 N., R. 34 E.	T. 15 N., R. 34 E.
T. 16 N., R. 34 E.	T. 17 N., R. 34 E.	T. 18 N., R. 34 E.
T. 19 N., R. 34 E.		

**RANGE 35 E.**

T. 1 N., R. 35 E.	T. 2 N., R. 35 E.	T. 3 N., R. 35 E.
T. 4 N., R. 35 E.	T. 5 N., R. 35 E.	T. 6 N., R. 35 E.
T. 7 N., R. 35 E.	T. 8 N., R. 35 E.	T. 9 N., R. 35 E.
T. 10 N., R. 35 E.	T. 11 N., R. 35 E.	T. 12 N., R. 35 E.
T. 13 N., R. 35 E.	T. 14 N., R. 35 E.	T. 15 N., R. 35 E.
T. 16 N., R. 35 E.	T. 17 N., R. 35 E.	T. 18 N., R. 35 E.
T. 19 N., R. 35 E.	T. 20 N., R. 35 E.	T. 21 N., R. 35 E.

**RANGE 36 E.**

T. 1 N., R. 36 E.	T. 2 N., R. 36 E.	T. 3 N., R. 36 E.
T. 4 N., R. 36 E.	T. 5 N., R. 36 E.	T. 6 N., R. 36 E.
T. 7 N., R. 36 E.	T. 8 N., R. 36 E.	T. 8 N., R. 36 1/2 E.
T. 9 N., R. 36 E.	T. 10 N., R. 36 E.	T. 10 N., R. 36 1/2 E.
T. 11 N., R. 36 E.	T. 12 N., R. 36 E.	T. 13 N., R. 36 E.
T. 14 N., R. 36 E.	T. 15 N., R. 36 E.	T. 16 N., R. 36 E.
T. 17 N., R. 36 E.	T. 18 N., R. 36 E.	T. 19 N., R. 36 E.
T. 20 N., R. 36 E.	T. 21 N., R. 36 E.	T. 22 N., R. 36 E.

**RANGE 37 E.**

T. 1 N., R. 37 E.	T. 2 N., R. 37 E.	T. 3 N., R. 37 E.
T. 4 N., R. 37 E.	T. 5 N., R. 37 E.	T. 6 N., R. 37 E.
T. 6 N., R. 37 1/2 E.	T. 7 N., R. 37 E.	T. 7 N., R. 37 1/2 E.
T. 8 N., R. 37 E.	T. 8 N., R. 37 1/2 E.	T. 9 N., R. 37 E.
T. 9 N., R. 37 1/2 E.	T. 10 N., R. 37 E.	T. 10 N., R. 37 1/2 E.
T. 11 N., R. 37 E.	T. 12 N., R. 37 E.	T. 13 N., R. 37 E.

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH**

**RANGE 37 E. cont.**

T. 14 N., R. 37 E.	T. 15 N., R. 37 E.	T. 16 N., R. 37 E.
T. 17 N., R. 37 E.	T. 18 N., R. 37 E.	T. 19 N., R. 37 E.
T. 20 N., R. 37 E.	T. 21 N., R. 37 E.	T. 22 N., R. 37 E.
T. 23 N., R. 37 E.		

**RANGE 38 E.**

T. 1 N., R. 38 E.	T. 1 N., R. 38 1/2 E.	T. 2 N., R. 38 E.
T. 2 N., R. 38 1/2 E.	T. 3 N., R. 38 E.	T. 3 N., R. 38 1/2 E.
T. 4 N., R. 38 E.	T. 4 N., R. 38 1/2 E.	T. 5 N., R. 38 E.
T. 5 N., R. 38 1/2 E.	T. 6 N., R. 38 E.	T. 7 N., R. 38 E.
T. 8 N., R. 38 E.	T. 9 N., R. 38 E.	T. 10 N., R. 38 E.
T. 11 N., R. 38 E.	T. 12 N., R. 38 E.	T. 13 N., R. 38 E.
T. 14 N., R. 38 E.	T. 15 N., R. 38 E.	T. 16 N., R. 38 E.
T. 17 N., R. 38 E.	T. 18 N., R. 38 E.	T. 19 N., R. 38 E.
T. 20 N., R. 38 E.	T. 21 N., R. 38 E.	T. 22 N., R. 38 E.
T. 23 N., R. 38 E.	T. 24 N., R. 38 E.	T. 25 N., R. 38 E.
T. 26 N., R. 38 E.	T. 27 N., R. 38 E.	T. 28 N., R. 38 E.
T. 29 N., R. 38 E.	T. 30 N., R. 38 E.	T. 31 N., R. 38 E.
T. 32 N., R. 38 E.	T. 33 N., R. 38 E.	

**RANGE 39 E.**

T. 1 N., R. 39 E.	T. 2 N., R. 39 E.	T. 3 N., R. 39 E.
T. 4 N., R. 39 E.	T. 5 N., R. 39 E.	T. 6 N., R. 39 E.
T. 7 N., R. 39 E.	T. 8 N., R. 39 E.	T. 9 N., R. 39 E.
T. 10 N., R. 39 E.	T. 11 N., R. 39 E.	T. 12 N., R. 39 E.
T. 13 N., R. 39 E.	T. 14 N., R. 39 E.	T. 15 N., R. 39 E.
T. 16 N., R. 39 E.	T. 17 N., R. 39 E.	T. 18 N., R. 39 E.
T. 19 N., R. 39 E.	T. 20 N., R. 39 E.	T. 21 N., R. 39 E.
T. 22 N., R. 39 E.	T. 23 N., R. 39 E.	T. 24 N., R. 39 E.
T. 25 N., R. 39 E.	T. 26 N., R. 39 E.	T. 27 N., R. 39 E.
T. 28 N., R. 39 E.	T. 29 N., R. 39 E.	T. 30 N., R. 39 E.
T. 31 N., R. 39 E.	T. 32 N., R. 39 E.	T. 33 N., R. 39 E.
T. 34 N., R. 39 E.	T. 35 N., R. 39 E.	T. 36 N., R. 39 E.
T. 37 N., R. 39 E.		

**RANGE 40 E.**

T. 1 N., R. 40 E.	T. 2 N., R. 40 E.	T. 3 N., R. 40 E.
T. 4 N., R. 40 E.	T. 5 N., R. 40 E.	T. 6 N., R. 40 E.
T. 7 N., R. 40 E.	T. 8 N., R. 40 E.	T. 9 N., R. 40 E.
T. 10 N., R. 40 E.	T. 11 N., R. 40 E.	T. 12 N., R. 40 E.
T. 13 N., R. 40 E.	T. 14 N., R. 40 E.	T. 15 N., R. 40 E.
T. 16 N., R. 40 E.	T. 17 N., R. 40 E.	T. 18 N., R. 40 E.
T. 19 N., R. 40 E.	T. 20 N., R. 40 E.	T. 21 N., R. 40 E.
T. 22 N., R. 40 E.	T. 23 N., R. 40 E.	T. 24 N., R. 40 E.
T. 25 N., R. 40 E.	T. 26 N., R. 40 E.	T. 27 N., R. 40 E.
T. 28 N., R. 40 E.	T. 29 N., R. 40 E.	T. 30 N., R. 40 E.
T. 31 N., R. 40 E.	T. 32 N., R. 40 E.	T. 33 N., R. 40 E.
T. 34 N., R. 40 E.	T. 35 N., R. 40 E.	T. 36 N., R. 40 E.
T. 37 N., R. 40 E.		

**RANGE 41 E.**

T. 1 N., R. 41 E.	T. 2 N., R. 41 E.	T. 3 N., R. 41 E.
T. 4 N., R. 41 E.	T. 5 N., R. 41 E.	T. 6 N., R. 41 E.
T. 7 N., R. 41 E.	T. 8 N., R. 41 E.	T. 9 N., R. 41 E.
T. 10 N., R. 41 E.	T. 10 1/2 N., R. 41 E.	T. 11 N., R. 41 E.

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.**

**RANGE 41 E. cont.**

T. 12 N., R. 41 E.	T. 13 N., R. 41 E.	T. 14 N., R. 41 E.
T. 15 N., R. 41 E.	T. 16 N., R. 41 E.	T. 17 N., R. 41 E.
T. 18 N., R. 41 E.	T. 19 N., R. 41 E.	T. 20 N., R. 41 E.
T. 21 N., R. 41 E.	T. 22 N., R. 41 E.	T. 23 N., R. 41 E.
T. 23 1/2 N., R. 41 E.	T. 24 N., R. 41 E.	T. 25 N., R. 41 E.
T. 26 N., R. 41 E.	T. 27 N., R. 41 E.	T. 28 N., R. 41 E.
T. 29 N., R. 41 E.	T. 30 N., R. 41 E.	T. 31 N., R. 41 E.
T. 32 N., R. 41 E.	T. 33 N., R. 41 E.	T. 34 N., R. 41 E.
T. 35 N., R. 41 E.	T. 36 N., R. 41 E.	T. 37 N., R. 41 E.
T. 38 N., R. 41 E.		

**RANGE 41 E.**

T. 1 N., R. 42 E.	T. 2 N., R. 42 E.	T. 3 N., R. 42 E.
T. 4 N., R. 42 E.	T. 5 N., R. 42 E.	T. 6 N., R. 42 E.
T. 7 N., R. 42 E.	T. 8 N., R. 42 E.	T. 9 N., R. 42 E.
T. 10 N., R. 42 E.	T. 11 N., R. 42 E.	T. 12 N., R. 42 E.
T. 13 N., R. 42 E.	T. 14 N., R. 42 E.	T. 15 N., R. 42 E.
T. 16 N., R. 42 E.	T. 17 N., R. 42 E.	T. 18 N., R. 42 E.
T. 19 N., R. 42 E.	T. 20 N., R. 42 E.	T. 21 N., R. 42 E.
T. 22 N., R. 42 E.	T. 24 N., R. 42 E.	T. 25 N., R. 42 E.
T. 25 N., R. 42 E.	T. 27 N., R. 42 E.	T. 28 N., R. 42 E.
T. 29 N., R. 42 E.	T. 30 N., R. 42 E.	T. 31 N., R. 42 E.
T. 32 N., R. 42 E.	T. 33 N., R. 42 E.	T. 34 N., R. 42 E.
T. 35 N., R. 42 E.	T. 36 N., R. 42 E.	T. 37 N., R. 42 E.
T. 38 N., R. 42 E.		

**RANGE 43 E.**

T. 1 N., R. 43 E.	T. 2 N., R. 43 E.	T. 3 N., R. 43 E.
T. 4 N., R. 43 E.	T. 5 N., R. 43 E.	T. 6 N., R. 43 E.
T. 7 N., R. 43 E.	T. 8 N., R. 43 E.	T. 9 N., R. 43 E.
T. 10 N., R. 43 E.	T. 11 N., R. 43 E.	T. 12 N., R. 43 E.
T. 13 N., R. 43 E.	T. 14 N., R. 43 E.	T. 15 N., R. 43 E.
T. 16 N., R. 43 E.	T. 17 N., R. 43 E.	T. 18 N., R. 43 E.
T. 19 N., R. 43 E.	T. 20 N., R. 43 E.	T. 21 N., R. 43 E.
T. 22 N., R. 43 E.	T. 23 N., R. 43 E.	T. 24 N., R. 43 E.
T. 25 N., R. 43 E.	T. 26 N., R. 43 E.	T. 27 N., R. 43 E.
T. 28 N., R. 43 E.	T. 29 N., R. 43 E.	T. 30 N., R. 43 E.
T. 31 N., R. 43 E.	T. 32 N., R. 43 E.	T. 33 N., R. 43 E.
T. 34 N., R. 43 E.	T. 35 N., R. 43 E.	T. 36 N., R. 43 E.
T. 37 N., R. 43 E.	T. 37 1/2 N., R. 43 E.	T. 38 N., R. 43 E.
T. 39 N., R. 43 E.	T. 40 N., R. 43 E.	T. 41 N., R. 43 E.
T. 42 N., R. 43 E.	T. 43 N., R. 43 E.	T. 44 N., R. 43 E.
T. 45 N., R. 43 E.	T. 46 N., R. 43 E.	T. 47 N., R. 43 E.

**RANGE 44 E.**

T. 1 N., R. 44 E.	T. 2 N., R. 44 E.	T. 3 N., R. 44 E.
T. 4 N., R. 44 E.	T. 5 N., R. 44 E.	T. 6 N., R. 44 E.
T. 7 N., R. 44 E.	T. 8 N., R. 44 E.	T. 8 N., R. 44 1/2 E.
T. 9 N., R. 44 E.	T. 9 N., R. 44 1/2 E.	T. 10 N., R. 44 E.
T. 10 N., R. 44 1/2 E.	T. 11 N., R. 44 E.	T. 11 N., R. 44 1/2 E.
T. 12 N., R. 44 E.	T. 12 N., R. 44 1/2 E.	T. 13 N., R. 44 E.
T. 13 N., R. 44 1/2 E.	T. 13 1/2 N., R. 44 1/2 E.	T. 14 N., R. 44 E.
T. 15 N., R. 44 E.	T. 16 N., R. 44 E.	T. 17 N., R. 44 E.
T. 18 N., R. 44 E.	T. 19 N., R. 44 E.	T. 20 N., R. 44 E.
T. 21 N., R. 44 E.	T. 22 N., R. 44 E.	T. 23 N., R. 44 E.
T. 24 N., R. 44 E.	T. 25 N., R. 44 E.	T. 26 N., R. 44 E.

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

**NEVADA: MOUNT DIABLO MERIDIAN - NO**

**RANGE 44 E.**

T. 27 N., R. 44 E.	T. 28 N., R. 44 E.	T. 29 N., R. 44 E.
T. 29 N., R. 44 1/2 E.	T. 30 N., R. 44 E.	T. 30 N., R. 44 1/2 E.
T. 31 N., R. 44 E.	T. 32 N., R. 44 E.	T. 33 N., R. 44 E.
T. 34 N., R. 44 E.	T. 35 N., R. 44 E.	T. 36 N., R. 44 E.
T. 37 N., R. 44 E.	T. 38 N., R. 44 E.	T. 39 N., R. 44 E.
T. 40 N., R. 44 E.	T. 41 N., R. 44 E.	T. 42 N., R. 44 E.
T. 43 N., R. 44 E.	T. 44 N., R. 44 E.	T. 45 N., R. 44 E.
T. 46 N., R. 44 E.	T. 47 N., R. 44 E.	

**RANGE 45 E.**

T. 1 N., R. 45 E.	T. 2 N., R. 45 E.	T. 3 N., R. 45 E.
T. 4 N., R. 45 E.	T. 5 N., R. 45 E.	T. 6 N., R. 45 E.
T. 7 N., R. 45 E.	T. 8 N., R. 45 E.	T. 9 N., R. 45 E.
T. 10 N., R. 45 E.	T. 11 N., R. 45 E.	T. 12 N., R. 45 E.
T. 13 N., R. 45 E.	T. 13 1/2 N., R. 45 E.	T. 14 N., R. 45 E.
T. 14 N., R. 45 1/2 E.	T. 15 N., R. 45 E.	T. 15 N., R. 45 1/2 E.
T. 16 N., R. 45 E.	T. 16 N., R. 45 1/2 E.	T. 17 N., R. 45 E.
T. 17 N., R. 45 1/2 E.	T. 18 N., R. 45 E.	T. 18 N., R. 45 1/2 E.
T. 18 1/2 N., R. 45 1/2 E.	T. 19 N., R. 45 E.	T. 20 N., R. 45 E.
T. 20 N., R. 45 1/2 E.	T. 21 N., R. 45 E.	T. 22 N., R. 45 E.
T. 23 N., R. 45 E.	T. 24 N., R. 45 E.	T. 25 N., R. 45 E.
T. 26 N., R. 45 E.	T. 27 N., R. 45 E.	T. 28 N., R. 45 E.
T. 29 N., R. 45 E.	T. 30 N., R. 45 E.	T. 31 N., R. 45 E.
T. 32 N., R. 45 E.	T. 33 N., R. 45 E.	T. 34 N., R. 45 E.
T. 35 N., R. 45 E.	T. 36 N., R. 45 E.	T. 37 N., R. 45 E.
T. 38 N., R. 45 E.	T. 37 N., R. 45 E.	T. 39 N., R. 45 E.
T. 37 N., R. 45 E.	T. 40 N., R. 45 E.	T. 37 N., R. 45 E.
T. 41 N., R. 45 E.	T. 42 N., R. 45 E.	T. 43 N., R. 45 E.
T. 44 N., R. 45 E.	T. 45 N., R. 45 E.	T. 46 N., R. 45 E.
T. 47 N., R. 45 E.		

**RANGE 46 E.**

T. 1 N., R. 46 E.	T. 2 N., R. 46 E.	T. 3 N., R. 46 E.
T. 4 N., R. 46 E.	T. 5 N., R. 46 E.	T. 6 N., R. 46 E.
T. 7 N., R. 46 E.	T. 7 N., R. 46 1/2 E.	T. 8 N., R. 46 E.
T. 9 N., R. 46 E.	T. 10 N., R. 46 E.	T. 11 N., R. 46 E.
T. 12 N., R. 46 E.	T. 13 N., R. 46 E.	T. 14 N., R. 46 E.
T. 15 N., R. 46 E.	T. 16 N., R. 46 E.	T. 17 N., R. 46 E.
T. 18 N., R. 46 E.	T. 18 1/2 N., R. 46 E.	T. 19 N., R. 46 E.
T. 20 N., R. 46 E.	T. 21 N., R. 46 E.	T. 22 N., R. 46 E.
T. 23 N., R. 46 E.	T. 24 N., R. 46 E.	T. 25 N., R. 46 E.
T. 26 N., R. 46 E.	T. 27 N., R. 46 E.	T. 28 N., R. 46 E.
T. 29 N., R. 46 E.	T. 30 N., R. 46 E.	T. 31 N., R. 46 E.
T. 32 N., R. 46 E.	T. 33 N., R. 46 E.	T. 34 N., R. 46 E.
T. 35 N., R. 46 E.	T. 36 N., R. 46 E.	T. 37 N., R. 46 E.
T. 38 N., R. 46 E.	T. 39 N., R. 46 E.	T. 40 N., R. 46 E.
T. 41 N., R. 46 E.	T. 42 N., R. 46 E.	T. 43 N., R. 46 E.
T. 44 N., R. 46 E.	T. 45 N., R. 46 E.	T. 46 N., R. 46 E.
T. 47 N., R. 46 E.		

**RANGE 47 E.**

T. 1 N., R. 47 E.	T. 2 N., R. 47 E.	T. 3 N., R. 47 E.
T. 4 N., R. 47 E.	T. 5 N., R. 47 E.	T. 6 N., R. 47 E.
T. 6 1/2 N., R. 47 1/2 E.	T. 7 N., R. 47 E.	T. 7 N., R. 47 1/2 E.
T. 8 N., R. 47 E.	T. 8 N., R. 47 1/2 E.	T. 9 N., R. 47 E.
T. 9 N., R. 47 1/2 E.	T. 10 N., R. 47 E.	T. 10 N., R. 47 1/2 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.**

**RANGE 47 E. cont.**

T. 11 N., R. 47 E.	T. 12 N., R. 47 E.	T. 13 N., R. 47 E.
T. 14 N., R. 47 E.	T. 15 N., R. 47 E.	T. 16 N., R. 47 E.
T. 17 N., R. 47 E.	T. 18 N., R. 47 E.	T. 18 1/2 N., R. 47 E.
T. 19 N., R. 47 E.	T. 20 N., R. 47 E.	T. 21 N., R. 47 E.
T. 22 N., R. 47 E.	T. 23 N., R. 47 E.	T. 24 N., R. 47 E.
T. 25 N., R. 47 E.	T. 26 N., R. 47 E.	T. 27 N., R. 47 E.
T. 28 N., R. 47 E.	T. 29 N., R. 47 E.	T. 30 N., R. 47 E.
T. 31 N., R. 47 E.	T. 32 N., R. 47 E.	T. 33 N., R. 47 E.
T. 34 N., R. 47 E.	T. 35 N., R. 47 E.	T. 36 N., R. 47 E.
T. 37 N., R. 47 E.	T. 38 N., R. 47 E.	T. 39 N., R. 47 E.
T. 40 N., R. 47 E.	T. 41 N., R. 47 E.	T. 42 N., R. 47 E.
T. 43 N., R. 47 E.	T. 44 N., R. 47 E.	T. 45 N., R. 47 E.
T. 46 N., R. 47 E.	T. 47 N., R. 47 E.	

**RANGE 48 E.**

T. 1 N., R. 48 E.	T. 2 N., R. 48 E.	T. 3 N., R. 48 E.
T. 4 N., R. 48 E.	T. 5 N., R. 48 E.	T. 6 N., R. 48 E.
T. 6 1/2 N., R. 48 E.	T. 7 N., R. 48 E.	T. 8 N., R. 48 E.
T. 9 N., R. 48 E.	T. 10 N., R. 48 E.	T. 11 N., R. 48 E.
T. 12 N., R. 48 E.	T. 13 N., R. 48 E.	T. 14 N., R. 48 E.
T. 14 N., R. 48 1/2 E.	T. 15 N., R. 48 E.	T. 15 N., R. 48 1/2 E.
T. 16 N., R. 48 E.	T. 17 N., R. 48 E.	T. 17 N., R. 48 1/2 E.
T. 18 N., R. 48 E.	T. 19 N., R. 48 E.	T. 20 N., R. 48 E.
T. 21 N., R. 48 E.	T. 22 N., R. 48 E.	T. 23 N., R. 48 E.
T. 24 N., R. 48 E.	T. 24 N., R. 48 1/2 E.	T. 25 N., R. 48 E.
T. 25 N., R. 48 1/2 E.	T. 26 N., R. 48 E.	T. 27 N., R. 48 E.
T. 28 N., R. 48 E.	T. 29 N., R. 48 E.	T. 30 N., R. 48 E.
T. 31 N., R. 48 E.	T. 32 N., R. 48 E.	T. 33 N., R. 48 E.
T. 34 N., R. 48 E.	T. 35 N., R. 48 E.	T. 36 N., R. 48 E.
T. 37 N., R. 48 E.	T. 38 N., R. 48 E.	T. 39 N., R. 48 E.
T. 40 N., R. 48 E.	T. 41 N., R. 48 E.	T. 42 N., R. 48 E.
T. 43 N., R. 48 E.	T. 44 N., R. 48 E.	T. 45 N., R. 48 E.
T. 46 N., R. 48 E.	T. 47 N., R. 48 E.	

**RANGE 49 E.**

T. 1 N., R. 49 E.	T. 2 N., R. 49 E.	T. 3 N., R. 49 E.
T. 4 N., R. 49 E.	T. 4 N., R. 49 1/2 E.	T. 5 N., R. 49 E.
T. 5 N., R. 49 1/2 E.	T. 6 N., R. 49 E.	T. 6 N., R. 49 1/2 E.
T. 7 N., R. 49 E.	T. 8 N., R. 49 E.	T. 9 N., R. 49 E.
T. 9 N., R. 49 1/2 E.	T. 10 N., R. 49 E.	T. 10 N., R. 49 1/2 E.
T. 11 N., R. 49 E.	T. 12 N., R. 49 E.	T. 13 N., R. 49 E.
T. 13 1/2 N., R. 49 E.	T. 14 N., R. 49 E.	T. 15 N., R. 49 E.
T. 16 N., R. 49 E.	T. 17 N., R. 49 E.	T. 18 N., R. 49 E.
T. 19 N., R. 49 E.	T. 21 N., R. 49 E.	T. 22 N., R. 49 E.
T. 23 N., R. 49 E.	T. 23 1/2 N., R. 49 E.	T. 24 N., R. 49 E.
T. 25 N., R. 49 E.	T. 26 N., R. 49 E.	T. 27 N., R. 49 E.
T. 28 N., R. 49 E.	T. 29 N., R. 49 E.	T. 30 N., R. 49 E.
T. 31 N., R. 49 E.	T. 32 N., R. 49 E.	T. 33 N., R. 49 E.
T. 34 N., R. 49 E.	T. 35 N., R. 49 E.	T. 36 N., R. 49 E.
T. 37 N., R. 49 E.	T. 38 N., R. 49 E.	T. 39 N., R. 49 E.
T. 40 N., R. 49 E.	T. 41 N., R. 49 E.	T. 42 N., R. 49 E.
T. 43 N., R. 49 E.	T. 44 N., R. 49 E.	T. 45 N., R. 49 E.
T. 46 N., R. 49 E.	T. 47 N., R. 49 E.	

**RANGE 50 E.**

T. 1 N., R. 50 E.	T. 2 N., R. 50 E.	T. 3 N., R. 50 E.
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*Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government*

NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.

RANGE 50 E. cont.

T. 3 1/2 N., R. 50 E.	T. 4 N., R. 50 E.	T. 5 N., R. 50 E.
T. 6 N., R. 50 E.	T. 7 N., R. 50 E.	T. 8 N., R. 50 E.
T. 9 N., R. 50 E.	T. 10 N., R. 50 E.	T. 11 N., R. 50 E.
T. 12 N., R. 50 E.	T. 13 N., R. 50 E.	T. 13 1/2 N., R. 50 E.
T. 14 N., R. 50 E.	T. 15 N., R. 50 E.	T. 16 N., R. 50 E.
T. 17 N., R. 50 E.	T. 18 N., R. 50 E.	T. 19 N., R. 50 E.
T. 20 N., R. 50 E.	T. 21 N., R. 50 E.	T. 22 N., R. 50 E.
T. 23 N., R. 50 E.	T. 23 1/2 N., R. 50 E.	T. 24 N., R. 50 E.
T. 25 N., R. 50 E.	T. 26 N., R. 50 E.	T. 27 N., R. 50 E.
T. 28 N., R. 50 E.	T. 29 N., R. 50 E.	T. 30 N., R. 50 E.
T. 31 N., R. 50 E.	T. 32 N., R. 50 E.	T. 33 N., R. 50 E.
T. 34 N., R. 50 E.	T. 35 N., R. 50 E.	T. 36 N., R. 50 E.
T. 37 N., R. 50 E.	T. 38 N., R. 50 E.	T. 39 N., R. 50 E.
T. 40 N., R. 50 E.	T. 41 N., R. 50 E.	T. 42 N., R. 50 E.
T. 43 N., R. 50 E.	T. 44 N., R. 50 E.	T. 45 N., R. 50 E.
T. 46 N., R. 50 E.	T. 47 N., R. 50 E.	

RANGE 51 E.

T. 1 N., R. 51 E.	T. 1 N., R. 51 1/2 E.	T. 2 N., R. 51 E.
T. 2 N., R. 51 1/2 E.	T. 3 N., R. 51 E.	T. 3 1/2 N., R. 51 E.
T. 3 N., R. 51 1/2 E.	T. 3 1/2 N., R. 51 1/2 E.	T. 4 N., R. 51 E.
T. 5 N., R. 51 E.	T. 6 N., R. 51 E.	T. 7 N., R. 51 E.
T. 8 N., R. 51 E.	T. 9 N., R. 51 E.	T. 10 N., R. 51 E.
T. 11 N., R. 51 E.	T. 12 N., R. 51 E.	T. 13 N., R. 51 E.
T. 14 N., R. 51 E.	T. 15 N., R. 51 E.	T. 16 N., R. 51 E.
T. 17 N., R. 51 E.	T. 18 N., R. 51 E.	T. 19 N., R. 51 E.
T. 20 N., R. 51 E.	T. 21 N., R. 51 E.	T. 21 1/2 N., R. 51 1/2 E.
T. 22 N., R. 51 E.	T. 22 N., R. 51 1/2 E.	T. 23 N., R. 51 E.
T. 24 N., R. 51 E.	T. 25 N., R. 51 E.	T. 26 N., R. 51 E.
T. 27 N., R. 51 E.	T. 28 N., R. 51 E.	T. 29 N., R. 51 E.
T. 30 N., R. 51 E.	T. 31 N., R. 51 E.	T. 32 N., R. 51 E.
T. 33 N., R. 51 E.	T. 34 N., R. 51 E.	T. 35 N., R. 51 E.
T. 36 N., R. 51 E.	T. 37 N., R. 51 E.	T. 38 N., R. 51 E.
T. 39 N., R. 51 E.	T. 40 N., R. 51 E.	T. 41 N., R. 51 E.
T. 42 N., R. 51 E.	T. 43 N., R. 51 E.	T. 44 N., R. 51 E.
T. 45 N., R. 51 E.		

RANGE 52 E.

T. 1 N., R. 52 E.	T. 2 N., R. 52 E.	T. 2 1/2 N., R. 52 E.
T. 3 N., R. 52 E.	T. 4 N., R. 52 E.	T. 5 N., R. 52 E.
T. 6 N., R. 52 E.	T. 7 N., R. 52 E.	T. 8 N., R. 52 E.
T. 9 N., R. 52 E.	T. 10 N., R. 52 E.	T. 11 N., R. 52 E.
T. 12 N., R. 52 E.	T. 13 N., R. 52 E.	T. 13 1/2 N., R. 52 E.
T. 14 N., R. 52 E.	T. 15 N., R. 52 E.	T. 16 N., R. 52 E.
T. 17 N., R. 52 E.	T. 18 N., R. 52 E.	T. 19 N., R. 52 E.
T. 20 N., R. 52 E.	T. 21 N., R. 52 E.	T. 21 1/2 N., R. 52 E.
T. 22 N., R. 52 E.	T. 23 N., R. 52 E.	T. 24 N., R. 52 E.
T. 25 N., R. 52 E.	T. 26 N., R. 52 E.	T. 27 N., R. 52 E.
T. 28 N., R. 52 E.	T. 29 N., R. 52 E.	T. 30 N., R. 52 E.
T. 31 N., R. 52 E.	T. 32 N., R. 52 E.	T. 33 N., R. 52 E.
T. 34 N., R. 52 E.	T. 35 N., R. 52 E.	T. 36 N., R. 52 E.
T. 37 N., R. 52 E.	T. 38 N., R. 52 E.	T. 38 N., R. 52 1/2 E.
T. 39 N., R. 52 E.	T. 39 N., R. 52 1/2 E.	T. 40 N., R. 52 E.
T. 41 N., R. 52 E.	T. 42 N., R. 52 E.	T. 43 N., R. 52 E.
T. 44 N., R. 52 E.	T. 45 N., R. 52 E.	

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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.**

**RANGE 53 E.**

T. 1 N., R. 53 E.	T. 2 N., R. 53 E.	T. 3 N., R. 53 E.
T. 6 N., R. 53 E.	T. 5 N., R. 53 E.	T. 6 N., R. 53 E.
T. 7 N., R. 53 E.	T. 8 N., R. 53 E.	T. 9 N., R. 53 E.
T. 10 N., R. 53 E.	T. 11 N., R. 53 E.	T. 12 N., R. 53 E.
T. 13 1/2 N., R. 53 E.	T. 13 1/2 N., R. 53 E.	T. 14 N., R. 53 E.
T. 15 N., R. 53 E.	T. 16 N., R. 53 E.	T. 17 N., R. 53 E.
T. 18 N., R. 53 E.	T. 19 N., R. 53 E.	T. 20 N., R. 53 E.
T. 21 N., R. 53 E.	T. 21 1/2 N., R. 53 E.	T. 22 N., R. 53 E.
T. 23 N., R. 53 E.	T. 24 N., R. 53 E.	T. 25 N., R. 53 E.
T. 26 N., R. 53 E.	T. 27 N., R. 53 E.	T. 28 N., R. 53 E.
T. 29 N., R. 53 E.	T. 30 N., R. 53 E.	T. 31 N., R. 53 E.
T. 32 N., R. 53 E.	T. 33 N., R. 53 E.	T. 34 N., R. 53 E.
T. 35 N., R. 53 E.	T. 36 N., R. 53 E.	T. 37 N., R. 53 E.
T. 38 N., R. 53 E.	T. 39 N., R. 53 E.	T. 40 N., R. 53 E.
T. 41 N., R. 53 E.	T. 42 N., R. 53 E.	T. 43 N., R. 53 E.
T. 44 N., R. 53 E.	T. 45 N., R. 53 E.	T. 46 N., R. 53 E.
T. 47 N., R. 53 E.		

**RANGE 54 E.**

T. 1 N., R. 54 E.	T. 2 N., R. 54 E.	T. 3 N., R. 54 E.
T. 4 N., R. 54 E.	T. 5 N., R. 54 E.	T. 6 N., R. 54 E.
T. 7 N., R. 54 E.	T. 8 N., R. 54 E.	T. 9 N., R. 54 E.
T. 10 N., R. 54 E.	T. 11 N., R. 54 E.	T. 12 N., R. 54 E.
T. 13 N., R. 54 E.	T. 13 1/2 N., R. 54 E.	T. 14 N., R. 54 E.
T. 15 N., R. 54 E.	T. 16 N., R. 54 E.	T. 17 N., R. 54 E.
T. 18 N., R. 54 E.	T. 19 N., R. 54 E.	T. 20 N., R. 54 E.
T. 21 N., R. 54 E.	T. 21 1/2 N., R. 54 E.	T. 22 N., R. 54 E.
T. 23 N., R. 54 E.	T. 24 N., R. 54 E.	T. 25 N., R. 54 E.
T. 26 N., R. 54 E.	T. 27 N., R. 54 E.	T. 28 N., R. 54 E.
T. 29 N., R. 54 E.	T. 30 N., R. 54 E.	T. 31 N., R. 54 E.
T. 32 N., R. 54 E.	T. 33 N., R. 54 E.	T. 34 N., R. 54 E.
T. 34 N., R. 54 1/2 E.	T. 35 N., R. 54 E.	T. 36 N., R. 54 E.
T. 37 N., R. 54 E.	T. 38 N., R. 54 E.	T. 39 N., R. 54 E.
T. 40 N., R. 54 E.	T. 41 N., R. 54 E.	T. 42 N., R. 54 E.
T. 43 N., R. 54 E.	T. 44 N., R. 54 E.	T. 45 N., R. 54 E.
T. 46 N., R. 54 E.	T. 46 N., R. 54 1/2 E.	T. 47 N., R. 54 E.

**RANGE 55 E.**

T. 1 N., R. 55 E.	T. 2 N., R. 55 E.	T. 3 N., R. 55 E.
T. 4 N., R. 55 E.	T. 5 N., R. 55 E.	T. 6 N., R. 55 E.
T. 7 N., R. 55 E.	T. 8 N., R. 55 E.	T. 9 N., R. 55 E.
T. 10 N., R. 55 E.	T. 11 N., R. 55 E.	T. 11 1/2 N., R. 55 1/2 E.
T. 12 N., R. 55 E.	T. 12 N., R. 55 E.	T. 13 N., R. 55 E.
T. 13 1/2 N., R. 55 E.	T. 13 N., R. 55 1/2 E.	T. 13 1/2 N., R. 55 1/2 E.
T. 14 N., R. 55 E.	T. 15 N., R. 55 E.	T. 16 N., R. 55 E.
T. 17 N., R. 55 E.	T. 18 N., R. 55 E.	T. 19 N., R. 55 E.
T. 20 N., R. 55 E.	T. 21 N., R. 55 E.	T. 22 N., R. 55 E.
T. 23 N., R. 55 E.	T. 24 N., R. 55 E.	T. 25 N., R. 55 E.
T. 26 N., R. 55 E.	T. 27 N., R. 55 E.	T. 28 N., R. 55 E.
T. 29 N., R. 55 E.	T. 30 N., R. 55 E.	T. 31 N., R. 55 E.
T. 32 N., R. 55 E.	T. 33 N., R. 55 E.	T. 34 N., R. 55 E.
T. 35 N., R. 55 E.	T. 36 N., R. 55 E.	T. 37 N., R. 55 E.
T. 38 N., R. 55 E.	T. 39 N., R. 55 E.	T. 40 N., R. 55 E.
T. 41 N., R. 55 E.	T. 42 N., R. 55 E.	T. 43 N., R. 55 E.
T. 44 N., R. 55 E.	T. 45 N., R. 55 E.	T. 46 N., R. 55 E.
T. 47 N., R. 55 E.		

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.

**RANGE 56 E.**

T. 1 N., R. 56 E.	T. 2 N., R. 56 E.	T. 3 N., R. 56 E.
T. 4 N., R. 56 E.	T. 5 N., R. 56 E.	T. 6 N., R. 56 E.
T. 7 N., R. 56 E.	T. 8 N., R. 56 E.	T. 9 N., R. 56 E.
T. 10 N., R. 56 E.	T. 11 N., R. 56 E.	T. 12 N., R. 56 E.
T. 13 N., R. 56 E.	T. 14 N., R. 56 E.	T. 15 N., R. 56 E.
T. 16 N., R. 56 E.	T. 17 N., R. 56 E.	T. 18 N., R. 56 E.
T. 19 N., R. 56 E.	T. 20 N., R. 56 E.	T. 21 N., R. 56 E.
T. 22 N., R. 56 E.	T. 23 N., R. 56 E.	T. 24 N., R. 56 E.
T. 25 N., R. 56 E.	T. 26 N., R. 56 E.	T. 27 N., R. 56 E.
T. 28 N., R. 56 E.	T. 29 N., R. 56 E.	T. 30 N., R. 56 E.
T. 31 N., R. 56 E.	T. 32 N., R. 56 E.	T. 33 N., R. 56 E.
T. 34 N., R. 56 E.	T. 35 N., R. 56 E.	T. 36 N., R. 56 E.
T. 37 N., R. 56 E.	T. 38 N., R. 56 E.	T. 39 N., R. 56 E.
T. 40 N., R. 56 E.	T. 41 N., R. 56 E.	T. 42 N., R. 56 E.
T. 43 N., R. 56 E.	T. 44 N., R. 56 E.	T. 45 N., R. 56 E.
T. 46 N., R. 56 E.	T. 47 N., R. 56 E.	

**RANGE 57 E.**

T. 1 N., R. 57 E.	T. 2 N., R. 57 E.	T. 3 N., R. 57 E.
T. 4 N., R. 57 E.	T. 5 N., R. 57 E.	T. 6 N., R. 57 E.
T. 7 N., R. 57 E.	T. 8 N., R. 57 E.	T. 9 N., R. 57 E.
T. 10 N., R. 57 E.	T. 11 N., R. 57 E.	T. 12 N., R. 57 E.
T. 13 N., R. 57 E.	T. 14 N., R. 57 E.	T. 15 N., R. 57 E.
T. 16 N., R. 57 E.	T. 17 N., R. 57 E.	T. 18 N., R. 57 E.
T. 19 N., R. 57 E.	T. 20 N., R. 57 E.	T. 21 N., R. 57 E.
T. 22 N., R. 57 E.	T. 23 N., R. 57 E.	T. 24 N., R. 57 E.
T. 25 N., R. 57 E.	T. 26 N., R. 57 E.	T. 27 N., R. 57 E.
T. 28 N., R. 57 E.	T. 29 N., R. 57 E.	T. 30 N., R. 57 E.
T. 31 N., R. 57 E.	T. 32 N., R. 57 E.	T. 33 N., R. 57 E.
T. 34 N., R. 57 E.	T. 35 N., R. 57 E.	T. 36 N., R. 57 E.
T. 37 N., R. 57 E.	T. 38 N., R. 57 E.	T. 39 N., R. 57 E.
T. 40 N., R. 57 E.	T. 41 N., R. 57 E.	T. 42 N., R. 57 E.
T. 43 N., R. 57 E.	T. 44 N., R. 57 E.	T. 45 N., R. 57 E.
T. 46 N., R. 57 E.	T. 47 N., R. 57 E.	

**RANGE 58 E.**

T. 1 N., R. 58 E.	T. 2 N., R. 58 E.	T. 3 N., R. 58 E.
T. 4 N., R. 58 E.	T. 5 N., R. 58 E.	T. 6 N., R. 58 E.
T. 7 N., R. 58 E.	T. 8 N., R. 58 E.	T. 9 N., R. 58 E.
T. 10 N., R. 58 E.	T. 11 N., R. 58 E.	T. 12 N., R. 58 E.
T. 13 N., R. 58 E.	T. 14 N., R. 58 E.	T. 15 N., R. 58 E.
T. 16 N., R. 58 E.	T. 17 N., R. 58 E.	T. 18 N., R. 58 E.
T. 19 N., R. 58 E.	T. 20 N., R. 58 E.	T. 21 N., R. 58 E.
T. 22 N., R. 58 E.	T. 23 N., R. 58 E.	T. 24 N., R. 58 E.
T. 25 N., R. 58 E.	T. 26 N., R. 58 E.	T. 27 N., R. 58 E.
T. 28 N., R. 58 E.	T. 29 N., R. 58 E.	T. 30 N., R. 58 E.
T. 31 N., R. 58 E.	T. 32 N., R. 58 E.	T. 33 N., R. 58 E.
T. 34 N., R. 58 E.	T. 35 N., R. 58 E.	T. 36 N., R. 58 E.
T. 37 N., R. 58 E.	T. 38 N., R. 58 E.	T. 39 N., R. 58 E.
T. 40 N., R. 58 E.	T. 41 N., R. 58 E.	T. 42 N., R. 58 E.
T. 43 N., R. 58 E.	T. 44 N., R. 58 E.	T. 45 N., R. 58 E.
T. 46 N., R. 58 E.	T. 47 N., R. 58 E.	

**RANGE 59 E.**

T. 1 N., R. 59 E.	T. 2 N., R. 59 E.	T. 3 N., R. 59 E.
T. 4 N., R. 59 E.	T. 5 N., R. 59 E.	T. 6 N., R. 59 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.**

**RANGE 59 E. cont.**

T. 7 N., R. 59 E.	T. 8 N., R. 59 E.	T. 9 N., R. 59 E.
T. 10 N., R. 59 E.	T. 11 N., R. 59 E.	T. 12 N., R. 59 E.
T. 13 N., R. 59 E.	T. 14 N., R. 59 E.	T. 15 N., R. 59 E.
T. 16 N., R. 59 E.	T. 17 N., R. 59 E.	T. 18 N., R. 59 E.
T. 19 N., R. 59 E.	T. 20 N., R. 59 E.	T. 21 N., R. 59 E.
T. 22 N., R. 59 E.	T. 23 N., R. 59 E.	T. 24 N., R. 59 E.
T. 25 N., R. 59 E.	T. 26 N., R. 59 E.	T. 27 N., R. 59 E.
T. 28 N., R. 59 E.	T. 29 N., R. 59 E.	T. 30 N., R. 59 E.
T. 31 N., R. 59 E.	T. 32 N., R. 59 E.	T. 33 N., R. 59 E.
T. 34 N., R. 59 E.	T. 35 N., R. 59 E.	T. 36 N., R. 59 E.
T. 37 N., R. 59 E.	T. 38 N., R. 59 E.	T. 39 N., R. 59 E.
T. 40 N., R. 59 E.	T. 41 N., R. 59 E.	T. 42 N., R. 59 E.
T. 43 N., R. 59 E.	T. 44 N., R. 59 E.	T. 45 N., R. 59 E.
T. 46 N., R. 59 E.	T. 47 N., R. 59 E.	

**RANGE 60 E.**

T. 1 N., R. 60 E.	T. 2 N., R. 60 E.	T. 3 N., R. 60 E.
T. 4 N., R. 60 E.	T. 5 N., R. 60 E.	T. 6 N., R. 60 E.
T. 7 N., R. 60 E.	T. 8 N., R. 60 E.	T. 9 N., R. 60 E.
T. 10 N., R. 60 E.	T. 11 N., R. 60 E.	T. 12 N., R. 60 E.
T. 13 N., R. 60 E.	T. 14 N., R. 60 E.	T. 15 N., R. 60 E.
T. 16 N., R. 60 E.	T. 17 N., R. 60 E.	T. 18 N., R. 60 E.
T. 19 N., R. 60 E.	T. 20 N., R. 60 E.	T. 21 N., R. 60 E.
T. 22 N., R. 60 E.	T. 23 N., R. 60 E.	T. 24 N., R. 60 E.
T. 25 N., R. 60 E.	T. 26 N., R. 60 E.	T. 27 N., R. 60 E.
T. 28 N., R. 60 E.	T. 29 N., R. 60 E.	T. 30 N., R. 60 E.
T. 31 N., R. 60 E.	T. 32 N., R. 60 E.	T. 33 N., R. 60 E.
T. 34 N., R. 60 E.	T. 35 N., R. 60 E.	T. 36 N., R. 60 E.
T. 37 N., R. 60 E.	T. 38 N., R. 60 E.	T. 39 N., R. 60 E.
T. 40 N., R. 60 E.	T. 41 N., R. 60 E.	T. 42 N., R. 60 E.
T. 43 N., R. 60 E.	T. 44 N., R. 60 E.	T. 45 N., R. 60 E.
T. 46 N., R. 60 E.	T. 47 N., R. 60 E.	

**RANGE 61 E.**

T. 1 N., R. 61 E.	T. 2 N., R. 61 E.	T. 3 N., R. 61 E.
T. 4 N., R. 61 E.	T. 5 N., R. 61 E.	T. 6 N., R. 61 E.
T. 7 N., R. 61 E.	T. 8 N., R. 61 E.	T. 9 N., R. 61 E.
T. 10 N., R. 61 E.	T. 11 N., R. 61 E.	T. 12 N., R. 61 E.
T. 13 N., R. 61 E.	T. 14 N., R. 61 E.	T. 15 N., R. 61 E.
T. 16 N., R. 61 E.	T. 17 N., R. 61 E.	T. 18 N., R. 61 E.
T. 19 N., R. 61 E.	T. 20 N., R. 61 E.	T. 21 N., R. 61 E.
T. 22 N., R. 61 E.	T. 23 N., R. 61 E.	T. 24 N., R. 61 E.
T. 25 N., R. 61 E.	T. 26 N., R. 61 E.	T. 27 N., R. 61 E.
T. 28 N., R. 61 E.	T. 29 N., R. 61 E.	T. 30 N., R. 61 E.
T. 31 N., R. 61 E.	T. 32 N., R. 61 E.	T. 33 N., R. 61 E.
T. 34 N., R. 61 E.	T. 35 N., R. 61 E.	T. 36 N., R. 61 E.
T. 37 N., R. 61 E.	T. 38 N., R. 61 E.	T. 39 N., R. 61 E.
T. 40 N., R. 61 E.	T. 41 N., R. 61 E.	T. 42 N., R. 61 E.
T. 43 N., R. 61 E.	T. 44 N., R. 61 E.	T. 45 N., R. 61 E.
T. 46 N., R. 61 E.	T. 47 N., R. 61 E.	

**RANGE 62 E.**

T. 1 N., R. 62 E.	T. 2 N., R. 62 E.	T. 3 N., R. 62 E.
T. 4 N., R. 62 E.	T. 5 N., R. 62 E.	T. 6 N., R. 62 E.
T. 7 N., R. 62 E.	T. 8 N., R. 62 E.	T. 9 N., R. 62 E.
T. 10 N., R. 62 E.	T. 11 N., R. 62 E.	T. 12 N., R. 62 E.

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.

**RANGE 62 E. cont.**

T. 13 N., R. 62 E.	T. 14 N., R. 62 E.	T. 15 N., R. 62 E.
T. 16 N., R. 62 E.	T. 17 N., R. 62 E.	T. 18 N., R. 62 E.
T. 19 N., R. 62 E.	T. 20 N., R. 62 E.	T. 21 N., R. 62 E.
T. 22 N., R. 62 E.	T. 23 N., R. 62 E.	T. 24 N., R. 62 E.
T. 25 N., R. 62 E.	T. 26 N., R. 62 E.	T. 27 N., R. 62 E.
T. 28 N., R. 62 E.	T. 29 N., R. 62 E.	T. 30 N., R. 62 E.
T. 31 N., R. 62 E.	T. 32 N., R. 62 E.	T. 33 N., R. 62 E.
T. 34 N., R. 62 E.	T. 35 N., R. 62 E.	T. 36 N., R. 62 E.
T. 37 N., R. 62 E.	T. 38 N., R. 62 E.	T. 39 N., R. 62 E.
T. 40 N., R. 62 E.	T. 41 N., R. 62 E.	T. 42 N., R. 62 E.
T. 43 N., R. 62 E.	T. 44 N., R. 62 E.	T. 45 N., R. 62 E.
T. 46 N., R. 62 E.	T. 47 N., R. 62 E.	

**RANGE 63 E.**

T. 1 N., R. 63 E.	T. 2 N., R. 63 E.	T. 3 N., R. 63 E.
T. 4 N., R. 63 E.	T. 5 N., R. 63 E.	T. 6 N., R. 63 E.
T. 7 N., R. 63 E.	T. 8 N., R. 63 E.	T. 9 N., R. 63 E.
T. 10 N., R. 63 E.	T. 11 N., R. 63 E.	T. 12 N., R. 63 E.
T. 13 N., R. 63 E.	T. 14 N., R. 63 E.	T. 15 N., R. 63 E.
T. 16 N., R. 63 E.	T. 17 N., R. 63 E.	T. 18 N., R. 63 E.
T. 19 N., R. 63 E.	T. 20 N., R. 63 E.	T. 21 N., R. 63 E.
T. 22 N., R. 63 E.	T. 23 N., R. 63 E.	T. 24 N., R. 63 E.
T. 25 N., R. 63 E.	T. 26 N., R. 63 E.	T. 27 N., R. 63 E.
T. 28 N., R. 63 E.	T. 29 N., R. 63 E.	T. 30 N., R. 63 E.
T. 31 N., R. 63 E.	T. 32 N., R. 63 E.	T. 33 N., R. 63 E.
T. 34 N., R. 63 E.	T. 35 N., R. 63 E.	T. 36 N., R. 63 E.
T. 37 N., R. 63 E.	T. 38 N., R. 63 E.	T. 39 N., R. 63 E.
T. 40 N., R. 63 E.	T. 41 N., R. 63 E.	T. 42 N., R. 63 E.
T. 43 N., R. 63 E.	T. 44 N., R. 63 E.	T. 45 N., R. 63 E.
T. 46 N., R. 63 E.	T. 47 N., R. 63 E.	

**RANGE 64 E.**

T. 1 N., R. 64 E.	T. 2 N., R. 64 E.	T. 3 N., R. 64 E.
T. 4 N., R. 64 E.	T. 5 N., R. 64 E.	T. 6 N., R. 64 E.
T. 7 N., R. 64 E.	T. 8 N., R. 64 E.	T. 9 N., R. 64 E.
T. 10 N., R. 64 E.	T. 11 N., R. 64 E.	T. 12 N., R. 64 E.
T. 13 N., R. 64 E.	T. 14 N., R. 64 E.	T. 15 N., R. 64 E.
T. 16 N., R. 64 E.	T. 17 N., R. 64 E.	T. 18 N., R. 64 E.
T. 19 N., R. 64 E.	T. 20 N., R. 64 E.	T. 21 N., R. 64 E.
T. 22 N., R. 64 E.	T. 23 N., R. 64 E.	T. 24 N., R. 64 E.
T. 25 N., R. 64 E.	T. 26 N., R. 64 E.	T. 27 N., R. 64 E.
T. 28 N., R. 64 E.	T. 29 N., R. 64 E.	T. 30 N., R. 64 E.
T. 31 N., R. 64 E.	T. 32 N., R. 64 E.	T. 33 N., R. 64 E.
T. 34 N., R. 64 E.	T. 35 N., R. 64 E.	T. 36 N., R. 64 E.
T. 37 N., R. 64 E.	T. 38 N., R. 64 E.	T. 38 1/2 N., R. 64 E.
T. 39 N., R. 64 E.	T. 40 N., R. 64 E.	T. 41 N., R. 64 E.
T. 42 N., R. 64 E.	T. 43 N., R. 64 E.	T. 44 N., R. 64 E.
T. 45 N., R. 64 E.	T. 46 N., R. 64 E.	T. 47 N., R. 64 E.

**RANGE 65 E.**

T. 1 N., R. 65 E.	T. 2 N., R. 65 E.	T. 3 N., R. 65 E.
T. 4 N., R. 65 E.	T. 5 N., R. 65 E.	T. 6 N., R. 65 E.
T. 7 N., R. 65 E.	T. 8 N., R. 65 E.	T. 9 N., R. 65 E.
T. 10 N., R. 65 E.	T. 11 N., R. 65 E.	T. 12 N., R. 65 E.
T. 13 N., R. 65 E.	T. 14 N., R. 65 E.	T. 15 N., R. 65 E.
T. 16 N., R. 65 E.	T. 17 N., R. 65 E.	T. 18 N., R. 65 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH**

**RANGE 65 E.**

T. 19 N., R. 65 E.	T. 20 N., R. 65 E.	T. 20 1/2 N., R. 65 E.
T. 21 N., R. 65 E.	T. 22 N., R. 65 E.	T. 23 N., R. 65 E.
T. 24 N., R. 65 E.	T. 25 N., R. 65 E.	T. 26 N., R. 65 E.
T. 27 N., R. 65 E.	T. 28 N., R. 65 E.	T. 29 N., R. 65 E.
T. 30 N., R. 65 E.	T. 31 N., R. 65 E.	T. 32 N., R. 65 E.
T. 33 N., R. 65 E.	T. 34 N., R. 65 E.	T. 35 N., R. 65 E.
T. 36 N., R. 65 E.	T. 37 N., R. 65 E.	T. 38 N., R. 65 E.
T. 38 1/2 N., R. 65 E.	T. 39 N., R. 65 E.	T. 40 N., R. 65 E.
T. 41 N., R. 65 E.	T. 42 N., R. 65 E.	T. 43 N., R. 65 E.
T. 44 N., R. 65 E.	T. 45 N., R. 65 E.	T. 46 N., R. 65 E.
T. 47 N., R. 65 E.		

**RANGE 66 E.**

T. 1 N., R. 66 E.	T. 2 N., R. 66 E.	T. 3 N., R. 66 E.
T. 4 N., R. 66 E.	T. 5 N., R. 66 E.	T. 6 N., R. 66 E.
T. 7 N., R. 66 E.	T. 8 N., R. 66 E.	T. 9 N., R. 66 E.
T. 10 N., R. 66 E.	T. 11 N., R. 66 E.	T. 12 N., R. 66 E.
T. 13 N., R. 66 E.	T. 14 N., R. 66 E.	T. 15 N., R. 66 E.
T. 16 N., R. 66 E.	T. 17 N., R. 66 E.	T. 18 N., R. 66 E.
T. 19 N., R. 66 E.	T. 20 N., R. 66 E.	T. 21 N., R. 66 E.
T. 22 N., R. 66 E.	T. 23 N., R. 66 E.	T. 24 N., R. 66 E.
T. 25 N., R. 66 E.	T. 26 N., R. 66 E.	T. 27 N., R. 66 E.
T. 28 N., R. 66 E.	T. 29 N., R. 66 E.	T. 30 N., R. 66 E.
T. 31 N., R. 66 E.	T. 32 N., R. 66 E.	T. 33 N., R. 66 E.
T. 34 N., R. 66 E.	T. 35 N., R. 66 E.	T. 36 N., R. 66 E.
T. 37 N., R. 66 E.	T. 38 N., R. 66 E.	T. 39 N., R. 66 E.
T. 40 N., R. 66 E.	T. 41 N., R. 66 E.	T. 42 N., R. 66 E.
T. 43 N., R. 66 E.	T. 44 N., R. 66 E.	T. 45 N., R. 66 E.
T. 46 N., R. 66 E.	T. 47 N., R. 66 E.	

**RANGE 67 E.**

T. 1 N., R. 67 E.	T. 2 N., R. 67 E.	T. 3 N., R. 67 E.
T. 4 N., R. 67 E.	T. 5 N., R. 67 E.	T. 6 N., R. 67 E.
T. 7 N., R. 67 E.	T. 8 N., R. 67 E.	T. 9 N., R. 67 E.
T. 10 N., R. 67 E.	T. 11 N., R. 67 E.	T. 12 N., R. 67 E.
T. 13 N., R. 67 E.	T. 14 N., R. 67 E.	T. 15 N., R. 67 E.
T. 16 N., R. 67 E.	T. 17 N., R. 67 E.	T. 18 N., R. 67 E.
T. 19 N., R. 67 E.	T. 20 N., R. 67 E.	T. 21 N., R. 67 E.
T. 22 N., R. 67 E.	T. 23 N., R. 67 E.	T. 24 N., R. 67 E.
T. 25 N., R. 67 E.	T. 26 N., R. 67 E.	T. 27 N., R. 67 E.
T. 28 N., R. 67 E.	T. 29 N., R. 67 E.	T. 30 N., R. 67 E.
T. 31 N., R. 67 E.	T. 32 N., R. 67 E.	T. 33 N., R. 67 E.
T. 34 N., R. 67 E.	T. 35 N., R. 67 E.	T. 36 N., R. 67 E.
T. 37 N., R. 67 E.	T. 38 N., R. 67 E.	T. 39 N., R. 67 E.
T. 40 N., R. 67 E.	T. 41 N., R. 67 E.	T. 42 N., R. 67 E.
T. 43 N., R. 67 E.	T. 44 N., R. 67 E.	T. 45 N., R. 67 E.
T. 46 N., R. 67 E.	T. 47 N., R. 67 E.	

**RANGE 68 E.**

T. 1 N., R. 68 E.	T. 2 N., R. 68 E.	T. 3 N., R. 68 E.
T. 4 N., R. 68 E.	T. 5 N., R. 68 E.	T. 6 N., R. 68 E.
T. 7 N., R. 68 E.	T. 8 N., R. 68 E.	T. 9 N., R. 68 E.
T. 10 N., R. 68 E.	T. 11 N., R. 68 E.	T. 12 N., R. 68 E.
T. 13 N., R. 68 E.	T. 14 N., R. 68 E.	T. 15 N., R. 68 E.
T. 23 N., R. 68 E.	T. 24 N., R. 68 E.	T. 25 N., R. 68 E.
T. 26 N., R. 68 E.	T. 27 N., R. 68 E.	T. 28 N., R. 68 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**NEVADA: MOUNT DIABLO MERIDIAN - NORTH cont.**

**RANGE 68 E. cont.**

T. 29 N., R. 68 E.	T. 30 N., R. 68 E.	T. 31 N., R. 68 E.
T. 32 N., R. 68 E.	T. 33 N., R. 68 E.	T. 34 N., R. 68 E.
T. 35 N., R. 68 E.	T. 36 N., R. 68 E.	T. 37 N., R. 68 E.
T. 38 N., R. 68 E.	T. 39 N., R. 68 E.	T. 40 N., R. 68 E.
T. 41 N., R. 68 E.	T. 42 N., R. 68 E.	T. 43 N., R. 68 E.
T. 44 N., R. 68 E.	T. 45 N., R. 68 E.	T. 46 N., R. 68 E.
T. 47 N., R. 68 E.		

**RANGE 69 E.**

T. 1 N., R. 69 E.	T. 1 1/2 N., R. 69 E.	T. 2 N., R. 69 E.
T. 7 N., R. 69 E.	T. 8 N., R. 69 E.	T. 9 N., R. 69 E.
T. 9 1/2 N., R. 69 E.	T. 10 N., R. 69 E.	T. 11 N., R. 69 E.
T. 12 N., R. 69 E.	T. 13 N., R. 69 E.	T. 14 N., R. 69 E.
T. 15 N., R. 69 E.	T. 26 N., R. 69 E.	T. 27 N., R. 69 E.
T. 28 N., R. 69 E.	T. 29 N., R. 69 E.	T. 30 N., R. 69 E.
T. 31 N., R. 69 E.	T. 32 N., R. 69 E.	T. 33 N., R. 69 E.
T. 34 N., R. 69 E.	T. 35 N., R. 69 E.	T. 36 N., R. 69 E.
T. 37 N., R. 69 E.	T. 38 N., R. 69 E.	T. 39 N., R. 69 E.
T. 40 N., R. 69 E.	T. 41 N., R. 69 E.	T. 42 N., R. 69 E.
T. 43 N., R. 69 E.	T. 44 N., R. 69 E.	T. 45 N., R. 69 E.
T. 46 N., R. 69 E.	T. 47 N., R. 69 E.	

**RANGE 70 E.**

T. 9 N., R. 70 E.	T. 9 1/2 N., R. 70 E.	T. 10 N., R. 70 E.
T. 11 N., R. 70 E.	T. 12 N., R. 70 E.	T. 13 N., R. 70 E.
T. 14 N., R. 70 E.	T. 35 N., R. 70 E.	T. 36 N., R. 70 E.
T. 37 N., R. 70 E.	T. 38 N., R. 70 E.	T. 39 N., R. 70 E.
T. 40 N., R. 70 E.	T. 41 N., R. 70 E.	T. 42 N., R. 70 E.
T. 43 N., R. 70 E.	T. 44 N., R. 70 E.	T. 45 N., R. 70 E.
T. 46 N., R. 70 E.	T. 47 N., R. 70 E.	

**NEVADA: MOUNT DIABLO MERIDIAN - SOUTH**

**RANGE 32 E.**  
T. 1 S., R. 32 E.

**RANGE 33 E.**  
T. 1 S., R. 33 E.

**RANGE 34 E.**  
T. 1 S., R. 34 E.

**RANGE 35 E.**  
T. 1 S., R. 35 E.

**RANGE 36 E.**  
T. 1 S., R. 36 E.

**RANGE 37 E.**  
T. 1 S., R. 37 E.

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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

**NEVADA: MOUNT DIABLO MERIDIAN - SOUTH**

**RANGE 38 E.**

T. 1 S., R. 38 E.	T. 2 S., R. 38 E.	T. 3 S., R. 38 E.
T. 4 S., R. 38 E.	T. 5 S., R. 38 E.	T. 6 S., R. 38 E.

**RANGE 39 E.**

T. 1 S., R. 39 E.	T. 2 S., R. 39 E.	T. 3 S., R. 39 E.
T. 4 S., R. 39 E.	T. 5 S., R. 39 E.	T. 6 S., R. 39 E.
T. 7 S., R. 39 E.		

**RANGE 40 E.**

T. 1 S., R. 40 E.	T. 1 S., R. 40 1/2 E.	T. 2 S., R. 40 E.
T. 2 S., R. 40 1/2 E.	T. 3 S., R. 40 E.	T. 3 S., R. 40 1/2 E.
T. 4 S., R. 40 E.	T. 4 S., R. 40 1/2 E.	T. 5 S., R. 40 E.
T. 6 S., R. 40 E.	T. 7 S., R. 40 E.	T. 8 S., R. 40 E.
T. 9 S., R. 40 E.		

**RANGE 41 E.**

T. 1 S., R. 41 E.	T. 2 S., R. 41 E.	T. 3 S., R. 41 E.
T. 4 S., R. 41 E.	T. 5 S., R. 41 E.	T. 5 S., R. 41 1/2 E.
T. 6 S., R. 41 E.	T. 6 S., R. 41 1/2 E.	T. 7 S., R. 41 E.
T. 7 S., R. 41 1/2 E.	T. 8 S., R. 41 E.	T. 9 S., R. 41 E.
T. 10 S., R. 41 E.		

**RANGE 42 E.**

T. 1 S., R. 42 E.	T. 2 S., R. 42 E.	T. 3 S., R. 42 E.
T. 4 S., R. 42 E.	T. 5 S., R. 42 E.	T. 6 S., R. 42 E.
T. 7 S., R. 42 E.	T. 8 S., R. 42 E.	T. 9 S., R. 42 E.
T. 10 S., R. 42 E.	T. 11 S., R. 42 E.	

**RANGE 43 E.**

T. 1 S., R. 43 E.	T. 2 S., R. 43 E.	T. 3 S., R. 43 E.
T. 4 S., R. 43 E.	T. 5 S., R. 43 E.	T. 6 S., R. 43 E.
T. 7 S., R. 43 E.	T. 8 S., R. 43 E.	T. 9 S., R. 43 E.
T. 10 S., R. 43 E.	T. 11 S., R. 43 E.	T. 12 S., R. 43 E.

**RANGE 44 E.**

T. 1 S., R. 44 E.	T. 2 S., R. 44 E.	T. 3 S., R. 44 E.
T. 4 S., R. 44 E.	T. 5 S., R. 44 E.	T. 6 S., R. 44 E.
T. 7 S., R. 44 E.	T. 8 S., R. 44 E.	T. 9 S., R. 44 E.
T. 10 S., R. 44 E.	T. 11 S., R. 44 E.	T. 12 S., R. 44 E.

**RANGE 45 E.**

T. 1 S., R. 45 E.	T. 2 S., R. 45 E.	T. 3 S., R. 45 E.
T. 4 S., R. 45 E.	T. 5 S., R. 45 E.	T. 6 S., R. 45 E.
T. 7 S., R. 45 E.	T. 8 S., R. 45 E.	T. 9 S., R. 45 E.
T. 10 S., R. 45 E.	T. 11 S., R. 45 E.	T. 12 S., R. 45 E.
T. 13 S., R. 45 E.		

**RANGE 46 E.**

T. 1 S., R. 46 E.	T. 2 S., R. 46 E.	T. 3 S., R. 46 E.
T. 4 S., R. 46 E.	T. 5 S., R. 46 E.	T. 6 S., R. 46 E.
T. 7 S., R. 46 E.	T. 8 S., R. 46 E.	T. 9 S., R. 46 E.
T. 10 S., R. 46 E.	T. 11 S., R. 46 E.	T. 12 S., R. 46 E.
T. 13 S., R. 46 E.	T. 14 S., R. 46 E.	

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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

NEVADA: MOUNT DIABLO MERIDIAN - SOUTH! cont.

**RANGE 65 E.**

T. 1 S., R. 65 E.	T. 2 S., R. 65 E.	T. 3 S., R. 65 E.
T. 4 S., R. 65 E.	T. 5 S., R. 65 E.	T. 6 S., R. 65 E.
T. 7 S., R. 65 E.	T. 8 S., R. 65 E.	T. 9 S., R. 65 E.
T. 10 S., R. 65 E.		

**RANGE 66 E.**

T. 1 S., R. 66 E.	T. 2 S., R. 66 E.	T. 3 S., R. 66 E.
T. 4 S., R. 66 E.	T. 5 S., R. 66 E.	T. 6 S., R. 66 E.
T. 7 S., R. 66 E.	T. 8 S., R. 66 E.	

**RANGE 67 E.**

T. 1 S., R. 67 E.	T. 2 S., R. 67 E.	T. 3 S., R. 67 E.
T. 4 S., R. 67 E.	T. 5 S., R. 67 E.	T. 6 S., R. 67 E.
T. 7 S., R. 67 E.		

**RANGE 68 E.**

T. 1 S., R. 68 E.	T. 2 S., R. 68 E.	T. 3 S., R. 68 E.
T. 4 S., R. 68 E.	T. 5 S., R. 68 E.	

**RANGE 69 E.**

T. 1 S., R. 69 E.	T. 2 S., R. 69 E.	T. 3 S., R. 69 E.
T. 4 S., R. 69 E.		

**RANGE 70 E.**

T. 1 S., R. 70 E.	T. 2 S., R. 70 E.	T. 3 S., R. 70 E.

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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

**CALIFORNIA: MOUNT DIABLO MERIDIAN**

**RANGE 32 E.**

T. 1 S., R. 32 E.	T. 1 S., R. 32 E.	T. 2 S., R. 32 E.
T. 3 S., R. 32 E.	T. 4 S., R. 32 E.	

**RANGE 33 E.**

T. 1 S., R. 33 E.	T. 2 S., R. 33 E.	T. 3 S., R. 33 E.
T. 4 S., R. 33 E.	T. 5 S., R. 33 E.	T. 6 S., R. 33 E.
T. 7 S., R. 33 E.	T. 8 S., R. 33 E.	

**RANGE 34 E.**

T. 2 S., R. 34 E.	T. 3 S., R. 34 E.	T. 4 S., R. 34 E.
T. 5 S., R. 34 E.	T. 6 S., R. 34 E.	T. 7 S., R. 34 E.
T. 8 S., R. 34 E.	T. 9 S., R. 34 E.	T. 10 S., R. 34 E.
T. 11 S., R. 34 E.		

**RANGE 35 E.**

T. 3 S., R. 35 E.	T. 4 S., R. 35 E.	T. 5 S., R. 35 E.
T. 6 S., R. 35 E.	T. 7 S., R. 35 E.	T. 8 S., R. 35 E.
T. 9 S., R. 35 E.	T. 10 S., R. 35 E.	T. 11 S., R. 35 E.
T. 12 S., R. 35 E.	T. 13 S., R. 35 E.	T. 14 S., R. 35 E.
T. 31 S., R. 35 E.	T. 32 S., R. 35 E.	

**RANGE 36 E.**

T. 4 S., R. 36 E.	T. 5 S., R. 36 E.	T. 6 S., R. 36 E.
T. 7 S., R. 36 E.	T. 8 S., R. 36 E.	T. 9 S., R. 36 E.
T. 10 S., R. 36 E.	T. 11 S., R. 36 E.	T. 12 S., R. 36 E.
T. 13 S., R. 36 E.	T. 14 S., R. 36 E.	T. 15 S., R. 36 E.
T. 16 S., R. 36 E.	T. 17 S., R. 36 E.	T. 18 S., R. 36 E.
T. 19 S., R. 36 E.	T. 20 S., R. 36 E.	T. 21 S., R. 36 E.
T. 31 S., R. 36 E.	T. 32 S., R. 36 E.	

**RANGE 37 E.**

T. 5 S., R. 37 E.	T. 6 S., R. 37 E.	T. 7 S., R. 37 E.
T. 8 S., R. 37 E.	T. 9 S., R. 37 E.	T. 10 S., R. 37 E.
T. 11 S., R. 37 E.	T. 12 S., R. 37 E.	T. 13 S., R. 37 E.
T. 14 S., R. 37 E.	T. 15 S., R. 37 E.	T. 16 S., R. 37 E.
T. 17 S., R. 37 E.	T. 18 S., R. 37 E.	T. 19 S., R. 37 E.
T. 20 S., R. 37 E.	T. 20 S., R. 37 1/2 E.	T. 21 S., R. 37 E.
T. 22 S., R. 37 E.	T. 23 S., R. 37 E.	T. 23 S., R. 37 1/2 E.
T. 28 S., R. 37 E.	T. 29 S., R. 37 E.	T. 30 S., R. 37 E.
T. 31 S., R. 37 E.	T. 32 S., R. 37 E.	

**RANGE 38 E.**

T. 5 S., R. 38 E.	T. 6 S., R. 38 E.	T. 7 S., R. 38 E.
T. 8 S., R. 38 E.	T. 9 S., R. 38 E.	T. 10 S., R. 38 E.
T. 11 S., R. 38 E.	T. 12 S., R. 38 E.	T. 13 S., R. 38 E.
T. 14 S., R. 38 E.	T. 15 S., R. 38 E.	T. 16 S., R. 38 E.
T. 17 S., R. 38 E.	T. 18 S., R. 38 E.	T. 19 S., R. 38 E.
T. 20 S., R. 38 E.	T. 21 S., R. 38 E.	T. 22 S., R. 38 E.
T. 23 S., R. 38 E.	T. 24 S., R. 38 E.	T. 25 S., R. 38 E.
T. 26 S., R. 38 E.	T. 27 S., R. 38 E.	T. 28 S., R. 38 E.
T. 29 S., R. 38 E.	T. 30 S., R. 38 E.	T. 31 S., R. 38 E.
T. 32 S., R. 38 E.		

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

CALIFORNIA: MOUNT DIABLO MERIDIAN cont.

**RANGE 39 E.**

T. 6 S., R. 39 E.	T. 7 S., R. 39 E.	T. 8 S., R. 39 E.
T. 9 S., R. 39 E.	T. 10 S., R. 39 E.	T. 11 S., R. 39 E.
T. 12 S., R. 39 E.	T. 13 S., R. 39 E.	T. 14 S., R. 39 E.
T. 15 S., R. 39 E.	T. 16 S., R. 39 E.	T. 17 S., R. 39 E.
T. 18 S., R. 39 E.	T. 19 S., R. 39 E.	T. 20 S., R. 39 E.
T. 21 S., R. 39 E.	T. 22 S., R. 39 E.	T. 23 S., R. 39 E.
T. 24 S., R. 39 E.	T. 25 S., R. 39 E.	T. 26 S., R. 39 E.
T. 27 S., R. 39 E.	T. 28 S., R. 39 E.	T. 29 S., R. 39 E.
T. 30 S., R. 39 E.	T. 31 S., R. 39 E.	T. 32 S., R. 39 E.

**RANGE 40 E.**

T. 7 S., R. 40 E.	T. 8 S., R. 40 E.	T. 9 S., R. 40 E.
T. 10 S., R. 40 E.	T. 11 S., R. 40 E.	T. 12 S., R. 40 E.
T. 13 S., R. 40 E.	T. 14 S., R. 40 E.	T. 15 S., R. 40 E.
T. 16 S., R. 40 E.	T. 17 S., R. 40 E.	T. 18 S., R. 40 E.
T. 19 S., R. 40 E.	T. 20 S., R. 40 E.	T. 21 S., R. 40 E.
T. 22 S., R. 40 E.	T. 23 S., R. 40 E.	T. 24 S., R. 40 E.
T. 25 S., R. 40 E.	T. 26 S., R. 40 E.	T. 27 S., R. 40 E.
T. 27 S., R. 40 1/2 E.	T. 28 S., R. 40 E.	T. 28 1/2 S., R. 40 E.
T. 29 S., R. 40 E.	T. 30 S., R. 40 E.	T. 31 S., R. 40 E.
T. 32 S., R. 40 E.		

**RANGE 41 E.**

T. 8 S., R. 41 E.	T. 9 S., R. 41 E.	T. 10 S., R. 41 E.
T. 11 S., R. 41 E.	T. 12 S., R. 41 E.	T. 13 S., R. 41 E.
T. 14 S., R. 41 E.	T. 15 S., R. 41 E.	T. 16 S., R. 41 E.
T. 17 S., R. 41 E.	T. 18 S., R. 41 E.	T. 19 S., R. 41 E.
T. 20 S., R. 41 E.	T. 21 S., R. 41 E.	T. 22 S., R. 41 E.
T. 23 S., R. 41 E.	T. 24 S., R. 41 E.	T. 25 S., R. 41 E.
T. 26 S., R. 41 E.	T. 27 S., R. 41 E.	T. 28 S., R. 41 E.
T. 29 S., R. 41 E.	T. 30 S., R. 41 E.	T. 31 S., R. 41 E.
T. 32 S., R. 41 E.		

**RANGE 42 E.**

T. 9 S., R. 42 E.	T. 10 S., R. 42 E.	T. 11 S., R. 42 E.
T. 12 S., R. 42 E.	T. 13 S., R. 42 E.	T. 14 S., R. 42 E.
T. 15 S., R. 42 E.	T. 16 S., R. 42 E.	T. 17 S., R. 42 E.
T. 18 S., R. 42 E.	T. 19 S., R. 42 E.	T. 20 S., R. 42 E.
T. 21 S., R. 42 E.	T. 22 S., R. 42 E.	T. 23 S., R. 42 E.
T. 24 S., R. 42 E.	T. 25 S., R. 42 E.	T. 26 S., R. 42 E.
T. 27 S., R. 42 E.	T. 28 S., R. 42 E.	T. 29 S., R. 42 E.
T. 30 S., R. 42 E.	T. 31 S., R. 42 E.	T. 32 S., R. 42 E.

**RANGE 43 E.**

T. 10 S., R. 43 E.	T. 11 S., R. 43 E.	T. 12 S., R. 43 E.
T. 13 S., R. 43 E.	T. 14 S., R. 43 E.	T. 15 S., R. 43 E.
T. 16 S., R. 43 E.	T. 17 S., R. 43 E.	T. 18 S., R. 43 E.
T. 19 S., R. 43 E.	T. 20 S., R. 43 E.	T. 21 S., R. 43 E.
T. 22 S., R. 43 E.	T. 23 S., R. 43 E.	T. 24 S., R. 43 E.
T. 25 S., R. 43 E.	T. 26 S., R. 43 E.	T. 27 S., R. 43 E.
T. 28 S., R. 43 E.	T. 29 S., R. 43 E.	T. 30 S., R. 43 E.
T. 31 S., R. 43 E.	T. 32 S., R. 43 E.	

**RANGE 44 E.**

T. 11 S., R. 44 E.	T. 12 S., R. 44 E.	T. 13 S., R. 44 E.
T. 14 S., R. 44 E.	T. 15 S., R. 44 E.	T. 16 S., R. 44 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**CALIFORNIA: MOUNT DIABLO MERIDIAN cont.**

**RANGE 44 E.**

T. 17 S., R. 44 E.	T. 18 S., R. 44 E.	T. 19 S., R. 44 E.
T. 20 S., R. 44 E.	T. 21 S., R. 44 E.	T. 22 S., R. 44 E.
T. 23 S., R. 44 E.	T. 24 S., R. 44 E.	T. 25 S., R. 44 E.
T. 26 S., R. 44 E.	T. 27 S., R. 44 E.	T. 28 S., R. 44 E.
T. 29 S., R. 44 E.	T. 30 S., R. 44 E.	T. 31 S., R. 44 E.
T. 32 S., R. 44 E.		

**RANGE 45 E.**

T. 12 S., R. 45 E.	T. 13 S., R. 45 E.	T. 14 S., R. 45 E.
T. 15 S., R. 45 E.	T. 16 S., R. 45 E.	T. 17 S., R. 45 E.
T. 18 S., R. 45 E.	T. 19 S., R. 45 E.	T. 20 S., R. 45 E.
T. 21 S., R. 45 E.	T. 22 S., R. 45 E.	T. 23 S., R. 45 E.
T. 24 S., R. 45 E.	T. 25 S., R. 45 E.	T. 26 S., R. 45 E.
T. 27 S., R. 45 E.	T. 28 S., R. 45 E.	T. 29 S., R. 45 E.
T. 30 S., R. 45 E.	T. 31 S., R. 45 E.	T. 32 S., R. 45 E.

**RANGE 46 E.**

T. 13 S., R. 46 E.	T. 14 S., R. 46 E.	T. 15 S., R. 46 E.
T. 16 S., R. 46 E.	T. 17 S., R. 46 E.	T. 18 S., R. 46 E.
T. 19 S., R. 46 E.	T. 20 S., R. 46 E.	T. 21 S., R. 46 E.
T. 22 S., R. 46 E.	T. 23 S., R. 46 E.	T. 24 S., R. 46 E.
T. 25 S., R. 46 E.	T. 26 S., R. 46 E.	T. 27 S., R. 46 E.
T. 28 S., R. 46 E.	T. 29 S., R. 46 E.	T. 30 S., R. 46 E.
T. 31 S., R. 46 E.	T. 32 S., R. 46 E.	

**RANGE 47 E.**

T. 21 S., R. 47 E.	T. 22 S., R. 47 E.	T. 23 S., R. 47 E.
T. 24 S., R. 47 E.	T. 25 S., R. 47 E.	T. 26 S., R. 47 E.
T. 27 S., R. 47 E.	T. 28 S., R. 47 E.	T. 29 S., R. 47 E.
T. 30 S., R. 47 E.	T. 31 S., R. 47 E.	T. 32 S., R. 47 E.

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***Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government***

CALIFORNIA: SAN BERNARDINO MERIDIAN - NORTH

**RANGE 1 E.**

T. 1 N., R. 1 E.	T. 2 N., R. 1 E.	T. 3 N., R. 1 E.
T. 4 N., R. 1 E.	T. 5 N., R. 1 E.	T. 6 N., R. 1 E.
T. 7 N., R. 1 E.	T. 8 N., R. 1 E.	T. 9 N., R. 1 E.
T. 10 N., R. 1 E.	T. 11 N., R. 1 E.	T. 12 N., R. 1 E.
T. 13 N., R. 1 E.	T. 14 N., R. 1 E.	T. 15 N., R. 1 E.
T. 16 N., R. 1 E.	T. 17 N., R. 1 E.	T. 18 N., R. 1 E.
T. 18 1/2 N., R. 1 E.	T. 19 N., R. 1 E.	T. 20 N., R. 1 E.
T. 21 N., R. 1 E.	T. 22 N., R. 1 E.	T. 23 N., R. 1 E.
T. 24 N., R. 1 E.	T. 25 N., R. 1 E.	T. 26 N., R. 1 E.
T. 27 N., R. 1 E.	T. 28 N., R. 1 E.	T. 29 N., R. 1 E.
T. 30 N., R. 1 E.	T. 31 N., R. 1 E.	

**RANGE 2 E.**

T. 1 N., R. 2 E.	T. 2 N., R. 2 E.	T. 3 N., R. 2 E.
T. 4 N., R. 2 E.	T. 5 N., R. 2 E.	T. 6 N., R. 2 E.
T. 7 N., R. 2 E.	T. 8 N., R. 2 E.	T. 9 N., R. 2 E.
T. 10 N., R. 2 E.	T. 11 N., R. 2 E.	T. 12 N., R. 2 E.
T. 13 N., R. 2 E.	T. 14 N., R. 2 E.	T. 15 N., R. 2 E.
T. 16 N., R. 2 E.	T. 17 N., R. 2 E.	T. 18 N., R. 2 E.
T. 19 N., R. 2 E.	T. 20 N., R. 2 E.	T. 20 1/2 N., R. 2 E.
T. 21 N., R. 2 E.	T. 22 N., R. 2 E.	T. 22 1/2 N., R. 2 E.
T. 23 N., R. 2 E.	T. 24 N., R. 2 E.	T. 25 N., R. 2 E.
T. 26 N., R. 2 E.	T. 27 N., R. 2 E.	T. 28 N., R. 2 E.
T. 29 N., R. 2 E.	T. 30 N., R. 2 E.	

**RANGE 3 E.**

T. 1 N., R. 3 E.	T. 2 N., R. 3 E.	T. 3 N., R. 3 E.
T. 4 N., R. 3 E.	T. 5 N., R. 3 E.	T. 6 N., R. 3 E.
T. 7 N., R. 3 E.	T. 8 N., R. 3 E.	T. 9 N., R. 3 E.
T. 10 N., R. 3 E.	T. 11 N., R. 3 E.	T. 12 N., R. 3 E.
T. 13 N., R. 3 E.	T. 14 N., R. 3 E.	T. 15 N., R. 3 E.
T. 16 N., R. 3 E.	T. 17 N., R. 3 E.	T. 18 N., R. 3 E.
T. 19 N., R. 3 E.	T. 20 N., R. 3 E.	T. 20 1/2 N., R. 3 E.
T. 21 N., R. 3 E.	T. 22 N., R. 3 E.	T. 22 1/2 N., R. 3 E.
T. 23 N., R. 3 E.	T. 24 N., R. 3 E.	T. 25 N., R. 3 E.
T. 26 N., R. 3 E.	T. 27 N., R. 3 E.	T. 28 N., R. 3 E.
T. 29 N., R. 3 E.		

**RANGE 4 E.**

T. 1 N., R. 4 E.	T. 2 N., R. 4 E.	T. 3 N., R. 4 E.
T. 4 N., R. 4 E.	T. 5 N., R. 4 E.	T. 6 N., R. 4 E.
T. 7 N., R. 4 E.	T. 8 N., R. 4 E.	T. 9 N., R. 4 E.
T. 10 N., R. 4 E.	T. 11 N., R. 4 E.	T. 12 N., R. 4 E.
T. 13 N., R. 4 E.	T. 14 N., R. 4 E.	T. 15 N., R. 4 E.
T. 16 N., R. 4 E.	T. 17 N., R. 4 E.	T. 18 N., R. 4 E.
T. 19 N., R. 4 E.	T. 20 N., R. 4 E.	T. 20 1/2 N., R. 4 E.
T. 21 N., R. 4 E.	T. 22 N., R. 4 E.	T. 22 1/2 N., R. 4 E.
T. 23 N., R. 4 E.	T. 24 N., R. 4 E.	T. 25 N., R. 4 E.
T. 26 N., R. 4 E.	T. 27 N., R. 4 E.	T. 28 N., R. 4 E.

**RANGE 5 E.**

T. 1 N., R. 5 E.	T. 2 N., R. 5 E.	T. 3 N., R. 5 E.
T. 4 N., R. 5 E.	T. 5 N., R. 5 E.	T. 6 N., R. 5 E.
T. 7 N., R. 5 E.	T. 8 N., R. 5 E.	T. 9 N., R. 5 E.
T. 10 N., R. 5 E.	T. 11 N., R. 5 E.	T. 12 N., R. 5 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

CALIFORNIA: SAN BERNARDINO MERIDIAN - NORTH east.

**RANGE 5 E. cont.**

T. 13 N., R. 5 E.	T. 14 N., R. 5 E.	T. 15 N., R. 5 E.
T. 16 N., R. 5 E.	T. 17 N., R. 5 E.	T. 18 N., R. 5 E.
T. 19 N., R. 5 E.	T. 19 1/2 N., R. 5 E.	T. 20 N., R. 5 E.
T. 20 1/2 N., R. 5 E.	T. 21 N., R. 5 E.	T. 22 N., R. 5 E.
T. 22 1/2 N., R. 5 E.	T. 23 N., R. 5 E.	T. 24 N., R. 5 E.
T. 25 N., R. 5 E.	T. 26 N., R. 5 E.	T. 27 N., R. 5 E.

**RANGE 6 E.**

T. 1 N., R. 6 E.	T. 2 N., R. 6 E.	T. 3 N., R. 6 E.
T. 4 N., R. 6 E.	T. 5 N., R. 6 E.	T. 6 N., R. 6 E.
T. 7 N., R. 6 E.	T. 8 N., R. 6 E.	T. 9 N., R. 6 E.
T. 10 N., R. 6 E.	T. 11 N., R. 6 E.	T. 12 N., R. 6 E.
T. 13 N., R. 6 E.	T. 14 N., R. 6 E.	T. 15 N., R. 6 E.
T. 16 N., R. 6 E.	T. 17 N., R. 6 E.	T. 18 N., R. 6 E.
T. 19 N., R. 6 E.	T. 19 1/2 N., R. 6 E.	T. 20 N., R. 6 E.
T. 20 1/2 N., R. 6 E.	T. 21 N., R. 6 E.	T. 22 N., R. 6 E.
T. 22 1/2 N., R. 6 E.	T. 23 N., R. 6 E.	T. 24 N., R. 6 E.
T. 25 N., R. 6 E.	T. 26 N., R. 6 E.	

**RANGE 7 E.**

T. 1 N., R. 7 E.	T. 2 N., R. 7 E.	T. 3 N., R. 7 E.
T. 4 N., R. 7 E.	T. 5 N., R. 7 E.	T. 6 N., R. 7 E.
T. 7 N., R. 7 E.	T. 8 N., R. 7 E.	T. 9 N., R. 7 E.
T. 10 N., R. 7 E.	T. 11 N., R. 7 E.	T. 12 N., R. 7 E.
T. 13 N., R. 7 E.	T. 14 N., R. 7 E.	T. 15 N., R. 7 E.
T. 16 N., R. 7 E.	T. 17 N., R. 7 E.	T. 18 N., R. 7 E.
T. 19 N., R. 7 E.	T. 19 1/2 N., R. 7 E.	T. 20 N., R. 7 E.
T. 20 1/2 N., R. 7 E.	T. 21 N., R. 7 E.	T. 22 N., R. 7 E.
T. 23 N., R. 7 E.	T. 24 N., R. 7 E.	T. 25 N., R. 7 E.

**RANGE 8 E.**

T. 1 N., R. 8 E.	T. 2 N., R. 8 E.	T. 3 N., R. 8 E.
T. 4 N., R. 8 E.	T. 5 N., R. 8 E.	T. 6 N., R. 8 E.
T. 7 N., R. 8 E.	T. 8 N., R. 8 E.	T. 9 N., R. 8 E.
T. 10 N., R. 8 E.	T. 11 N., R. 8 E.	T. 12 N., R. 8 E.
T. 13 N., R. 8 E.	T. 14 N., R. 8 E.	T. 15 N., R. 8 E.
T. 16 N., R. 8 E.	T. 17 N., R. 8 E.	T. 18 N., R. 8 E.
T. 19 N., R. 8 E.	T. 19 1/2 N., R. 8 E.	T. 20 N., R. 8 E.
T. 20 1/2 N., R. 8 E.	T. 21 N., R. 8 E.	T. 22 N., R. 8 E.
T. 23 N., R. 8 E.	T. 24 N., R. 8 E.	

**RANGE 9 E.**

T. 1 N., R. 9 E.	T. 2 N., R. 9 E.	T. 3 N., R. 9 E.
T. 4 N., R. 9 E.	T. 5 N., R. 9 E.	T. 6 N., R. 9 E.
T. 7 N., R. 9 E.	T. 8 N., R. 9 E.	T. 9 N., R. 9 E.
T. 10 N., R. 9 E.	T. 11 N., R. 9 E.	T. 12 N., R. 9 E.
T. 13 N., R. 9 E.	T. 14 N., R. 9 E.	T. 15 N., R. 9 E.
T. 16 N., R. 9 E.	T. 17 N., R. 9 E.	T. 18 N., R. 9 E.
T. 19 N., R. 9 E.	T. 20 N., R. 9 E.	T. 20 1/2 N., R. 9 E.
T. 21 N., R. 9 E.	T. 21 1/2 N., R. 9 E.	T. 22 N., R. 9 E.
T. 23 N., R. 9 E.		

**RANGE 10 E.**

T. 1 N., R. 10 E.	T. 2 N., R. 10 E.	T. 3 N., R. 10 E.
T. 4 N., R. 10 E.	T. 5 N., R. 10 E.	T. 6 N., R. 10 E.
T. 7 N., R. 10 E.	T. 8 N., R. 10 E.	T. 9 N., R. 10 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

CALIFORNIA: SAN BERNARDINO MERIDIAN - NORTH cont.

**RANGE 10 E. cont.**

T. 1 N., R. 10 E.	T. 11 N., R. 10 E.	T. 12 N., R. 10 E.
T. 13 N., R. 10 E.	T. 14 N., R. 10 E.	T. 15 N., R. 10 E.
T. 16 N., R. 10 E.	T. 17 N., R. 10 E.	T. 18 N., R. 10 E.
T. 19 N., R. 10 E.	T. 20 N., R. 10 E.	T. 20 1/2 N., R. 10 E.
T. 21 N., R. 10 E.	T. 22 N., R. 10 E.	

**R. 11 E.**

T. 1 N., R. 11 E.	T. 2 N., R. 11 E.	T. 3 N., R. 11 E.
T. 4 N., R. 11 E.	T. 5 N., R. 11 E.	T. 6 N., R. 11 E.
T. 7 N., R. 11 E.	T. 8 N., R. 11 E.	T. 9 N., R. 11 E.
T. 10 N., R. 11 E.	T. 11 N., R. 11 E.	T. 12 N., R. 11 E.
T. 13 N., R. 11 E.	T. 14 N., R. 11 E.	T. 15 N., R. 11 E.
T. 16 N., R. 11 E.	T. 17 N., R. 11 E.	T. 18 N., R. 11 E.
T. 19 N., R. 11 E.	T. 20 N., R. 11 E.	T. 20 1/2 N., R. 11 E.
T. 21 N., R. 11 E.		

**RANGE 12 E.**

T. 1 N., R. 12 E.	T. 2 N., R. 12 E.	T. 3 N., R. 12 E.
T. 4 N., R. 12 E.	T. 5 N., R. 12 E.	T. 6 N., R. 12 E.
T. 7 N., R. 12 E.	T. 8 N., R. 12 E.	T. 9 N., R. 12 E.
T. 10 N., R. 12 E.	T. 11 N., R. 12 E.	T. 12 N., R. 12 E.
T. 13 N., R. 12 E.	T. 14 N., R. 12 E.	T. 15 N., R. 12 E.
T. 16 N., R. 12 E.	T. 16 N., R. 12 1/2 E.	T. 17 N., R. 12 E.
T. 17 N., R. 12 1/2 E.	T. 18 N., R. 12 E.	T. 18 1/2 N., R. 12 E.
T. 19 N., R. 12 E.	T. 20 N., R. 12 E.	

**RANGE 13 E.**

T. 1 N., R. 13 E.	T. 2 N., R. 13 E.	T. 3 N., R. 13 E.
T. 4 N., R. 13 E.	T. 5 N., R. 13 E.	T. 6 N., R. 13 E.
T. 8 N., R. 13 E.	T. 9 N., R. 13 E.	T. 10 N., R. 13 E.
T. 11 N., R. 13 E.	T. 12 N., R. 13 E.	T. 13 N., R. 13 E.
T. 14 N., R. 13 E.	T. 15 N., R. 13 E.	T. 16 N., R. 13 E.
T. 17 N., R. 13 E.	T. 17 1/2 N., R. 13 E.	T. 18 N., R. 13 E.
T. 19 N., R. 13 E.		

**RANGE 14 E.**

T. 1 N., R. 14 E.	T. 2 N., R. 14 E.	T. 3 N., R. 14 E.
T. 4 N., R. 14 E.	T. 5 N., R. 14 E.	T. 11 N., R. 14 E.
T. 12 N., R. 14 E.	T. 13 N., R. 14 E.	T. 14 N., R. 14 E.
T. 15 N., R. 14 E.	T. 15 1/2 N., R. 14 E.	T. 16 N., R. 14 E.
T. 17 N., R. 14 E.	T. 18 N., R. 14 E.	

**RANGE 15 E.**

T. 1 N., R. 15 E.	T. 2 N., R. 15 E.	T. 13 N., R. 15 E.
T. 14 N., R. 15 E.	T. 15 N., R. 15 E.	T. 15 1/2 N., R. 15 E.
T. 16 N., R. 15 E.	T. 17 N., R. 15 E.	

**RANGE 16 E.**

T. 1 N., R. 16 E.
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**RANGE 1 W.**

T. 1 N., R. 1 W.	T. 2 N., R. 1 W.	T. 3 N., R. 1 W.
T. 4 N., R. 1 W.	T. 5 N., R. 1 W.	T. 6 N., R. 1 W.
T. 7 N., R. 1 W.	T. 8 N., R. 1 W.	T. 9 N., R. 1 W.
T. 10 N., R. 1 W.	T. 11 N., R. 1 W.	T. 12 N., R. 1 W.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**CALIFORNIA: SAN BERNARDINO MERIDIAN - NORTH east**

**RANGE 2 W.**

T. 2N, R. 2W.	T. 3N, R. 2W.	T. 4N, R. 2W.
T. 5N, R. 2W.	T. 6N, R. 2W.	T. 7N, R. 2W.
T. 8N, R. 2W.	T. 9N, R. 2W.	T. 10N, R. 2W.
T. 11N, R. 2W.	T. 12N, R. 2W.	

**RANGE 3 W.**

T. 3N, R. 3W.	T. 4N, R. 3W.	T. 5N, R. 3W.
T. 6N, R. 3W.	T. 7N, R. 3W.	T. 8N, R. 3W.
T. 9N, R. 3W.	T. 10N, R. 3W.	T. 11N, R. 3W.
T. 12N, R. 3W.		

**RANGE 4 W.**

T. 5N, R. 4W.	T. 6N, R. 4W.	T. 7N, R. 4W.
T. 8N, R. 4W.	T. 9N, R. 4W.	T. 10N, R. 4W.
T. 11N, R. 4W.	T. 12N, R. 4W.	

**RANGE 5 W.**

T. 5N, R. 5W.	T. 6N, R. 5W.	T. 7N, R. 5W.
T. 8N, R. 5W.	T. 9N, R. 5W.	T. 10N, R. 5W.
T. 11N, R. 5W.	T. 12N, R. 5W.	

**RANGE 6 W.**

T. 6N, R. 6W.	T. 7N, R. 6W.	T. 8N, R. 6W.
T. 9N, R. 6W.	T. 10N, R. 6W.	T. 11N, R. 6W.
T. 12N, R. 6W.		

**RANGE 7 W.**

T. 7N, R. 7W.	T. 8N, R. 7W.	T. 9N, R. 7W.
T. 10N, R. 7W.	T. 11N, R. 7W.	T. 12N, R. 7W.

**RANGE 8 W.**

T. 8N, R. 8W.	T. 9N, R. 8W.	T. 10N, R. 8W.
T. 11N, R. 8W.	T. 12N, R. 8W.	

**RANGE 9 W.**

T. 9N, R. 9W.	T. 10N, R. 9W.	T. 11N, R. 9W.
T. 12N, R. 9W.		

**RANGE 10 W.**

T. 10N, R. 10W.	T. 11N, R. 10W.	T. 12N, R. 10W.
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**RANGE 11 W.**

T. 10N, R. 11W.	T. 11N, R. 11W.	T. 12N, R. 11W.
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**RANGE 12 W.**

T. 10N, R. 12W.	T. 11N, R. 12W.	T. 12N, R. 12W.
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**CALIFORNIA: SAN BERNARDINO MERIDIAN: SOUTH**

**RANGE 1 E.**

T. 1S, R. 2E.	T. 2S, R. 2E.
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**RANGE 2 E.**

T. 1S, R. 3E.	T. 2S, R. 3E.
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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

CALIFORNIA: SAN BERNARDINO MERIDIAN - SOUTH (cont.)

<b>RANGE 4 E.</b> T. 1 S., R. 4 E.	T. 2 S., R. 4 E.	T. 3 S., R. 4 E.
<b>RANGE 5 E.</b> T. 1 S., R. 5 E. T. 4 S., R. 5 E.	T. 2 S., R. 5 E.	T. 3 S., R. 5 E.
<b>RANGE 6 E.</b> T. 1 S., R. 6 E. T. 4 S., R. 6 E.	T. 2 S., R. 6 E.	T. 3 S., R. 6 E.
<b>RANGE 7 E.</b> T. 1 S., R. 7 E. T. 4 S., R. 7 E.	T. 2 S., R. 7 E. T. 5 S., R. 7 E.	T. 3 S., R. 7 E.
<b>RANGE 8 E.</b> T. 1 S., R. 8 E. T. 4 S., R. 8 E.	T. 2 S., R. 8 E. T. 5 S., R. 8 E.	T. 3 S., R. 8 E. T. 6 S., R. 8 E.
<b>RANGE 9 E.</b> T. 1 S., R. 9 E. T. 4 S., R. 9 E. T. 7 S., R. 9 E.	T. 2 S., R. 9 E. T. 5 S., R. 9 E.	T. 3 S., R. 9 E. T. 6 S., R. 9 E.
<b>RANGE 10 E.</b> T. 1 S., R. 10 E. T. 4 S., R. 10 E. T. 7 S., R. 10 E.	T. 2 S., R. 10 E. T. 5 S., R. 10 E.	T. 3 S., R. 10 E. T. 6 S., R. 10 E.
<b>RANGE 11 E.</b> T. 1 S., R. 11 E. T. 4 S., R. 11 E. T. 7 S., R. 11 E.	T. 2 S., R. 11 E. T. 5 S., R. 11 E. T. 8 S., R. 11 E.	T. 3 S., R. 11 E. T. 6 S., R. 11 E.
<b>RANGE 12 E.</b> T. 1 S., R. 12 E. T. 4 S., R. 12 E. T. 7 S., R. 12 E.	T. 2 S., R. 12 E. T. 5 S., R. 12 E. T. 8 S., R. 12 E.	T. 3 S., R. 12 E. T. 6 S., R. 12 E.
<b>RANGE 13 E.</b> T. 1 S., R. 13 E. T. 4 S., R. 13 E. T. 7 S., R. 13 E.	T. 2 S., R. 13 E. T. 5 S., R. 13 E. T. 8 S., R. 13 E.	T. 3 S., R. 13 E. T. 6 S., R. 13 E.
<b>RANGE 14 E.</b> T. 1 S., R. 14 E. T. 4 S., R. 14 E. T. 7 S., R. 14 E.	T. 2 S., R. 14 E. T. 5 S., R. 14 E.	T. 3 S., R. 14 E. T. 6 S., R. 14 E.
<b>RANGE 15 E.</b> T. 1 S., R. 15 E. T. 4 S., R. 15 E. T. 7 S., R. 15 E.	T. 2 S., R. 15 E. T. 5 S., R. 15 E.	T. 3 S., R. 15 E. T. 6 S., R. 15 E.
<b>RANGE 16 E.</b> T. 1 S., R. 16 E. T. 4 S., R. 16 E.	T. 2 S., R. 16 E. T. 5 S., R. 16 E.	T. 3 S., R. 16 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government**

**IDaho: Boise Meridian**

**RANGE 11 E**

T. 11 S., R. 11 E.	T. 12 S., R. 11 E.	T. 13 S., R. 11 E.
T. 14 S., R. 11 E.	T. 15 S., R. 11 E.	T. 16 S., R. 11 E.

**RANGE 12 E**

T. 10 S., R. 12 E.	T. 11 S., R. 12 E.	T. 12 S., R. 12 E.
T. 13 S., R. 12 E.	T. 14 S., R. 12 E.	T. 15 S., R. 12 E.
T. 16 S., R. 12 E.		

**RANGE 13 E**

T. 9 S., R. 13 E.	T. 10 S., R. 13 E.	T. 11 S., R. 13 E.
T. 12 S., R. 13 E.	T. 13 S., R. 13 E.	T. 14 S., R. 13 E.
T. 15 S., R. 13 E.	T. 16 S., R. 13 E.	

**RANGE 14 E**

T. 8 S., R. 14 E.	T. 9 S., R. 14 E.	T. 10 S., R. 14 E.
T. 11 S., R. 14 E.	T. 12 S., R. 14 E.	T. 13 S., R. 14 E.
T. 14 S., R. 14 E.	T. 15 S., R. 14 E.	T. 16 S., R. 14 E.

**RANGE 15 E**

T. 9 S., R. 15 E.	T. 10 S., R. 15 E.	T. 11 S., R. 15 E.
T. 12 S., R. 15 E.	T. 13 S., R. 15 E.	T. 14 S., R. 15 E.
T. 15 S., R. 15 E.	T. 16 S., R. 15 E.	

**RANGE 16 E**

T. 9 S., R. 16 E.	T. 10 S., R. 16 E.	T. 11 S., R. 16 E.
T. 12 S., R. 16 E.	T. 13 S., R. 16 E.	T. 14 S., R. 16 E.
T. 15 S., R. 16 E.	T. 16 S., R. 16 E.	

**RANGE 17 E**

T. 9 S., R. 17 E.	T. 10 S., R. 17 E.	T. 11 S., R. 17 E.
T. 12 S., R. 17 E.	T. 13 S., R. 17 E.	T. 14 S., R. 17 E.
T. 15 S., R. 17 E.	T. 16 S., R. 17 E.	

**RANGE 18 E**

T. 9 S., R. 18 E.	T. 10 S., R. 18 E.	T. 11 S., R. 18 E.
T. 12 S., R. 18 E.	T. 13 S., R. 18 E.	T. 14 S., R. 18 E.
T. 15 S., R. 18 E.	T. 16 S., R. 18 E.	

**RANGE 19 E**

T. 10 S., R. 19 E.	T. 11 S., R. 19 E.	T. 12 S., R. 19 E.
T. 13 S., R. 19 E.	T. 14 S., R. 19 E.	T. 15 S., R. 19 E.
T. 16 S., R. 19 E.		

**RANGE 20 E**

T. 10 S., R. 20 E.	T. 11 S., R. 20 E.	T. 12 S., R. 20 E.
T. 13 S., R. 20 E.	T. 14 S., R. 20 E.	T. 15 S., R. 20 E.
T. 16 S., R. 20 E.		

**RANGE 21 E**

T. 10 S., R. 21 E.	T. 11 S., R. 21 E.	T. 12 S., R. 21 E.
T. 13 S., R. 21 E.	T. 14 S., R. 21 E.	T. 15 S., R. 21 E.
T. 16 S., R. 21 E.		

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Commentor No. 40 (cont'd): Ian Zabarte, Principal Man  
for Foreign Affairs, Western Shoshone Government

IDAHO: BOISE MERIDIAN cont.

**RANGE 21 E.**  
T. 10 S., R. 22 E.  
T. 13 S., R. 22 E.  
T. 16 S., R. 22 E.

T. 11 S., R. 22 E.  
T. 14 S., R. 22 E.

T. 12 S., R. 22 E.  
T. 15 S., R. 22 E.

**RANGE 23 E.**  
T. 10 S., R. 23 E.  
T. 13 S., R. 23 E.  
T. 16 S., R. 23 E.

T. 11 S., R. 23 E.  
T. 14 S., R. 23 E.

T. 12 S., R. 23 E.  
T. 15 S., R. 23 E.

**RANGE 24 E.**  
T. 9 S., R. 24 E.  
T. 12 S., R. 24 E.  
T. 15 S., R. 24 E.

T. 10 S., R. 24 E.  
T. 13 S., R. 24 E.  
T. 16 S., R. 24 E.

T. 11 S., R. 24 E.  
T. 14 S., R. 24 E.

**RANGE 25 E.**  
T. 9 S., R. 25 E.  
T. 12 S., R. 25 E.  
T. 15 S., R. 25 E.

T. 10 S., R. 25 E.  
T. 13 S., R. 25 E.  
T. 16 S., R. 25 E.

T. 11 S., R. 25 E.  
T. 14 S., R. 25 E.

**RANGE 26 E.**  
T. 9 S., R. 26 E.  
T. 12 S., R. 26 E.  
T. 15 S., R. 26 E.

T. 10 S., R. 26 E.  
T. 13 S., R. 26 E.  
T. 16 S., R. 26 E.

T. 11 S., R. 26 E.  
T. 14 S., R. 26 E.

**RANGE 27 E.**  
T. 9 S., R. 27 E.  
T. 12 S., R. 27 E.  
T. 15 S., R. 27 E.

T. 10 S., R. 27 E.  
T. 13 S., R. 27 E.  
T. 16 S., R. 27 E.

T. 11 S., R. 27 E.  
T. 14 S., R. 27 E.

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**Commentor No. 40 (cont'd): Ian Zabarte, Principal Man for Foreign Affairs, Western Shoshone Government**

UTAH: SALT LAKE MERIDIAN

**RANGE 14 W.** T. 12 N., R. 14 W. T. 13 N., R. 14 W. T. 14 N., R. 14 W.

RANGE 15 W. T. 10 N., R. 15 W. T. 11 N., R. 15 W. T. 12 N., R. 15 W.  
T. 13 N., R. 15 W. T. 14 N., R. 15 W. T. 15 N., R. 15 W.

**RANGE 16 W.**  
 T. 8 N., R. 16 W.  
 T. 11 N., R. 16 W.  
 T. 14 N., R. 16 W.  
 T. 9 N., R. 16 W.  
 T. 12 N., R. 16 W.  
 T. 15 N., R. 16 W.  
 T. 10 N., R. 16 W.  
 T. 13 N., R. 16 W.

**RANGE 17 W.** T. 8 N., R. 17 W. T. 9 N., R. 17 W.  
 T. 10 N., R. 17 W. T. 11 N., R. 17 W. T. 12 N., R. 17 W.  
 T. 13 N., R. 17 W. T. 14 N., R. 17 W. T. 15 N., R. 17 W.

<b>RANGE 18 W.</b>		
T. 5 N., R. 18 W.	T. 6 N., R. 18 W.	T. 7 N., R. 18 W.
T. 8 N., R. 18 W.	T. 9 N., R. 18 W.	T. 10 N., R. 18 W.
T. 12 N., R. 18 W.	T. 13 N., R. 18 W.	T. 14 N., R. 18 W.

<b>RANGE 18 W.</b>	T. 5 N., R. 18 W. T. 8 N., R. 18 W. T. 11 N., R. 18 W. T. 14 N., R. 18 W.	T. 6 N., R. 18 W. T. 9 N., R. 18 W. T. 12 N., R. 18 W. T. 15 N., R. 18 W.	T. 7 N., R. 18 W. T. 10 N., R. 18 W. T. 13 N., R. 18 W.
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**RANGE 19 W.**

T. 3 N., R. 19 W.	T. 4 N., R. 19 W.	T. 5 N., R. 19 W.
T. 6 N., R. 19 W.	T. 7 N., R. 19 W.	T. 8 N., R. 19 W.
T. 9 N., R. 19 W.	T. 10 N., R. 19 W.	T. 11 N., R. 19 W.

T. 12 N., R. 19 W.                  T. 13 N., R. 19 W.                  T. 14 N., R. 19 W.  
T. 15 N., R. 19 W.

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**Commentor No. 41: Jim Haber**  
**Nevada Desert Experience**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

Please print clearly

1. The document is so long and complex that the public comment period should be extended.
2. The 1996 document, the current SWEIS needs to be publicly available on the NNSA website.
3. No undisturbed land should be used for any new or ongoing programs.
4. Nuclear waste disposal should be stopped immediately.
5. International law & treaties must be cynically ignored or treated as irrelevant. This includes Ruby Valley, the NPT and other conventions.

All commenters will receive a Summary and CD of the Final NNSS SWEIS. More comments will also be submitted.

Name: JIM HABER

Organization: NEVADA DESERT EXPERIENCE

Mailing Address: 1420 W. BARTLETT AVE,  
LAS VEGAS NV 89106

E-mail (optional): JIM@NEVADADESERTEXPERIENCE.ORG

Comment forms can be submitted by mail to:  
 NNSA Nevada Operations Office  
 NNSA SWEIS Document Manager  
 P.O. Box 98518  
 Las Vegas, NV 89193-8518

Comments can also be submitted by:  
 Phone (toll-free number): 877-781-6105  
 Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

- 41-1 DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).
- 41-2 The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.
- 41-3 The commentator's statement of opposition to nuclear waste disposal is noted.
- 41-4 The commentator does not provide any information regarding which aspects of laws and/or treaties "musn't be cynically ignored or treated as irrelevant" but does cite the Treaty of Ruby Valley and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as general examples. Regarding the Ruby Valley Treaty of 1863, the Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.
- The NPT was ratified by the U.S. Senate on March 5, 1970. The basic provisions of the NPT are to (1) prevent the spread of nuclear weapons, (2) provide assurance, through international safeguards, that the peaceful nuclear activities of states that have not already developed nuclear weapons will not be diverted to making such weapons, (3) promote the peaceful uses of nuclear energy, and (4) express the determination that the treaty should lead to further progress in comprehensive arms control and nuclear disarmament measures. Although not directly germane to the scope of this SWEIS, many of the projects and activities described in Chapter 3 support U.S. efforts to address these provisions.

**Commentor No. 42: Richard Lai**  
**Nevada Desert Experience**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

Please print clearly

*Please extend the public comment period by 3 months  
as the Draft SWEIS is complex deserving consideration.*

*Please do not disturb previously undisturbed lands & hydrological systems.*

*Please provide easier direct access to the previous  
SWEIS, physically & online.*

*Please choose the Reduced Activity Options or  
a combination of options toward reduced Activity*

*Virtually, abide by the Treaty of Ruby Valley*

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Richard Lai

Organization: Nevada Desert Experience

Mailing Address: 400 Q # 13, Sacramento CA

E-mail (optional): RKLAI@NevadaDesertExperience.org

Comment forms can be submitted by mail to:	Comments can also be submitted by:
NNSS Nevada Operations Office NNSS SWEIS Document Manager P.O. Box 98518 Las Vegas, NV 89193-8518	Phone (toll-free number): 877-781-6105 Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

- || 42-1 The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. With respect to hydrological systems, new groundwater characterization wells may be added and wells for potable water may be constructed in the future as the need arises.
- || 42-2 DOE/NNSA has made the 1996 NTS EIS (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).
- || 42-3 The commentator's preference for the Reduced Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this NNSS SWEIS, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.
- || 42-4 The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

**Commentor No. 43: James Drollingier**  
**Sheet Metal Workers Local 88**



**COMMENT FORM**

DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA

*Please print clearly*

My name is James Drollingier, 5th year apprentice for Local 88, and working for MMC Mechanical, Formerly Fabor Mechanical. I worked on the test site during the fire stations project towards the end of last year (2010). The test site and its goals are something I strongly believe in, and I support all the forms of alternate energy that are being proposed. The ways of the Las. Vegas construction worker have changed, and with it so must we. Most importantly though, we need to create jobs, for my journey men, for myself, and for my posterity coming up. Without the National Government leading the way, still be a much longer road ahead.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: James Drollingier

Organization: Sheetmetal Workers Local 88

Mailing Address: P.O. Box 2226 Overton NV 89040

E-mail (optional): blasterbike519@hotmail.com

Comment forms can be submitted by mail to:

NNSA Nevada Operations Office  
NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

43-1

- 43-1 The commentor's concerns regarding the need for job creation in Nevada and support for alternative energy programs are noted.

**Commentor No. 44: Alfonso N. Lopez**  
**Sheet Metal Workers Local 88**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

*This state needs JOBS! JOBS! JOBS! I hope  
that the DOE takes advantage of the opportunity  
to put Neandians back to work. I'm being told  
from these meeting that over 1500 construction  
JOBS and over 400 Permanent JOBS are  
available if this project goes through*

44-1

- 44-1 The commentor's concerns regarding the need for job creation in Nevada are noted.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Alfonso N. Lopez

Organization: Sheet Metal Workers Local 88

Mailing Address: 2560 Marco St.  
Las Vegas, NV 89115

E-mail (optional): alonso@smw88.org

Comment forms can be submitted by mail to:

NNSS Nevada Operations Office  
NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:

Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSS will accept comments until October 27, 2011.

**Commentor No. 45: Darrell Lacy, Director  
Nye County Community Development**



**Nye County**  
**Nuclear Waste Repository Project Office**  
2101 E. Calvada Blvd., Ste. #100 Pahrump, Nevada 89048  
(775) 727-7727 • Fax (775) 727-7919

11-167 DL (L)

October 24, 2011

Linda M. Cohn, SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

**RE: AVAILABILITY OF THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA (NNSS SWEIS)**

Nye County appreciates the opportunity to submit comments on the scope of the subject Draft EIS. We ask that you consider and include our comments to the extent possible.

**Primary Comments:**

1. The Draft Site-Wide Environmental Impact Statement (DSWEIS) correctly defines cumulative impacts as, "impact on the environment which results from the incremental impact of the action when added to past, present, and reasonably foreseeable future actions . ." Although claiming to evaluate all past, present, and reasonably foreseeable actions, as is required by the National Environmental Policy Act (NEPA), this DSWEIS incorrectly assumes the current conditions to be the baseline conditions and considers only the direct cumulative impacts associated with water use in support of NNSA-related actions. DOE fails to acknowledge (1) the historic Federal actions, such as the original and ongoing land withdrawals that removed the NNSS from public domain, and (2) the direct and indirect impacts of the land withdrawals that continue to affect water availability in southern Nye County. These *current conditions, which include historical impacts*, are incorrectly used by DOE as the *baseline environmental conditions* against which impacts are measured. This DSWEIS continues to ignore the past, present, and ongoing cumulative impacts resulting from the loss of access to public land and waters of the state (that belong to the public), as well as other natural resources located on withdrawn public lands. The Federal government

45-1

45-2

45-3

- 45-1 The Council on Environmental Quality (CEQ) stated in *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997): "The description of the affected environment should focus on how the existing conditions of key resources, ecosystems, and human communities have been altered by human activities." CEQ cumulative impacts guidance goes on to state: "The description of the affected environment will not only provide the baseline needed to evaluate environmental consequences, but also it will help identify other actions contributing to cumulative effects." Chapter 4 of this *NNSS SWEIS* describes the affected environment of DOE/NNSA facilities in the state of Nevada in terms of their existing condition, including impacts that have occurred to those resources from past activities. For example, Section 4.1.5.2 includes descriptions of surface soils and subsurface geological media as it has been impacted by both atmospheric and underground nuclear weapons testing; Section 4.1.6.2 describes groundwater at the NNSS, including current knowledge of the extent of radiological contamination resulting from underground nuclear weapons testing; and Section 4.1.7 describes biological resources of the NNSS and provides information on the amount of wildlife, specifically desert tortoise, habitat that has been disturbed by past DOE/NNSA activities at the NNSS. Chapter 6, Section 6.3.6.2, of this *NNSS SWEIS* acknowledges and evaluates impacts that may have occurred or will continue to occur due to lack of direct access to NNSS groundwater.
- 45-2 When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right at the NNSS to use groundwater to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation. As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and U.S. National Park Service (NPS), have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate, and thus the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.
- 45-3 DOE/NNSA involves Nye County (the commentator) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For

**Commentor No. 45 (cont'd): Darrell Lacy, Director  
Nye County Community Development**

October 18, 2011  
Page 2 of 8

has never recognized, mitigated, or compensated Nye County for its removal from appropriation and/or the contamination of a vast water resource within the County, and continues to deny the County access to substantial water and land resources on the NNSS wholly within Nye County.

As an example, Nye County's applications to the Nevada State Engineer to obtain rights to unappropriated water in several basins located on the NNSS have largely been denied based on DOE's protest that they (DOE) would not grant Nye County the right of access needed to retrieve the water. DOE's direct actions serve to deny Nye County access to water that is vital to the County's interests. Nye County offers the practical solution of providing the County reasonable access to the substantial clean water resources that exist on the NNSS in excess of historical NNSS usage, so long as the sustainable yield is not exceeded.

2. Nye County understands that some of the groundwater at the NNSS is contaminated and has the potential to migrate offsite. Because the hazard posed by the potential offsite migration of contaminated groundwater lies completely within Nye County, DOE should closely coordinate its groundwater studies at the NNSS with Nye County scientists. Nye County also believes (as DOE has also indicated) that the vast majority of water on the NNSS is perfectly safe for public use, i.e. meets drinking water standards.

Further, Nye County believes that NNSA should provide funding for Nye County to conduct its own independent groundwater studies to the south and west of the NNSS, where DOE's groundwater models have predicted the highest probability of offsite migration. As a minimum, NNSA should provide funding for Nye County programs designed to monitor offsite groundwater flow along the western and southern NNSS boundaries.

Finally, Nevada Assembly Joint Resolution 5, dated June 16, 2011, further documents Nye County's concern regarding groundwater contamination. The joint resolution urges the Federal government to engage in discussions with Nye County regarding "...the mitigation and containment of water contamination in Nevada which resulted from nuclear testing and storage activities that were conducted by the Federal Government at the Nevada National Security Site; and the restoration of any water contaminated because of those activities."

Consistent with the letter and spirit of NEPA, DOE should seek the means to mitigate both the direct and indirect impacts.

3. DOE further deviates from the cumulative impact analysis requirements of NEPA by failing to include and evaluate the impacts of the Yucca Mountain Repository in this SWEIS on the basis of the Administration's fiscal year 2010, 2011, and 2012 budget requests, and the current administration's call for all funding and activities related to development of a repository at Yucca Mountain to be eliminated. Such calls do not constitute formal decisions, nor do they override existing Federal laws. The omission of the Yucca Mountain Repository from the cumulative impact analysis renders this DSWEIS deficient.

As noted in Section 1.5 on page 1-16 the DOE prepared the *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level*

45-2  
cont'd

45-3

45-4

example, Nye County, through its liaison with the Nevada Site Specific Advisory Board (with two standing liaison positions), regularly interacts with DOE/NSSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

Furthermore, although participation in groundwater characterization and monitoring programs at the NNSS is outside the scope of this NNSS, DOE/NSSA accepts, evaluates, and may fund unsolicited proposals for various activities such as the hydrogeological investigations suggested by the commentator. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NSSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NSSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the Federal Facility Agreement and Consent Order (FFACO), which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NSSA, under the NNSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing and monitoring locations and resources that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

DOE/NSSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NSSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. As a Cooperating Agency in this SWEIS, Nye County may provide input for consideration in the mitigation action plan. Chapter 7, Section 7.0, has been modified to reflect DOE/NSSA's intentions to prepare a mitigation action plan.

- 45-4 DOE is not required, nor does it intend, to construct or operate a repository at Yucca Mountain. Accordingly, in the absence of a DOE proposal to construct and operate a repository, NEPA review of the former Yucca Mountain Repository Project in this SWEIS is not required.

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*Radioactive Waste at Yucca Mountain, Nye County, Nevada (Yucca Mountain EIS)* (DOE/EIS-0250-F) (DOE 2002e). Published in 2002, the *Yucca Mountain EIS* analyzed a proposed action to construct, operate, monitor, and eventually close a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste at Yucca Mountain in Nye County, Nevada. Following issuance of the *Yucca Mountain EIS* in 2002, DOE modified its approach to repository design and operational plans. In 2008, DOE published the *Final Supplemental 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-0250F-S1) (DOE 2008g). This supplemental EIS evaluated the potential environmental impacts of DOE's modified repository design and operational plans, and should be included in the cumulative impacts analysis.

4. It is commendable that this DSWEIS considers renewable energy development at several different locations on the NNSS. Nye County endorses development of renewable energy resources in our county. As you have noted in the DSWEIS, significant renewable energy development on the NNSS would require partnership with private developers. In this regard, Nye County believes that there are adequate water resources on the NNSS for solar development projects, whether or not the solar projects are located on the NNSS.

To illustrate, the DSWEIS identifies a sustainable yield for four basins within the NNSS as being in the range of 5,844 and 8,964 acre-feet. Water demand from solar power operations under the expanded operations scenario is a maximum of 3,124 acre-feet per year. Nye County agrees that as long as the sustainable yield is not exceeded, significant impacts from the use of water by DOE in the basins comprising the NNSS would not be expected, whether or not the water were made available for on or offsite use. DOE, in coordination with Nye County scientists, should work together to better define the sustainable water yield of the Forty-mile Canyon, Jackass Flats Subdivision that DOE cites as between 824 and 3,944 acre-feet per year.

5. Chapter 6, Cumulative Impacts, addresses proposed DOE actions that are not under the auspices of NNSA or are not environmental restoration activities. It is troubling that DOE is so fractured internally that it cannot describe its actions at NNSS as one agency. This segmentation among organizations makes understanding the Federal government's actions and potential actions difficult to understand by Nye County and the general public. In particular, it is stated that the proposed Greater-Than-Class C Low-Level Waste Disposal Facility; what this SWEIS calls, "the formerly proposed Yucca Mountain repository project;" and the DOE Office of Energy Efficiency and Renewable Energy's Concentrating Solar Power (CSP) validation Project in Area 25 of the NNSS "are separate from the NNSA programs, projects, and activities addressed in this NNSS SWEIS." The discussion goes on to say that DOE's Office of Energy Efficiency and Renewable Energy will undertake an appropriate level of NEPA analysis for the CSP Validation Project; however, based on available information, this section addresses the proposed project. Neither Nye County officials nor the public care about DOE's internal organization or which organization

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- 45-5 For estimating impacts on groundwater availability from proposed activities at the NNSS in this *Final NNSS SWEIS*, DOE/NNSA used the perennial yields established by the Nevada State Engineer. These perennial yields are sufficient for purposes of estimating impacts. Better defining the sustainable water yields of the hydrographic basins and sub-basins on the NNSS is beyond the scope of this SWEIS.

- 45-6 The three proposed actions that the commentator references are separate projects that have been or would have been analyzed in separate NEPA processes as a result of organizational responsibilities within the DOE. DOE/NNSA did include them in the *Draft NNSS SWEIS* as reasonably foreseeable future actions and analyzed their impacts as cumulative impacts.

Chapter 2, Section 2.5.2, of this *NNSS SWEIS* notes that the Administration decided to cease funding and activities related to the development of a repository at Yucca Mountain, while developing alternative storage and disposal approaches for spent nuclear fuel (SNF) and high-level radioactive waste (HLW). Accordingly, in the absence of a DOE proposal to construct and operate a repository, NEPA review of the former Yucca Mountain Repository Project is not required.

Although the Yucca Mountain Repository Project has been cancelled and there is not a specific proposal for remediation of the former site, DOE/NNSA recognizes that, at some point in the future, specific remediation is likely to be proposed. Accordingly, the cumulative impacts analysis in Chapter 6 has been revised to include a programmatic-level analysis of the potential impacts of such a remediation project, based on the analyses in the *Final Environmental Impact Statement for a Geological Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (Yucca Mountain FEIS)* (DOE/EIS-0250) and *Final Supplemental Environmental Impact Statement for a Geological Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (Yucca Mountain SEIS)* (DOE/EIS-0250-S1).

Since publication of the *Draft NNSS SWEIS*, the CSP Validation Project has been put on indefinite hold and the environmental assessment has been cancelled. The CSP Validation Project description has been deleted from Chapter 6, Section 6.2.1.1, and its potential impacts removed from Section 6.3 of this *Final NNSS SWEIS*. If a similar project is proposed in the future, appropriate NEPA review will be performed at that time.

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- proposes which actions. The SWEIS should describe Federal government's actions on the NNSS and not leave it up to readers to try to figure out the organizational priorities and differences.
6. Chapter 6, Cumulative Impacts, describes the Concentrating Solar Power (CSP) validation Project in Area 25 of the NNSS. The location of this facility conflicts with both highway and rail access to the Yucca Mountain Repository. As noted in a previous comment, the Yucca Mountain Repository is required by Federal law and should be fully evaluated in this SWEIS. In particular, any conflicts between the CSP and Yucca Mountain Repository should be specifically addressed. Until /unless the Nuclear Waste Policy Act is changed, it is a mistake to commit land to another activity that is in conflict with Federal law. Alternatively, a discussion of how land use conflicts would be avoided is acceptable.
  7. The lack of a preferred alternative limits the focus of public comments on the SWEIS. If a preferred alternative is included in the final SWEIS, another public comment period should be offered.
  8. Nye County questions the inclusion of commercial-scale power production, i.e., solar and geothermal, activities on the Nevada National Security Site, as the land withdrawals are specifically for weapons related activities. Land rights issues for activities not currently authorized should be addressed in this EIS.
  9. The restricted air space above Area 25 is a further impediment to developing commercial solar facilities. Air Force use restrictions on adjacent land would almost certainly preclude development of a tower facility, which is the most meaningful type of facility in an area where private water supplies are oversubscribed. Solar development options should be further discussed in this SWEIS instead of segmenting such decisions in a subsequent NEPA analysis.
  10. The DSWEIS does not recognize that the Reduced Operations Alternative would have an impact on Environmental Management activities. For example, under the Reduced Operations Alternative, road maintenance on Pahute Mesa would be curtailed, effectively limiting access to the Under Ground Test Area (UGTA) monitoring wells.
  11. The DSWEIS does not provide sufficient detail to allow meaningful evaluation of transportation shipping routes, such as the source of and the number of shipments proposed for each alternative transportation route under the constrained and unconstrained options, for each of the three alternative scenarios. Transportation impacts are of particular concern to Nye County.
  12. The DSWEIS does not evaluate the impacts of remediating the Yucca Mountain site. While the document notes that *"Until DOE receives appropriations for remediation of the infrastructure and buildings of the former Yucca Mountain Project, NNSA will maintain the infrastructure and buildings and provide security and support to DOE to remain compliant with Federal and state regulations pursuant to existing site permits. Upon receipt of appropriations, DOE will remediate and close the infrastructure and buildings as required*

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- 45-7 Please see response to comment 45-6 for information regarding the CSP Validation Project.
- 45-8 As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS, but in no event later than the final EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*. DOE/NNSA will not make a decision based on this *Final NNSS SWEIS* until at least 30 days following its issuance (see 40 CFR 1506.10). During that minimum 30-day period, interested parties may submit comments to DOE/NNSA for consideration in its decisionmaking.
- 45-9 DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. Any commercial solar development would be fully coordinated with BLM before such a decision would be made.
- 45-10 The USAF is a cooperating agency on this SWEIS and has reviewed all proposed activities, including those for a commercial solar power facility, to ensure that they are compatible with USAF mission requirements. The USAF did not identify any conflicts with the location (i.e., Area 25) or configuration (parabolic mirror arrays) of the solar power facility described in the *Draft NNSS SWEIS*.
- At this time, there are no proposals from private-sector entities to construct a solar power facility at the NNSS, and DOE/NNSA would not pursue or allow construction of a large-scale facility without such a proposal. Therefore, it is not productive to speculate further within the SWEIS about the specifics of the facility configuration proposed by such a proponent. If a proposal for a solar power facility were received in the future, it would be subject to appropriate NEPA review.
- 45-11 Under the Reduced Operations Alternative, environmental restoration activities would continue in accordance with the most recent version of the FFACO. Chapter 3, Section 3.3, of the *Draft NNSS SWEIS* indicated that maintenance of Pahute Mesa, Stockade Wash, and Buckboard Mesa Roads would be terminated; however, Section 3.3.3.1 stated, "Roads within Areas 18, 19, 20, 29, and 30 would be minimally maintained to provide the basic access necessary to maintain the noted infrastructure." While maintenance levels on roads and other infrastructure in the northwest portion of the NNSS would be reduced relative to other alternatives, access to sites necessary to continue environmental restoration activities would be maintained. Sections 3.3

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by law, regulations, and applicable agreements. At the completion of site closure, DOE will initiate a long-term surveillance program." (Table 2-1) this is more than a funding issue. If the program has been canceled, there are MOUs that state that the Environmental Management Program is responsible for the necessary remediation activities, and this will be a major federal action. It is appropriate to evaluate the impacts of this action in this Environmental Impact Statement so that not only can the true costs of closing the Yucca Mountain project be understood by decision makers, but that reviewers of this Environmental Impact Statement can evaluate the impacts of remediating the site.

13. The unconstrained transportation case is neither meaningful nor evaluated in sufficient detail to allow independent evaluation of the associated impacts. The Nevada National Security Site Waste Acceptance Criteria prohibits transportation through Las Vegas, over Hoover Dam, or over the O'Callahan – Tillman Bridge. Further, ongoing construction defeats any advantage that could be gained by routing wastes through the Las Vegas Valley. Examples include: future modification of the I-15 / U.S. 95 interchange; continuing construction of overpasses; poorly designed interchanges at the I-215 bypasses; and a new bridge planned for the Charleston underpass. Absent formal, State directed alternative highway routing, transportation should adhere to existing Department of Transportation and NEPA guidelines.

**Other Section Specific Comments**

1. Section S.3.1.3, page S-26. The 150 FTE's expected for a 240-megawatt commercial solar power facility is unrealistic. Current plans for facilities in the Amargosa Valley area or the West-Wide Solar Programmatic Environmental Impact Statement should be referenced for a more accurate account of the expected FTE's needed to operate a solar facility.
2. Section S.3.1.3, page S-26 states, "The permanent workforce needed to operate a solar power generation facility (125 individuals)..." A 100MW solar (PV) facility has been shown to not need more than one permanent person to operate; this statement should be clarified or amended." The one person would be required to check equipment operation, identify failing PV panels, order and install replacement panels, and return defective panels to the supplier. Other work, such as washing the PV panels or replacement of major equipment items, such as inverter, would be done by temporary (on call) workers or contractors.  
In Section S.3.1.3, page S-27, the statement "...the NNSS workforce would be reduced by approximately 45 percent (1,700 to 1,655 individuals)" should be changed to "approximately 45 individuals."
3. In Table S-15, page S-46, under Infrastructure and Energy, the planned production levels of electricity from the proposed solar power plants is exceeds the expected power demand for the NNSS. This document later states that VEA and NV Energy are upgrading and constructing a new transmission line, but it should be clarified if the NNSS has addressed transmission issues and the sale of excess power with VEA and/or NV Energy. The plan for the sale of excess power produced at the NNSS should be addressed in this section.

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and 3.3.3.1 and appropriate sections in Appendix A of this *Final NNSS SWEIS* were revised to clarify this point.

- 45-12** The transportation analysis used a regional approach because waste generators that have not historically transported waste to NNSS may do so in the future and there is uncertainty regarding the waste volumes to be received from identified waste generators, as discussed in Appendix E, Section E.4.1. Table E-3, shows the radioactive waste generators and site-specific waste volumes used to estimate the number of waste shipments. Figures E-3 through E-9 show the transportation routes that were analyzed. Tables E-11, E-12, and E-13 show the estimated number of shipments of radioactive wastes and materials originating from each region of the country for the Constrained Case under each alternative, and Table E-17 shows the estimated number of shipments for the Unconstrained Case. Note that an Unconstrained Case was evaluated for comparative purposes and was only evaluated for the number of shipments under the Expanded Operations Alternative. The *NNSS SWEIS* transportation analysis is based on population characteristics developed from U.S. census data developed at the block group level.
- 45-13** DOE recognizes that it has an obligation to remediate lands disturbed by its past activities, including those associated with the former Yucca Mountain Repository Project. Accordingly, DOE has evaluated the potential cumulative impacts of remediating the lands and closing the infrastructure and buildings at Yucca Mountain (see Chapter 6 of this SWEIS). Chapter 1, Section 1.7.1 (Table 1-2) and Chapter 2, Section 2.5.2, have been clarified in this regard.
- 45-14** When considering whether to allow commercial solar power generation as an acceptable land use, DOE/NNSA selected a comparative model based on a BLM EIS for a project proposed near the NNSS: the *Final Environmental Impact Statement for the Amargosa Farm Road Solar Energy Project* (BLM 2010). This EIS projects a permanent labor force of 170 to 200 full-time equivalents for a plant of approximately 250 megawatts in production capacity. DOE/NNSA's comparative model used the same technologies and facility layout as the Amargosa Farm Road Solar Energy Project, and scaled employment estimates accordingly. While other types of power generation technologies could result in lower employment levels (and lower levels of impacts on environmental resources), DOE/NNSA chose to use a conservative model for purposes of analysis that provided an upper-end level of resource impacts. Chapter 3, Section 3.1.3.2, describes how the Amargosa Farm Road Solar Energy Project was used as the basis for facility descriptions in this *NNSS SWEIS*.

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4. Table S-15, page 46, regarding operation of solar facilities should include the water uses of such plants as is done in Table S-6.
5. In Table S-15 under Biological Resources, page S-53, it cannot be predicted that the disturbing of desert tortoise habitat will result only in "harassment" since there is also the potential to, however inadvertently, kill a tortoise during activities despite operations history at NNSS, which isn't explained until page 5-119 of this document. The statement, "...all by harassment," should be removed from all three alternatives under Biological Resource Impacts.
6. Table S-15 under Biological Resources, page S-53 notes, "Over the next 10 years, up to 125 desert tortoises would be taken on NNSS roadways, due to non-project vehicle travel. Fewer than 20 of these desert tortoises are expected to be taken by injury or mortality." It should be explained how the other 105 tortoises are expected to be taken.
7. Table S-15 under Groundwater Resources, page S-52 should discuss potential groundwater tritium contamination issues as part of groundwater usage for operations and construction.
8. In Table S-15 under Visual Resources, page 54 and throughout the summary section, new transmission lines are only addressed under the Expanded Operations Alternative. The solar power generation facilities for the No Action Alternative and Reduced Operations Alternative will produce more power than the NNSS is expected to use, therefore, transmission should be addressed under those alternatives as well since new transmission lines will be necessary to export the excess power off site, such as is stated in Table S-16, Cumulative Impacts.
9. Table S-15 under Land Use, page S-56. If the SWEIS is going to include/account for the water utilization, employment numbers, and megawatt production, the amount of waste generated and potential disposal methods for that waste should be addressed as well. To say it will be the responsibility of the solar facility fails to address the cumulative effect of the facility which is being identified/addressed in this EIS.
10. Table S-16 under Land Use, page S-60. The statement on change in public land designation needs a reference.
11. Table S-16 under Groundwater, page S-65. The values in this table are 18 acre-feet less than the values in Tables S-4, S-5, and S-6 and should be made consistent.
12. Table S-16, Page s-71. If the SWEIS is going to include/account for the water utilization, employment numbers, and megawatt production, the amount of waste generated and potential disposal methods for that waste should be addressed as well. To say it will be the responsibility of the solar facility fails to address the cumulative effect of the facility which is being identified/addressed in this EIS
13. Section 3.2.3.2, page 3-41. This section references Section 3.1.4.2 for additional information on solar power generation facilities in Area 25. The reference should read Section 3.1.3.2.
14. Section 3.2.3.2, page 3-41. Potential water use for the solar facility types discussed in this paragraph should be included, as they were in the following paragraph on the Geothermal Demonstration Project.

- 45-17                  45-18                  45-19                  45-20                  45-21                  45-22                  45-23                  45-24                  45-25                  45-26
- 45-15 See response to comment 45-14 above. The actual workforce (permanent and contractors/on-call) associated with a solar power generation facility would depend upon the design and technologies proposed by private applicants. No such proposals have been identified at this point in time. Chapter 3, Section 3.1.3.2, describes how the *Amargosa Farm Road Solar Energy Project Environmental Impact Statement* was used to develop attributes for a commercial solar power generation facility in this NNSS SWEIS.
  - 45-16 DOE/NNSA analyzed the potential effects of allowing land on the NNSS to be used by a private entity for the construction and operation of a commercial solar power generation facility, as well as a route for a connection to the regional transmission system. However, these analyses are based upon hypothetical designs (including for production capacity and transmission line alignment). A private proponent's designs could likely vary from these. Therefore, it is premature to discuss any specific issues related to power transmission and sales. These issues would be addressed in an additional, tiered NEPA review should a proposal from a private entity be considered in the future.
  - 45-17 Water use associated with a commercial solar power generation facility (as well as all other activities) is presented in the Summary, Table S-15, under the heading "Groundwater Resources."
  - 45-18 Table S-15 is located in the Summary of this *NNSS SWEIS*. A similar table may be found in Chapter 3, Section 3.5 (Table 3-4), of the SWEIS. Both tables are labeled as summaries and, as such, do not contain all of the detailed information available in the text of the SWEIS and its appendices. As noted, the explanation for representing impacts on the threatened desert tortoise as "harassment" is explained in the text, in Chapter 5, page 5-119, of this *NNSS SWEIS*. A clarification has been added in Section 5.1.7 of this *Final NNSS SWEIS* to explain that the term "harassment" in this *NNSS SWEIS* analysis includes relocation by qualified biologists of tortoises that may be found within the impact zone of a proposed action. In addition, the NNSS Desert Tortoise Compliance Program is described and the text states, in part: "By implementing the Desert Tortoise Compliance Program, NNSA/NSO would ensure that most, if not all, impacts on desert tortoises addressed in this analysis would involve harassment, rather than injury or mortality." The expectation that impacts on desert tortoises from DOE/NNSA activities at the NNSS would almost entirely result from "harassment" is based on almost 20 years of operating experience. Through pre-activity tortoise clearance surveys and use of tortoise monitors during land-disturbing activities in tortoise habitat, DOE/NNSA has not experienced a single program-related

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15. Section 3.4, page 3-53. The 150 FTE's expected for a 240-megawatt commercial solar power facility is unrealistic. Current plans for facilities in the Amargosa Valley area or the West-Wide Solar Programmatic Environmental Impact Statement should be referenced for a more accurate account of the expected FTE's needed to operate a solar facility.
16. Section 4.1.12.6, page 4-164. The last sentence in the first paragraph should include "and coordinate emergency planning, training, and responses with local government officials to ensure the interoperability of equipment, communications and personnel as required by the National Incident Management System."
17. Section 4.4.12.6, page 4-241. The first paragraph should contain the words "The Emergency Management Program includes the coordination of emergency planning, preparedness, and response with local government officials to ensure necessary interconnectivity and interoperability required under the National Incident Management Program."
18. Section 5.1.2.1.2, page 5-28. The paragraph ends "These improvements would benefit the communications network at the NNSS and would have no adverse impact on the offsite resources." They would likely also have a beneficial impact on offsite resources, such as first responders and local governments in keeping with the requirements of the National Incident Management System. Add: "The NNSS will work with local governments to ensure reliable communications interconnectivity and interoperability is achieved in accordance with the requirements of the National Incident Management System."
19. Section 5.1.1.2.3, page 5-18. Consideration should be taken on modifying the Area 25 Research, Test and Experiment Zone in order to accommodate commercial solar energy facilities in non or less sensitive habitat areas of the Area, as well as allowing the solar development to occur outside of the ephemeral water ways such as Forty Mile, Topopah, and Rock Valley Washes.
20. Section 5.1.4.1.1, page 5-71. The 150 FTE's expected for a 240-megawatt commercial solar power facility is unrealistic. Current plans for facilities in the Amargosa Valley area or the West-Wide Solar Programmatic Environmental Impact Statement should be referenced for a more accurate account of the expected FTE's needed to operate a solar facility.
21. Section 5.1.7, page 5-115. Correct the spelling of the weed species from "Acropitilon repens" to "Acroptilon repens."
22. Section 5.1.7.1.3, page 5-123. Construction of up to 240 megawatts of commercial solar power generation that would permanently disturb about 2,650 acres in Area 25 will impact sensitive habitat, as illustrated in Figure 4-15. This should be addressed in this section.
23. Section 5.1.7.1.2, page 5-123. The last sentence in the first paragraph of this section should read, "In addition, predation could increase as construction may attract additional predators such as ravens or coyotes, and displaces wildlife from protective cover to uncovered habitat."
24. Section 5.1.7.1.3, page 5-126. Correct spelling of sensitive plant species from "Camissonia megalantha" to "Camissonia megalanthia."
25. Section 5.1.7.2.2, page 5-132. The sentence, "In addition, predation could increase as construction and other disturbances displace wildlife from protective cover to uncovered

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desert tortoise injury or mortality since 1992; however, there have been 15 tortoises taken by mortality on NNSS roadways since 1992, or an average of 0.75 per year. As stated in the SWEIS, based on the long history of actual operations, it can be anticipated that less than one desert tortoise may be taken each year by injury or mortality due to non-project-related impacts by vehicles on NNSS roads. Information regarding desert tortoise mortality on NNSS roadways has been incorporated into Section 5.1.7 of this *Final NNSS SWEIS*.

- 45-19 The number of desert tortoises that may be taken on NNSS roadways that was used in the SWEIS analysis is the number allowed under the NNSS Biological Opinion (USFWS 2009). This number was used for purposes of analysis only. Based on actual operating experience at the NNSS since 1992, fewer than one desert tortoise per year would be expected to be taken by direct injury or mortality; the remaining number of tortoises taken would be expected to result from harassment (i.e., being moved from roadways to prevent injury or death). The textbox located in Chapter 5, Section 5.1.7, of this *NNSS SWEIS* includes a definition of the term "harass." A description of the methodology used for estimating impacts on desert tortoises, a brief clarification of "harassment" as used in the analysis, and an explanation of desert tortoise takes on NNSS roadways have been added to Section 5.1.7.
- 45-20 In the Summary, Table S-15 summarizes the potential direct and indirect impacts that could result under the three alternatives. Tritium contamination currently exists on the NNSS; however, additional tritium contamination is not expected to result from the proposed construction or operation of future activities and, therefore, is not included in the table. A discussion of existing baseline conditions at the NNSS, including current knowledge of the extent of tritium contamination, is discussed in S.3.1.4 and Chapter 4, Section 4.1.6.2.
- 45-21 As described in Chapter 3, Sections 3.1.3.2 and 3.2.3.2, in this *NNSS SWEIS*, new transmission lines would be required under the No Action and Expanded Operations Alternatives, but not under the Reduced Operations Alternative. Chapter 3, Table 3-4, and the Summary, Table S-15, have been revised to clarify that new transmission lines would be necessary for a commercial solar power generation facility under both the No Action and Expanded Operations Alternatives.
- 45-22 In the Summary, Table S-15, summarizes potential impacts and, as such, does not include all of the details and results of the analyses. Chapter 5, Sections 5.1.11.1.1, 5.1.11.1.2, 5.1.11.2.1, 5.1.11.2.2, 5.1.11.3.1, and 5.1.11.2 of this *NNSS SWEIS* address solid waste generation and disposal, including potential solar power generation facilities for the No Action, Expanded Operations, and Reduced Operations

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habitat," should read, "In addition, predation could increase as construction and other disturbances attract predators such as ravens and coyotes, and displace wildlife from protective cover to uncovered habitat."

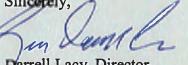
26. Section 5.1.7.2.3, page 5-133. Correct spelling of sensitive plant species from "Camissonia megalantha" to "Camissonia megalantha."

27. Section 5.1.7.3.1, page 5-138. Correct the spelling of the weed species from "Acroptilon repens" to "Acropitilon repens."

28. Section 5.1.7.3.5, page 5-140. Correct spelling of sensitive plant species from "Camissonia megalantha" to "Camissonia megalantha."

29. Section 5.4.4.2.2, page 5-253. Add: "NNSSA/NSO will coordinate emergency planning, training, and responses with local government officials to ensure the interoperability of equipment, communications and personnel as required by the National Incident Management System."

30. Section 5.4.4.3.2, page 5-254. Add: "NNSSA/NSO will coordinate emergency planning, training, and responses with local government officials to ensure the interoperability of equipment, communications and personnel as required by the National Incident Management System."

Sincerely,  
  
 Darrell Lacy, Director  
 Nye County Community Development  
 On behalf of Board of County Commissioners

CC: Nye County BOCC  
 Richard Osborne, Nye County Manager

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Alternatives, respectively. The potential waste volumes that may be generated if a commercial solar power generation facility were developed at the NNSS have been included to add more detail in Table S-15 and Chapter 3, Table 3-4. The cumulative impacts of nonradioactive solid waste generation and disposal are addressed in Chapter 6, Section 6.3.11, of this *NNSS SWEIS*. That section has been modified to include specific information related to a potential commercial solar power generation facility.

- 45-23 This information is a summary of the cumulative impacts analysis for land use in Chapter 6 of this SWEIS. Chapter 6, Section 6.3.1, provides a more-detailed analysis of cumulative land use impacts.
- 45-24 The groundwater values in the Summary, Tables S-15 and S-16, and Chapter 3, Table 3-4, have been reviewed and corrected as necessary to accurately reflect estimated groundwater usage under the three alternatives.
- 45-25 This *NNSS SWEIS* does address the amount of waste that would be generated by a commercial solar power generation facility and its management. On the table and page of the *Draft NNSS SWEIS* referenced by the commentor, the column labeled "DOE/NNSA Contribution to Cumulative Impacts" shows the volumes of waste that would come from NNSS. Under each alternative, there is a line showing the volume of waste from DOE/NNSA activities and a second line showing the volumes from a commercial solar facility. The table entry addressing disposition of the waste (below the volumes) was revised to address the disposition of either source of waste in a similar manner.
- 45-26 The reference to Chapter 3, Section 3.1.4.2, has been changed to Section 3.1.3.2. In addition, potential annual water requirements for operation of the commercial solar power generation facility considered under each of the alternatives have been added to the descriptions in Sections 3.1.3.2, 3.2.3.2, and 3.3.3.2.
- 45-27 When considering whether to allow commercial solar power generation as an acceptable land use, as described in Chapter 3, Section 3.1.3.2, DOE/NNSA selected a comparative model based on a BLM EIS for a project proposed near the NNSS: the *Final Environmental Impact Statement for the Amargosa Farm Road Solar Energy Project* (BLM 2010). This EIS projects a permanent labor force of 170 to 200 full-time equivalents for a plant of approximately 250 megawatts in production capacity. DOE/NNSA's comparative model used the same technologies and facility layout as the Amargosa Farm Road Solar Energy Project, and scaled employment estimates accordingly. While other types of power generation technologies could result in

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11-171-EE (L)

November 21, 2011

Linda M. Cohn, SWEIS Document Manager  
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 U.S. Department of Energy  
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**RE: AVAILABILITY OF THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA (NNSS SWEIS)**

Reference: NWRPO October 24, 2011 Letter, Same subject.

This is an addendum to the subject/reference comments previously submitted. Our original comments included the following comment:

13. *The unconstrained transportation case is neither meaningful nor evaluated in sufficient detail to allow independent evaluation of the associated impacts. The Nevada National Security Site Waste Acceptance Criteria prohibits transportation through Las Vegas, over Hoover Dam, or over the O'Callahan – Tillman Bridge. Further, ongoing construction defeats any advantage that could be gained by routing wastes through the Las Vegas Valley. Examples include: future modification of the I-15 / U.S. 95 interchange; continuing construction of overpasses; poorly designed interchanges at the I-215 bypasses; and a new bridge planned for the Charleston underpass. Absent formal, State directed alternative highway routing, transportation should adhere to existing Department of Transportation (DOT) and NEPA guidelines.*

Additional comment:

As a result of the extension of the Comment Period, Nye County was able to participate in Department of Energy (DOE) Transportation Working Group sessions. Based on the discussions

45-42

lower employment levels (and lower levels of impacts on environmental resources), DOE/NNSA chose to use a conservative model for purposes of analysis that provided an upper-end level of resource impacts.

- 45-28 Chapter 4, Section 4.1.12.6, and 4.4.12.6, have been revised as suggested by the commentor.
- 45-29 Per the commentor's suggestions, the following text was added to the SWEIS at the end of Chapter 5, Section 5.1.2.1.2. "The NNSA would continue to work with local governments to ensure that reliable communications interconnectivity and interoperability is achieved in accordance with the National Incident Management System."
- 45-30 While the Solar Energy Zone shown for Area 25 is large in size, siting considerations for any solar projects would still be analyzed on a case-by-case basis. If a proposal for a commercial solar power generation facility were received in the future, DOE/NNSA would work with the proponent on preliminary siting issues, such as compatibility with other projects and land uses, as well as avoidance of sensitive environmental resources, including ephemeral waterways, followed by the appropriate level of NEPA review, which would include measures to further reduce the potential impacts on resources, such as surface hydrology.
- 45-31 Please refer to the responses to comments 45-14 and 45-15, above.
- 45-32 The noted correction has been made.
- 45-33 As noted in Chapter 4, Section 4.1.7.1.4, and Chapter 5, Section 5.1.7, of this NNSS SWEIS, the term "sensitive habitat" is one of several designations developed by DOE/NNSA as management tools to identify important habitats at the NNSS where special attention is paid during project planning. The presence of an important habitat in an area could affect project planning by potentially requiring some mitigation measures or, in the cases of some habitats, complete avoidance. A "sensitive habitat" is an area where vegetation is expected to recover slowly from disturbance. Because a commercial solar power generation facility would permanently convert and maintain the land to a cleared and stabilized area with engineered controls to control run-on and run-off of surface water flows from storm events, the status of the area as "sensitive habitat" would not be cause for any extraordinary mitigation measures. Additional information regarding potential impacts on important habitats has been included in Sections 5.1.7.1.1, 5.1.7.2.1, and 5.1.7.3.1 of this NNSS SWEIS.
- 45-34 The suggested change has been made.

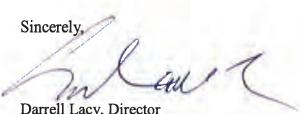
**Commentor No. 45 (cont'd): Darrell Lacy, Director  
Nye County Community Development**

November 21, 2011  
Page 2 of 2

in those sessions, it is apparent that the State of Nevada, Clark County, Las Vegas, Henderson and Boulder City strongly object to the "unconstrained" transportation case. The final sentence of our initial comment above is at odds with the aforementioned entities' objections. Nye County will not realize any relief on the number of shipments via NV 160 Route through Pahrump if DOE yields to those entities and continues with the existing "constrained" case.

The "expanded operations" case will significantly add to the existing number of shipments and further aggravate our transportation issues. Maintaining the status quo or increasing the number of shipments and routing them through Pahrump is unacceptable, an environmental justice issue of significant magnitude that warrants specific mitigation. Nye County has an expectation that the DOE will work with the County to find mutually agreeable measures that enhance the safety of the shipments and minimize the adverse impacts the additional shipments will bring. We would like to start ASAP on identifying road improvements, alternative highway alignments or other measures that will mitigate these impacts.

Sincerely,



Darrell Lacy, Director  
Nye County Community Development  
On Behalf of Board of County Commissioners

CC: Nye County BOCC  
Richard Osborne, Nye County Manager

DL/ee

45-42  
*cont'd*

- 45-35 The spelling has been corrected.
- 45-36 The suggested change has been made.
- 45-37 The spelling has been corrected as suggested.
- 45-38 The spelling has been corrected as suggested.
- 45-39 The spelling has been corrected as suggested.
- 45-40 The section referred to in this comment addresses environmental impacts; the proposed change is not reflective of or relevant to characterizing an environmental impact. Therefore, no change was made to this section. Instead, the intent of this comment was addressed in the responses to comment numbers 45-28 and 45-29, and text was added to Chapter 4, Section 4.1.12.6, regarding coordination between DOE/NNSA and local governments on emergency planning and preparedness.
- 45-41 As with comment 45-41, the suggested change was not made in the referenced section of this *NNSS SWEIS*, but the intent of this comment was addressed in the responses to comment numbers 45-28 and 45-29.
- 45-42 DOE/NNSA notes the commentor's concern that the existing routing arrangement would result in a large percentage of the shipments continuing to traverse Nevada State Route 160 and pass through Pahrump, Nevada. No changes will be made to existing DOE/NNSA transportation routes through this NEPA process; any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012). As shown in Chapter 5, Table 5-19, increases in traffic volume on Nevada State Route 160 associated with any of the alternatives, including the Expanded Operations Alternative, would not change the level-of-service designation for any of the locations along this route. Section 5.1.13 addresses the potential for environmental justice impacts and concludes that there are none associated with NNSS-related transportation activities. DOE/NNSA looks forward to continuing engagement with the State of Nevada and affected counties regarding transportation and would be glad to discuss improvements that the counties may be planning.

**Commentor No. 46: John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**



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November 30, 2011

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**COMMENTS ON THE NEVADA TEST SITE DRAFT SITE-WIDE  
ENVIRONMENTAL IMPACT STATEMENT (SWEIS)**

All of us at HOME welcome and appreciate this SWEIS comment process as an important opportunity for the public to participate in determining the direction of programs at the Nevada Test Site. We also greatly appreciate the Department of Energy's (DOE) positive response to the public's request for additional time to review these extensive documents, and the many other documents referred to throughout. Please consider our comments below in shaping the Final SWEIS.

**THE PUBLIC MEETING & COMMENT PROCESS**

**PUBLIC MEETINGS**

HOME found the public meetings to be well done in general. The format of poster session followed by a formal hearing should be continued in future NEPA actions. Resource people at the poster sessions were able to field most questions, and there was good follow-up on informational materials that were not available at the poster sessions.

The number and range of public hearings also adequately covered the impacted communities, although a hearing in Beatty, NV might have been productive. Beatty is the nearest community to the most likely first offsite impacts, due to radionuclides moving in the groundwater from Pahute Mesa.

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46-1

- 46-1** DOE/NNSA sought to make the public hearings highly accessible to local communities and stakeholders and structured them in a way that allowed hearing attendees to have their questions answered by qualified subject matter experts. DOE/NNSA selected the locations for public hearings to provide opportunities for as many interested parties as possible to be able to attend; however, the combination of long distances between communities in southern Nevada and budget and schedule considerations precluded conducting a hearing in every local community. It should be noted that DOE/NNSA's Underground Test Area (UGTA) Project conducts informational open houses in local communities, including Beatty, Nevada, to present and discuss with residents the current status of groundwater studies related to the NNSS and planned activities to further characterize and monitor groundwater at and around the NNSS.

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

2 HOME comments on NTS Draft SWEIS

In addition to outreach that DOE/NNSA conducted themselves, HOME also conducted outreach and advertising to involve additional stakeholders from a variety of backgrounds in the SWEIS process for each of the meetings (made possible through a grant from the DOE funded Community Involvement Fund). While we had hoped for higher turnout, we believe through informal polling that between 50-66% of those attending meetings overall came as a direct result of our efforts. We have focused much of our comments on issues of particular importance to members of the public who attended SWEIS meetings or corresponded with us.

The DOE staff was generally supportive of HOME's outreach efforts, but there were a couple of snafus. At the Cashmen Center hearing, employees of the Las Vegas Convention and Visitors Authority, which operates Cashmen Center, tried to corral HOME representatives into a taped off, outdoor "free speech" area that was in the sun and reflected light from the center windows, in 95 degree heat. That issue was resolved and HOME was allowed to have a table inside the center with access to the visiting public.

The issue of access was somewhat repeated in Pahrump when employees of the Nugget refused to allow HOME to table outside the room hosting the DEIS hearing. The employees cited space concerns, although there were already a number of (empty) tables in the same hallway for use by casino patrons. DOE employees again allowed HOME to table within the hearing area, which resolved the issue. HOME representatives were grateful for the cooperation of the DOE employees.

HOME or other groups that wish to offer additional information, concerns and perspectives on the issues, or to otherwise inform the public, need to be assured access inside or outside the immediate hearing area. This is common for BLM DEIS hearings, for example.

**DIGITAL COMMENT PROCESS**

We experienced two significant problems with DOE's online comment process. First, comments submitted by email were not generally accepted by the SWEIS Documents Manager until November 30<sup>th</sup>. This is far and away the most accessible method for people to use, particularly those in rural areas using dial-up access to the Internet, which includes most of the NTS area of impact. Second, the online comment form, the DOE preferred format by far, was not updated to include the extended date of December 2 until November 30<sup>th</sup>, at our insistence. So, for the entire month of November, anyone directed to the site to comment would believe that it was too late.

**THE DRAFT SWEIS DOCUMENT AND NEPA REQUIREMENTS**

**DOE SHOULD IDENTIFY A PREFERRED ALTERNATIVE**

By failing to identify their Preferred Alternative, DOE makes it much more difficult to analyze the SWEIS. We have no clear sense of the DOE's priorities. We can only note that DOE did not state a preferred alternative in 1996 either, but later chose the Expanded Operations Alternative in every program category.

HOME advocates the selection of different Alternatives for different programmatic areas, throughout our comments on the SWEIS.

**46-1  
cont'd**

- 46-2** Comments were accepted as they arrived. The first electronic comment received was dated August 31, 2011, and electronic comments continued to be accepted throughout the comment period, with the last dated December 2, 2012. DOE/NNSA did not have a preference regarding the method in which comments were submitted. Comments were received by fax, U.S. Postal Service, email, and telephone.

The comment period extension from 90 to 126 days for the *Draft NNSS SWEIS* was announced September 29, 2011, in a press release from the DOE/NNSA NSO and on the *NNSS SWEIS* webpage. The press release included hundreds of people and organizations. Flyers/notices with the changed date were mailed to the *NNSS SWEIS* distribution list via the U.S. Postal Service and email. Additionally, notice of the extended comment period was published in the *Federal Register* on October 21, 2011 (FR 2011-27287).

- 46-3** As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative, a "hybrid" composed of portions of all three alternatives, is described in Section 3.4 of this *Final NNSS SWEIS*.

**Commentor No. 46 (cont'd): John Hader, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

3 HOME comments on NTS Draft SWEIS

*SWEIS DOCUMENT STRUCTURE WAS EXTREMELY DIFFICULT TO FOLLOW*

All consultants working with HOME on the analysis of this document found the document structure extremely disjointed and difficult to approach in any consistent way. Data on specific issues, such as historic contamination, or specific program impacts, had to be chased down throughout all the volumes and beyond, to additional cited documents that were frequently difficult to locate. Had we had a longer comment period, a more programmatic approach to data presentation and better access to cited documents, understanding and analysis of the Draft SWEIS would have led to better comments overall.

As suggested throughout this review, HOME is left with more questions about the past and potential environmental impacts of NNSA programs at the NTS and off-site locations in Nevada. The description of activities surrounding the National Security Mission, the principle mission of the NNSA-NV facilities, is not complete enough to allow a complete meaningful evaluation of the environmental impacts. For example, the amount of fissile material (principally plutonium) and how it is used in the experiments as part of the National Security Mission is not clear, so the toxic waste and how it is handled cannot be evaluated. There is a discussion of reasonably foreseeable accidents involving plutonium at the DAF, for example, which does state the maximum amount of plutonium involved in such an accident, but it is not clear if this is the upper bounding amount of plutonium at the facility. This kind of incomplete and unclear discussion coupled with deficiencies and unsupported analysis in Chapter 4 left HOME less than confident regarding the environmental analysis in general.

Chapter 5 of the SWEIS is not organized for effective analysis. It would have been better to organize the impacts analysis by proceeding through all types of impacts for each alternative instead of examining the impact category for all alternatives as presented in the SWEIS. The current structure is clumsy for the reviewer, since it requires the reader to jump from one alternative to the other constantly. It is standard practice to review all of the impacts of one alternative, typically beginning with the no action alternative, and then move to the next alternative. In this way the reader can stay focused on one proposal at a time. In our view the structure in the SWEIS is fatiguing and can set up the reader to miss aspects of the analysis through confusion.

The overriding purpose of an EIS is to provide the needed information and analysis to facilitate the best environmental decision regarding the proposal under examination. The decision should be through an informed public process. To meet this challenge the document must be accessible to the public, including those not previously familiar with the proposal. The combination of incomplete information, unsubstantiated conclusions, and structure of the impact analysis seriously undermines the purpose of the SWEIS.

*NEPA REQUIRES A REAL "NO ACTION" ALTERNATIVE IN THE SWEIS*

By law, the National Environmental Policy Act (NEPA) requires the development of reasonable alternatives to the "preferred or proposed action," and that one proposed action be a "no action" alternative (10 CFR Part 1502.14). The SWEIS<sup>1</sup> has an unusual way of identifying the alternatives,

<sup>1</sup> DOE/NNSA, *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada*, July 2011 (DOE/EIS-0426D). To be referred to as the SWEIS.

46-4

DOE/NNSA considered numerous ways to organize and present the large amount of information contained in the SWEIS, including the organization favored by the commentor. Among the methods of presenting the information, DOE/NNSA felt that the method selected would be most easily followed. In addition, DOE/NNSA provided tables (Chapter 3, Tables 3–4 through 3–7) that summarize impacts across the alternatives by resource in the manner suggested by the commentor.

As stated in DOE/NNSA's Notice of Availability for this *NNSS SWEIS* (76 FR 204), electronic copies of all but a few of the references (i.e., those for which copying would violate copyright laws) were made available in DOE reading rooms and public libraries in 18 cities in Nevada, as well as one each in Utah and Arizona, and were also available via the Internet at the DOE/NNSA NEPA website ([www.nv.doe.gov](http://www.nv.doe.gov)). Electronic copies of additional references used to prepare this *Final NNSS SWEIS* are also available at the same sites.

46-5

Specific information regarding fissile materials, such as amounts maintained on site or used in tests and experiments, may not be addressed in a nonclassified document. However, Chapter 5, Sections 5.1.11, 5.2.11, 5.3.11, and 5.4.11, of this *NNSS SWEIS* include estimates of the volumes of LLW/MLLW, TRU wastes, hazardous/toxic wastes, and nonhazardous sanitary wastes that may be generated by activities under the National Security/Defense, Environmental Management, and Nondefense Missions at each DOE/NNSA facility in Nevada. Additionally, DOE/NNSA waste management procedures and facilities are described in Chapter 4, Sections 4.1.11, 4.2.11, 4.3.11, and 4.4.11.

The description of the accidents associated with the Device Assembly Facility (DAF) correctly reflects the amount of plutonium that would be involved in a reasonably foreseeable accident. Therefore, this represents the magnitude of impacts that could reasonably be expected from a severe accident at DAF. The total amount of plutonium at the DAF is not necessarily indicative of the magnitude of impacts that could occur as a result of reasonably foreseen accidents.

46-5

DOE/NNSA believes the No Action Alternative in this *NNSS SWEIS* fully complies with current NEPA requirements and guidance (i.e., Council on Environmental Quality [CEQ] "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" [40 CFR Parts 1500-1508], CEQ's "Forty Most Asked Questions Concerning CEQ's New National Environmental Policy Act Regulations" [46 FR 18026], and DOE "National Environmental Policy Act Implementing Procedures" [10 CFR Part 1021]).

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

4 HOME comments on NTS Draft SWEIS

where continued activities “as is” at the various Nevada NNSA sites is presented as the “no action” alternative. The “project” already exists, but the “no action” alternative is typically associated with any impacts in the absence of the project. The SWEIS does not analyze the equivalent of the “no action” alternative, unlike in the 1996 EIS, and even in the original 1977 EIS for the NTS.<sup>2</sup> An example of this inappropriate “no action” designation use is the analysis the damage to 2,650 acres of endangered desert tortoise habitat in constructing a Commercial Solar Power Generation Facility under the No Action Alternative on page 5-125, which is clearly an impact as a result of a yet to be action. In this way the SWEIS is deficient, and HOME contends that it is illegal under NEPA law at this point, by not including the equivalent of the “no action” alternative.

DOE/NNSA concluded without explanation that “NNSA will not consider shutting down the NNSS because it does not meet the agency’s purpose and need.”<sup>3</sup> However, an environmental impact statement is intended to establish how the project affects the environment and to analyze whether alternatives exist that will entail less of an impact. Furthermore, the EIS should provide a basis of judgment as to whether the impacts from the project are unacceptably high, and if so, require an alternative action, specific mitigation procedures, or that there be no action at all.

The NEPA process is not intended to cater to the agency’s “purpose and need” but rather “... to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” (10 CFR Part 1500.1). The “absence of the project” alternative, which in the most conservative sense would be as stated in the 1996 EIS,

“Alternative 2 – Discontinue Operations – All current and planned program activities and NTS operations would be discontinued under this alternative. Only environmental monitoring and site-security functions necessary for human health, safety, and security would be maintained.”<sup>4</sup>

The 1996 EIS also considered a less extreme alternative,

“Alternative 4 – Alternate Use of Withdrawn Lands – All defense-related activities and most Work for Others program activities would be discontinued at the NTS. Certain programs and activities that are not currently included in NTS mission responsibilities are also evaluated. This alternative could include other activities, such as the relinquishment of portions of the NTS that would be dependent upon future land-use designations and withdrawal status.”<sup>4</sup>

The SWEIS does not sufficiently discuss why such alternatives were eliminated from consideration as required by law, “... for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” (10 CFR Part 1502.14). The brief statement in the SWEIS quoted above and the referenced discussion in section 1.5 of the SWEIS do not provide a basis of understanding as to why alternatives like those analyzed in the 1996 EIS were not considered.

<sup>2</sup> ERDA, *Final Environmental Impact Statement, Nevada Test Site, Nye County, Nevada*, September 1977.

<sup>3</sup> SWEIS, pp 1-12 – 1-13.

<sup>4</sup> DOE, *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada*, August 1996, pg. 1-4.

46-5  
cont'd

As noted by the commentor, in its *1996 NTS EIS* (DOE EIS-0243, August 1996), DOE considered a Discontinue Operations Alternative and an Alternate Use of Withdrawn Lands Alternative. DOE/NNSA’s reasons for not addressing similar alternatives in this *NNSS SWEIS* were addressed in Chapter 3, Section 3.5 of the *Draft NNSS SWEIS* and may be found in Section 3.6 of this *Final NNSS SWEIS*.

***Commentor No. 46 (cont'd): John Hader, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)***

5 HOME comments on NTS Draft SWEIS

*AN ALTERNATIVE SHOULD ANALYZE RESTORATION OF USABLE PUBLIC LANDS*

HOME supports the inclusion of an alternative to be analyzed as part of the SWEIS, which entails a partial restoration of the NTS to public or tribal use, or the preparation of that restoration with or without the existing missions. It is unclear from the SWEIS whether all of the withdrawn land is still needed for the existing missions of the NTS, and whether those missions are still important to the public. However, in order to make this assessment, complete information is needed regarding the contamination and if any areas are clean and suitable for public use.

*PROGRAMATIC PRIORITY AND COST DATA NEEDED TO COMPARE ALTERNATIVES*

The SWEIS should provide enough financial budget information for the reader to evaluate the significance of specific programs, both within the Test Site mission, and relative to our national budget as a whole. There is no data in the SWEIS that shows the resource allocation in cost for of each of the programs. For instance, the public has no idea what costs are incurred for the various Stockpile Stewardship experiments, or for environmental restoration projects. HOME has independently determined from DOE FY2012 budget request information that about 12.5% of DOE/NNSA's request for the NTS is for clean-up of contaminated soils and groundwater contamination studies, which is too low a priority. It would also be useful to know what clean-up activities that roughly \$59 million can buy, such as the cost to drill a well downgradient of an underground nuclear test, and the follow up radionuclide migration analysis. Without this information, there is no way to fully realize the breakdown of resources for each alternative. The SWEIS under the National Environmental Policy Act (NEPA) should provide sufficient information for an evaluation of the alternatives, and to determine whether there is an alternative that still needs to be considered, and whether a dropped alternative is justified.

*GENERAL SITE-WIDE LAND USE CONCERNs AND ISSUES*

*NATIVE LAND RIGHTS, ACCESS AND INCLUSION IN DECISIONS*

HOME appreciates DOE/NNSA's inclusion of the comments from the Consolidated Group of Tribes and Organizations (CGTO) throughout the SWEIS document. With a few minor exceptions, we generally agree with the positions taken in all of these comments, and urge DOE/NNSA to be genuinely guided by these views. HOME also greatly appreciates DOE/NNSA's ongoing efforts to work collaboratively with the CGTO on the NTS Resource Management Plan, including developing mitigation strategies.<sup>5</sup>

HOME continues to advocate that the U.S. follow its own and international laws in upholding the Western Shoshone Treaty of Ruby Valley, ratified by Congress in 1863. This would include restoring the NTS site as much as possible and returning much of it to Shoshone guardianship. HOME supports the Western Shoshone in their efforts through the United Nations and other venues to hold the U.S.

<sup>5</sup> SWEIS pg. 7-1

- 46-6 To provide the public with a better understanding of areas of contamination at the NNSS, DOE/NNSA has revised Chapter 4, Sections 4.1.5.4.1 and 4.1.6.2, of this *Final NNSS SWEIS* to include additional information on the current knowledge of the extent of soil and groundwater contamination resulting from nuclear weapons testing activities.
- 46-7 Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and otherwise sensitive testing, experimental, and training activities on site.
- 46-8 Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.
- Although DOE/NNSA activities require the entire NNSS (about 1,360 square miles), these activities are not inconsistent with periodic visits by the public (including American Indians for purposes related to their cultural affiliation with the lands of the NNSS) or certain commercial activities proposed to be developed on the site (e.g., commercial solar power generation facilities). Public visits and commercial activities are and would be conducted under the safeguards and security protocols of DOE/NNSA, which limit the frequency and nature of public visits and could restrict commercial activities from time to time. For this reason, DOE/NNSA is able to allow properly cleared and escorted public visitation and the development of commercial projects without hindering its national security activities while continuing to protect the offsite public.
- 46-7 CEQ NEPA regulations (40 CFR 1502.23) state: "If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by references or appended to the statement as an aid in evaluating the environmental consequences." CEQ NEPA regulations go on to say, "For purposes of complying with the Act [NEPA], the weighing of

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accountable. However, recognizing that this issue is not going to be resolved soon, we therefore submit these comments on the SWEIS for management of these lands in the interim.

Additionally, Shoshone oppose any further ground disturbance on their treaty lands. Whenever safe, access to sacred, cultural and resource sites should be provided for traditional Native use. Shoshone and Paiute tribal entities should be included in land and resource management, including historic and cultural resources.

***MINIMIZING NEW CONTAMINATION & THE SPREAD OF HISTORIC CONTAMINATION***

The Nevada desert and its inhabitants are slowly healing from over 60 years of immensely toxic and destructive human activities. All living things must have access to healthy habitat and safe drinking water at all times- it is not a human right to destroy the home ranges and water sources for wildlife. Whenever possible, throughout the full range of programs at NTS, HOME feels that new lands should not be disturbed. Undamaged land and endangered species habitat should be protected. Whenever not toxic to employees and others, all activities, trainings and installations should be conducted on previously disturbed lands. Conversely, care must be taken to minimize disturbance where below-surface contamination would be exposed, except for specific mitigation.

**ENVIRONMENTAL MANAGEMENT MISSION**

***CLEANUP ASPECTS OF ENVIRONMENTAL MANAGEMENT***

In general, HOME supports the Expanded Operations Alternative for Environmental Restoration. For example, the NTS region is prone to flash flooding and wildfire that can carry contamination off-site. The SWEIS did not, but should address the issue of wildfire. In the Expanded Operations Alternative, there are no proposals for new or expanded Environmental Restoration activities. Additional cleanup and environmental restoration would decrease the danger of surface contamination being carried off-site in smoke from fires.

In general, HOME also supports all mitigation measures discussed in the 7.0 Mitigation Measures section. We especially advocate the use of native plantings and water catchment, rather than the use of polymers and other soil amendments. We strongly support the program to protect nesting raptors from electrical transmission poles, particularly if transmission lines are upgraded or expanded. As stated elsewhere, we always advocate that "DOE use areas disturbed by past activities for staging, parking and equipment storage"<sup>6</sup> and would expand that policy to include not just construction phases, but siting, trainings, and programmatic activities in general.

However, DOE/NNSA incorrectly treats the "No Action" alternative as if it were an "absence of a project" alternative, which is typical of most NEPA actions, where the project has yet to be implemented. Under this approach the regions withdrawn under NNSA-NV and the existing facilities are considered a baseline, which leads generally to a less than expected impact result for the no action

<sup>6</sup> SWEIS pg.7-3

**46-8  
cont'd**

**46-9**

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**46-12**

the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." The vast majority of activities conducted by DOE/NNSA in Nevada support national security and are not driven by a need for economic return. For this reason, DOE/NNSA did not and does not intend to prepare a cost-benefit analysis as part of this NNSS SWEIS. DOE/NNSA believes that the analyses in this NNSS SWEIS are sufficient to provide its decisionmakers with adequate information for making a selection among the alternatives. Further, the alternatives analyzed identify the reasonable range of missions, programs, projects, and activities that may be expected to occur at DOE/NNSA facilities in Nevada over the next 10 years.

**46-8** The DOE/NNSA NSO American Indian Consultation Program interacts with the 16 culturally affiliated Western Shoshone, Southern Paiute, and Owens Valley Paiute/Shoshone Tribes represented by CGTO. Throughout the SWEIS, CGTO provided their perspectives, which are valued by DOE/NNSA.

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

NSA/NSO accommodates CGTO requests for access associated with their connections to the land whenever possible. Efforts are made to work collaboratively with CGTO on identification of land management activities and protection of cultural resources.

Additionally, DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.

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alternative in most cases. The correct baseline for analysis would be prior to actions on these regions, so prior to 1951. The 1977 EIS only dedicated about 3 pages to the pre-1951 period, where the use of the NTS areas was "mainly comprised mining, grazing, and hunting." The EIS continues to indicate that mining and prospecting created "locally severe disturbances, but the total impact of these activities on the environment has been slight." The impact of grazing was described as "evidently small and is now indiscernible."<sup>7</sup> Clearly a detailed and accurate baseline is unavailable. However, DOE could have developed an approximate baseline based on similar types of regions that have not seen significant development. Even a comparison of some untouched areas within the NTS to similar developed areas could provide the public a better picture of the impacts of the current activities.

The lack of a true baseline description results in a confusing analysis in the SWEIS. Chapter 4 (Affected Environments) of the SWEIS mixes impacts from past actions with unimpacted areas in describing the current environmental status of NNSA-NV sites, so the discussion in this chapter is really the true baseline (environment if no government activities had taken place) with the impacts layered on top.

The SWEIS creates a separation between possible alternatives and impacts from past actions by treating the existing environment as the "environmental baseline." Impacts from past actions are connected to the existing "National Security/Defense Mission" and "Waste Management Program," and so when the SWEIS discusses impacts to NNSA-NV areas the "past actions" impacts should be included, since they are part of the same mission or program. The public needs to have a clear picture of how each mission/program at NNSA-NV sites has and will impact the environment, but the current structure and presentation in the SWEIS does not allow the public this important evaluation. The SWEIS is a document for decision making, and one possible decision that our government (US citizens) could make is that the environmental impacts from the National Security/Defense Mission (or any other mission) is too great and this program should be changed or even eliminated.

The environmental clean-up programs (soils and water) are actually mitigation procedures to reduce existing impacts. Under this definition these programs can be evaluated from a mitigation of impacts perspective. The public then has a better way to engage around this EIS process by evaluating if these programs are actually mitigating impacts, and if so, to what extent. The metric is then presented to the public on impact mitigation (clean-up) goals for their review.

The SWEIS does acknowledge impacts from the resumption of underground testing under the "Resource Commitments, Unavoidable Adverse Effects" section. Structurally, resumption of testing should be included in the cumulative impacts section as a foreseeable action, otherwise it is not a foreseeable action and is not included in the analysis. The existence of an unavoidable impacts section implies to HOME that impacts discussed in Sections 5 and 6 of the SWEIS (Environmental Consequences and Cumulative Impacts) are avoidable, but there is no discussion of how. Clearly, if the programs that result in impacts discussed in Sections 5 and 6 are shut down, then the associated impacts could be avoided; however, the SWEIS does not give this as an alternative for the public to consider. The SWEIS structure is confusing in this way and misleading. Here again, there should be an "absence of the project" alternative to allow an evaluation of minimum impacts.

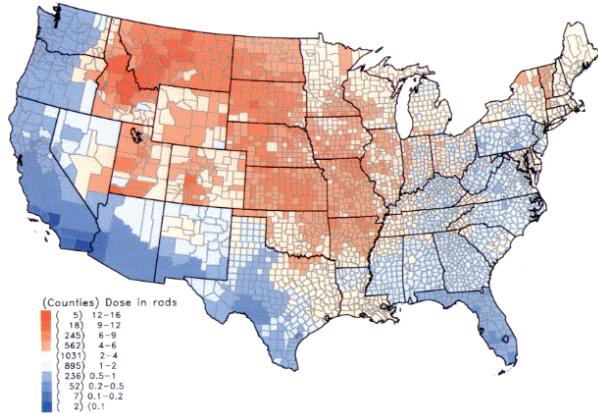
<sup>7</sup> ERDA, *Final Environmental Impact Statement, Nevada Test Site, Nye County, Nevada*, September 1977, pp.2-11-2-12.

- 46-9** The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. DOE/NNSA agrees with the commentor that care must be taken to minimize disturbance where below-surface contamination would be exposed.
- 46-10** DOE/NNSA acknowledges the commentor's support for the Expanded Operations Alternative for environmental restoration. As noted in the response to comment 46-3, above, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. However, as stated in Chapter 3, Section 3.1.2.2, and Appendix A, Section A.1.2.2, among other places within this *NNSS SWEIS*, the Environmental Restoration Program is driven by the FFACO. For this reason, the extent of characterization, cleanup, and monitoring is essentially the same under all three alternatives in this *NNSS SWEIS* (although the Expanded Operations Alternative does assume cleanup to background levels at several soils sites on the Nevada Test and Training Range, primarily for purposes of estimating the maximum amount of LLW that may be generated by the Soils Project). The pace of fulfilling the goals and requirements established in the FFACO is driven in part by the availability of funding provided by Congress.
- The commentor is correct in stating that additional remediation of contaminated sites would reduce the levels of contaminants contained in smoke from wildfires on the NNSS. However, evidence from monitoring of air emissions from wildfires on the NNSS and other modeling confirms that radioactivity released from wild fires on the NNSS would not result in hazards off site. Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires. During some wildland fires that occur on the NNSS, DOE/NNSA deploys high-volume air samplers to supplement data from the routine sampling network. These supplemental samplers were deployed during fires in 2002, 2005, 2006, and 2011. None of these sampling activities has indicated substantially elevated levels of manmade radionuclides as a result of the fires. For example, results of sampling during a 2002 fire indicated the presence of cesium-137, plutonium-239 and -240, and americium-241, but in concentrations that were less than 4 percent of the concentration that would result in a dose of 10 millirem per year (DOE/NV 2003). In 2005, there

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CUMULATIVE IMPACTS



The Cumulative Impacts (Section 6) of the SWEIS does not include all of the impacts from the above ground testing period. The zone of cumulative impacts from past action is insufficient, since the fallout from the above ground testing impacted people and the environment across the United States and in fact globally. For all other actions at NNSS-NV site, the 50 mile Region of Influence (ROI) is likely to be adequate, barring possible long-term groundwater contamination to off-site locations. Therefore, HOME generally accepts the 50 mile ROI, but the SWEIS needs to include all of the impacts from the above ground testing. There is considerable data on Iodine-131 impacts in the NCI/NIH study<sup>8</sup> that includes fallout maps and specific radionuclide release data, which is included in Chapter 4 of SWEIS, and HOME recommends that the map above also be included. Additionally, these impacts should be acknowledged as cumulative impacts.

MAXIMALLY EXPOSED INDIVIDUAL

The SWEIS generally defines the Maximally Exposed Individual (MEI) as "A hypothetical individual whose location and habits result in the highest total radiological or chemical exposure (and thus dose)

<sup>8</sup> National Cancer Institute, National Institutes of Health, *Estimated Exposures and Thyroid Doses Received by the American People from Iodine-131 in Fallout Following Nevada Atmospheric Nuclear Bomb Tests*, October 1997.

46-15

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was a series of 31 lightning-caused wildfires, none of which resulted in samples with activity higher than normally observed. None of the fires occurred in areas with the highest levels of legacy radioactivity in soil, but DOE/NNSA conducted a special evaluation of the onsite and offsite radiation doses that may have occurred if a fire had spread into an area with high surface contamination, such as the SMOKY site in Area 8 of the NNSS. That evaluation found that the radiation dose 2.5 miles downwind of the SMOKY site would be 1 millirem and the highest offsite dose would be around 0.1 millirem at 24.8 miles from the SMOKY site (DOE/NV 2006). As noted in the cited report, "...[t]his finding helps confirm that radioactivity released from wild fires on the [NNSS] would not result in hazards offsite."

- 46-11 The commentor's preference for specific impact mitigation and activity siting strategies is noted. DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.
- 46-12 DOE/NNSA does not agree that the affected environment of the No Action Alternative should be that of the period before 1951. As noted in the response to comment 46-5, above, CEQ clearly recognizes that "no action" does not necessarily imply a pre-project condition for the potentially affected environment. Where a program, project, or activity may be ongoing, such as those addressed in this *NNSS SWEIS*, CEQ considers it as, "continuing with the present course of action until that action is changed." Therefore, the description of the affected environment in this *NNSS SWEIS* is appropriate.
- 46-13 The commentor is correct that CEQ defines mitigation in part as "Rectifying the impact by repairing, rehabilitating, or restoring that affected environment" (40 CFR 1508.20(c)). However, DOE/NNSA views its Environmental Restoration Program as one of its primary activities. Proposed activities for the Environmental Restoration Program are described in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2.2, for each of the three alternatives. Implementation of the proposed environmental restoration activities, which are conducted under the auspices of the FFACO, would result in environmental impacts that must be addressed and, where practicable, mitigated. Those activities include: drilling characterization and monitoring wells under the UGTA Project, which may affect cultural and biological resources, among others; decontamination and demolition of contaminated buildings, which generates

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from a particular source for all exposure routes (inhalation, ingestion, external exposure).<sup>9</sup> This definition is further refined in some instances, but it is not clear to HOME who the MEI would be for the general public living near NNSA-NV location, especially in evaluating historical radiological health effects. In a groundbreaking study conducted by Nuclear Risk Management for Native Communities, it was determined that the traditional Native American lifestyle in rural downwind communities from the Nevada Test Site was the most exposed due to multiple “close to the Earth” pathways, such as consumption of wild game and harvesting of native plants.<sup>10</sup> DOE/NNSA should review this work and include the lifestyle discussed therein as the MEI for “downwind” impacts.

*CHARACTERIZING, QUANTIFYING AND MAPPING HISTORIC CONTAMINATION*

A primary emphasis must be for DOE/NNSA to fully characterize the extent of contamination and illustrate the results of the analysis in one or more maps to clarify the locations. For those sites where characterization is incomplete there should be a marker to show that, so that the public knows what has yet to be done that NNSA is aware of. Overall, The SWEIS should supply as complete a picture of the existing contamination as possible, in a form that is understandable.

The preponderance of environmental impacts at the NTS and off-site locations is from the overt nuclear weapons testing period of 1952 to 1992, with overall 2,000 – 3,000 curies in the soil and 130 million curies<sup>11</sup> in the groundwater. This is largely remnant radioactivity in the soil and subsurface including underground water systems, which varies markedly around the site. The SWEIS gives incomplete information regarding this residual contamination, which varies markedly around the NNSA sites.

*Soils Characterization*

Chapter 4 is intended to describe the “environmental baseline,” but the picture presented is incomplete and unclear. It seems that some areas remain highly contaminated while others appear to be uncontaminated. For example, as a result of the “Safety Tests” conducted between 1954 and 1963, levels of plutonium in the soil have been measured at over 1,000 picocuries per gram, over 5 times the previous agreed (1997) clean-up level. This would translate to an annual exposure of about 100 millirems for a rancher in those locations. The “Double Track” test was relatively close to the Nellis Air Force Base north-western boundary, and relatively close to public lands. It is not clear from the SWEIS what if any action has been taken at these highly contaminated safety test locations.

On the other hand Areas 30, 29, and 26 of the NTS *may be* uncontaminated. Clean-up remains an important, if not the most important program (from HOME’s perspective) at the NNSA-NV locations. Fully characterizing and disclosing the contamination will allow the public to know where clean-up actions are needed and what areas, if any, have the potential to be returned to public use.

<sup>9</sup> Nuclear Risk Management for Native Communities; Best contact is Virginia Sanchez (Chair), Duckwater Shoshone Tribe, P.O. Box 140068, Duckwater, NV 89314, 775-683-0227.

<sup>10</sup>This figure is quite uncertain and based upon information from the 1996 FEIS, and updated information contained in the Environmental Reports.

various kinds of wastes, including radioactive waste; and disturbance and removal of contaminated soils, which may affect cultural and biological resources, generate radioactive wastes, and produce air emissions, both from vehicle/equipment exhausts and suspension of particulate matter in the air. Further, not all environmental restoration activities will result in removal of contamination. Many soils sites may be closed in place without removing contaminated soil or partially remediated and then closed in place (see Chapter 4, Section 4.1.5.4.1); under the UGTA Project, a regulatory boundary will be established in consultation with NDEP, and a long-term closure monitoring well network will be designed and installed to ensure public health and safety, as discussed Section 4.1.6.2.

DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE’s requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA’s intentions to prepare a mitigation action plan.

- 46-14** Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0. The discussion of unavoidable impacts resulting from conducting an underground nuclear test in Chapter 8, “Resource Commitments,” Section 8.1.1.1.1, has been deleted from this *Final NNSS SWEIS*. The impacts of nuclear weapons testing at the NNSS are addressed in Chapter 6, “Cumulative Impacts,” not as reasonably foreseeable future actions, but as past actions. Chapter 7, “Mitigation Measures,” of this *NNSS SWEIS* presents the proposed mitigation measures that would be implemented by the DOE/NNSA to avoid, minimize, rectify, reduce, eliminate, or compensate for potential adverse impacts on the environment resulting from any of the three alternatives. Impacts remaining after application of mitigation measures are considered unavoidable and are addressed in Chapter 8, pursuant to CEQ NEPA regulations at 40 CFR 1502.16. As noted in responses to comments 46-5 and 46-12, above, DOE/NNSA properly did not consider an “absence of the project alternative” in this *NNSS SWEIS*.

- 46-15** As defined in 40 CFR 1508.7, cumulative impacts are the impacts on the environment that result from “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions....” The impacts of radioactive fallout from past nuclear weapons testing were identified far beyond a 50-mile radius

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Upon examination of the soils sites illustrated in Appendix 6 (see figure below), Federal Facility Agreement & Consent Order (FFACO)<sup>11</sup>, it is clear that well defined areas of contamination exist, and a similar map exists for industrial sites. There is no overall mapping of the contaminated areas in the SWEIS; however, there are references to a flurry of other documents that contain some of this data. The SWEIS states that there are approximately 100 radioactive soils sites<sup>12</sup>, and there is some data given as to the radioactivity “remaining” at these safety test locations. After reading the section on radioactive contamination, one is left wondering where all these sites are and what the extent of contamination is? It is also not explained what “closed” means – what is the level of clean-up at a closed site?

As the primary public document on the NNSS-NV sites (NTS, etc.) the SWEIS should give the public a clear picture of the level of contamination and its distribution about the NTS and off-site locations. The general public does not have the luxury of time to review the numerous citations within the SWEIS to track down where the contamination is. Thus, DOE/NNSA must provide clear maps and concise description to show areas of contamination and the nature of that contamination. It is clear to HOME in reviewing other documents including previous Environmental Reports<sup>13</sup> that gamma spectrographic analysis (Thermoluminescent Dosimetry, TLD) has been done over significant portions of the NTS. These documents include maps showing surveyed locations, but none of this is illustrated in the SWEIS. Furthermore, all this data could be summarized in radiographic activity maps, which could be detailed by radioisotope. The SWEIS should combine this TLD data with other soils analysis, including the industrial soil sites, to provide as complete a picture of contamination as possible. For those sites where characterization is incomplete there should be a marker to show that, so that the public knows what has yet to be done. These maps and associated text should allow a layperson to understand where is the contamination, how much, and what has yet to be analyzed. Chapter 4 of the SWEIS needs to revised to include this information.

The SWEIS should also explain the nature of the soils analysis. Are samples drawn from various depths per sampling location? Furthermore, there is no disclosure of the program costs and, in particular, anticipated costs of full characterization and clean-up.

46-19  
*cont'd*

from the NNSS, as noted by the commentor. However, based upon the cited definition of cumulative impacts, there are no activities proposed at the NNSS that would have a detectable or measurable effect beyond that radius. Therefore, there could be no cumulative impact with fallout from previous nuclear weapons testing, and there is no reason to address them in the analysis in this *NNSS SWEIS*.

The commentor also mentions possible long-term groundwater contamination to offsite locations. Based upon the current knowledge of groundwater flow direction and rate at and in the region surrounding the NNSS, it is extremely unlikely that groundwater outside of the 50-mile cumulative impact analysis region could be affected by any past, present, or proposed future activity at the NNSS. Effects of underground nuclear testing are addressed in Chapter 6, “Cumulative Impacts,” Section 6.3.6.2, of this *NNSS SWEIS*.

**46-16** DOE/NNSA has added an analysis of a special receptor identified as a “subsistence consumer” in Appendix G of this SWEIS. This receptor was selected for inclusion to address a scenario in which a person derives essentially all of his/her diet from food that is harvested locally, including game animals. Such a scenario accounts for the exposure pathways that would contribute the most significant dose to the receptor.

**46-17** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Because of the new information provided in Section 4.1.6.2, DOE/NNSA has revised the potential cumulative impacts from radiologically contaminated groundwater at the NNSS (see Chapter 6, Section 6.3.6.2).

<sup>8</sup> The State of Nevada, Department of Conservation and Natural Resources, Division of Environmental Protection and the United States Department of Energy and the United States Department of Defense in the Matter of Federal Facility Agreement and Consent Order, March 15, 1996.

<sup>9</sup> SWEIS, pg. 4-58.

<sup>10</sup> DOE/NNSA, *Nevada Test Site Environmental Report 2003*, DOE/NV/11718—971, October, 2004, *Nevada Test Site Environmental Report 2008*, DOE/NV/25946-790, September, 2009.

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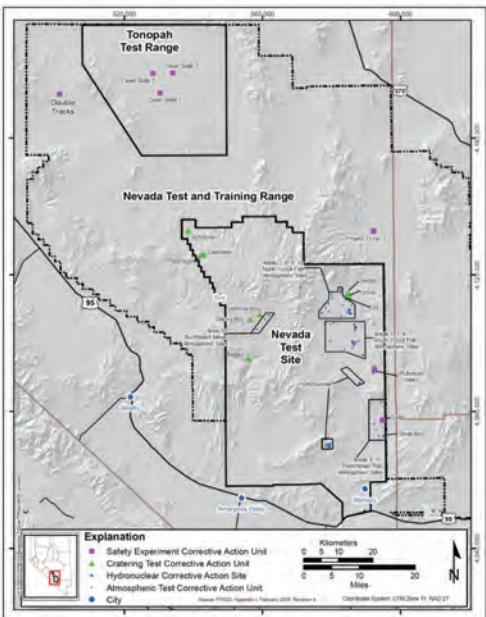


Figure 4-1  
Soils Sites Corrective Action Units.

Groundwater Contamination Characterization

Similar to the situation with the soils program the SWEIS does not present a clear picture of the groundwater contamination at the NTS. The first formal work began around 1972 with the EPA's Long Term Hydrological Monitoring Program (LTHMP), DOE, Nevada Operations Office, and later in 1989 created the Underground Test Area Project (UGTA). HOME is surprised that after almost 40 years there is not more demonstrated understanding about the extent of the groundwater contamination represented in the SWEIS. Table 4-32 in the SWEIS lists all the wells on the NTS, which is much less useful than if a map or multiple maps were presented showing the locations of

46-20

- 46-18** The commentor cites dated information regarding the radiological source term remaining at the NNSS. As noted in Chapter 6, Section 6.3.6.2, Groundwater, the most recent estimate of the underground source term at the NNSS was about 132 million curies as of September 22, 1992, based on a 2001 study by Bowen et al. Only a portion of this source term would be available as part of the hydrologic source term. The hydrologic source term is that portion of the overall underground source term that is available for transport in the groundwater. As noted in Appendix H, Section H.2, between 30 and 38 percent of underground nuclear tests were conducted close enough to the groundwater to potentially contribute to the hydrologic source term. Of the radionuclides produced by an underground nuclear detonation, only those that are readily soluble in water and/or are available to be transported (i.e., those not encapsulated within the melt glass in the detonation cavity or otherwise immobile) may become part of the hydrologic source term.

A recent estimate indicates that, as of January 2012, there are about 1,614 curies of radioactivity remaining in NNSS surface soils (Kidman 2012). As noted in the response to comment 46-17, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface soils and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR.

As discussed in Chapter 1, Section 1.4, and Chapter 3, Section 3.1.2.2, the FFACO provides the process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. Additional information on environmental restoration is included in Appendix A, Section A.1.2.2, Environmental Restoration Program. Additionally, a website ([www.nv.energy.gov/envmgt](http://www.nv.energy.gov/envmgt)) has been created to provide additional information concerning the NNSS Environmental Restoration Program.

- 46-19** Since 1996, only one of the safety test sites on USAF land has been remediated, the Double Tracks site. Information regarding the Double Tracks site may be found as part of the description of Soils Project sites in Chapter 4, Section 4.1.5.4.1, of this SWEIS. A new figure depicting the area of remaining radiological contamination at the Double Tracks site has been added to Section 4.1.5.4.1 of this *Final NNSS SWEIS*. Double Tracks is the site of a nuclear weapons safety test located on Nevada Test and Training Range, about 14 miles east of the town of Goldfield, Nevada. It was remediated in 1996 to a level of less than 400 picocuries per gram of soil. This level of remediation is considered appropriate for current land use in the area. All of the Soils Project sites are subject to decisions made in consultation with NDEP under the FFACO, including appropriate levels of characterization, monitoring, and remediation. DOE/NNSA will

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the wells and the underground nuclear explosion locations. For example, the comprehensive well map that was presented during the “open house” meeting labeled “Monitoring & Hydrogeologic Investigation Wells and Springs of the Nevada National Security Site (NNSS)” should be included in the SWEIS. Using this kind of map along with the general groundwater flow map the public could see how the UGTA program is analyzing groundwater impacts from the underground tests.

After reviewing the information provided in the SWEIS it is not clear just what the UGTA project has established. As stated in the SWEIS, “The UGTA program evaluates the extent of radionuclide groundwater contamination due to past underground nuclear testing through hydrogeologic investigation and characterization, groundwater flow and transport modeling, and groundwater sampling and monitoring.”<sup>14</sup> There is some information regarding the presence of tritium, including the discovery of tritium in one off-site well. DOE/NNSA should be able to generate a groundwater tritium iso-concentration map of the NTS, given all the sampling locations for tritium suggested in the SWEIS. (120 active groundwater wells). This would help in public understanding of the extent of tritium contamination at NTS.

Characterization efforts for the migration of radioactive elements other than tritium is not well represented. The SWEIS states, “Most investigators have concluded that, exclusive of tritium, much of the radioactivity released during an underground nuclear test remains confined in the melted and fused rock in the detonation cavity, particularly the refractory isotope species, such as plutonium, rare earth elements, zirconium, and alkaline earth elements.”<sup>15</sup> This statement is not supported by evidence in the SWEIS, nor are there any citations pointing to experimental data to support it. Few members of the public will have the time or technical understanding to “hunt” through and decipher DOE/NNSA electronic documents to find for themselves what evidence there is to support the above statement. HOME did spend some time to review some of the studies (although not cited in the SWEIS) on radionuclide migration from underground nuclear test shots. It seems clear that radionuclide migration is a very complex process that varies in terms of the type of aquifer and its associated geochemistry. There is evidence of radionuclide migration in addition to tritium, but the picture is not clear.<sup>16</sup> What is important here is to provide the public with the state of knowledge with some data in support of any conclusions drawn in the SWEIS. The discussion in the under “Groundwater Monitoring and Quality” and in Appendix H should be revised.

It is also not clear from the SWEIS that DOE/NNSA has rigorously conducted characterization studies much closer to the source (underground nuclear explosion location) in order to fully understand the nature of radionuclide migration. HOME is aware (but not because of information in the SWEIS) that some studies have been done as cited above, but again the following statement which is applied to tritium contamination is not supported for other radioactive elements. “Due to the distance between existing water supply wells at the NNSS and the underground tests, DOE believes that groundwater use at the NNSS has little or no effect on the migration or spread of contamination

<sup>14</sup> SWEIS, pg. 4-90.

<sup>15</sup> SWEIS, appendix H, pg. H-9.

<sup>16</sup> For example: Hoffman, D. C., R. Stone, W.W. Dudley, Jr., “Radioactivity in the Underground Environment of the CAMBRIC Nuclear Explosion at the Nevada Test Site, Informal Report LA-6877-M,” Los Alamos National Laboratory, Los Alamos New Mexico, 1977; Q. Hu, D. K. Smith, “Field-Scale Migration of 99Tc and 129I at the Nevada Test Site UCRL-PROC-203482,” 2004 Materials Research Society Spring Meeting, April 9, 2004; Gregory J. Nimz, “Underground Radionuclide Migration at the NTS,” Lawrence Livermore National Laboratory, and Joseph L. Thompson Isotopes and Nuclear Chemistry Division, Los Alamos National Laboratory, 1992.

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As noted in the response to comment 46-17, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the current knowledge of the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. In response to comments, Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2 have been revised, based on information developed under the FFACO and in coordination with NDEP, to better describe the extent of groundwater contamination at the NNSS.

continue to meet with the USAF and NDEP to determine the final closure scenarios for Double Tracks and other sites on USAF lands (i.e., Clean Slate 1, 2, and 3; Project 57; and Small Boy).

Soils sites are considered closed under the FFACO when they meet site-specific criteria. Closure of a site does not necessarily mean that contamination has been removed. Some sites are closed in place. That is based on the judgment of NDEP and DOE/NNSA that all or some of the contaminants are of such a nature and in such a condition that it would be safer and less damaging to the environment to leave them in place and monitor the site. Clean closure of a site would assume that all contamination is removed and there is no need for further monitoring or regulatory jurisdiction of the site.

As noted in the response to comment 46-17, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

The sampling and analysis necessary for characterizing areas of contaminated soil is determined under the FFACO by DOE/NNSA and NDEP. Characterization plans are site-specific and consider a number of factors, including site history (i.e., the kinds of activities that occurred at the site that may have caused the contamination) and soil type.

Although the cost of any project or activity is a factor in decisionmaking, it is not a useful discriminator of environmental impacts and is not addressed in this *NNSS SWEIS*. The actual activities that are undertaken under the Environmental Restoration Program are driven by the FFACO, but the pace of accomplishment may be affected by the level of funding appropriated by Congress.

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from underground nuclear testing. Groundwater at the NNSS is deep and slow moving, which affords protection to adjacent areas...”<sup>17</sup>

Groundwater movement was extensively studied as part of the Yucca Mountain Project, which focused on an aquifer and volcanoes similar in nature to the aquifer for many of the underground nuclear explosions. Unlike the conclusion in the SWEIS, the data from the Yucca Mountain studies shows a widely varying water transport, which due to the fracturing of the rock, had fast pathways.<sup>18</sup> In addition was the “unexpectedly” rapid plutonium migration, 1.3 kilometers in ~30 years, reported in 1999 from the “Benham” test shot in Pahute Mesa.<sup>19</sup> While the concentration of plutonium was small, ~1.5 picocuries/liter, the observation calls into question previously assumed rates of radionuclide migration. Unlike the relatively short half-life of tritium (~12.33 yr) the half life of plutonium is long enough that at this rate it could easily appear in off-site wells. There are potentially other radioactive elements with longer half-lives (cesium-137 was also observed in 1999 for same well) that could be a public health risk. Overall the SWEIS needs to present a more complete and clear picture of what is understood and what has yet to be shown regarding the potential risk of radionuclide and daughter product migration in the groundwater from the NTS.

DOE/NNSA need to clear up a discrepancy in the total radionuclide inventory as part of the underground testing program. Appendix H of the SWEIS reports 131 million curies, but HOME understand that over 300 million was stated at a UGTA meeting in 2001.<sup>20</sup> The SWEIS goes on to state, “The inventory in Table H-2 represents an upper limit of the radionuclides that are potentially available for transport in the groundwater.” So, is the 131 million figure really the radioactive inventory as a result of testing below the water table? The SWEIS does not give any data on the break down the 130 million curies into the various radioactive elements that are estimated to still exist underground and is to be used to evaluate groundwater contamination.

Page 4-72 of the SWEIS presents a table of tritium, gross alpha, and gross beta; Table 4-22 “Radiological Results for E-Tunnel Waste Water Disposal System Discharge.” Although the levels are within existing permit parameters they are still very high, and there should be an explanation of the source of the radioactivity. What program is creating this radioactive waste? HOME found independently that tunnel seepage contains high tritium activities as well as strontium-90, cesium-137, plutonium-238, plutonium-239/240, and americium-241.<sup>21</sup> Why is this information not reported in the SWEIS? This waste from the E-tunnel drains into a series of holding ponds, but there is no discussion of what happens to the waste from the holding ponds. Is it evaporated? Are the holding ponds lined? These questions should be addressed in the SWEIS.

<sup>17</sup> SWEIS, pg. 4-93.

<sup>18</sup> Lui, Beiling, June Fabryka-Martin, Andy Wolfsberg, Bruce Robinson, Los Alamos National Laboratory, Los Alamos, NM, and Pankaj Sharma, PRIME Laboratory, Physics Dept., Purdue University, West Lafayette, IN, “Significance of Apparent Discrepancies in Water Age Derived From Atmospheric Radionuclides at Yucca Mountain, Nevada,” Proceedings of 1995 American Institute of Hydrology, Annual Meeting, May 1995, Denver, CO.; Nuclear Waste Technical Review Board, transcripts from the September 16, 2003 meeting, Amargosa Valley, Nevada.

<sup>19</sup> A. B. Kersting, D. W. Efurd, D. L. Finnegan, D. J. Rokop, D. K. Smith & J. L. Thompson, “Migration of Plutonium in Groundwater at the Nevada Test Site”, NATURE, VOL. 397, JANUARY 7, 1999, pg. 56.

<sup>20</sup> Bangerter, Robert Presentation at UGTA Peer Review meeting in Las Vegas, June 12, 2001

<sup>21</sup> Highest measured activities (pCi/L): tritium = 946,000, strontium-90 = 1.49, cesium-137 = 62.7, plutonium-238 = 0.44, plutonium-239/240 = 4.96, americium-241 = 0.26 (U.S. Dept. of Energy, 2003, pages 5-41 – 5-42; U.S. Dept. of Energy, 2004, page 3-14, and U.S. Dept. of Energy 2005, pages 4-16 and 4-17).

- 46-21** As noted in Chapter 3, Section 3.1.2.2, and Appendix A, Section A.1.2.2, DOE/NNSA’s UGTA Project is conducted pursuant to the FFACO and in consultation with the NDEP. A brief summary of UGTA Project activities is included in Chapter 4, Section 4.1.6.2. DOE/NNSA, in consultation with NDEP, determines the locations for new groundwater characterization and monitoring wells based on sampling results from existing wells and state-of-the-art predictive modeling. The wells are designed to state-of-the-art standards to ensure they achieve their purpose(s). Both the UGTA Project and DOE/NNSA’s RREM Program analyze water samples for a wide range of radionuclides associated with underground nuclear testing.

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Tritium is not the only radioactive element of concern in groundwater monitoring and characterization at the NNSS, but because it was the radioactive species created in the greatest quantities during underground nuclear testing and is widely believed to be the most mobile in groundwater, it is the primary target analyte for both the UGTA Project and the RREM Program. For this reason, tritium is the primary radionuclide discussed in this NNSS SWEIS.

Chapter 4, Section 4.1.6.2, has been revised to include more information regarding both the UGTA Project and RREM Program groundwater sampling programs, including the lists of typical radioisotopes analyzed. DOE/NNSA has and will continue to track and report results of groundwater characterization and monitoring that demonstrate the transport of any of the noted elements. Further, the data obtained from the ongoing groundwater characterization and monitoring are used in developing and refining the models used by DOE/NNSA and NDEP to site new characterization and monitoring wells and improve groundwater models.

In 1992, Ernest A. Bryant from Los Alamos National Laboratory published *The Cambridge Migration Experiment: A Summary Report* (LA-12335-MS). This report detailed the “Cambridge Experiment,” which was a long-term (October 1974 through August 1991) experiment that consisted of first measuring the distribution of radioactive materials in water and rock in the vicinity of the 1965 Cambridge underground nuclear test explosion and then inducing an artificial hydraulic gradient by pumping water from a nearby well (91 meters from the well used to characterize the initial source term). The water samples pumped from the test well were regularly analyzed for the presence of radioactive species that might have migrated from the explosion cavity. Among other things, the Cambridge Experiment demonstrated that tritium migrates at about the same rate as groundwater relative to most other contaminants. Other radionuclides that exhibited migration with the groundwater during the Cambridge Experiment included krypton-85 (a noble gas), chlorine-36,

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**NUCLEAR WASTE TRANSPORTATION & STORAGE**

The issues of waste transportation and storage are linked because cleanup involves collecting contaminated soils, equipment, etc., safely containing it, and placing it in a storage facility. The low-level waste sites at NTS contain much waste that has been collected and contained from the site itself. Cleanup and restoration activities at NTS should continue, and should be expanded so as to contain and isolate radiation contamination on the site and reduce the possibility of releases from the site to air and water. We advocate that the storage of waste streams allowed at NTS be minimized and disposed on-site whenever and wherever possible. We also support waste consolidation on-site to minimize transport, as well as continued monitoring of groundwater and plugging of unneeded boreholes in areas 3 and 5.

However, the majority of waste stored or disposed there is from other DOE weapons complex sites nationwide. The SWEIS mentions over 20,000 truckloads in recent years. In the interest of avoiding Las Vegas, these shipments have major impacts on the small rural roads leading to the Test Site. Estimates of future waste disposal, based on 1997-2010 current levels (for both NTS waste and waste transported from other DOE nuclear weapons sites), is 15 million cubic feet of Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste.

HOME advocates that NTS low-level waste sites should prioritize accepting wastes from cleanup activities, rather than be available to take waste generated by new waste-producing projects. The Expanded Operations Alternative proposes new projects that will create more waste, and also increases the current waste production from on-going projects. HOME opposes such projects and believes that the production of new radioactive wastes, such as the "approximately 24 cubic meters of TRU waste per year"<sup>22</sup> from the JASPER facility should be minimized as much as possible. NTS should not be seen as an unlimited waste dumping area that encourages future waste production.

**GTCC WASTE DISPOSAL**

Overall, HOME opposes GTCC waste disposal at NTS. HOME feels that the evaluation of GTCC storage in general is premature, since the vast majority of the waste will not exist for at least 20 years, and the Blue Ribbon Commission should have adequate time to explore the disposal of all high level nuclear waste and GTCC waste. GTCC waste was originally slated for disposal at Yucca Mountain Repository, a very different kind of facility. This type of radioactive waste is quite dangerous, where the use of remote handling equipment is needed in some cases. It will comprise about 98% of the radioactivity from commercial nuclear reactors.

We believe that in most cases, the safest method to address short-term and intermediate-term (100 years) concerns with GTCC waste is to store it on-site where generated and not dump it on any particular centralized location. Instead of the disposal options outlined in the SWEIS<sup>23</sup>, DOE should consider a storage option called Hardened On-Site Storage (HOSS). HOSS is similar to one of the disposal concepts (vaults) that DOE is considering, except that it is for storage, not disposal. HOSS would solve some security concerns inherent to the GTCC issue, and could also be used to store the

<sup>22</sup> SWEIS, pg. 5-104.

<sup>23</sup> SWEIS, pg. 6-5

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iodine-129, technetium-99, and ruthenium-106. As noted above, each of these, with the exception of krypton-85, are included in the list of radioisotopes analyzed by either the UGTA Project or RREM Program.

Additionally, many wells have been drilled downgradient of the test cavities showing a migration trend of tritium transport at distance, as well as other radionuclides transporting short distances over the same period of time. Chapter 4, Figure 4-21 displays the locations of various wells used for monitoring groundwater at the NNSS and nearby offsite areas.

**46-22** The *Final NNSS SWEIS* has been updated to include information regarding the potential for plutonium migration in groundwater in and around Pahute Mesa in Chapter 4, Section 4.1.6.2. This information includes conclusions reached by Kersting et al. (1998) regarding the movement of plutonium associated with colloids in and around Pahute Mesa, as well as more-recent testing results and conclusions made by Smith et al. (2003) and Eaton et al. (2007). Kersting et al. noted, "...this is the first time Pu has been shown to be transported by groundwater and for a significant distance." In a study subsequent to the discovery of plutonium at well EC-20-5, Smith et al. (2003) noted that, "...general experience from the U.S. nuclear testing program based on radiochemical diagnostic data collected from a variety of test matrices suggest that only a small fraction (5 to 10 percent) of the total plutonium from an underground nuclear detonation would be available for transport in groundwater."

**46-23** As stated in Chapter 6, Section 6.3.6.2, of this *NNSS SWEIS*, the underground radioactive source term as of September 23, 1992, is about 132 million curies, based on a study by scientists from Los Alamos National Laboratory and Lawrence Livermore National Laboratory (Bowen et al. 2001). This is the most up-to-date estimate available. This 132-million-curie source term is the total estimated level of radioactivity in the NNSS underground environment. Not all underground nuclear tests were conducted near enough to the water table to cause groundwater contamination, as explained in Appendix H, Section H.2, of this *NNSS SWEIS*. Appendix H has been revised to include a new table that contains the summary of radionuclide totals in curies as they existed on September 23, 1992.

**46-24** Information has been added to Chapter 4, Section 4.1.6.1, of this *Final NNSS SWEIS* describing the nature of the E-Tunnel system, wastewater, and basins. The purpose of this section is to summarize permitting requirements associated with NDEP-approved wastewater surface impoundments to describe requirements likely to continue over the next 10 years of NNSS operation. The NDEP Water Pollution

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"spent nuclear fuel" at the reactor sites as well, thus allowing a dual purpose for these storage facilities. There is also the problem of transportation of the waste to Nevada, since there is no rail to the site, and routing would need to go through Las Vegas or on small unimproved rural roads in Nevada and California.

While HOME recognizes that wastes exist from nuclear reactor facilities, any discussion of the long-term problem of the GTCC waste from reactors should address the issue of source creation. If there are no new reactors being planned or built, then the preponderance of the GTCC waste will be eliminated, and thus this possible scenario should be analyzed through the separate GTCC EIS process.

**NATIONAL SECURITY / DEFENSE MISSION**

**STOCKPILE STEWARDSHIP & MANAGEMENT PROGRAM**

**NUCLEAR WEAPONS TESTING, DEVELOPMENT & DISMANTLING**

The SWEIS states "The primary purpose of continuing operation of the [Test Site] is to provide support for NNSA's nuclear weapons stockpile and stewardship missions"<sup>24</sup>. However, these activities have been declining in recent years, and this downward trend should continue or escalate. Congress has repeatedly rejected paying for new nuclear weapons designs and expanded plutonium pit production, and there has been much public discussion recently about the U.S. adopting the long-term national security goal of a nuclear weapons-free future. Further environmental damage and federal expenditure on nuclear programs is inconsistent with that goal. Polls have documented that the majority of the American people feel that nuclear weapons programs should continue to be scaled back until eliminated completely. However, verification of compliance with international weapons treaties and reducing and dismantling aging U.S. arsenals is important, and is consistent with U.S. goals.

HOME therefore does not support any weapons testing programs that do not lead to the reduction and dismantlement of the U.S. nuclear arsenal, such as dynamic, shock physics, hydrodynamic and subcritical experiments<sup>25</sup>. While we certainly expect to see the safe storage and maintenance of the nuclear armory as long as it exists, we do not see a real need for these types of experiments demonstrated to serve that objective. The enormous financial and environmental costs of such nuclear materials, tests and the waste they produce is not in the best interests of the United States.

In all three alternatives presented, the possibility of resuming underground nuclear weapons testing needs to be thoroughly analyzed. The discussion of impacts from resumption of testing amounts to four paragraphs totaling less than a page of text. This is not an analysis. Using the 150 kiloton anticipated explosion power limit, a conservative estimation could be done of the radionuclides and radioactivity that would be injected in the underground environment. In addition, determining the extent of testing that would be below the water table and the anticipated radionuclide release into the groundwater is very important. Certainly, over 40 years of experimentation and analysis of the groundwater and

<sup>24</sup> SWEIS, pg. 1-4.

<sup>25</sup> SWEIS, pg. 5-12-13.

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Control Permit associated with the E-Tunnel Waste Water Disposal System Discharge (Number: NEV 96021) requires monitoring of tritium, gross alpha, and gross beta, as well as several nonradiological parameters, which is why current data on those parameters are reported in this SWEIS. Thus, aside from tritium, historic data on other radiological constituents are not included in this discussion. Data on other radiological constituents have not been collected since 2007, and there is no plan to restart collecting such data.

46-25 As addressed in this *NVSS SWEIS* (e.g., see Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2, as well as Appendix A, Sections A.1.2.2, A.2.2.2, and A.3.2), DOE/NNSA is conducting environmental restoration at NNSS in accordance with Federal and state statutes and regulations, including the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. The NNSS Environmental Restoration Program is organized into three projects: the UGTA Project, Soils Project, and Industrial Sites Project. The Environmental Restoration Program also addresses DOE/NNSA's Borehole Management Program. Environmental restoration activities would continue under all alternatives, although the pace of cleanup could be accelerated under the Expanded Operations Alternative. Under the No Action and Reduced Operations Alternatives, DOE/NSO would continue implementing the UGTA Project to characterize and monitor groundwater, develop groundwater flow and transport models, develop closure strategies, and develop up to 50 new groundwater and monitoring wells; close all identified Soils Project sites under the FFACO by the end of 2022; complete remediation, decontamination, and decommissioning of FFACO industrial sites by the end of 2018; and plug all unneeded boreholes by the end of 2013. Environmental restoration activities under the Expanded Operations Alternative include an examination of the impacts of implementing a stricter cleanup standard for certain Soils Project sites than that assumed under the No Action Alternative. The impacts include the possible generation of up to approximately 11,000,000 cubic feet of additional LLW that was assumed to be disposed at the NNSS.

46-26 DOE/NNSA is committed to reducing impacts associated with LLW/MLLW transportation to the NNSS.

The transportation of radioactive waste typically would occur on Federal and state highways when required. To mitigate impacts on affected Nevada counties, a grant program was established. This program is funded by DOE and administrated by the

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underground testing should yield some specific impact information for contemporary use in impact modeling.

***EXPLOSIVES TESTING***

HOME supports collaborative efforts toward nuclear weapons treaty verification world-wide, including training for missions that would detect and dismantle weapons. However, we do not think it serves U.S. interests politically, financially or environmentally to continue to develop additional weapons systems. HOME generally opposes weapons testing programs, both nuclear and large-scale conventional explosives, including development and demonstration related to military missions, training for invasion, occupation or war, fuel-air explosives and rocket development and testing.

HOME further believes that no resumption of nuclear or any other explosives testing should be considered until previous contamination to soil and groundwater is fully characterized, mapped and analyzed. Of the Alternatives presented, the Reduced Operations Alternative, which would disturb the soils, plant life, wildlife and surface drainage of only 430 acres for "explosive", "dynamic" and "biological" experiments, is far preferable to Current Operations at 700 acres, or Expanded Operations, which would disturb 3,335 acres.

HOME also strongly advocates that no additional acreage be contaminated by the use of Depleted Uranium (DU) munitions. Many independent studies now show that DU munitions are proven to cause significant health problems worldwide, especially among children, and its use should be completely banned. Many U.S. veterans are now suffering health effects known to have been caused by exposure to DU munitions from the first Gulf War.

HOME is also concerned about releases of potentially lethal chemicals and "biological simulants"<sup>26</sup> used in weapons testing and training exercises. The final SWEIS should adequately explain exactly what chemicals are being considered for use and what the potential environmental and health impacts might be. We cannot help but concur with what was probably a typo, concerning Allowable Chemical Concentration that "would have a low probability of morality."<sup>27</sup>

HOME also believes that in the event of testing or experimentation with biological or chemical weapons that does take place, more information must be made publicly available regarding the release of chemicals and biological simulants before such activities begin. Tests should be evaluated and approved publicly, allowing informed consent for any environmental impacts.

***TREATY VERIFICATION, EMERGENCY RESPONSE AND COUNTERTERRORISM PROGRAMS***

In general, HOME supports all training efforts on a reasonable scale to better train Emergency Responders to identify and cope with potential radiological emergencies. However, like other programs, HOME advocates for choosing locations and methodologies that will minimize the impacts to previously undisturbed land, to contaminated land, and to either sensitive habitat or habitat for rare or

<sup>26</sup> SWEIS, pp. A-16-17.

<sup>27</sup> SWEIS, pg. A-17, Table A-1.

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State of Nevada. The program aids the affected counties in preparing for all kinds of emergencies.

Note that this *NNSS SWEIS* analysis indicates only minor impacts on Nevada State Route 160 in Nye County. Chapter 4, Table 4-11, of this *NNSS SWEIS* shows the level of service in year 2008 and the level projected to year 2020. Chapter 5, Table 5-19, and the supporting text show that there would be no degradation in the level of service compared to that projected for 2020 from the traffic volume on State Route 160 that would be associated with the *NNSS SWEIS* alternatives.

**46-27** Disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant to the *WM PEIS* (DOE/EIS-0200). In accordance with the *WM PEIS* ROD (65 FR 10061) issued on February 25, 2000, DOE decided to continue onsite disposal of LLW at NNSS and certain other DOE sites and to establish regional disposal capacity at the NNSS and the Hanford Site. Specifically, in addition to disposing their own LLW, the NNSS and the Hanford Site would dispose LLW generated at other DOE sites, provided the waste met their respective WAC. DOE decided to treat MLLW at a number of DOE sites, with disposal at either the NNSS or the Hanford Site. Neither decision precludes DOE's use of commercial disposal facilities consistent with DOE Orders and policy. Only a small percentage of the LLW/MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW/MLLW is disposed of at the site where they are generated. About half of the remaining quantities are disposed of at commercial facilities.

The increase in the volume of LLW/MLLW between the No Action and Expanded Operations Alternatives is largely due to sources other than new NNSS projects or increased levels of operation at the NNSS. As shown in Chapter 5, Table 5-49, the volume of onsite-generated waste increases by 300,000 cubic feet between the No Action and Expanded Operations Alternatives. The large difference in waste disposal volumes between the two alternatives is from an assumed extensive removal of contaminated soil from cleanup activities at Nevada locations outside NNSS, with shipment to the NNSS for disposal, and to increased projections of wastes that may be shipped to NNSS from authorized out-of-state generators. The text in Chapter 3, Section 3.2.2.1, was revised to more clearly indicate the sources of the larger quantity of waste that would be disposed of under the Expanded Operations Alternative.

As addressed in Chapter 5, Section 5.1.11.2.1, of this *NNSS SWEIS*, there may be other options for addressing the soil contamination other than removing it and shipping it to the NNSS for disposal. In accordance with agreements between DOE

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endangered species. We support the use of existing facilities for training and disposition purposes, and do not believe after reading the SWEIS that new facilities or sites are appropriate or required.

In particular, HOME supports efforts developed to verify compliance with the Comprehensive Test Ban Treaty and other arms control initiatives, including aerial monitoring systems for detection and measurement of radioactive material. HOME also supports cooperation and networking of existing U.S. and international agencies, the work of the NEST Team as it assists FBI and the State Dept. in search and recovery missions involving nuclear materials internationally, as well as the Federal Radiological Monitoring and Assessment Center in its work to respond to radiological emergencies within the United States. We also support the Radiological Assistance Program for first response and assessment of radiological emergencies and the Accident Response Group to manage and resolve accidents.

HOME also supports the Disposition Forensics Program in the analysis and disposition of improvised nuclear devices and the training programs required to maintain readiness capability. We would like to see further clarification in the Final SWEIS regarding the intent of the following statements (italics added):

"The Federal Bureau of Investigation has lead responsibility for nuclear forensics in response to a radiological event within the United States. However, for the most part, the scientific expertise and laboratory facilities for the nuclear forensics and the assets for *collection and storage of radiological samples* reside in the DOE complex.

The NNSS has unique facilities and capabilities for staging, *as well as experimentation with*, nuclear materials and would provide a centralized location where currently dispersed nuclear forensics capabilities would be integrated."<sup>28</sup>

HOME understands the threat of improvised nuclear devices in today's world, and appreciates these efforts to establish a consistent approach. However, we would not support the use of actual radiological materials, the construction of improvised nuclear devices or other experimentation, or the development of new facilities for testing or training purposes.

**NON-DEFENSE MISSION**

**ENERGY USE, CONSERVATION, ALTERNATIVE ENERGY RESEARCH AND FACILITIES**

Overall, HOME supports all the NTS efforts to increase on-site energy conservation proposed under all alternatives, as well as the increased reliance on energy coming from renewable sources. Future ground disturbance at NTS should be handled very carefully because of Desert Tortoise habitat, and some areas have below-surface contamination that would be exposed. Additionally, it is noted that nearby Paiute and Shoshone Indians oppose any further ground disturbance on these treaty lands.

<sup>28</sup> SWEIS pp. A-12-13.

and other Federal and state agencies, these options may include stabilization in place or use of environmental restoration disposal sites established nearer the points of contamination. The projections of wastes from out-of-state sources are considered upper-bound estimates, and their generation would depend on programmatic and regulatory decisions, funding, and other considerations that are outside the scope of this *NNSS SWEIS*. DOE Order 435.1, *Radioactive Waste Management*, requires that all DOE radioactive waste generators implement a Waste Minimization and Pollution Prevention Program to minimize the generation of waste. Although, for purposes of conservative NEPA analysis, it was assumed that the out-of-state wastes would all be disposed at NNSS, waste managers at DOE sites proactively seek to use commercial disposal facilities if the facilities are compliant, cost-effective, and have WAC under which they are able to accept the DOE waste.

As noted above, DOE/NNSA sites, including the NNSS, implement Waste Minimization and Pollution Prevention Programs to minimize the generation of waste. Nonetheless, certain experimental activities, such as those conducted at the Joint Actinide Shock Physics Experimental Facility (JASPER), would generate TRU waste. These wastes would be disposed of at the Waste Isolation Pilot Plant, not at the NNSS.

- 46-28** Alternatives for the management or disposal of GTCC waste are not within the scope of this *NNSS SWEIS*. DOE determined that preparation of the *GTCC EIS* was needed for several reasons, as summarized at the GTCC EIS website ([www.gtcceis.anl.gov/eis/shy/index.cfm](http://www.gtcceis.anl.gov/eis/shy/index.cfm)). The *Draft GTCC EIS* (DOE/EIS-0375), which is being prepared in compliance with NEPA and other statutes, such as the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Amendments Act) and the Energy Policy Act of 2005, was issued for public comment on February 25, 2011 (76 FR 10574). The comment period for that EIS ended in June 2011; however, this comment has been forwarded to the DOE Document Manager of the *GTCC EIS* for consideration.

The NNSS is one of the candidate sites evaluated in the *Draft GTCC EIS*. DOE has not yet made a decision regarding GTCC waste disposition. Therefore, rather than evaluating GTCC waste management at the NNSS as a mission assigned to the NSO, it is discussed as a reasonably foreseeable future action in this *NNSS SWEIS* in Chapter 6, "Cumulative Impacts." Section 6.2.1.2 includes a description of the facility, and Section 6.3 presents the cumulative impacts of the activities evaluated in this *NNSS SWEIS* and other activities, including construction and operation of a GTCC disposal facility.

**46-32  
cont'd**

**46-33**

**46-32  
cont'd**

**Commentor No. 46 (cont'd): John Hader, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

18 HOME comments on NTS Draft SWEIS

Alternative Energy Research

The recommendation of using NTS lands for small-scale demonstration energy research projects not possible elsewhere seems like a good idea to maximize energy availability, reduce cost, and provide electricity that can be utilized without extending transmission lines. Research and development programs for solar power that minimize water usage are especially important to the Western U.S. These on-site development projects can also help model and increase the development of new de-centralized power sources that reduce the need for transmission lines elsewhere.

Research projects, as well as installations of systems that conserve energy will have long-term economic, employment, and academic value as well. Each alternative presented has some level of this activity that will have benefits to the Test Site, the Western U.S., and the world. HOME prefers the Expanded Operations Alternative for energy research.

On Site Electrical Generation Facilities

While HOME supports renewable energy development as an excellent redirection of previously disturbed land use at the NTS, large scale facilities with major transmission lines are not generally the best approach. For on site use, solar panels are best installed on NTS rooftops, over parking areas, and on previously disturbed ground surfaces wherever possible.

HOME advocates specifically for development of energy systems that minimize the use of water and large scale transmission lines. Development of local electrical power generating systems is preferable to large scale systems, to reduce unnecessary use of natural resources and impacts to health and habitat. Use of previously disturbed areas for such experiments and installations is far preferable to destruction of new areas and endangered species habitat. However, care should obviously be taken to minimize the disturbance of contaminated areas as well.

HOME notes that the land identified in Area 25 for the installation of a possible commercial solar electrical generating facility is generally sandier soil that makes poor habitat for tortoises. This seems like a good choice, as long as future flash flooding is unlikely to carry disturbed materials away. We support the construction of additional solar power generation in Area 25 which, upon completion, would supply a portion of its generating capacity to support NTS needs, with the balance supplied to the outside commercial grid. HOME advocates for a modest installation at that site, similar to the 250 megawatt facility outlined in the "No Action" Alternative. Since NTS itself has a power typically averaging "20 megawatts with a peak demand of 27 megawatts"<sup>29</sup>, this would make a significant contribution to the regional grid system. HOME does not support the development of on-site electrical generation solely for the purpose of increasing experiments that use a higher level of voltage than the current grid system can sustain. Combined with conservation measures, continued maintenance of the existing on-site distribution system as well as some significant system upgrades as specified to achieve more energy efficiency, this approach would work on a reasonable scale, both in terms of financial and environmental impacts.

<sup>29</sup> SWEIS, p. 5-30

46-34

46-35

46-36

- 46-29** The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*. DOE/NNSA acknowledges the preference of the commentator that DOE/NNSA not conduct dynamic, shock physics, hydrodynamic, and subcritical experiments; however, these tests and experiments are necessary to continue to ensure the safety and reliability of the remaining nuclear weapons in the Nation's stockpile and to support the current policies of the United States.
- 46-30** Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0. Because conducting an underground nuclear test is not proposed in this *NNSS SWEIS*, the analysis suggested by the commentator is not required. The discussion of impacts from an underground nuclear weapons test in Chapter 8, Section 8.1.1.1, was inadvertently included in the *Draft NNSS SWEIS* and has been deleted from this *Final NNSS SWEIS*. Although conducting an underground nuclear test is not proposed under any of the alternatives, DOE/NNSA provided a generic description of such testing and impacts on the underground environment, including groundwater, in Appendix H. Appendix H is an informational presentation only and is in no way to be construed as an impact analysis of underground nuclear testing. In addition, Chapter 6, "Cumulative Impacts," addresses the impacts from past underground nuclear testing.
- 46-31** DOE/NNSA acknowledges the commentator's preferences for weapons dismantlement and opposition to development and/or testing of new nuclear or conventional weapons systems. These issues are matters of national policy and outside the scope of this *NNSS SWEIS*. The commentator's preference for implementation of the Reduced Operations Alternative is also noted. As stated in the response to comment 46-3, above, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

Although resumption of underground nuclear weapons testing is not proposed under any of the alternatives in this *NNSS SWEIS* (a clear statement to this effect has been added in Chapter 3, Section 3.0), tests and experiments using conventional explosives are proposed. DOE/NNSA would avoid conducting explosives testing in areas considered radiologically contaminated and would ensure that no activity or combination of activities at the NNSS would result in exceeding the radioactive

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

19 HOME comments on NTS Draft SWEIS

Additional alternative energy and conservation proposals that HOME supports include research on greenhouse gases, including policies for low-carbon emissions, projects that promote and implement water reuse strategies and water conservation, and the composting of organics.

**Geothermal Energy Production**

In general, HOME opposes geothermal energy production, having studied it at other sites. Geothermal energy production is a source of major water waste and pollution, as well as degradation of rare Native sacred sites where hot springs emerge from the Earth. Since the SWEIS notes that the NTS does not have any quality hot water sites, this seems a poor energy generation choice for DOE/NNSA to pursue. Solar and wind energy are far more appropriate for development in Nevada.

**CLOSING DESIGNATED AREAS**

HOME supports the idea of Reduced Operations Zones for Areas 18, 19, 20, 29 and 30, as specified in the Reduced Operations Alternative.<sup>30</sup> While these areas undoubtedly have some contamination, as stated earlier, we advocate the thorough evaluation and public disclosure of all potential contamination, followed by return of any lands deemed safe enough to tribal and public use, whenever possible.

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Thank you for this opportunity to review DOE/NNSA's extensive research and to share our views on this important matter. We look forward to the publication of the Final Site-Wide Environmental Impact Statement for the Nevada Test Site.

John Hadder

President, Board of Directors

Jennifer Olaranna Viereck

Executive Director

Judy Treichel

Director

**46-36**  
*cont'd***46-37****46-38**

emissions limit of 10 millirem per year exposure to the hypothetical MEI (40 CFR 61 Subpart H). As shown in Chapter 5, Table 5-52, of this *NNSS SWEIS*, under the Expanded Operations Alternative, the total calculated dose to the MEI would be 4.8 millirem per year, less than one-half of the regulatory standard.

As noted in the response to comment 46-17, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

As described in Chapter 3, Section 3.2.1.1, and Appendix A, Section A.2.1.1, of this *NNSS SWEIS*, under the Expanded Operations Alternative, up to three 40-acre depleted uranium test and experiment areas may be established within Areas 2, 4, 12, or 16 of the NNSS. Tests and experiments conducted in these areas would use depleted uranium in combination with explosives. The areas where these tests and experiments would be conducted are in the north-central portion of the NNSS and, therefore, are remote from any areas where the public could be affected. DOE/NNSA analyzed the potential impacts on human health from conducting the proposed depleted uranium tests and experiments, as described in Chapter 5, Section 5.1.12.1.2, and Appendix G, Section G.2.3.1. As shown in Table 5-52, the annual radiation dose to the MEI from all proposed activities under the Expanded Operations Alternative is estimated to be 4.8 millirem per year, or less than one-half of the 10 millirem per year standard set by the EPA in 40 CFR 61, Subpart H, "National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities." Radioactive emissions from the proposed depleted uranium experiments would result in an estimated dose to the MEI of about 0.62 millirem per year (i.e., about 13 percent of the total dose to the MEI from NNSS activities under the Expanded Operations Alternative and 6.2 percent of the EPA standard). As shown in Appendix G, Figure G-1, the location of the MEI for the depleted uranium tests and experiments was considered to be on the boundary of the NNSS, just over 9 miles east of the experiment location in an area well removed from any regular human activity or residence.

The word "morality" in the second row and right-hand column in Appendix A, Table A-1 has been changed to "mortality."

Under all three alternatives addressed in this *NNSS SWEIS*, DOE/NNSA would conduct experiments involving releases of various chemicals and biological simulants.

<sup>30</sup> SWEIS, pg. S-11.

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

Appendix A, Section A.1.1.3, includes a description of the parameters under which these releases may be conducted, including a list of the specific biological simulants that may be released. The release parameters described, along with other administrative controls, are designed to prevent harm to humans and the environment. Based on DOE/NNSA's experience over more than 20 years of conducting experiments and training using releases of chemicals, the release parameters are successful in protecting human health and safety, and monitoring by qualified biologists since 1996 has not demonstrated any significant differences between vegetation and wildlife communities inside and outside the impact areas for large-scale releases on Frenchman Flat. The phrase "would have a low probability of mortality" is not a typographical error.

Environmental impacts from releases of chemicals and biological simulants are addressed in two EAs: *Hazardous Materials Testing at the Hazardous Materials Spill Center, Nevada Test Site* (DOE/EA-0864) (DOE 2002) and *Final Environmental Assessment for Activities Using Biological Simulants and Releases of Chemicals at the Nevada Test Site* (DOE/EA-1494) (DOE 2004) and were incorporated into this NNSS SWEIS. Copies of these EAs are available on the DOE/NNSA NSO webpage at [www.nv.doe.gov](http://www.nv.doe.gov).

- 46-32** DOE/NNSA acknowledges the stated preferences of the commentor. As noted in the response to comment 46-3, above, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

As noted in the sentences immediately following the quoted passage from Appendix A, page A-12, "The Federal Bureau of Investigation Disposition Forensics Program would deploy a small number of personnel to the NNSS for training and exercises or for an actual incident, as needed. All activities would take place in existing facilities at the NNSS." To properly train personnel to conduct nuclear forensics on an actual improvised nuclear device, it would likely be necessary to provide them with the opportunity to gain experience with samples of actual radioactive materials that may be used in such a device. For this reason, DOE/NNSA would continue to store radioactive materials and use them as needed for training, exercises, and other purposes; DOE/NNSA does not propose to construct an operational improvised nuclear device.

- 46-33** DOE/NNSA does try to minimize ground disturbance (see the response to comment 46-9). Mitigation measures related to minimizing ground disturbance, habitats, and cultural resources are found in Chapter 7, Sections 7.7, Biological

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

Resources, and 7.10, Cultural Resources. DOE/NNSA agrees with the commentor that care must be taken to minimize disturbance where below-surface contamination would be exposed.

- 46-34 The commentor's support for solar energy systems that minimize the use of water and large-scale transmission lines is noted.
- 46-35 The commentor's preference for energy research and installation of energy conservation systems is noted.
- 46-36 DOE/NNSA acknowledges the commentor's support for solar energy systems that minimize the use of water, as well as for large-scale transmission lines that are constructed in previously disturbed areas, particularly Area 25. Also noted is the commentor's support for other alternative energy and conservation measures and research.
- 46-37 The pilot-scale "enhanced geothermal system" described under the Expanded Operations Alternative would not tap into or affect hot springs or hot groundwater (none of which have been identified on the NNSS), and thus would not be a source of water pollution or degradation of American Indian sacred sites where hot springs emerge. The theoretical system, as described in Appendix A, Section A.2.3.2, would involve the injection of water into boreholes penetrating deep "dry" hot rock (i.e., over 356 degrees Fahrenheit) that naturally contains no mobile water, then recovering the injected water after it is heated, passing it through a steam turbine engine to generate electrical energy, and then recirculating the water back through the hot rock for reheating. As mentioned in Chapter 3, Section 3.2.3.2, and Section A.2.3.2, because there are no specific proposals for geothermal exploration or development on the NNSS at this time, additional NEPA review would be required before such work could be conducted.
- 46-38 DOE/NNSA notes the commentor's preference for implementation of the limited use zone designation for Areas 18, 19, 20, 29, and 30 at the NNSS, as described under the Reduced Operations Alternative in Chapter 3, Sections 3.3. and 3.3.3.1.

As noted in the response to comment 46-17, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface soils and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Further detail on the Environmental Restoration Program may be found at [www.nv.energy.gov/envmgt](http://www.nv.energy.gov/envmgt).

**Commentor No. 46 (cont'd): John Hadder, Jennifer Olaranna Viereck,  
Judy Treichel, HOME (Healing Ourselves and Mother Earth)**

Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and otherwise sensitive testing, experimental, and training activities on site.

Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.

Although DOE/NNSA activities require the entire NNSS (about 1,360 square miles), these activities are not inconsistent with periodic visits by the public (including American Indians for purposes related to their cultural affiliation with the lands of the NNSS) or certain commercial activities proposed to be developed on the site (e.g., commercial solar power generation facilities). Public visits and commercial activities are and would be conducted under the safeguards and security protocols of DOE/NNSA, which limit the frequency and nature of public visits and could restrict commercial activities from time to time. For this reason, DOE/NNSA is able to allow properly cleared and escorted public visitation and the development of commercial projects without hindering its national security activities while continuing to protect the offsite public.

**Commentor No. 47: Mary L. Ross**

**Submitted:** Wednesday, November 30, 2011 - 09:07:

**Name:** Mary L. Ross

**E-mail (optional):**

**Organization:**

**Comment:**

I am distressed to think that we are even considering further testing of nuclear weaponry. Experts have verified that our current nuclear stockpile is adequate and that testing is unnecessary.

After over 40 years and over one thousand tests, we know what nuclear weapons are capable of doing to the environment and all living things globally, not just in the Los Alamos area. Unfortunately, we knew the devastating effects upon persons, livestock, soil, and water early in the testing process and continued to experiment on the unwilling in the name of protection and patriotism. It is ironic that no other nation attacked the United States with a nuclear weapon and under the perceived threat of such said attack we bombed our own homeland a thousand times over. Our soils are now contaminated as is our water, livestock, and our people. Most of the downwinders are dead and unable to speak for the grave injustices imposed upon US citizens. Most people in this country do not know our sordid nuclear history. Personally, I began studying our nuclear history when the Fukushima incident awakened me to the presence of radioisotopes in the immediate environment, despite the thousands of miles that separate me from Japan.

Since the tsunami, I have followed any data I might find. That grossly inadequate display of poor detection and distribution of timely information speaks to the inappropriate nature of reinstating weapons testing. Our radiation detection systems are abysmally inadequate. Either that, or the agencies involved in the monitoring of radiation in the atmosphere and in the food and water supplies are not watching out for the best interests of the general public and rather the interests of those who stand to lose from information being shared with the populace. People have been having their own soil samples tested and some have found that the Fukushima fallout is significant. Others have found that more significant is the continued presence of radioactivity from past weapons testing.

We are skating through this volatile chapter in our history with the fate of future generations in the hands of a few who tend to fudge numbers, raise safe levels, hide releases, and engage in sleazy back room politics. We can no longer endanger the planet by upping the levels of exposure for ages to come.

47-1

47-1

The United States has not conducted a nuclear weapon test since September 1992, when a moratorium was imposed by President George H.W. Bush. In the absence of underground nuclear weapons testing, DOE/NNSA developed the Stockpile Stewardship and Management Program to increase understanding of the basic phenomena associated with nuclear weapons, to provide better predictive understanding of the safety and reliability of weapons, and to ensure a strong scientific and technical basis for future U.S. nuclear weapons policy objectives. Because of the success of the Stockpile Stewardship and Management Program, the United States has not needed to conduct an underground nuclear weapon test to support certifying the safety and reliability of the stockpile since 1992. For this reason, although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

**Commentor No. 47 (cont'd): Mary L. Ross**

Please no more weapons testing. And please, to those who hold the health of this planet in their hands, remember that we are all "stakeholders" and stewards of this precious environment. Let us be admired for our protection of that which is so utterly vulnerable. May we not regret taking actions that we cannot remedy.

Mary Ross

47-1  
cont'd

*Response side of this page intentionally left blank.*

**Commentor No. 48: Tom Seaver, Chair,  
Indian Springs Town Advisory Board**

**Submitted:** Thursday, December 1, 2011 - 14:42:

**Name:** I. S. Town Advisory Board

**E-mail (optional):**

**Organization:**

**Comment:**

Indian Springs Town Advisory Board  
P. O. Box 12 \* 719 Gretta Lane \* Indian Springs NV \* 89018-0012  
(702) 879-3004 \* Fax (702) 879-3006

Advisory Board Members: Tom Seaver, Chair \* Jayme Brown, Vice Chair Ann Brauer \* Lisa Crow \* David Rohde \* Secretary: Michelle McClary

December 1, 2011

By Email to: National Nuclear Security Administration Nevada Site

Office Attn: NNSS SWEIS  
PO Box 98518  
Las Vegas, NV 89193-8518

To Whom It May Concern:

The Indian Springs Town Advisory Board supports the NO ACTION alternative for the regional transportation system section of the Draft Site-Wide Environmental Impact Statement for the Nevada National Security Site and Off-Site Locations in Nevada (4.1.3.2.1). This would preserve the transportation routes noted on Figure 4-6 in Chapter 4, page 4-26.

Thank you for considering our comment.

Sincerely,

Tom Seaver, Chair

48-1

48-1 DOE/NNSA notes the preference of the Indian Springs Town Advisory Board to “preserve the transportation routes noted on Figure 4–6 in Chapter 4, page 4-26,” (i.e., the Constrained Case) of the *Draft NNSS SWEIS*. In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the 1996 *NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA’s environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**Commentor No. 49: Robert Majors,  
Nevada Desert Experience**

Submitted: Thursday, December 1, 2011 - 16:04

Submitted by: E-mail (optional): rmajors@mail.com

Name: Robert Majors

E-mail (optional): rmajors@mail.com

Organization: Nevada Desert Experience

Comment:

I do not support the plans to continue nuclear testing, on any scale, in Nevada or the United States. The uses for this type of technology are not ethical nor are they economical. More importantly, while we are attempting to make things better we are slowly destroying our deteriorating environment. I believe that our actions, even at the least level of morality, should be to focus on the problems our country is currently facing.

49-1

- 49-1 Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0. DOE/NNSA notes the commentator's issue with nuclear technology; however, addressing U.S. policy regarding such technology is beyond the scope of this *NNSS SWEIS*.

**Commentor No. 50: Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

Submitted: Thursday, December 1, 2011 - 11:36

Name: Jane Feldman

E-mail (optional): feldman.jane@gmail.com

Organization: Part One of Two Toiyabe Chptr, Sierra Clb

Comment:

Part One of Two

Thank you for the extended opportunity to participate in decision-making about the future of the Nevada Test Site, now called the Nevada National Security Site (N NSS). The Toiyabe Chapter of the Sierra Club has 5,000 members in Nevada and eastern California, and our outreach extends to 40,000 members and friends who have taken action with us.

Although there are many issues of importance, the following issues dominate the thinking within the Sierra Club.

1. The Sierra Club has a vision of a clean energy future for America, a future that is free of both fossil fuels and radioactive fuels.

We oppose any activity at the N NSS or anywhere else that is directed to develop a nuclear fuel capability, including but not limited to research on advanced nuclear reactors and reprocessing irradiated fuel. The Enhanced Operation Alternative is particularly troubling because it proposes a variety of new projects and expansion to on-going projects that result in a significantly larger burden of high-level radioactive waste. This cannot be allowed to take place. The first step in managing dangerous high-level radioactive waste is to stop generating it.

We support activity at the N NSS that is directed to research, develop and deploy hardened on-site storage (HOSS) of irradiated fuel. Irradiated fuel is accumulating in dangerous quantities in overcrowded and unhardened cooling pools at nuclear reactors all over the country. We understand the flawed nature of the work to force permanent storage at Yucca Mountain. The Sierra Club and a host of other environmental organizations formally endorse the HOSS storage principles to containerize and safely store irradiated fuel as close as possible to the site of its generation. It would be a great service to the country to implement HOSS storage of high-level radioactive waste where ever it is accumulating.

We oppose any activity that would require that irradiated fuel or other radioactive material to be transported over long distances to the N NSS or any other site. This is one of the reasons that we oppose the Enhanced Operation Alternative.

50-1

50-1

DOE/NNSA is not currently proposing to conduct or support any projects involving advanced nuclear reactors and/or reprocessing irradiated fuel at the N NSS or its other facilities in Nevada. There are also no projects proposed under any of the alternatives in this *N NSS SWEIS* that would generate HLW. Storage and/or disposal of SNF and/or HLW is not a DOE/NNSA mission at the N NSS. The commentor's opposition to transportation of irradiated fuel or other radioactive material is noted. As noted in Chapter 1, Section 1.2, of this *N NSS SWEIS*, DOE/NNSA supports research and development of clean, renewable energy, and incorporates that support under each of the alternatives (see Chapter 3, Sections 3.1.3.2, 3.2.3.2, and 3.3.3.2).

**Commentor No. 50 (cont'd): Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

We eagerly endorse activity at the NNSS directed to develop clean, renewable energy, including solar, wind and geothermal technologies. In particular, we would be interested in seeing programs for small-scale energy research projects, solar power that minimizes water usage, and decentralized power sources that reduce the need for transmission lines

2. Dangerous radioactive contamination of surface soils. An over-riding concern of pursuing any activity at the NNSS is avoiding the radioactive contamination on soil surfaces that is a legacy of both the above-ground and below-ground testing of nuclear devices at the Nevada Test Site in the 1950s and 60s.

Deploying solar or wind installations at the NNSS would require a significantly large footprint of disturbed surface soils. It will be a challenge to locate, characterize, and avoid disturbance to prevent radionuclides from becoming air-born.

We want to consider the surface contamination in some detail. Over 900 nuclear bomb tests occurred at the Nevada test site in the mid 20th century. The DOE also conducted numerous "safety" experiments that did not produce nuclear explosions but did create significant surface contamination of plutonium. Nuclear rocket tests added additional radioactive contamination.

We understand that the contamination from above ground testing along with the safety shots and cratering events left an estimated 27,000 acres (42 square miles) of surface soils contaminated at levels in excess of 40 pico curies per gram (John B. Walker and Paul J. Liebendorfer. Long-Term Stewardship at the Nevada Test Site. 1998 Nevada Division of Environmental Protection Bureau of Federal Facilities)

Underground tests did not stop until 1992 and the US Dept. of Energy (DOE) admits that of the 723 underground tests that were detonated, at least 114 of them released significant radioactivity into the atmosphere. Other scientists think that number is much higher and in fact think that it is rare that underground testing does not release atmospheric radioactivity. Surface soil contamination from underground tests only added to the radioactivity levels mentioned above.

The DOE has stated that it is not possible to fully define the level of residual contamination that remains from the atmospheric testing program, but admits that radioactive isotopes that are still in Great Basin soil include americium, plutonium, uranium, cobalt, cesium, strontium, and europium (op cit, Walker and Liebendorfer). Some of these radioactive elements are alpha-emitters, some of the most carcinogenic substances known. Illustrating this point: since 1943 the military has been aware of the extreme toxicity of uranium as a gas. In a document dated October 30, 1943 and declassified June 5, 1974, three major scientists from the Manhattan Project, Drs. James Conant, A. H. Compton, and H. C. Urey wrote to

50-1  
*cont'd*

50-2 DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Potential radiological impacts on the population from operation of DOE/NNSA facilities in the state of Nevada are presented in Chapter 5, Sections 5.1.12, 5.3.12, and 5.4.12. The calculated risks indicate that the most likely outcome of operations would be no additional latent fatal cancers in the populations living within 50 miles of DOE/NNSA facilities. However, based on the premise that there is some risk associated with any radiation dose, there is a small risk of a single latent fatal cancer in the population for each year of operations with radioactive emissions.

As discussed in Appendix G, Section G.1.1.6, DOE/NNSA analyzed the potential radiological impacts in accordance with approved methodologies using conservative assumptions that would tend to overestimate the severity of impacts. DOE/NNSA used a conversion factor of 0.0006 fatal cancers per rem, in accordance with recommendations of the Interagency Steering Committee on Radiation Standards (ISCORS). As noted in Section G.1.1.6, recent publications by both the National Research Council's Biological Effects of Ionizing Radiation (BEIR) Committee and the International Commission on Radiological Protection, support the continued use of the ISCORS-recommended risk values.

Under DOE/NNSA's Environmental Restoration Program, areas of soil contamination are characterized, remediated, as necessary, and monitored. Those activities are conducted under the auspices of the FFACO and in consultation with NDEP. Characterization of potentially contaminated sites includes sampling to determine the specific substances that may be present and their concentrations and locations within the site, as well as to provide a basis for any further action that may be determined to be necessary. Sampling and analysis conducted as part of the characterization of a site is guided by knowledge of the history of an area and the potential contaminants. The contaminants identified by the commentor would be included in the characterization plan if appropriate. NDEP actively participates in developing characterization plans, provides oversight for characterization work, and reviews the results.

As a routine part of its project planning process, DOE/NNSA considers the presence of potentially contaminated soils and avoids them, unless the proposed activities require

**Commentor No. 50 (cont'd): Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

Brigadier General Leslie R. Groves, who was the head of the atom bomb project, concerning "Radioactive materials as a military weapon." (That document can be found here: [www.mindfully.org/Nucs/Groves-Memo-Manhattan30oct43.htm](http://www.mindfully.org/Nucs/Groves-Memo-Manhattan30oct43.htm)) In that document they stated:

"As a gas warfare instrument the material (uranium) would be ground into particles of microscopic size to form dust and smoke and distributed by a ground-fired projectile, land vehicles, or aerial bombs. In this form it would be inhaled by personnel."

The amount necessary to cause death to a person inhaling the material is extremely small. It has been estimated that one millionth of a gram accumulating in a person's body would be fatal. There are no known methods of treatment for such a casualty.

Uranium was also recommended as a permanent terrain contaminant which could be used to destroy populations by contaminating water supplies and agricultural land with radioactive dust.

One millionth of a gram of uranium yields 1,000 alpha particles per day, each alpha particle carries over 4 million electron volts, and it takes only 6-10 electron volts to break a DNA strand. Because of its mass and energy alpha particles are 20 to 1000 times more dangerous to living tissue than beta or gamma radiation (A. Rytz, At. Data and Nucl. Data Tables 47, 205(1991)

Some of these radioactive elements also bioconcentrate as they rise up the food chain, reaching concentrations as much as thousands of times higher in meat and milk, including human breast milk. Humans reside at the top of the food chain, especially human embryos.

Once inside the human body these radioactive elements continue to bioconcentrate, accounting for their distinctive carcinogenic patterns and enhancing the toxicity of low dose exposures. Strontium concentrates in bone, bone marrow and teeth, resulting in bone cancers and leukemia. Cesium resembles potassium, which is ubiquitous in every cell. It concentrates in brain, muscle, ovary and testicles, leading to brain cancer, muscle cancers (rhabdomyosarcomas), ovarian and testicular cancer and, most importantly, can mutate genes in the eggs and sperm causing genetic diseases in future generations.

Plutonium is the most deadly of alpha emitters. If inhaled into the lung it is transported from the lung to thoracic lymph nodes where it can induce Hodgkins disease or lymphoma. Because it is an iron analogue it combines with the iron transporting protein and concentrates in the liver, causing liver cancer, and the bone marrow causing bone cancer, leukemia, or multiple myeloma. It also

50-2  
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entry into a contaminated site. Such activities would include site characterization, monitoring, and remediation; field training of first responders for dealing with events in a contaminated area; and similar kinds of activities. When entering a radiologically contaminated area, appropriate precautions are taken to protect the health and safety of the workers and ensure that any exposures would be as low as reasonably achievable. Disturbance of contaminated soils is avoided, but if it were necessary to conduct an activity that could cause such disturbance (i.e., soil site remediation), appropriate measures would be taken to prevent resuspension of radionuclides to the extent practicable by using dust suppression techniques.

DOE/NNSA also conducts air monitoring for demonstrating compliance with "National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities" (10 CFR 61, Subpart H). These regulations limit the release of radioactivity from a DOE facility to 10 millirem per year to the MEI. The NESHAP requirement is for exposure to a member of the public which, because the public is not allowed unrestricted access to the NNSS, would be someone off site. As explained in Appendix G, Section G.2.1.4, of this *NNSS SWEIS*, for purposes of the analysis, the MEI is a hypothetical person that would be located on the boundary of the NNSS, but remote from any inhabited or regularly visited area. As discussed in Chapter 4, Section 4.1.12, DOE/NNSA uses the results of sampling performed on site (where radionuclide concentrations would be higher than at offsite locations) to demonstrate that doses to an MEI would be below the regulatory limit. The results of monitoring demonstrate that radioactive emissions to the air from the NNSS are consistently a fraction of the 10-millirem per year standard. DOE/NNSA reports annually to EPA on estimated radioactive emissions from the NNSS. A more-detailed description of radiological air monitoring and results is presented in Chapter 4, Section 4.1.8.3, of this *NNSS SWEIS*.

**Commentor No. 50 (cont'd): Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

concentrates in the testicles and ovaries where it can induce testicular or ovarian cancer, and/or mutate genes to induce genetic disease in future generations. Plutonium can cross the placental barrier which protects the embryo. Once lodged within the embryo, one alpha particle could kill a cell that would form the left side of the brain, or the right arm, like thalidomide did years ago.

The half-life of plutonium is 24,400 years, so it can cause harm for 500,000 years; inducing cancers, congenital deformities, and genetic diseases for the rest of time, not only in humans, but in all life forms.

There is little doubt that current dust storms from the NNSS already deliver radioactive isotopes downwind to the environment and the people living there. A 2009 masters thesis study was conducted using soil samples from the Washington County area to determine if Cesium 137 still exists in the area in detectable amounts. 102 soil samples were collected and analyzed. Only one of the 102 soil samples did not have detectable amounts of Cesium. The author stated, "Several of the samples contained levels substantially higher than earlier estimates would have predicted. This leads us to conclude that doses to the public from the testing could also have been higher than earlier thought." (<http://ir.library.oregonstate.edu/xmlui/handle/1957/9293>)

As with particulate air pollution, science has established that there is no safe level of radioactivity exposure. The National Academy of Sciences Biological Effects of Ionizing Radiation (BEIR) Report VII from 2005 states, "A comprehensive review of available biological and biophysical data supports a "linear-no-threshold" (LNT) risk model, that the risk of cancer proceeds in a linear fashion at lower doses without a threshold and that the smallest dose has the potential to cause a small increase in risk to humans."

Radiation damage is cumulative and each successive dose builds upon the cellular mutation caused by the last. One mutation, in one gene, in a single cell, if unrepaired, can result in a fatal cancer. Many cancers, especially solid tumors, and other genetic diseases have a latency period of many decades. Utah residents are still showing up with new cancers from the original nuclear testing program decades ago. (Comments by Utah Physicians for a Healthy Environment, <http://www.uphe.org/evidence-archive>)

Even small increases in risk per person become significant public health hazards in the aggregate, when large numbers of people are exposed. In other words, when millions of people are exposed to slightly increased risks, there will be thousands of new victims.

It should be emphasized that cancer is not the only health risk of radiation exposure. Cardiovascular disease causing heart attacks, strokes and diseases

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**Commentor No. 50 (cont'd): Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

consequent to immunosuppression are all correlated to radiation exposure, as are any diseases related to chromosomal dysfunction, such as birth defects. Children are much more susceptible to radiation caused health affects and human embryos, especially during early gestation, are perhaps thousands of times more at risk for genetic mutations from radiation exposure than are adults. There are over 2,600 diseases described in the medical literature caused by genetic mutations. Mutated genes are passed down from generation to generation in perpetuity, impacting the health of future generations.

To summarize: the radioactive contamination from nuclear testing still present in surface soils and dust generated there has medical ramifications that will never cease. It will affect the health and viability of future generations forever, inducing epidemics of cancer, leukemia and genetic disease.

To characterize the dangerous radioactive surface contamination, a thorough soil sampling of the entire landscape anticipated to be disturbed is required. In addition to sampling for the radionuclides mentioned above, to protect public health, the soil sampling should include an assessment of the concentrations of all the primary heavy metals, especially mercury, zeolites in general, erionite in particular, and microorganisms, especially coccidioidomycosis. Depending on the results of the soil sampling, independent third parties should be employed to make a comprehensive study of what those concentrations will translate into regarding public health impacts

3. Surveys for biological resources Since the NNSS has had tightly controlled access for a number of decades, there has been little human impact to native Mojave Desert ecological communities. These biological resources need to be surveyed, inventoried and protected.

The entirety of the NNSS is expected to be good-to-excellent habitat for the desert tortoise, a species listed for protection under the Endangered Species Act. Activity should be conducted on previously disturbed lands, and any take of desert tortoise and impacts to its habitat will need to be mitigated fully in perpetuity in accordance with the Endangered Species Act.

The NNSS is almost certainly host to a variety of other animals and plants that are protected, sensitive or rare, and are listed as species to be monitored and protected by federal or state authorities. The resources need to be carefully surveyed, inventoried, described and protected.

**4. Restoring Native American access**

The Sierra Club formally recognizes (<http://www.sierraclub.org/policy/conservation/justice.aspx>) that to achieve our mission of environmental protection and a

**50-2  
cont'd**

- 50-3** DOE/NNSA agrees with the commentor's statement that biological resources on the NNSS need to be surveyed, inventoried, and protected. For this reason, and as described in Chapter 4, Section 4.1.7, of this *NNSS SWEIS*, the flora and fauna of the NNSS have been and continue to be surveyed and inventoried, sensitive species are monitored, and protection is afforded to sensitive and otherwise regulated species. These activities are conducted by a staff of highly qualified wildlife and plant ecologists. In addition to the Chapter 4 descriptions of NNSS flora (Section 4.1.7.1), fauna (Section 4.1.7.2), threatened and endangered species (Section 4.1.7.3), and other species of concern (Section 4.1.7.4), Appendix F provides lists of sensitive species of plants and animals known to occur on or near the NNSS, lists of all species of plants and animals that have been reported on the NNSS, and maps showing the locations of sensitive plant populations. Further, DOE/NNSA maintains several programs, as described in Section 4.1.7, as well as in Chapter 5, Section 5.1.7, to ensure full consideration of biological resources in all of its activities. Again, as described in both Section 4.1.7.3 and Section 5.1.7, issued a Biological Opinion (USFWS 2009) for the desert tortoise at the NNSS. That NNSS Biological Opinion provides the parameters under which DOE/NNSA must conduct its activities in desert tortoise habitat on the NNSS and the acceptable "take" of both tortoises and their habitat. As explained in Sections 4.1.7.3 and 5.1.7, the USFWS considers the tortoise population density on the NNSS to be very low.
- 50-4** As part of its American Indian Consultation Program, the DOE/NNSA NSO included tribal input into this *NNSS SWEIS*. CGTO recommendations are carefully reviewed and considered. The DOE/NNSA NSO strives to accommodate the recommendations of CGTO to the extent practicable as part of the overall American Indian Consultation Program. The DOE/NNSA NSO also tries to accommodate the tribes' requests for access as much as possible within the constraints of the DOE/NNSA missions.

2-150

**Commentor No. 50 (cont'd): Jane Feldman, Energy Chair,  
Toiyabe Chapter of the Sierra Club**

sustainable future for the planet, we must attain social justice and human rights at home and around the globe. We fully support and urge that Native Americans have access to sacred cultural sites on the NNSS, in ways that protect both the people and the environment from injury and damage. Native Americans also must be incorporated into and have full voice in land and resource management decision making.

5. Completely halt the development and deployment of nuclear weapons

The Sierra Club policy is very clear on this issue: Since 1981, our policy has said that "because the use of nuclear weapons in modern warfare would result in unprecedented destruction to the global environment on which human and all life depends for survival, the Sierra Club expresses grave concern over the lack of progress in completing nuclear arms reduction agreements and urges all nations by bilateral and multilateral agreements to halt any further development, testing, and further deployment of nuclear weapons. We urge all nations to develop a long-term program to reduce nuclear weapons stockpiles." (<http://www.sierraclub.org/policy/conservation/nuc-weapons.aspx>)

This means that nuclear weapons programs must be scaled back until eliminated completely. Further environmental damage and federal expenditure on nuclear programs is inconsistent with that goal.

We adamantly oppose the expanded weapons and explosives testing, the use of depleted uranium (DU) munitions, and release of dangerous contaminants from biological warfare experiments.

Sincerely

Jane Feldman  
Energy Chair  
Toiyabe Chapter of the Sierra Club

50-4  
*cont'd*

50-5

The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*. DOE/NNSA acknowledges Sierra Club's opposition to expanded weapons and explosives testing, the use of depleted uranium, and the release of dangerous contaminants from biological warfare experiments. However, it should be noted that DOE/NNSA does not propose releasing any biological warfare agents at any DOE/NNSA site in the state of Nevada. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

***Commentor No. 51: David Corcoran,  
SOA Watch***

**Submitted:** Thursday, December 1, 2011 - 16:49

**Name:** David Corcoran

**E-mail (optional):** dcorcor@sbcglobal.net

**Organization:** SOA Watch

**Comment:**

Stop making nuclear bombs and get rid of the ones we have. We are our own worst enemy.

51-1

- 51-1 The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*.

2-152

**Commentor No. 52: Ellen Murphy,  
Veterans for Peace**

**Submitted:** Thursday, December 1, 2011 - 18:17

**Name:** Ellen Murphy

**E-mail (optional):** ellenkavanagh@yahoo.com

**Organization:** Veterans for Peace

**Comment:**

Dear NNSA,

I want you to know that I have read and I support the positions and recommendations of the Consolidated Group of Tribes and Organizations.

It's easy to be influenced by one's work culture and not get, as they say, "outside the box."

I trust these positions and recommendations, and, I'm sorry to say, I have not a lot of trust in yours. Change my mind!

Sincerely, Ellen Murphy

52-1

**52-1** The DOE/NNSA NSO appreciates and considers all comments relating to the *Draft NNSS SWEIS*.

**Commentor No. 53: Ben Innes**

**Submitted:** Wednesday, November 30, 2011 - 20:38

**Name:** Ben Innes

**E-mail (optional):** binnes@qwestoffice.net

**Organization:**

**Comment:**

I have often referred to the Nevada Test Site as the "Nation's litter box." It should be treated as a litter box. Cleaned as much as possible, recognize that it has done and is still doing its job and it should not be expanded or moved. Thus uncontaminated areas remain uncontaminated. Nothing is done that might harm the groundwater or neighboring land.

We have a litter box, acknowledge it and don't make things worse.

53-1

**53-1** The commentor's preferences for remediating contaminated areas and limiting future activities that could result in contamination are noted. As presented in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.2.2, DOE/NSSA proposes to continue its Environmental Restoration Program under all three alternatives considered in this *NNSS SWEIS*. The greatest portion of the NNSS is not contaminated, as shown in Figure 4-11, which was added to this *Final NNSS SWEIS* to provide interested readers with additional information regarding radioactively contaminated soils at the NNSS.

2-154

**Commentor No. 54: Jovita Harrah,  
Pax Christi and NDE**

**Submitted:** Wednesday, November 30, 2011 - 21:29

**Name:** Jovita Harrah

**E-mail (optional):**

**Organization:** Pax Christi and NDE

**Comment:**

It is time for the US to end the development, maintainance and testing of nuclear weapons. America is telling other countries to desist from developing nuclear weapons while they are making and improving their own. This is wrong. Socially, politically and spiritually. END THE NUCLEAR WEAPONS TRADE !!!

||| 54-1

54-1 Comment noted.

***Commentor No. 55: Ronald Bruce Greene,  
NTS Guide Service***

**Submitted:** Thursday, December 1, 2011 - 07:38

**Name:** Ron Greene

**E-mail (optional):** hummingbird8088@yahoo.com

**Organization:** NTS Guide Service

**Comment:**

**From:** Ronald Bruce Greene

525 Colver Road Apt 2  
Phoenix Oregon 97520

xxx) xxx-xxxx

**To:** Ms Linda Cohn  
SWEIS Document Manager  
US DOE  
PO Box 98518  
Las Vegas Nevada 89193-8518

**RE:** NNSS, SWEIS, DOE/EIS-0426D

Dear Ms. Cohn,

There are portions of SWEIS that rightly fall into each option category; No Action, Expanded Operations and Reduced Operations.

No Action option: Continued (or expansion of) clean-up and monitoring of residual nuclear material should continue site-wide.

Expanded Operations option: The renewable energy projects at the southwest corner of NNSS should go forward on as large a scale as possible. This includes the 5megawatt solar array and the geothermal project and research center. Note: special care should be given to reduce and mitigate any negative watershed impacts.

Reduced Operations option:

- 1) Stockpile stewardship tests should be at the minimum level and should focus on a nuclear weapon free planet.
- 2) No new facility construction.
- 3) Discontinue the Big Explosives Experimentation Facility.
- 4) Move forward to close the northwest sections including Oak Spring, Captain Jack Spring, Topapah Spring, Tipapah Spring, Rainier Mesa, Pahute Mesa, Buckboard Mesa, Forty Mile canyon, the Calico Hills and Shoshone Peak. Note: Restore Western Shoshone Nation access to these areas.

55-1

- 55-1 The commentor's suggestions regarding alternatives in this SWEIS are noted.
- 55-2 As part of the NNSA/NSO American Indian Consultation Program, DOE/NNSA works with tribes affiliated with the geographic region of the NNSS through the Consolidated Group of Tribes and Organizations (CGTO). A large part of this consultation entails visits to the NNSS and its many culturally significant locations. These visits have included overnight camping at areas identified by CGTO for further study. Such visits will continue to be provided as part of the American Indian Consultation Program under the safeguards and security protocols of DOE/NNSA, which are designed to allow public visitation of the NNSS without hindering its national security activities while continuing to protect the offsite public.

55-2

2-156

***Commentor No. 55 (cont'd): Ronald Bruce Greene,  
NTS Guide Service***

In a special note I would like to say that when the Western Shoshone signed the Ruby Valley Treaty giving the US the right to build roads and forts through their territory I'm certain the didn't mean that to include a 6500 square mile "fort" centered on there summer home range. In the spirit of making restitution to Native Americans for the genocide waged against them by the US Government, every effort should be taken to restore their rights in this area in as large a magnitude, and as quickly as areas can be made safe.

Sincerely'

Ron Greene

55-3

55-3 The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

**Commentor No. 56: Susan Brager, Chair,  
Clark County Commissioners**

December 1, 2011

Linda M. Cohn, SWEIS Document Manager  
SNSA Nevada Site Office  
U.S. Department of Energy  
P O. Box 98518  
Las Vegas, Nevada 89193-8518

Dear Ms. Cohn,

Clark County respectfully submits the following comments on the Department of Energy DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION NEAVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA (JULY 2011 – DOE/EIS-0426D), due December 2, 2011.

Clark County has considerable concern with this Site-Wide Environmental Impact Statement (SWEIS) document in the following areas:

- The proposal of an unconstrained transportation throughout Clark County and potential impacts to its residents, visitors, environmental and socio-economic, etc., has not been fully studied or analyzed.
- The cumulative impacts on increasing shipments to the Nevada National Security Site (NNSS) from today's volume to the expanded alternative of 81,000 shipments, including the construction and operation of potential intermodal transfer sites in Clark County have not been fully vetted or impacts to air quality, emergency management, radiological exposures to nearby facilities and residents/workers.

**56-1** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the 1996 *NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

DOE/NNSA performs transportation analyses to determine comparative risks among alternatives using risks calculated for the entire route. The risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor necessary for the purposes of this *NNSS SWEIS*. The transportation of LLW/MLLW and other radioactive materials would use existing highways and railroads. Because no new land acquisition and construction would be required to accommodate these shipments, this SWEIS focuses on potential impacts on human health and safety and the potential for accidents along shipment routes. It should be noted that the transport of radioactive materials and wastes occurs daily on the Nation's highways, including highways in Las Vegas, as a result of commercial and government activities

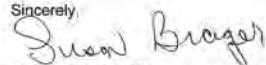
**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**

Linda M. Cohn, SWEIS Document Manager  
DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
December 1, 2011  
Page 2

- The lack of description in the transportation component makes it extremely difficult to provide comments on a worst case scenario event when the DOE fails to assess the cumulative impacts from other site activities that are not adequately addressed in this SWEIS.
- The absence of a preferred alternative makes it impossible for Clark County and others to properly evaluate DOE intentions when it comes to activities at the National Nuclear Security Site and impacts that will occur in Clark County.

I thank you for providing Clark County with the opportunity to provide extensive comments on the SWEIS, and we look forward to providing similar comments when the preferred alternative and Final Environmental Impact Statement is released to the public.

Sincerely,



Susan Brager, Chair  
Clark County Commissioners

Attachments

56-3

56-4

(e.g., materials for nuclear medicine); therefore, the transportation activities analyzed in this *NNSS SWEIS* do not present a new or unique hazard that would require specific locations along a route to be analyzed or analysis of other aspects such as local environmental or socioeconomic impacts.

- 56-2** To ensure a conservative analysis (i.e., to ensure impacts are not underestimated), this *NNSS SWEIS* cumulative impacts analysis was generally based on the Expanded Operations Alternative for potential DOE/NNSA activities, as described in Chapter 6, Section 6.1. The potential cumulative exposures and health risks for transportation are shown in Table 6-6. Similarly, the cumulative impacts analysis for each applicable resource area related to transportation of radioactive waste (i.e., traffic, air quality, and human health) were based on the Expanded Operations Alternative. For instance, the cumulative impacts on air quality in Clark County are addressed in Section 6.3.8.1.2 and include emissions from DOE/NNSA transportation of radioactive materials and waste derived from the impact analysis presented in Chapter 5, Sections 5.1.8.2, 5.2.8.1, 5.3.8.2, and 5.4.8.2.

DOE/NNSA does not propose construction of any rail-to-truck (i.e., intermodal) transfer sites in Clark County or anywhere else. Rail-to-truck transfer sites included in this *NNSS SWEIS* transportation analysis are currently existing operational facilities. This point has been clarified in Chapter 5, Section 5.1.3.1, Transportation, for both the Constrained and Unconstrained Cases.

- 56-3** Worst-case scenarios are by their very nature extremely unlikely to occur; thus, their analysis would not prove helpful to decisionmakers. For example, not even the CEQ regulations require the analysis of worst-case scenarios. This requirement was withdrawn in April 1986 (51 FR 15618).

As noted in the response to comment 56-2, the cumulative impacts analysis was based on the Expanded Operations Alternative for potential DOE/NNSA activities. As such, the impacts that would result from transportation were considered in the cumulative impacts analysis for each applicable resource area. DOE/NNSA evaluated the potential impacts of transportation accidents in Chapter 5, Sections 5.1.3.1.1, 5.1.3.1.2, and 5.1.3.1.3, and of facility accidents in Sections 5.1.12.2.1, 5.1.12.2.2, and 5.1.12.2.3. Because accidents are considered singular events, they were not included in the cumulative impacts analysis.

- 56-4** As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**

**CLARK COUNTY COMMENTS FOR THE DEPARTMENT OF ENERGY DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION NEAVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA (JULY 2011 – DOE/EIS-0426D)**

The following comments are respectfully submitted on behalf of the citizens of Clark County, Nevada, to the Department of Energy (DOE) National Security Administration Nevada with regard to the Site-Wide Environmental Impact Statement (SWEIS) and Off-Site locations. Clark County departments and agencies have reviewed the SWEIS and intend to focus comments on the generality of the SWEIS, and concerns about impacts to transportation, emergency management and public safety, socioeconomic issues, as well as radiation exposure risk, and impacts to air and water quality. Clark County notes the lack of a preferred alternative provided within the SWEIS, as required under NEPA. In addition, Clark County identified other significant gaps in analysis, including a consideration of cumulative impacts, and a full disclosure of all possible waste streams which could potentially be included in future Nevada National Security Site (NNSS) operations. Clark County suggests that once the final environmental impact statement is issued, the DOE should provide a second public comment period to allow time to review comments, changes, and to analyze the required preferred alternative in detail.

In general, the SWEIS fails to provide an in-depth analyses of the proposed activities and their potential impacts to Clark County. Clark County, at a population of nearly 2 million people, is the largest urban area in Nevada through which shipments would traverse. Major transportation corridors for both rail and truck shipments run through Clark County's nearly 8,000 square miles. The transportation information provided in the SWEIS is so vague that it is currently impossible to conduct an accurate and in depth analysis based on the various proposed transportation scenarios, including a comprehensive analysis of the impacts on emergency management and first responders' needs, and potential social-economic concerns such as employment, tourism and property values. The DOE failed to analyze the impacts of proposed changes to many aspects of these elements such as frequency of shipments, shipment loads, inter-modal transfer sites, route selection, actual types of shipments, security, traffic control and coordination, and emergency preparedness for first responders. In addition, no cost/benefit analysis had been used to actually evaluate any of the proposals such as the intermodal transfers, highway improvement needs, additional equipment and manpower needs for first responders, liability limits to accidents and impact on lost tourism revenue as well as other locally specific losses.

The existing transportation agreement between the Governor of the State of Nevada and the DOE for shipments of Low-Level Radioactive Waste (LLRW) and Mixed Low-Level Radioactive Waste (MLLRW) has been accepted into the waste confidence program and is supported by Clark County. This agreement was recently supported by Nevada's newest governor, Brian Sandoval in a letter dated September 16, 2011, whereby no shipments through southern Nevada to the NNSS were to occur outside of the designated and agreed upon transportation

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- 56-5** Please refer to the response to comment 56-4, above, regarding the lack of a preferred alternative in the *Draft NNSS SWEIS*. The commentor also suggests that DOE/NNSA provide a second public comment period for consideration of the Preferred Alternative identified in this *Final NNSS SWEIS*. As required by CEQ regulations (40 CFR 1506.10), DOE/NNSA will not make a decision on the actions proposed in this *NNSS SWEIS* until at least 30 days following publication in the *Federal Register* of the EPA notice of filing. CEQ refers to the period of time between the notice of filing of a final EIS and issuance of a decision by an agency as a "review period." Comments received on the *Final NNSS SWEIS* during the review period will be evaluated and addressed in the ROD.

56-6

- Cumulative impacts are analyzed in Chapter 6 of this *NNSS SWEIS*. As noted in Chapter 4, Sections 4.1.11, 4.2.11, 4.3.11, and 4.4.11, DOE/NNSA generates and/or manages a variety of waste streams at its facilities in the state of Nevada, including LLW/MLLW, TRU waste, nonradioactive hazardous waste regulated under RCRA (42 U.S.C. 6901 et seq.), wastes containing asbestos or polychlorinated biphenyls regulated under the Toxic Substances Control Act (15 U.S.C. 2601 et seq.), explosive wastes, and nonhazardous wastes, including sanitary solid waste, construction and demolition debris, and hydrocarbon-contaminated soil and debris. In Chapter 5, Sections 5.1.11, 5.2.11, 5.3.11, and 5.4.11 of this *NNSS SWEIS*, DOE/NNSA identified potential waste streams that may be generated by its operations over the next 10 years, the expected volumes, and their expected disposition pathways (i.e., disposal onsite, disposal at permitted/approved offsite facilities, recycling, etc.).

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- 56-6** The approach to the transportation analysis performed for this *NNSS SWEIS* is consistent with analyses performed for other DOE/NNSA NEPA analyses. As stated in Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*, DOE/NNSA has analyzed two transportation cases: one that reflects the existing commitment (Constrained Case) and one that permits shipments through the greater metropolitan Las Vegas, Nevada (Unconstrained Case). This analysis was undertaken to develop a greater

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routes established years prior and currently identified in the DOE's waste acceptance criteria (see Attachment 1).

Clark County does not support the DOE's proposal for an unconstrained case of shipping radioactive shipments through high density and population corridors such as the I-15 north of Blue Diamond (NV SR 160), both the US 95/93 highways throughout Clark County, and the Clark County 215 beltway. In the DOE unconstrained transportation case, the DOE proposes to include all of these highway systems for shipments to the NNSS. The continuous construction along the major arteries in the Las Vegas valley will continue for decades. Subsequently, the congestion and 'bottle-necks' created, particularly around major commuting periods and accidents, could possibly increase significant delays in shipments and continue to expose citizens to further unnecessary radiological exposures as well as other at risk activities. Recently, severe transportation restrictions have been put in place through the city of Boulder City and immediate surrounding's due to increase truck traffic causing major delays between 8 a.m.-5 p.m. Monday through Saturday. The Regional Transportation Commission (RTC) of Southern Nevada has stated they have major highway improvement projects projected past 10 years on all of these highways. To not understand the impacts associated with on-going highway improvements would adversely impact commuters, residents and the shipments themselves. It would be a huge error and violation of the National Environmental Policy Act (NEPA) for the SWEIS to not address to any extent the impacts or provide solutions.

Nevada SR 160 has been under construction as a result of a population explosion in the area for over eight years. The highway, known locally as the Pahrump Highway, is notorious for extended traffic delays due to accidents, heavy traffic congestion and construction. In addition, there are many problems as a result of weather delays, animals, and accidents in the pass between Pahrump and Blue Diamond. This road narrows and becomes a single lane, speed reduced area creating circumstances of higher risk to travelers and residents in the area. With DOE failing to analyze alternatives, including possible new routes to the NNSS or improvements to existing permitted alternate routes such as CA 127, Clark County would have a very difficult time accepting the increased risk if this route remained the primary transportation route for the NNSS. Until further analysis of the current conditions and land use conflicts along SR 160 are assessed and potential impacts are identified, Clark County requests that the DOE consider increased shipments along CA 127 for LLRW and MLLRW to the NNSS.

No analysis of the population impacts surrounding the one kilometer radius of any of these highways has been conducted by DOE. However, the Clark County Department of Comprehensive Planning recently completed such an analysis (see Attachments 2 and 3). Attachment 2 depicts the potential impact to the population who live along these unconstrained routes. In general, over 550,000 Clark County residents are located within the 1 kilometer radius of each of these highways combined. This does not take into account the thousands of transient workers and up to 250,000 visitors who stay on the world famous Las Vegas Strip and downtown Las Vegas each day. The unevaluated and unidentified impact on this region in the SWEIS document is a major deficiency under NEPA, and further highlights the failure of the

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understanding of the potential environmental consequences of shipping such waste along the analyzed routes, including through and around metropolitan Las Vegas, by comparing the impacts that would occur under different alternatives. Conservative assumptions were used throughout the analysis to prevent an understatement of the potential impacts. The results provide a reasonable estimate of the relative magnitude of impacts that could occur.

The analysis of incident-free impacts incorporates the population, projected to 2016, residing within 0.5 miles of the analyzed routes within Clark County. The consequences of potential accidents with the greatest impacts (maximum foreseeable accident) on routes near Las Vegas were calculated with the results shown in Appendix E, Table E-16, of this *Final NNSS SWEIS*. This analysis used the 2016-projected census data and used generic atmospheric conditions as described in Appendix E, Section E.6.4, because an accident could occur at any location along a route. To estimate the most-conservative (greatest) impacts, neutral atmospheric conditions were assumed when calculating impacts on the population within a 50-mile radius of the accident, and stable atmospheric conditions were assumed when considering impacts on an MEI.

The traffic analysis presented in Chapter 5, Section 5.1.3.2, and its subsections, incorporates the number of waste shipments under each alternative. As stated in Section 5.1.3.2.4, only Mercury Highway (on the NNSS) would experience a substantial increase in traffic (by approximately 80 percent) and degradation in level of service (from Level A to Level B). No other roadways in the region would experience a change in level of service. Shipments are expected to meet all U.S. Department of Transportation (DOT) regulations, with the same shipment types as those that have been historically received at NNSS. Road conditions (e.g., state of repair, geographic conditions) are not normally considered by DOE in NEPA-related transportation analyses. The routes that are analyzed are primarily interstate and state highways, and it was assumed that these roads meet the minimum standards for commercial truck traffic.

Historically, occasional rail shipments of LLW with transfer to trucks for transport to NNSS have occurred. The rail cargos are transferred to trucks at a transfer station (e.g., at Parker, Arizona) to complete shipment to NNSS. Because this mode of transport may be used in the future, an analysis of rail shipment to NNSS was conducted in this *NNSS SWEIS* to determine the overall route impacts and compare them to the results obtained for only truck transport. To envelope the impacts associated with rail shipments, DOE assumed that all waste shipments would occur

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SWEIS to analyze major impacts to specific local conditions, including population density, land use conflicts, and existing conditions and maintenance of transportation and utility corridors.

The proposed intermodal transfer sites for both the areas known locally, and as described in the SWEIS as Arden and Apex, pose significant impacts that the DOE failed to analyze. Similar arguments are made in the unconstrained case. There is no identification of shipment frequencies, impacts to traffic congestion (locally sensitive), size of shipments, types, or restricted travel times due to commuting citizens. Given the significant increase in the number of potential shipments that are projected in the expanded alternative (upwards of 81,000 as stated in the SWEIS), common sense would prevail and show that an evaluation study is certainly needed prior to permitting this significant impact to occur. This study would need to include and not be specifically limited to socioeconomic study, traffic control issues, first responders' needs, security risks, air quality impacts, etc. In any event, the SWEIS mentions a reduction in truck shipments but if the transfers occur in Clark County, then the number of shipments will not be reduced. Subsequently, this is a false statement for local conditions.

The impacts to air quality will not be reduced in Clark County and in particular the Las Vegas valley hydrographic basin known as 212 or a reduction in the carbon footprint of the region because these shipments are no longer considered a through shipment. In fact, it could be anticipated, although not modeled by the DOE or DOD in the SWEIS that an increase in green house gas emissions and subsequent carbon footprint will occur in the Las Vegas valley if an intermodal facility was to be constructed in the hydrographic basin 212. The Clean Air Act is the overriding law designating limitations to various criteria pollutants and the local regulatory agency, the Department of Air Quality and Environmental Management, could be more restrictive in limitations as needed.

The number of trucks and trains that will be idling on a constant basis without any prescribed restrictions provided a significant risk to the citizens of Clark County through degradation in air quality and subsequent breathing disorders. Clark County air quality regulations and National Environmental Protection Standards such as the National Ambient Air Quality Standards and specific criteria pollutants, will be at significant risk for degradation in an area that is under a State Implementation Plans (SIPs) for carbon monoxide management, particulate 10 microns reduction, and ozone. Diesel emissions will also affect particulate matter less than 2.5 microns. Thusly, the SWEIS has failed to analyze the unique air quality impacts on Clark County goals for reduction in green house gas emissions and their various SIPs in Clark County and in particular hydrographic basin 212.

The SWEIS does not provide any direction on the volume of shipments that the NNSS would receive nor does it outline any restrictions that it would not be able to accommodate. Clark County has concern with oversize shipments, packaging requirements, security risks, emergency plans for re-routing needs of halting shipments en-route. The oversize shipments are not defined as to weight or physical shipment size thereby putting highway infrastructure at risk for damaging heavy or oversize loads. Given railway shipments can accept heavier and larger loads than highway, the DOE has not eliminated the possibility of transfer risk at any

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by rail, with the cargo transferred at five different transfer station locations, as described in Appendix E. The transfer station locations to be analyzed were selected to cover the geographic area where a transfer station facility might be located and to maximize possible impacts. Chapter 5, Section 5.1.3.1, has been revised in the *Final NNSS SWEIS* to state that DOE does not plan on establishing or promoting any transfer station facility; thus, a detailed analysis of the operations at a transfer station facility is beyond the scope of this *NNSS SWEIS*. If a commercial carrier decides to use a transfer station facility, then that carrier must abide by applicable laws and regulations governing those operations. It should be noted that DOE did publish two reports regarding operations at transfer station facilities. In the first report, *Life-Cycle Cost and Risk Analysis of Alternative Configurations for Shipping Low-Level Radioactive Waste to the Nevada Test Site* (DOE 1999a), and as shown in Table E-15 of this *NNSS SWEIS*, the dose to a transfer station facility worker would be up to  $3.4 \times 10^{-4}$  person-rem per container transferred. In a second report, *Intermodal and Highway Transportation of Low-level Radioactive Waste to the Nevada Test Site* (DOE 1999b), accident consequences associated with a large fire near LLW shipping containers were provided. The consequences to a population within 50 miles would be no (up to  $1.7 \times 10^{-4}$ ) fatalities for a population of about 195,000 people. DOE has added this information to Appendix E of the *Final NNSS SWEIS*.

DOE/NNSA has added additional information to Appendix E, Section E.3.3, regarding emergency response to better explain Federal emergency response programs and how they relate to local response to an accident. The Transportation Emergency Preparedness Program was established by DOE to ensure its operating contractors and state, tribal, and local emergency responders are prepared to respond promptly, efficiently, and effectively to accidents involving DOE shipments of radioactive material. This program is a component of the overall emergency management system established by DOE Order 151.1C. The following assistance is provided: emergency planning and guidance; training material development and delivery; emergency drills and exercises; centralized emergency notification; support to emergency responders (radiological surveys, technical assistance, and public information); and post-incident assessment (along with other agencies). In addition, for all accidents, the U.S. Department of Homeland Security (DHS) is responsible for establishing policies for and coordinating civil emergency management, planning, and interaction with Federal Executive agencies that have emergency response functions.

DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark,

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intermodal site, including the two proposed within the geographic area of Clark County. Type A packaging has not been evaluated or studied since the early 1970's and could pose a significant risk to transporting materials for disposal. Most, if not all crash studies on these packages have occurred with over highway shipments. The train crash situation is a significant scenario with increase risk to hotter temperatures and longer burning fires, crushing forces from collisions or derailment and other impacts.

Currently, the DOE provides the State of Nevada a number of affected counties with federal Emergency Management Planning Grant funds at a rate of 50 cents per cubic meter of volume of materials shipped. It is unknown what current volumes will be, as the DOE acknowledges funding will be reduced over the next several years. The DOE does not acknowledge this in the SWEIS, and does not address how an increase in shipment volume would be funded. It would be worthwhile for DOE to evaluate this grant funding scheme to ensure that first responder and emergency management agencies in Nevada can adequately prepare for and respond to radiological emergencies.

Significant security risks will exist to an intermodal facility within Clark County. On August 30, 2007, a loaded 30,000 gallon chlorine gas tanker car accidentally 'escaped' out of the Arden yard and travelled over 18 miles through the downtown core of the City of Las Vegas and along the world famous Las Vegas Strip at speeds in excess of 75 mph until it was stopped 21 minutes later in North Las Vegas. Fortunately for the citizens of Clark County, this tanker car did not derail or rupture and no citizens were injured. However, it did expose many critical commodity flow risks while supporting the risks as analyzed by Clark County in the past. As a result of this incident, Clark County cannot support additional activities in the rail yard that will pose additional health risks to residents and visitors with respect to the transfer of hazardous commodities.

Both the groundwater and storm water impacts in Clark County have not been analyzed for local conditions for a worse case scenario. Most storm water in the Las Vegas valley transports tens of miles west to east impacting thousands of residents in many jurisdictions and ultimately primarily flowing into the Las Vegas Wash and finally into Lake Mead—the source of the majority of the drinking water needs for Las Vegas residents and tourists. If an accident were to occur during a severe weather event and radiation were to be dispersed into the storm water, it would practically be impossible to control the discharge and subsequently possibly impacting the drinking water supply. In addition, even if the discharge was controlled, the radiation may penetrate groundwater and thus pose a significant risk to contamination of wells and drinking supply for rural areas or those not connected to local water supply sources. Many areas, including I-15, US 93/95, and NV SR 160 pass through areas subjected to flash flooding posing a significant and real risk to contamination to water.

The DOE is not clear as to what changes in activities actually impact the overall SWEIS and how, if any, does each facet interact with the overall alternative proposed. For example, if the NNSS were to receive an increased disposal of LLRW and MLLRW but reduce carbon footprint by changing their source of energy, will this be a net increase/decrease or zero? Are the proposed alternatives independent or dependent on the interaction in the overall SWEIS in

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Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada.

CEQ NEPA regulations (40 CFR 1502.23) state: "If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by references or appended to the statement as an aid in evaluating the environmental consequences." CEQ NEPA regulations go on to say, "For purposes of complying with the Act [NEPA], the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." The vast majority of activities conducted by DOE/NNSA in Nevada support national security and are not driven by a need for economic return. For this reason, DOE/NNSA did not and does not intend to prepare a cost-benefit analysis as part of this NNSS SWEIS. The analyses in this NNSS SWEIS are sufficient to provide DOE/NNSA decisionmakers with adequate information for making a selection among the alternatives.

In consideration of the environmental analyses and stakeholder comments, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. DOE/NNSA's determination regarding continuing existing transportation routing restrictions is described in Chapter 1, Section 1.4, of this *Final NNSS SWEIS*. The major tourist areas of downtown Las Vegas, therefore, would continue to be avoided.

With regards to accident liability, the Price-Anderson Act of 1957 (revised in 1967, 1975, and 1988 and extended by the Energy Policy Act of 2005) requires all NRC licensees and DOE contractors to enter into agreements of indemnification for personal injury and property damage due to any nuclear or radiological incident, regardless of who may be liable. Section 604 of the act limits the indemnity provided by DOE for its contractors to \$10 billion for each nuclear incident, including legal costs, subject to adjustment for inflation.

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order to determine which alternative is selected? If the decommissioning of buildings in Mercury were to occur, is this an increase in activity or decrease in activity? The DOE has failed to provide the readers of the SWEIS an understanding as to how the alternative will be selected and to what basis is this determination to be founded.

Currently the DOE is attempting to withdraw their application to construct and operate a permanent high-level waste (HLW) and spent nuclear fuel (SNF) repository in an area of the NNSS known as Yucca Mountain. Recently, the Nuclear Regulatory Commission Commissioners affirmed the previous decision of the Construction Authorization Board (CAB), the DOE does not have the authority to withdraw this application and thus it remains. The SWEIS has erroneously stated the Yucca Mountain project is not a part of the NNSS activities because the facility is not being sought after for the nation's permanent repository. Many additional issues arise from this judgment and are listed below.

- 1) Construction of a repository or additional activities in pre-construction is not included in the alternatives provided in the SWEIS.
- 2) The increase of truck shipments to the NNSS is not included in the calculation of alternative impacts (disposal of 70,000 metric tons of HLW and SNF).
- 3) Supporting activities such as the EIS for the Caliente Railroad has never been withdrawn and remains before the Surface Transportation Board (STB) (STB Finance Docket No. 35106). It would seem logical the applicant DOE, could still utilize this existing filing in support of additional activities supporting the NNSS objectives.
- 4) Additional impacts are ignored such as emergency management and first responder, needs that would also be cumulative in nature.
- 5) Socioeconomic conditions in the alternative scenarios have been neglected and do not consider impacts from other supporting NNSS activities.

Likewise arguments can be made in the recent DOE EIS for Greater-Than-Class-C Radioactive Waste (GTCC) and GTCC-Like Waste that was released in February 2011. The SWEIS fails to evaluate cumulative impacts to the NNSS EIS as well as risks and other impacts to Clark County. SWEIS does not include the additional radiological exposure or risk to those along transportation routes. Their alternatives propose a total of 12,600 truck shipments or about 5,000 rail shipments with the majority disposed of in the first 16 years commencing in 2019. It is inappropriate not to analyze these cumulative impacts along with the alternatives proposed in the SWEIS because there is a chance the GTCC and GTCC-Like waste based on a worst case scenario, the NNSS is to be selected as the only disposal site for this waste as well. The DOE has the responsibility under the NEPA to evaluate and determine worst case scenarios. The SWEIS does not take into consideration five other Environmental Impact Statements which have been completed by the same agency in the same general vicinity.

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- 56-7** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

- 56-8** As stated in response to comment 56-1, above, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

- 56-9** As indicated in the response to comment 56-1, DOE/NNSA did not intend for specific waste transportation routes to be decided through the NEPA process. Instead, the analysis was to evaluate the impacts of differing levels of NNSS operations and, in the case of waste transportation, typical transportation routes were assumed in the analysis. However, as shown in Chapter 4, Figure 4-6, some carriers choose to use California Route CA-127 as an approach to the NNSS.

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- 1) DEIS Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, (DOE/EIS-0250F-S1D);
- 2) DEIS for a geologic repository for the Disposal of Spent Nuclear Fuel and High-Level radioactive Waste at Yucca Mountain, Nye County, Nevada – Nevada Rail Transportation Corridor (DOE/EIS-0250F-S2D);
- 3) DEIS for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a geologic repository at Yucca Mountain, Nye County, Nevada (DOE/EIS-0369D);
- 4) DEIS for the Disposal of Greater-Than-Class C (GTCC) Low-Level radioactive Waste and GTCC-Like Waste (DOE/EIS-0375-D).
- 5) Global Nuclear Energy Program Programmatic EIS (2008/2009).

Clark County residents have major concerns with all the cumulative activities the DOE has been proposing since 2008 and documented via the submittal of their EIS respectively. At no time in the SWEIS does the DOE address any of the impacts that may be associated to the issuance of appropriate permits for any of these actions. It is incumbent on the applicant to study and address these cumulative impacts as required under NEPA and other laws.

The DOE has not provided a preferred alternative to the SWEIS and instead has chosen to provide one at some unknown time in the future. Given all of the above mentioned problems with addressing the lack of information within the SWEIS and failure to evaluate multiple cumulative impacts, this provides a severe disadvantage to those who are to provide comments in a timely fashion. It is impossible to provide comments or even make suggestions as to what a preferred alternative should be without knowing:

- 1) The current impacts within each proposed alternative within the SWEIS document.
- 2) What are the impacts and interaction between different activities within the SWEIS, and how will this be used to create an overall change to an alternative, and
- 3) Not including the cumulative impacts on previously submitted proposed activities by DOE as mentioned above in the other environmental impact statements.

The DOE cannot continue to compartmentalize its own activities, stovepipe its decision making, and fail to reveal any preferred alternative. The public cannot be expected to trust that the DOE is taking into consideration all possible alternatives, scenarios, risks, impacts, and benefits to the state, local, and tribal entities affected by its actions. Clark County looks forward to a Final SWEIS which incorporates all of these elements and takes seriously the concerns of the public before moving forward with changes to the current activity level at the NNSS.

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Please refer to the response to comment 56-6 regarding the analysis of traffic impacts along routes analyzed in the SWEIS. No changes to the level of service would occur to Nevada State Route 160 from implementation of any of the alternatives, as shown in Chapter 5, Table 5-19. DOE revised Appendix E, Section E.11.3, in the *Final NNSS SWEIS* to state that, according to DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A* (DOE M 460.2-1A), the carrier should consider conditions at the point of origin and along the entire route; this includes consideration of traffic congestion and roadwork along routes. While this *NNSS SWEIS* analyzes specific routes, other routes may be used. Taking into consideration that using California Route CA-127 instead of Nevada State Route 160 would add travel distance for some shipments, but that the more-urbanized area of State Route 160 near Interstate 15 would be avoided, it would be expected that the incident-free and accident dose and risk for the whole route would not significantly change.

- 56-10** Please see the response to comment 56-1 regarding the rationale for analyzing the routes considered in the Unconstrained Case and for not analyzing impacts on specific locales along transportation routes.

Impacts on the resident population within 0.5 miles of the routes analyzed for the Unconstrained Case are presented in Appendix E, Table E-17, of this *NNSS SWEIS*. As stated in Appendix E, Section E.4, the analysis uses Web-TRAGIS modeling to calculate the population densities along each route. The TRAGIS results were escalated to a projected population density representative of 2016 using state-level population growth rates derived from the difference between the 2000 census and 2010 census. Because the Web-TRAGIS model uses census block population data, the estimated population densities do not include people that temporarily occupy a location or newly developed areas. However, the analysis of impacts on an MEI provides a conservatively high estimate of the risks that could be imposed on anybody as a result of transportation activities. The attachments included with the comment document provided estimates of populations, not impacts, along the transportation routes and cannot be directly compared to those used in this *NNSS SWEIS*.

- 56-11** As stated in the response to comment 56-6, DOE does not plan on establishing or promoting any transfer station facility; thus, a detailed analysis of the operations at a transfer station facility is beyond the scope of this *NNSS SWEIS*. DOE/NNSA agrees with the commentator that use of rail would reduce the number of shipments to the Las Vegas, Nevada, region, but the number of truck shipments occurring from the

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Attachment 1 – Governor Sandoval's letter  
Attachment 2 – County Demographics map  
Attachment 3 – City Demographics map

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transfer station to NNSS would not be reduced. Appendix E, Section E.7, of this *Final NNSS SWEIS* has been revised to make this clarification.

Note that the analysis of rail shipments in this *NNSS SWEIS* assumed that all LLW/MLLW would be transported by rail to the Las Vegas region to provide a comparison to the use of only trucks. If rail were used more in the future, it would replace truck transport for a portion of the waste sent to the NNSS, but trucks would also continue to be used. The analysis in this *NNSS SWEIS* was predicated on the assumption that, if future waste shipment were received by rail, existing infrastructure would be used and no new land acquisition and construction would be required to accommodate these shipments, either for rail lines or transfer facilities. Without the need for construction or modification of transportation infrastructure, physical impacts on most environmental resources (e.g., biological resources, surface water) from transportation activities would not be distinguishable from baseline conditions. Therefore, the impact assessment for waste transportation in this SWEIS focuses on potential impacts on human health, as this provides the clearest means of comparing and contrasting the alternatives.

If a commercial carrier decides to use a transfer station facility, then that carrier must abide by applicable laws and regulations governing those operations. For shipments containing Class 7 materials, the shipper is required to consider time of day when scheduling shipments.

- 56-12** DOE/NNSA does not propose to construct an intermodal facility in the Las Vegas Valley or in any other location. Under both the Constrained and Unconstrained Cases analyzed in this SWEIS, waste shippers would make use of existing facilities for intermodal transfer. Chapter 5, Section 5.1.3.1, has been revised to clarify this point. While the exact routing of any particular waste shipment cannot be predicted at this time, DOE/NNSA has included representative routing assumptions in its analyses based upon past practices and current transportation infrastructure. In Section 5.1.8, Air Quality, DOE/NNSA has provided estimates of average annual emissions of criteria pollutants associated with waste transportation (considering both mostly rail and mostly truck scenarios; see Tables 5-34, 5-39, and 5-42) and has also estimated peak annual emissions associated with transportation, specifically for travel through Clark County (see Tables 5-33, 5-37, and 5-41). DOE/NNSA has also estimated greenhouse gas emissions associated with all its proposed activities under each alternative, broken into Scope 1/2/3 sources as required by Executive Order 13514 (see Tables 5-36, 5-40, and 5-44).

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**

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**RECEIVED**

SEP 20 2011

Agency for Nuclear Projects

**Office of the Governor**  
September 16, 2011

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Re: Transportation of Low-Level, Mixed Hazardous and Radioactive Waste

Dear Secretary Chu:

In 1999, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed that shipments of low-level radioactive waste (LLW) and mixed hazardous and radioactive waste (MLLW) being imported to the Nevada Test Site (now known as the Nevada National Security Site -NNSS) for disposal from other U.S. Department of Energy (DOE) facilities would use highway routes that avoid the heavily populated metropolitan Las Vegas area, including the interchange known as the 'Spaghetti Bowl' where Interstate 15 and US 95 meet. (At the time, DOE also agreed to keep LLW and MLLW shipments off Hoover Dam, but that has since become moot because of Homeland Security restrictions that were instituted following 9/11.) This arrangement was part of a larger, albeit informal, agreement whereby Governor Guinn agreed not to challenge the Record of Decision for DOE's Waste Management Programmatic Environmental Impact Statement designating NNSS/NTS as a regional disposal site for LLW and MLLW resulting from clean-up activities at other DOE locations. In exchange, Secretary Richardson agreed to certain "equity considerations" on the part of DOE, a key one of which was the highway routing concession.

To implement the agreement, DOE instituted certain extra-regulatory mechanisms to assure that waste shipments would stay out of metro-Las Vegas and off of Hoover Dam. DOE amended its waste acceptance criteria for NNSS to specifically require that waste slated for disposal at the site must be transported there using only the agreed-upon routes. In addition, DOE increased the fee charged to waste generators for disposing material at NNSS by fifty cents per cubic foot, with the additional monies dedicated a special fund for rural local governments located along shipping routes. Those funds are used by these local governments to create and enhance their emergency preparedness and response capabilities.

- 56-13** NNSS does not have any procedural restrictions on the number of shipments that can be received per day. Based on current operations levels at NNSS, the site can receive up to about 25 shipments per day. In 2010, about 15 shipments per day were received. NNSS constantly coordinates with waste generators and would manage the receipt of a large number of shipments within the site's operational capabilities. If the number of shipments related to the Expanded Operations Alternative were to be received, adjustments to NNSS waste receipt capabilities would be needed.

This NNSS SWEIS recognizes that there is some level of risk associated with any aspect of the transport of radioactive waste, including transfer of waste containers at a rail-truck transfer site. Activities unique to the rail-truck transfer locations are the movements of containers to or from railcars to trucks, with the possibility of a dropped container. Accidents that could occur along other portions of the transport route include collisions at a range of speeds, some of which would result in forces greater than those of an accident at the transfer station. These are encompassed in the range of accident impacts included in the analysis. In addition, the transportation analysis includes analysis of a severe accident occurring in a high-population area (see Appendix E, Section E.7.1). Based on accident statistics, the probability of such a severe accident occurring in an urban area in Nevada is less than 1 chance in 10 million.

As stated in Appendix E, Section E.4.2, it was assumed for this analysis that all truck shipments received would be within the Federal gross vehicle weight limit of 80,000 pounds, which is the weight limit for a standard semi-trailer truck. Further, for rail transport, it was assumed that each railcar would carry two such standard semi-trailers. NNSS periodically receives overweight or oversized shipments that require state permits. The originating sites must obtain applicable state permits to transport these types of shipments and coordinate with state and local officials as required by the permits.

As discussed in Appendix E, Section E.3.1, specific requirements for Type A packages are detailed in 49 CFR Part 173, Subpart I. Commonly used Type A packages include 55-gallon drums and steel boxes. The shippers only use packages that are approved for the purpose intended. The packages can be transported by either truck or rail mode. The NNSS SWEIS analysis considers the total amount of waste shipped in all packages in a truck or a railcar when evaluating the consequences of an accident. Therefore, the differences in the accident impact forces in a truck or rail accident are already included in the consequence analysis.

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**

Hon. Steven Chu, Ph.D.  
Secretary of Energy  
U.S. Department of Energy  
Page 2 of 2

For over 12 years this arrangement has worked to the mutual benefit of DOE and the state of Nevada. Now, however, it appears that DOE/NSS, through the vehicle of the site-wide environmental impact statement (EIS) for the test site, is considering abandoning its long-standing agreement. The draft of the EIS that was released for public comment on July 29<sup>th</sup> contains an "unconstrained" transportation scenario that assumes renewed shipments of waste along through the Las Vegas metro area along I-15, the Las Vegas beltway, the Spaghetti Bowl and the new Hoover Dam bypass bridge.

The rationale for this proposed action appears to be financial. The draft EIS postulates the use of intermodal shipments of waste to NNSS, with the material being transported from DOE's generator sites by rail and then off-loaded onto trucks at locations proximate to Interstate 15 for the last leg of the trip to NNSS. The draft EIS asserts that using I-15 and the Las Vegas beltway through metro Las Vegas is now acceptable because of improvements to the area's highway system that were not in place when the original agreement was made. This is emphatically not the case. Since 1999, the population of the Las Vegas metro area has increased exponentially. While I-15 and the beltway have undergone almost constant reconstruction over the past decade in an effort to mitigate ever-increasing traffic, congestion and gridlock continue to be major problems.

I am deeply concerned that DOE/NSS appears to be setting the stage for abandoning the extremely successful agreement that has served the interests of both DOE and the State of Nevada exceeding well for over twelve years. I am asking that you reaffirm DOE's commitment to the routing arrangement for LLW and MLLW shipments originally agreed to by Governor Guinn and Secretary Richardson in 1999. I very much appreciate your attention to this matter.

Sincere regards,  
  
BRIAN SANDOVAL  
Governor

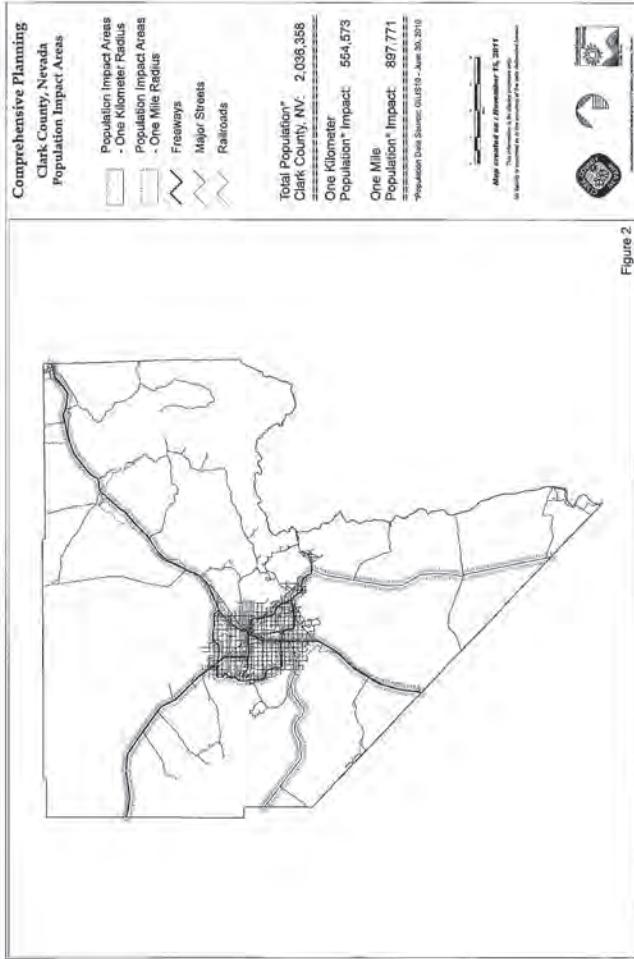
For radioactive material shipments that exceed highway route controlled-quantity limits, the carrier must operate vehicles only over preferred routes and notify affected states and tribes regarding when these shipments will occur. For such shipments, DOE uses a satellite tracking and communications system to track shipments during transport; this system would be used to immediately report an incident. In addition, for all accidents, DHS is responsible for establishing policies for and coordinating civil emergency management, planning, and interaction with Federal Executive agencies that have emergency response functions in the event of a transportation incident.

- 56-14** DOE/NSSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NSSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NSSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NSSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada.

DOE/NSSA acquires grant funding every year by charging its national network of waste generators a 50-cent fee for every cubic foot of waste disposed at the NNSS. While it must be recognized that projected budgets are only estimates and actual funding levels could be much less due to unplanned reductions in the waste volumes to be disposed, DOE/NSSA provides a minimum of \$250,000 (total) for each year the grant program is in effect. This funding is provided to ensure maintenance of emergency management programs during temporary reductions in waste volumes. For these reasons, DOE/NSSA does not anticipate that changes in appropriations for DOE/NSSA programs in the near term will have a material impact on the funding available for the grant program.

- 56-15** Comment noted. As noted in the response to comment 56-6, DOE/NSSA does not plan on establishing or promoting any rail-to-truck transfer facility. Chapter 1, Section 1.4, of *this Final NNSS SWEIS* was revised to clarify this point.
- 56-16** Worst-case scenarios are, by their very nature, extremely unlikely to occur; thus, their analysis would not be helpful to decisionmakers. The CEQ regulations no longer

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**



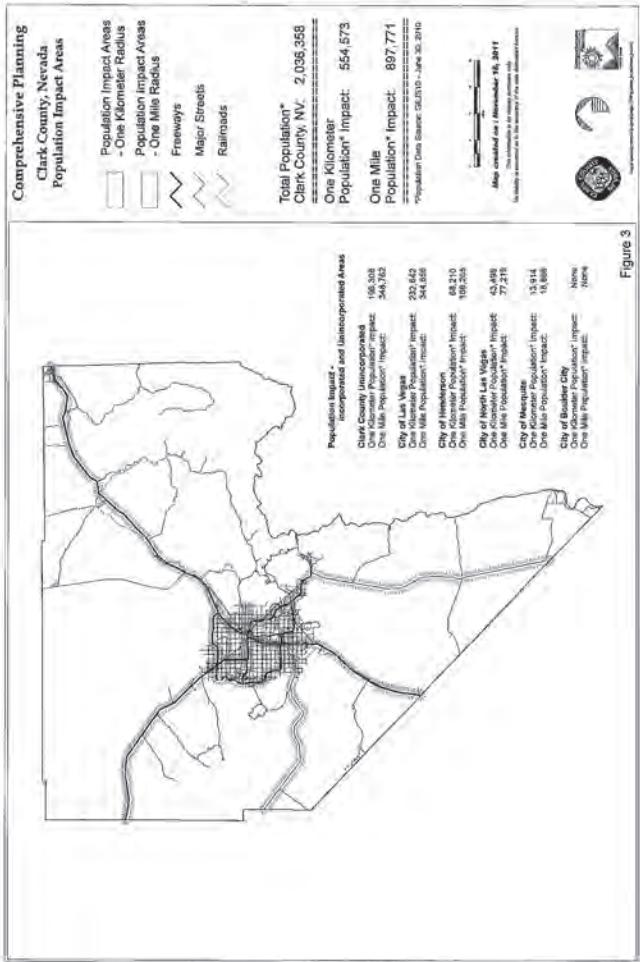
require the analysis of worst-case accident scenarios; this requirement was withdrawn in April 1986 (51 FR 15618).

Nonetheless, waste shipments must meet the NNSS WAC which stipulate, among other requirements, that the waste be free of liquids. The radioactive wastes would not be in a form that would be readily transported by water through storm drains and dispersed in Lake Mead. Please refer to the response to comment 56-13 regarding shipment of Type A packages. Radioactive wastes that have higher radionuclide activity would be transported in Type B containers, as required by Federal regulations; these containers meet rigorous requirements to prevent release of contents, as presented in Appendix E, Section E.3.1.

- 56-17** The No Action Alternative, described in Chapter 3, Section 3.1 reflects the use of existing facilities and ongoing projects to maintain operations consistent with those experienced in recent years at the NNSS and offsite locations in Nevada. In this regard, it provides the baseline against which the Expanded Operations and Reduced Operations Alternatives may be assessed. The Expanded Operations Alternative, described in Section 3.2, incorporates DOE/NNSA's best judgment as to potential new programs, projects, and activities and estimated levels of operations over the next 10 years. The Reduced Operations Alternative, described in Section 3.3, represents DOE/NNSA's estimate of the lowest level of operations that may be expected to occur over the next 10 years. These three alternatives represent a range of reasonable alternatives based on the requirements of DOE/NNSA missions at facilities in the state of Nevada.

DOE/NNSA structured each alternative to allow a reader to compare the alternatives and impacts for specific missions and programs across the alternatives. Although each alternative includes common elements with the others, each is designed to be considered independently of each other. For instance, decommissioning of specific facilities in Mercury are considered under the No Action Alternative; however, in addition to decommissioning of facilities, reconfiguring Mercury (i.e., constructing new replacement facilities that are larger, provide greater capabilities, or are located on previously undisturbed land) is considered under the Expanded Operations Alternative. DOE/NNSA also structured the alternatives in this NNSS SWEIS to provide flexibility for DOE/NNSA in identifying potential impacts of specific missions and programs to facilitate the agency's ability to select a "hybrid" preferred alternative that could incorporate elements from two or all three of the alternatives. A description of the Preferred Alternative and the rationale for its selection may be found in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**



**56-18** DOE is not required, nor does it intend, to construct or operate a repository at Yucca Mountain. Accordingly, in the absence of a DOE proposal to construct and operate a repository, NEPA review of the former Yucca Mountain Repository Project in this SWEIS is not required.

**56-19** DOE/NNSA analyzed all relevant DOE/NNSA proposed actions. The impacts resulting from the potential siting of a GTCC waste disposal site at the NNSS are addressed in Chapter 6, Section 6.3, for all relevant resources. Potential cumulative impacts from transportation of GTCC waste are included in the analysis of cumulative transportation impacts in Section 6.3.3 (see Table 6–5). Likewise, potential cumulative impacts from land disturbance (see Table 6–4) associated with development and operation of a GTCC waste facility at the NNSS are addressed in appropriate sections of Chapter 6, including geology and soils (Section 6.3.5), biological resources (Section 6.3.7), and cultural resources (Section 6.3.10). Cumulative impacts related to waste management resulting from a potential GTCC disposal facility at the NNSS are addressed in Section 6.3.11. DOE/NNSA notes that impacts on the air and climate resource area resulting from construction and operation of a GTCC disposal facility at the NNSS were not addressed in the *Draft NNSS SWEIS*. Section 6.3.8 has been revised to include those potentially cumulative impacts.

The proposed actions in three of the other four documents listed are related to the former Yucca Mountain Repository Project and are no longer being proposed by DOE. Chapter 2, Section 2.5.2, of this *NNSS SWEIS* notes that the Administration decided to cease funding and activities related to the development of a repository at Yucca Mountain, while developing alternative storage and disposal approaches for SNF and HLW. Based on this decision by the Administration, DOE withdrew its construction authorization application for disposal of SNF and HLW. DOE recognizes that a writ of mandamus has been filed to compel NRC to act on DOE's license application. However, even if NRC were ordered to make a decision on the license application, DOE is not required, nor does it intend to, construct or operate a repository at Yucca Mountain. Accordingly, in the absence of a DOE proposal to construct and operate a repository, NEPA review of the former Yucca Mountain Repository Project is not required.

Although the Yucca Mountain Repository Project has been cancelled and there is not a specific proposal for remediation of the former site, DOE/NNSA recognizes that, at some point in the future, specific remediation is likely to be proposed. Accordingly, the cumulative impacts analysis in Chapter 6 has been revised to include a programmatic-level analysis of the potential impacts of such a remediation project, based on the

**Commentor No. 56 (cont'd): Susan Brager, Chair,  
Clark County Commissioners**

analyses in the *Yucca Mountain FEIS* (DOE/EIS-0250) and *Yucca Mountain SEIS* (DOE/EIS-0250-S1).

The final document listed by the commentor, the *Global Nuclear Energy Program (GNEP) Programmatic Environmental Impact Statement (GNEP Programmatic EIS)*, was issued as a draft by DOE's Office of Nuclear Energy in October 2008. Impacts on southern Nevada resulting from the alternatives addressed in that programmatic EIS would have resulted from transportation of SNF and HLW to the formerly proposed Yucca Mountain Repository and disposal therein. The *GNEP Programmatic EIS* was cancelled in April 2009 before being finalized. Therefore, the Global Nuclear Energy Program is not a reasonably foreseeable future action.

- 56-20** The potential environmental impacts (both direct and indirect) of each alternative in this SWEIS are described in Chapter 5. Under each alternative, the potential impacts on each environmental resource are addressed at the alternative level, mission level, and program level. This SWEIS also addresses the potential cumulative effects of all reasonably foreseeable DOE-proposed actions in Chapter 6. Additional information related to this comment may be found in the responses to comments 56-17 and 56-19 above.

As noted in Chapter 3, Section 3.4, of this SWEIS, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*. As required by CEQ regulations (40 CFR 1506.10), DOE/NNSA will not make a decision on the actions proposed in this *NNSS SWEIS* until at least 30 days following publication in the *Federal Register* of the EPA notice of filing. CEQ refers to the period of time between the notice of filing of a final EIS and issuance of a decision by an agency as a "review period." Comments received on the *Final NNSS SWEIS* during the review period will be evaluated and addressed as appropriate in the ROD.

***Commentor No. 57: Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency***



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3801

DEC 01 2011

Ms. Linda M. Cohn, SWEIS Document Manager  
NNSS Nevada Site Office  
U.S Department of Energy  
P.O. Box 98518,  
Las Vegas, Nevada 89193-8518

Subject: Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off Site locations in Nevada (CEQ# 20110241)

Dear Ms. Cohn:

The U.S. Environmental Protection Agency has reviewed the Draft Site-Wide Environmental Impact Statement for the continued operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and off site locations in Nevada. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508) and our NEPA review authority under Section 309 of the Clean Air Act.

We have rated all alternatives in the DSWEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed “Summary of EPA Rating Definitions”). We have concerns about the potential impact of the proposed Project to waters of the United States and biological resources. The EPA recommends the Final SWEIS also include additional analysis on water resources, mitigation measures, invasive species, climate change, air quality, and photovoltaic solar technologies. Our enclosed detailed comments provide additional information regarding these concerns and recommendations.

The DSWEIS identifies a number of individual projects that may have the potential to result in significant environmental impacts and will be subject to further NEPA review. We would appreciate the opportunity to participate in the environmental review at the individual project level. Please notify our office upon release of any future NEPA documentation and analyses for the Nevada National Security Site and off site locations in Nevada, and send a copy to our office.

We appreciate the opportunity to review this DSWEIS and are available to discuss our comments. Please send one hard copy and one CD ROM copy of the FSWEIS to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3521, or contact Scott Systum at (415) 972-3742 or systum.scott@epa.gov.

- |      |   |
|------|---|
| 57-1 | 57-1     DOE/NNSA has noted the alternatives rating and has provided responses to specific concerns below.    |
| 57-2 | 57-2     DOE/NNSA looks forward to continuing its relationship with the U.S. Environmental Protection Agency. |

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency**

Sincerely,



Kathleen Martyn Goforth, Manager  
Environmental Review Office  
Communities and Ecosystems Division

Enclosures:

- (1) Summary of EPA Rating Definitions
- (2) EPA's Detailed Comments
- (3) Distribution List

cc: Distribution List

*Response side of this page intentionally left blank.*

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency**

**SUMMARY OF EPA RATING DEFINITIONS\***

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement.

**ENVIRONMENTAL IMPACT OF THE ACTION**

***"LO"* (Lack of Objections)**

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

***"EC"* (Environmental Concerns)**

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

***"EO"* (Environmental Objections)**

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

***"EU"* (Environmentally Unsatisfactory)**

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. The EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality.

**ADEQUACY OF THE IMPACT STATEMENT**

***Category "I"* (Adequate)**

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

***Category "2"* (Insufficient Information)**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

***Category "3"* (Inadequate)**

The EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

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2-174

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency**

US EPA DETAILED COMMENTS ON THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF ENERGY/NATIONAL NUCLEAR  
SECURITY ADMINISTRATION NEVADA NATIONAL SECURITY SITE AND OFF SITE LOCATIONS IN  
NEVADA, DECEMBER 2, 2011

Water Resources

*Impacts to Surface Water Resources / Clean Water Act Section 404*

The DSWEIS does not fully assess potential impacts to wetlands and surface water resources. It indicates that there are no perennial streams on the site, and small springs provide perennial surface water sources throughout the area (p. 4-63). Jurisdictional delineations, pursuant to Section 404 of the Clean Water Act, have not yet been conducted for the project sites.

The DSWEIS indicates that, based on the new delineation guidance<sup>1</sup>, no wetlands at the site are expected to be jurisdictional, although certain tributaries on the NNSS may qualify (e.g., Forty-mile Wash) (p. 4-66). Later in the DSWEIS, it is stated that most of the springs at the NNSS support wetland (hydrophytic) vegetation, such as cattail, sedges, and rushes, which likely constitute wetlands, as defined by the U.S. Army Corps of Engineers and EPA (33 Code of Federal Regulations [CFR] 328.3(b) and 40 CFR 230.3(t), respectively) (p. 4-100). The DOE defers this assessment to future site-specific analysis, indicating that if a specific project may affect potentially jurisdictional waters, then a jurisdictional delineation would be verified by the U.S. Army Corps of Engineers (p. 4-66) at that time.

Aquatic resources provide a wide range of functions that are critical to the desert ecosystems. It is vital that project planning, especially at the larger site-wide scale, consider the locations and values of these resources so they can be avoided and preserved. Even small losses can be cumulatively significant, since 52% of Nevada's wetlands have already been lost<sup>2</sup>.

Preservation of waters that are determined not to be jurisdictional is also important. Natural washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows, as well as provide habitat for breeding, shelter, foraging, and movement of wildlife.

*Recommendations:*

In the Final Site-Wide Environmental Impact Statement (FSWEIS), describe all potential waters of the U.S. that could be affected by the Project alternatives. Include maps that identify locations of these waters, and indicate their acreages and channel lengths, habitat types, values, and

<sup>1</sup> EPA and Army (U.S. Environmental Protection Agency and U.S. Department of the Army), 2007, Clean Water Act Jurisdiction, Following the U.S. Supreme Court's Decision in Rapanos v. United States & Campbell v. United States Memorandum, June 5.

<sup>2</sup> Estimated loss from the 1780's to the 1980's. See: Thomas E. 1990. Wetlands losses in the United States 1780's to 1980's. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/wetlands/wetloss/index.htm>

57-3

Information in the *Draft NNSS SWEIS* regarding potential impacts on water resources is documented at a level commensurate with the level of detail available for future projects and activities. In some cases, project details, such as specific geographic locations, infrastructure needs, and construction footprints, have not yet been fully defined, and some assumptions and options have been applied for purposes of analysis. In these cases, project-specific NEPA reviews (tiered from this SWEIS) will be conducted in the future. Project-specific analyses that tier from this SWEIS will use the latest information available regarding wetlands and other surface waters on the NNSS, and site-specific surveys will be included in the project planning process. DOE/NNSA intends to initiate a more aggressive campaign of investigating and describing wetlands and other potentially federally jurisdictional "waters of the United States" in the future; however, this will be a longer-term effort that will not yield results in a time frame for inclusion in this SWEIS. As new information becomes available, DOE/NNSA will integrate it into applicable planning and management documents. As suggested by the commentor, additional available information about the characteristics of known wetland areas on the NNSS has been added to Chapter 4, Section 4.1.6.1, of this *Final NNSS SWEIS*.

All of the mitigation measures suggested by the commentor have been added to Chapter 7, Section 7.6, of the *Final NNSS SWEIS* as potential measures that could be applied to future projects. These measures will be considered in the mitigation action plan, which will use adaptive management as a primary means for controlling adverse environmental effects. Ultimately, selection of specific measures for future projects will be tailored to the final design and location of each project and may be adjusted during project implementation.

***Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency***

functions. Discuss what steps DOE has taken to avoid and minimize impacts to potential waters of the U.S.

The FSWEIS should also discuss the aquatic features that are determined not to be jurisdictional waters. Characterize the functions of such features and discuss potential project impacts. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert species.

EPA recommends the following to avoid and minimize direct and indirect impacts to desert washes:

- Do not place support structures in washes or desert dry wash woodlands.
- Utilize existing natural drainage channels on site and more natural features, such as earthen berms or channels, rather than concrete-lined channels.
- Commit to the use of natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable.
- Reconfigure the Project layout, roads, and drainage channels, as applicable, to avoid ephemeral washes, including desert dry wash woodlands within the Project footprint.
- Minimize the number of road crossings over washes and design necessary crossings to provide adequate flow-through during storm events.

If fencing is to be used for specific projects on-site, the FSWEIS should provide detailed information on any proposed fencing design and placement, and its potential effects on drainage systems on the Project site. In general, fencing should be designed to avoid drainages and not impede flows and sediment transport, if practicable.

*Water Supplies*

Public drinking water supplies and/or their source areas exist in many watersheds. Source water is water from streams, rivers, lakes, springs, and aquifers that is used as a supply of drinking water. Source water areas are delineated and mapped by the State for each federally-regulated public water system. The 1996 amendments to the Safe Drinking Water Act require federal agencies to protect sources of drinking water for communities. The DSWEIS states that no adverse impacts on potable groundwater quality have resulted from operations since 1996 and that, due to the distance between existing water supply wells at the NNSS and the underground tests, DOE/NNSA believes that groundwater use at the NNSS has little or no effect on the migration or spread of contamination from underground nuclear testing. The DSWEIS also indicates that groundwater at the NNSS is deep and slow moving, and that this affords protection to adjacent areas. Maintenance of the quality of waters that are currently clean is managed through the implementation of the Groundwater Protection Management Plan, required by DOE Order 5400.1 (p. 4-93).

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**57-3  
cont'd**

**57-4**

**57-4** Groundwater quality at the NNSS for both drinking water sources and other non-drinking water sources, in terms of both radiological and chemical constituents, is described in Chapter 4, Section 4.1.6.2 of this *Final NNSS SWEIS*. Section 4.1.6.2 describes the measures implemented by the NNSS to maintain the integrity of the groundwater and associated aquifers. Maintenance of the quality of waters that are currently clean is managed through the implementation of the Groundwater Protection Management Plan. The Groundwater Protection Management Plan includes measures such as ensuring the continued sustainable use of groundwater throughout the installation, closing, or buffering of wells to prevent groundwater contamination from testing activities; locating equipment maintenance and fueling areas away from groundwater wells; and conducting periodic groundwater sampling to identify adverse impacts on groundwater during current operations. As discussed in Chapter 5, Section 5.1.6.2, there would be no adverse impacts on groundwater quality under any of the alternatives. Also, as noted in Chapter 4, Section 4.1.7, DOE/NNSA monitors wetland areas on the NNSS, regardless of their jurisdictional status and conducts pre-activity surveys to ensure that sensitive habitats, such as springs, seeps, ponds, and other wetland features would not be impacted.

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
U.S. Environmental Protection Agency**

*Recommendation:*

The FSWEIS should identify:

- Any source water protection areas within the Project area.
- All activities that could potentially affect source water areas.
- Potential contaminants, other than radionuclides, that may result from the proposed Project that could impact source water protection areas.
- Measures that would be taken to protect the source water protection areas.

Solar Technologies Evaluated in the Alternatives Analysis

The DSWEIS states that the solar technologies that are most likely to be deployed at utility scale over the next 20 years are photovoltaic and concentrating solar power, such as parabolic trough, power tower, and dish engine. It is unknown what technology would be used in a solar power generation facility at the NNSS, but the analysis in this NNSS SWEIS assumes a concentrating solar power parabolic trough facility, based on the prevalence of that technology in other operating, proposed, and potential solar energy projects in southern Nevada (p. 3-28). In EPA's observation, photovoltaic systems are currently drawing more interest for future utility scale solar power projects. A few major CSP projects in the CA and NV deserts are changing or planning to change from CSP to PV technology. One reason is the increasing drop in the prices of solar PV modules and the ever-expanding track record for large-scale PV installations. Another advantage of PV systems is the potential for reduced environmental impact. Grading requirements can be less, water use is less and panel placement can be flexible to avoid sensitive areas, important considerations in the desert environment.

*Recommendation:*

The alternatives analysis in the FSWEIS should include a discussion of using PV as the technology for the utility-scale solar power facility. This could also include the use of hybrid PV/CSP plants.

Tiering and "Programmatic Like" Analysis

Since the DSWEIS is a large scale planning effort, details regarding specific projects are not always included, and the document indicates that additional NEPA analysis would occur for these projects (p. 1-12). However, it is not clear which individual projects are expected to receive further NEPA review. For example, Table 3-1, which compares the projects for each alternative, states that NNSA will develop and construct new facilities to support counterterrorism training and research and development activities, and this listing does not include a notation indicating that additional NEPA analysis would be required. Yet the text of the DSWEIS states that an appropriate level of additional NEPA analysis (beyond this SWEIS) would be required before NNSA makes any decision regarding these facilities (p. 3-35). The same is true for the Reconfigure Mercury project (Table 3-1 and p. 3-40).

The DSWEIS also does not describe the process that would be used to determine the level of subsequent NEPA analysis, nor does it identify the mechanism, screening criteria, or thresholds that would be used to make these determinations.

**57-4  
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**57-5**

**57-6**

**57-5** As stated in Chapter 3, Section 3.0, of this *NNSS SWEIS*, although there is no specific proposal for a commercial solar power generation facility at this time, DOE/NNSA considered the potential for such a facility under each of the alternatives. The analyses for a potential solar power generation facility are not meant to support the development of any particular solar power generation technology, but to provide DOE/NNSA decisionmakers with information upon which to base a future decision to either support or not support a commercial solar power generation facility at the NNSS. This is a continuation of the decision that was made in the *1996 NTS EIS ROD*, which stated, in part, "...DOE will continue to support the Solar Enterprise Zone concept for Southern Nevada which includes locating up to 1000 megawatts of solar power generation among the evaluated sites."

Although the commentator is correct that there is a trend toward photovoltaic solar power generation facilities in lieu of other solar power generation technologies, the use of parabolic trough CSP technology in the analyses was based on the fact that such technology does have greater impact on certain resources, particularly water use, than photovoltaic systems and would, therefore, produce more conservative impact estimates. Chapter 3, Section 3.1.3.2, and Appendix A, Section A.1.3.2, have been revised to clearly state the rationale for using CSP technology in the analyses and the relatively lower impacts on some resources of photovoltaic technology.

**57-6** Chapter 9, Section 9.1.1, of this *Final NNSS SWEIS* has been revised to include a description of the process DOE/NNSA uses in evaluating proposed actions and determining an appropriate level of NEPA analysis and documentation. In addition, notations in the text in Chapter 3, Table 3-1, and the Summary, Table S-1, are annotated (by footnote "a" with explanation at the bottom each table) to show proposed activities that were evaluated at a more programmatic level and for which additional, project-specific NEPA review would be required.

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
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In the expanded operations alternative, two of the larger land disturbing site specific projects - the Office of Secure Transportation training facility and the commercial-scale solar power facility - would together involve construction on more than 20,000 acres of previously undisturbed land. Because of the large land disturbance of these projects, it appears that they have the potential to significantly affect the environment.

*Recommendations:*

The DOE/NNSA should elaborate on the process that individual offices will use to determine whether an Environmental Assessment or EIS will be prepared for subsequent projects, and identify the mechanism, screening criteria, and/or thresholds that would be used to make these decisions. We recommend that consistent standards for determining the appropriate level of NEPA review for individual projects be identified and implemented to ensure that all impacts are identified and disclosed to decision-makers.

The FSWEIS should use consistent nomenclature for the individual projects and clearly and consistently identify what projects are expected to require further NEPA analysis.

Proposed Mitigation Measures

Chapter 7 of the DSWEIS lists the mitigation measures that are proposed to mitigate project impacts. Many of these proposed mitigation measures are generic, however, and do not identify specific actions that would be taken, nor the locations where they would occur. To be considered adequate, mitigation measures should be specific, feasible actions that will improve adverse environmental conditions. Mitigation measures should be measurable by all interested parties that may be monitoring their implementation. The CEQ has provided guidance on documenting and implementing mitigation measures, which states, among other things, that agencies should provide clear documentation of mitigation commitments, and when and how the mitigation commitments will be implemented. Also, the mitigation measures should be carefully specified in terms of measurable performance standards or expected results.<sup>3</sup>

*Recommendation:*

In the FSWEIS, the ROD or the required Mitigation Action Plan, the mitigation measures should have clear objectives – specifically how each measure will be implemented, who is responsible for its implementation, where it will occur and when it will occur.

Biological Resources, Habitat and Wildlife

Many of the proposed activities would result in vegetation being cleared and soils moved during the construction of roads, training ranges, buildings and other facilities. Such activities could adversely affect raptors or their habitats, which are known to occur on the project site (p. 5-263).

<sup>3</sup>CEQ, Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact ("Mitigation Guidance"), Jan. 14, 2011.

57-6  
*cont'd*

**57-7** DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.

**57-8** Chapter 5, Section 5.1.7, of this *NNSS SWEIS* acknowledges the protection afforded migratory birds under the Migratory Bird Treaty Act and of bald and golden eagles under the Bald and Golden Eagle Protection Act. Sections 5.1.7.3, 5.1.7.2.3, and 5.1.7.3.3 describe potential impacts on sensitive and protected species, including migratory birds. DOE/NNSA maintains a staff of qualified plant and animal ecologists who conduct pre-activity and other surveys related to biological resources on the NNSS, monitor various species that live on the NNSS, and maintain a constant surveillance of the NNSS biota. Because golden eagle nesting is rare on the NNSS (only two nests have been documented since 1968), NNSS ecologists take special note of them when they do occur. As stated in the above noted sections, if an active nest of a sensitive or otherwise protected or regulated bird species may be impacted by a proposed activity, DOE/NNSA would first seek to avoid the impact by postponing the activity until after the young birds fledge. If avoidance is not possible, DOE/NNSA would consult with the USFWS before taking any action that would affect the nest or nesting birds. DOE/NNSA will consult with the USFWS to determine if, given the very low incidence of eagle nesting at the NNSS if development of an eagle protection plan is necessary and if so, develop such a plan. A description of DOE/NNSA's procedures for avoiding/mitigating impacts on nesting birds has been added in Chapter 7, Section 7.7, of this *Final NNSS SWEIS*.

**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
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U.S. Environmental Protection Agency**

All raptor and owl species are protected under the Migratory Bird Treaty Act. The golden eagle and bald eagle also receive protection under the Bald and Golden Eagle Protection Act. In September 2009, the U.S. Fish and Wildlife Service finalized permit regulations<sup>4</sup> under the BGEPAs for the take of bald and golden eagles on a limited basis, provided that the take is compatible with preservation of the eagle and cannot be practically avoided. The final rule states that if advanced conservation practices can be developed to significantly reduce take, the operator of a facility may qualify for a programmatic take permit. Most permits under the new regulations would authorize disturbance, rather than take. Projects or activities that could impact golden or bald eagles may require the preparation of an Eagle Conservation Plan.

*Recommendation:*

Initiate discussions with the U.S. Fish and Wildlife Service on the requirement that an Eagle Conservation Plan be developed for transmission line projects or other projects that could impact bald or golden eagles. If required, the conservation plan should be based upon the U.S. Fish and Wildlife Service 2011 Draft Eagle Conservation Plan Guidance.

Invasive Species and Pesticide Management

Executive Order 13112, *Invasive Species* (February 3, 1999), mandates that federal agencies take actions to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause. The DSWEIS acknowledges potential invasion by noxious weeds as a significant impact and proposes mitigation measures; however, the mitigation is vague and it is unclear how it would be implemented and enforced (p. 5-115). Since the proposed Project will entail extensive surface disturbance and potentially new landscaping, the FSWEIS should describe how the Project will meet the requirements of Executive Order 13112.

*Recommendation:*

The FSWEIS should include an invasive plant or noxious weed management plan to monitor and control noxious weeds.

Climate Change

Emissions of carbon dioxide and other heat-trapping gases are affecting weather patterns, sea level, ocean acidification, chemical reaction rates, and precipitation rates, resulting in climate change. One report predicts that, by 2100, the average temperatures for Nevada are expected to increase by 3–4° F in the spring and fall and by 5–6° F in the summer and winter<sup>5</sup>. In general, Nevada is expected to have wetter winters and more summers as the subtropical dry zones for the whole planet are projected to increase. Higher temperatures and increased winter rainfall will be accompanied by a reduction in snow

<sup>4</sup> See Eagle Permits, 50 CFR parts 13 and 22, issued Sept. 11, 2009. See internet address: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/BaldEagle/Final%20Disturbance%20Rule%20Sep1%202009.pdf>

<sup>5</sup> United States Environmental Protection Agency. 1998. Climate Change and Nevada: Climate and Policy Assessment Division (2174), USEPA.

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57-9

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**57-9** Chapter 5, Section 5.1.7, and Chapter 7, Section 7.7, of this *Final NNSS SWEIS* have been revised to include information regarding DOE/NNSA's practices to control the introduction and spread of noxious weeds at the NNSS and how it meets the requirements of Executive Order 13112. DOE/NNSA believes that its noxious weed control procedures are effective in controlling the introduction and spread of many species of noxious weeds and will evaluate the need for a more formal plan to direct its efforts in this regard.

**57-10** This *NNSS SWEIS* assesses the range of ongoing, proposed, and potential projects and activities that may be developed or undertaken over the next 10 years. It is unlikely over the course of the next 10 years that climate change effects would have any measurable adverse impacts on activities at the NNSS. In the longer term, some climate change effects could affect some activities at the NNSS, particularly experiments involving releases of large quantities of chemicals as part of the Nonproliferation Test and Evaluation Complex where wind direction and speed can affect the ability to conduct the releases (see Section A.1.1.3, fifth bullet under "Nonproliferation projects and counterproliferation research and development"). However, it is generally too speculative to predict which activities might be occurring at the NNSS over longer periods of time (e.g., 100 years or longer). One notable exception is the long-term performance of waste disposal facilities. DOE/NNSA considered the potential effects of climate change, including changing patterns of precipitation, on long-term disposal system performance in Chapter 5, Section 5.1.12.1.4, Waste Disposal Facilities Performance Assessments, of this SWEIS. The impact on climate change from DOE/NNSA activities at its facilities in Nevada are addressed in Sections 5.1.8, 5.2.8, 5.3.8, and 5.4.8 of this SWEIS.

***Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
Environmental Review Office, Communities and Ecosystems Division,  
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pack, earlier snowmelts, and increased runoff.<sup>6</sup> The DEIS includes a good discussion of the effects of climate change in the Great Basin (p. 4-128). Some of the predictions, such as reduced groundwater discharge, and more frequent and severe drought conditions, may impact proposed or planned projects.

*Recommendation:*

The FSWEIS should discuss the potential impact of climate change on the project and mitigation measures, and assess how the projected impacts of the Project could be exacerbated by climate change.

Air Quality

*National Ambient Air Quality Standards (NAAQS) and Particulate Matter*

The DSWEIS describes and estimates air emissions from the proposed facility, including potential construction and maintenance activities, as well as proposed mitigation measures to minimize those emissions. Though we understand that the area where the Project will be implemented is in attainment for NAAQS, it is important to minimize impacts, whenever possible, for the protection of human health and the environment. Implementation of additional mitigation measures could reduce the Project's emissions.

*Recommendations:*

EPA recommends the following measures to reduce emissions of criteria air pollutants and hazardous air pollutants (air toxics).

- *Construction Emissions Mitigation Plan*—The DSWEIS should include a Construction Emissions Mitigation Plan. In addition to all applicable local, state, or federal requirements, the EPA recommends that the following mitigation measures be included in the Construction Emissions Mitigation Plan in order to reduce impacts associated with emissions of particulate matter and other toxics from construction-related activities:
  - *Fugitive Dust Source Controls*: The DSWEIS should identify the need for a Fugitive Dust Control Plan. We recommend that the plan include these general commitments:
    - Stabilize heavily used unpaved construction roads with a non-toxic soil stabilizer or soil weighting agent that will not result in loss of vegetation, or increase other environmental impacts.
    - During grading, use water, as necessary, on disturbed areas in construction sites to control visible plumes.
    - Vehicle Speed
      - Limit speeds to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.
      - Limit speeds to 10 miles per hour or less on unpaved areas within construction sites on unstabilized (and unpaved) roads.

<sup>6</sup> The Center for Integrative Environmental Research (CIER) at the University of Maryland. 2008. Economic Impacts of Climate Change on Nevada.

57-10  
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57-11

- 57-11 All of these recommended measures have been added to Chapter 7, Section 7.8, of this Final NNSS SWEIS as potential measures applicable to future projects and will be incorporated into a mitigation action plan. Many of the measures or recommendations are already incorporated into a standard dust management plan used at the NNSS and are also typical of permit requirements enforced by the State of Nevada for projects involving surface disturbance of 5 acres or more. Ultimately, the application of specific measures to each future project will be influenced by the final design and siting of the project and may be adjusted during project implementation to achieve the desired controls.

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**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
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- Post visible speed limit signs at construction site entrances.
  - Inspect and wash construction equipment vehicle tires, as necessary, so they are free of dirt before entering paved roadways, if applicable.
  - Provide gravel ramps of at least 20 feet in length at tire washing/cleaning stations, and ensure construction vehicles exit construction sites through treated entrance roadways, unless an alternative route has been approved by appropriate lead agencies, if applicable.
  - Use sandbags or equivalent effective measures to prevent run-off to roadways in construction areas adjacent to paved roadways. Ensure consistency with the project's Storm Water Pollution Prevention Plan, if such a plan is required for the project.
  - Sweep the first 500 feet of paved roads exiting construction sites, other unpaved roads en route from the construction site, or construction staging areas whenever dirt or runoff from construction activity is visible on paved roads, or at least twice daily (less during periods of precipitation).
  - Stabilize disturbed soils (after active construction activities are completed) with a non-toxic soil stabilizer, soil weighting agent, or other approved soil stabilizing method.
  - Cover or treat soil storage piles with appropriate dust suppressant compounds and disturbed areas that remain inactive for longer than 10 days. Provide vehicles (used to transport solid bulk material on public roadways and that have potential to cause visible emissions) with covers. Alternatively, sufficiently wet and load materials onto the trucks in a manner to provide at least one foot of freeboard.
  - Use wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stock pile areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.
- \* *Administrative controls:*
- Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips.
  - Identify any sensitive receptors in the project area, such as children, elderly, and the infirm, and specify the means by which impacts to these populations will be minimized (e.g. locate construction equipment and staging zones away from sensitive receptors and building air intakes).
  - Include provisions for monitoring fugitive dust in the fugitive dust control plan and initiate increased mitigation measures to abate any visible dust plumes.

57-11  
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**Commentor No. 57 (cont'd): Kathleen Martyn Goforth, Manager,  
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Distribution List	Chairperson Billy Bell Fort Medermitt Paiute-Shoshone	Chairperson Billie Saulque U Tu Uu Gyaitu Tribal Council
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Chairperson Alvin Moyle Fallon-Paiute Shoshone Tribe	Chairman Brandon Reynolds South Fork Band Council	Tammy Sample Battle Mountain Band Council
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Chairperson Israel Naylor Fort Independence Reservation	Chairperson Joe Kennedy Timbisha Shoshone Tribe	Brian Adkins Bishop Tribal Council

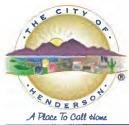
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Justin Nalder Bridgeport Paiute Tribe	Stephen Gill Las Vegas Tribal Council
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Tom Pradetto Chemehuevi Indian Tribe	Daren Daboda Moapa Tribal Council
David Harper Colorado River Indian Tribes	John Mosley Pyramid Lake Paiute Tribe
Annette Harris Duckwater Shoshone Tribe	Heather Lawrence Shoshone-Paiute Tribes
Alfreida Jake Elko Band Council	Nicholas LaPalm South Fork Band Council
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Richard Black Fallon-Paiute Shoshone Tribe	Juanita Watterson U Tu Utu Gwatu Tribal Council
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Ed Naranjo Goshute Business Council	
LeAnn Skrzynski Kaibab Band of Paiute	

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***Commentor No. 58: Robert A. Murnane, Director of Public Works,  
City of Henderson, Nevada***



CITY OF HENDERSON  
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December 1, 2011

Ms. Linda Cohn  
NNSS SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Subject: City of Henderson Comments – Draft SWEIS (DOE/EIS-0426D)

Dear Ms. Cohn:

The City of Henderson (COH) has reviewed the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada* (DOE/EIS-0426D), hereinafter referred to as the SWEIS. Based on an evaluation of the alternatives presented in the SWEIS, the COH offers the following comments.

The SWEIS evaluates the potential environmental impacts of continued management and operation of various Department of Energy (DOE) managed facilities in Nevada. These facilities are the Nevada National Security Site (NNSS), the Remote Sensing Laboratory (RSL), the North Las Vegas Facility (NLVF), and the Tonopah Test Range (TTR). The alternatives evaluated in the SWEIS are the Expanded Operations Alternative, the Reduced Operations Alternative and the No Action Alternative.

Currently, the DOE's waste management program accepts low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) for disposal at the NNSS. Under the Expanded Operations Alternative, the pace and amount of radioactive waste that would be disposed of at the NNSS would be accelerated. Under the Reduced Operations Alternative, the activity levels associated with many of the NNSS programs would be reduced however the anticipated rate of radioactive waste disposal would remain unchanged from the No Action Alternative. Under the No Action Alternative, NNSS activities and programs would remain unchanged from current levels.

Due to safety concerns raised by numerous Nevada agencies, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed in 1999 that shipments of LLW and MLLW intended for disposal at the NNSS would be transported following routes that avoided the heavily populated metropolitan Las Vegas area. As a result, the following requirement was incorporated into the NNSS Waste Acceptance Criteria which is the DOE policy document establishing the requirements, terms, and conditions under which the NNSS will accept LLW and MLLW for disposal: *Radioactive waste transportation to the NNSS, regardless of DOT classification, shall avoid the Hoover Dam Bypass Bridge and Las Vegas.*

58-1

**58-1** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**Commentor No. 58 (cont'd): Robert A. Murnane, Director of Public Works, City of Henderson, Nevada**

Page 2

The Transportation and Traffic section of the draft SWEIS presents analyses of incident-free transportation for two cases referred to as the Constrained and Unconstrained Case with the constrained case retaining the current routing limitations. Under the Unconstrained Case, the requirement to follow shipping routes which avoid the metropolitan Las Vegas area has been removed. The draft SWEIS includes the following statement: "Historically the U.S. Department of Energy (DOE) committed to the State of Nevada that it would avoid shipping low-level radioactive waste through the Interstate 15/U.S. 95 Interchange in Las Vegas, Nevada. This commitment was made when major highways, such as Interstate 15 and U.S. 95 were unable to accommodate increased traffic volumes. The commitment as stated in the waste acceptance criteria for the Nevada National Security Site (NNSS) avoided Hoover Dam and Las Vegas. In compliance with this requirement, commercial carriers of low-level radioactive waste used alternate shipping routes, such as Nevada State Route 160. Now, the transportation infrastructure through metropolitan Las Vegas, such as Interstate 15 and U.S. Route 95, have been expanded and improved. In addition, the 215 Beltway was built to take traffic around the center of Las Vegas. Moreover, highways that continue to be used to transport waste, such as the Nevada State Route 160, have experienced increased traffic as the population has grown in that area of the valley."

The draft SWEIS is not actually evaluating the Constrained and Unconstrained Cases as alternatives. Clearly, however, the DOE is contemplating removing this requirement from their Waste Acceptance Criteria for the NNSS at some point in the future. As such, the COH adamantly disagrees with the DOE's assertion that the addition of highway lane-miles through the Las Vegas metropolitan area has eliminated concerns about the transportation of radioactive waste through Las Vegas. The draft SWEIS provides no transportation analysis or other data to support their statements concerning the surface transportation system. Considering the data provided in Table 4-11: *Traffic Volumes and Levels of Service on Key Roads During Peak Hour Conditions* indicates that many of the sections of U.S. 95 and Interstate 15 currently receive a rating of F. This is clear evidence that while the surface transportation system in the metropolitan Las Vegas area has been expanded and improved in recent years, these facilities remain saturated corridors through densely populated areas. The addition of highway lane-miles has not kept pace with the exponential population growth experienced since 1999.

The draft SWEIS estimates risk based on road and rail miles traveled and does not adequately account for public risk perception, terrorism/sabotage risk, risk to iconic locations and venues, risk of disruption to national and international special events, long-term stigma risk associated with a radiological accident, and the subsequent risk to southern Nevada's already fragile economic engine of gaming, tourism, and entertainment. In addition to under estimating the risk associated with radiological shipments, the draft SWEIS does not sufficiently evaluate route specific impacts associated with non-radiological factors such as increased congestion, increased heavy truck traffic, increased air/noise pollution and the effect of traffic surges near intermodal transfer sites.

The Unconstrained Case postulates moving the current intermodal transfers (rail to truck) from West Wendover, Nevada and Parker, Arizona to Arden, Nevada and Apex, Nevada without so much as a rudimentary benefit/cost analysis to justify a major change in shipping operations. It is assumed that such a change would be financially attractive to the DOE but no analysis is given. And without a very detailed analysis taking all costs into account, it is impossible to determine which intermodal locations are preferable. The draft SWEIS is also silent on the risk associated with storage of LLW and MLLW in the minimally secured transfer stations at Arden and Apex. The risk of terrorism/sabotage in rail yards where LLW and MLLW is stored, even for short periods, is high and completely unaccounted for.

**58-1  
cont'd**

**58-2**

**58-3**

**58-4**

**58-2** DOE/NNSA conducted a detailed analysis of the potential human health effects associated with transportation of radioactive wastes and materials under both normal operations and accident scenarios. These analyses are presented in Chapter 5, Section 5.1.3.1, of this NNSS SWEIS. However, DOE/NNSA did not attempt to quantify any adverse socioeconomic impacts associated with waste transportation under normal operations or accident scenarios. In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

Traffic impacts associated with NNSS activities, including the shipment of LLW/MLLW, are addressed in Chapter 5, Section 5.1.3.2, and its subsections. Traffic impacts are evaluated in terms of changes to the level of service of specific roads in the Las Vegas, Nevada, area. The level of service reflects the level of traffic congestion and qualifies the operating conditions of a roadway or intersection. Chapter 5, Tables 5-19 and 5-20, show the level of service of different locations in Nye and Clark Counties, respectively, under each of the alternatives.

Air quality impacts, which include impacts from truck and rail transport, are provided in Chapter 5, Section 5.1.8. Air quality impacts are assessed in and near NNSS, including Nye and Clark Counties. Chapter 5, Tables 5-34, 5-38, and 5-42, show the air quality impacts specific to the transport of LLW/MLLW under each of the alternatives. These impacts are spread over the whole route. DOE/NNSA did not specifically address air quality impacts in the Las Vegas area from transporting LLW/MLLW. Under the Expanded Operations Alternative, there would be about 26 daily shipments of LLW/MLLW to NNSS (or 5,400 shipments per year), which is small compared to the total traffic volume in the Las Vegas area and, therefore would make a minimal contribution to air quality impacts from Las Vegas area traffic. This approach is consistent with CEQ's guidance that EISs "focus on significant environmental issues and alternatives" (40 CFR 1502.1) and discuss impacts "in proportion to their significance" (40 CFR 1502.2(b)).

**Commentor No. 58 (cont'd): Robert A. Murnane, Director of  
Public Works, City of Henderson, Nevada**

Page 3

The Unconstrained Case includes Interstates I-15, I-215, I-515 as well as US Highways US-93 and US-95. Approximately 112,000 Henderson residents (40%) live within 1-mile of I-15, I-215 or I-515. Any radiological release in these corridors would expose a large number of people very quickly. The Henderson Fire Department currently functions at the Operations level for hazardous/radioactive materials response. This level of training would permit our personnel to identify the hazard, isolate the area, control exposure zones, identify evacuation areas, provide notifications for evacuations or shelter in place with reverse 911, and to deny entry to the hazardous site. We have no Hazardous Materials Technicians or a hazardous materials response team that would have the capability to control or mitigate the spill, leak, or containment problem. The Clark County Fire Department also no longer supports a hazardous response team and so our closest Hazardous Materials team for emergency response would be from Las Vegas Fire and Rescue.

It is for these reasons and others that the City of Henderson strongly opposes any changes to the routing agreement currently in place between the State of Nevada and the US Department of Energy relative to the shipment of low-level radioactive and mixed low-level radioactive waste to the Nevada National Security Site.

A Resolution is on the agenda for adoption by the Henderson city council for December 20, 2011 supporting the Governor in opposition to changing the status quo. The Resolution urges the DOE to continue to honor on an indefinite basis the current agreement between the State of Nevada and the DOE relative to routing of LLW and MLLW shipments to the NNSS thus avoiding the heavily populated metropolitan areas of southern Nevada and the O'Callaghan/Tillman Bridge on US Highway US-93 in close proximity to Hoover Dam. It also urges that the expansion of operations and increased shipments of LLW and MLLW to the NNSS is limited to the number and amounts compatible with the current routing agreement between the State of Nevada and the DOE.

Furthermore, it encourages the DOE to undertake a comprehensive transportation analysis to determine the maximum number of additional LLW and MLLW shipments to the NNSS that is supported by the existing routing agreement between the State of Nevada and the DOE. In addition, it encourages the DOE to undertake a comprehensive transportation analysis to identify all impacts and risks associated with the shipments of LLW and MLLW and propose all reasonable means to mitigate identified impacts and risks to the greatest extent practicable before the NNSS is allowed to expand operations.

This concludes the City of Henderson's comments on the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (DOE/EIS-0426D)*.

Sincerely,



Robert A. Murnane, P.E.  
Director of Public Works

58-5

Noise pollution is addressed in Chapter 5, Sections 5.1.12.1.1 through 5.1.12.1.3. For the No Action and Reduced Operations Alternatives, the number of daily truck trips is not expected to increase baseline noise levels substantially along the primary highways leading to the NNSS because the truck transports would be distributed throughout the day. For the Expanded Operations Alternative, the increase in daily truck trips would moderately increase baseline noise levels along the primary highways leading to the NNSS.

58-6

The transportation analysis in this *NNSS SWEIS* was prepared to support the evaluation of potential impacts of varying levels of operation at DOE/NNSA sites in Nevada. As part of that analysis, the potential human health impacts of truck transport versus rail transport were evaluated. The analysis included a number of locations in the vicinity of Las Vegas, but was not done for the purpose of developing or selecting a specific rail-to-truck transfer location, and site-specific evaluations were judged to be unnecessary.

58-3

As noted in the response to comment 58-1 above, in Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Accordingly, no changes will be made to existing DOE/NNSA transportation routes through this NEPA process.

DOE/NNSA did not, nor is it required to, frame its environmental analyses of potential impacts to include a cost-benefit analysis as suggested by the commentator. CEQ regulations (40 CFR 1502.23) state: "For purposes of complying with the Act [NEPA], the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." Instead, in Chapter 5, Section 5.1.3.1,

**Commentor No. 58 (cont'd): Robert A. Murnane, Director of Public Works, City of Henderson, Nevada**

DOE/NNSA provided its estimation of potential health impacts on workers and the public from shipping LLW/MLLW to the NNSS.

Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011). While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas, Nevada (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

- 58-4** Appendix E, Section E.6.6, discusses acts of sabotage or terrorism as part of the transportation analysis. To complement the transportation analysis, results from the report, *Intermodal and Highway Transportation of Low-level Radioactive Waste to the Nevada Test Site* (DOE 1999b), were added to Appendix E, Section E.7.1. In that report, accident consequences associated with a large fire near LLW shipping containers at a transfer station were calculated. That analysis estimated the consequences to a population of about 195,000 people within 50 miles of the release point to be no (up to  $1.7 \times 10^{-4}$ ) fatalities. In addition, Chapter 5, Table 5–13, shows the consequences of a maximum reasonably foreseeable accident that involves a severe collision followed by a long-lasting fire of a truck or railcar carrying LLW or MLLW in a 20-foot International Organization for Standardization container. The consequences from these accidents involving releases and large fires would be consistent with the impacts associated with an intentional destructive act. In both cases, a large portion of the radioactive material is made available for release, the fire would cause wide distribution of a portion of the material, and a large population was assumed to be exposed.
- 58-5** In consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. As acknowledged in comments by the State of Nevada, the existing routing arrangement has worked to the mutual benefit of DOE/NNSA and the State of Nevada. As such, shipment of radioactive wastes will continue to avoid the Henderson area, negating

***Commentor No. 58 (cont'd): Robert A. Murnane, Director of  
Public Works, City of Henderson, Nevada***

the concerns regarding the ability of the Henderson Fire Department to respond to an accident. It should be noted that additional information has been added to Appendix E, Section E.3.3, regarding general emergency response procedures and how first responders would address an accident involving radioactive materials or waste.

- 58-6** As discussed above in response to comment 58-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

DOE/NNSA had analyzed the potential environmental impacts associated with the transportation of additional quantities of LLW/MLLW (relative to the No Action Alternative) under the Expanded Operations Alternative. The health impacts reported in Chapter 5, Section 5.1.3.1, as well as the traffic-related impacts in Section 5.1.3.2, were based on the existing routing commitments (i.e., the Constrained Case). DOE/NNSA concluded that the transportation of additional quantities of LLW/MLLW, coupled with associated vehicle traffic (e.g., worker commutes), under the Expanded Operations Alternative would provide a moderately high contribution when compared to projected traffic volumes in Clark and Nye Counties. Additional details may be found in Section 5.1.3.2.

**Commentor No. 59: Randall H. Walker, Director of Aviation,  
Clark County Department of Aviation**



December 2, 2011

Linda M. Cohn  
SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, NV 89193-8518

**RE: Draft SWEIS Comments**

Dear Ms. Cohn:

The Clark County Department of Aviation (CCDOA) has reviewed and concurs with the December 1, 2011 comments on the Draft Site-Wide Environmental Impact Statement (DSWEIS) filed by Commissioner Brager on behalf of the citizens of Clark County. The purpose of this letter is to address two additional aviation-specific issues.

**1. The Final Site-Wide Environmental Impact Statement Should Consider Potential Impacts of a Transportation Incident near McCarran International Airport**

As you are aware, the "unconstrained" truck routes described in the DSWEIS will use the I-15/I-215 interchange and will pass within close proximity of McCarran International Airport (LAS). CCDOA understands that, as explained on p. 5-40 of the DSWEIS, decisions regarding specific transportation routes will **not** be made as part of this EIS process. Nevertheless, the DSWEIS **does** contain an analysis of the constrained and unconstrained shipping routes. In light of that analysis, it is critical for the US Department of Energy (DOE) to examine, understand, and disclose the potential impacts of a transportation incident involving radioactive waste shipments near LAS on (1) passenger and cargo access to the airport, (2) airport operations, and (3) safety for LAS passengers and personnel resulting from either air or stormwater transport of radioactive material onto or proximal to the airport facilities.

**2. The DOE Should Acknowledge the Planned Southern Nevada Supplemental Airport**

As you may know, CCDOA is planning a new international, commercial service airport in the Ivanpah Valley (the Southern Nevada Supplemental Airport or SNSA) in order to ensure sufficient commercial aviation capacity in the Las Vegas metropolitan area. When the current shipping routes (identified in the DSWEIS as the "constrained" case) were established in 1996,

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Clark County Board of Commissioners  
Susan Brager, Chair • Steve Sisolak, Vice Chair  
Larry Brown • Tom Collins • Chris Giunchigliani • Mary Beth Scow • Lawrence Weekly

- 59-1** DOE/NNSA does not believe it necessary to consider risks associated with accidents involving radioactive materials at various types of installations (such as an airport) that may be located along a route. Consistent with transportation analyses performed for other NEPA documents, DOE/NNSA evaluates accident impacts on human health for a route as a whole, conservatively estimating these impacts such that the impacts would not be exceeded regardless of where the accident occurs on the route. Evaluation of specific facilities unrelated to the alternatives being analyzed would not provide additional data that could be used to differentiate alternatives from each other.

In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

The extent of contamination and related impacts of an accident at a particular location would depend on many factors, including the quantity and type of radioactive

**Commentor No. 59 (cont'd): Randall H. Walker, Director of Aviation,  
Clark County Department of Aviation**

Linda M. Cohn  
December 2, 2011  
Page 2

The SNSA site had not yet been determined. Since that time, Congress has identified a 6,000-acre site in the Ivanpah Valley between the towns of Jean and Primm and immediately east of Interstate highway I-15 (the Airport Site) for the purpose of developing the SNSA and related infrastructure. (See Ivanpah Valley Airport Public Lands Transfer Act of 2000 (Public Law 106-362)). That land was patented to Clark County in 2004. Subsequently, in Public Law 107-272, Congress directed that an additional 17,000 acres surrounding the Airport Site (the Airport Environs Overlay District, or Noise Compatibility Area) be transferred to the County upon final approval of the SNSA. (See Exhibit 1).

Trucks using the constrained routes coming from the south currently traverse I-15 through the Ivanpah Valley, and travel along the western perimeter of the Airport Site. However, the DSWEIS makes no mention of the planned SNSA and does not include the SNSA in the regions of influence (ROI) considered in the DSWEIS for cumulative impacts.

The Federal Aviation Administration (FAA) has accepted a proposed Airport Layout Plan for the SNSA, and the FAA and the Bureau of Land Management (BLM), acting as joint lead agencies, have begun preparing an Environmental Impact Statement (EIS) for the proposed airport. Although the SNSA EIS has been temporarily suspended due to the downturn in the economy, Clark County is continuing its planning efforts for the airport, albeit at a slower pace. Accordingly, the planned airport must be considered as a reasonably foreseeable project by the DOE when making any decisions regarding the routing or volume of low-level waste or medium low-level waste being transported by truck or rail on I-15 between the California state line and Jean, Nevada.

\* \* \*

Thank you for taking these issues into consideration. Please feel free to contact Teresa R. Motley of my staff at (702) 261-5706 with any questions.

Sincerely,



RANDALL H. WALKER  
Director of Aviation

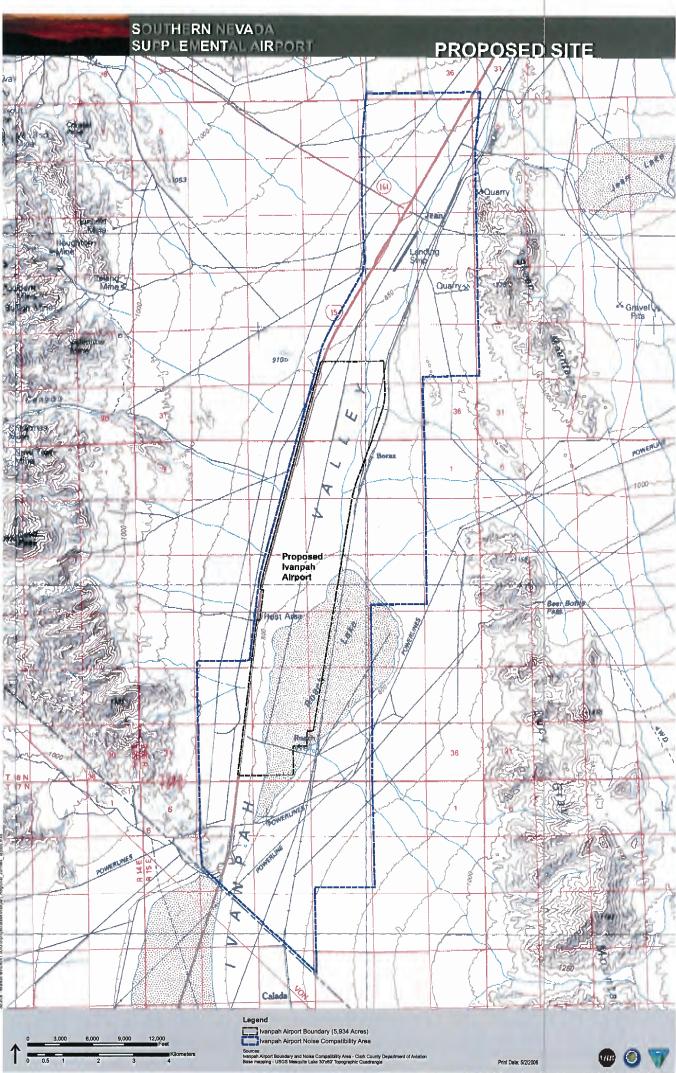
cc: Commissioner Susan Brager  
Rosemary Vassiliadis  
Nancy Lipski  
Teresa R. Motley

59-2  
cont'd

material involved; type of release (spill, fire); location of the accident; meteorological conditions; and surrounding land uses. Because of the myriad of factors associated with a specific accident, full quantitative, accident analyses for specific locations along transportation routes were not performed for this *NNSS SWEIS*. Instead, typical of many DOE/NNSA NEPA documents, human health impacts of a severe accident in an urban area along the route are evaluated. The results of this analysis are presented in Chapter 5, Table 5-13.

59-2 DOE/NNSA did not address cumulative impacts from this proposed Southern Nevada Supplemental Airport in Chapter 6 of the *Draft NNSS SWEIS* because it would be located well outside of the region of influence (ROI) (i.e., the area up to 50 miles outside of the borders of the NNSS and TTR and 10 miles outside of the borders of the Remote Sensing Laboratory and North Las Vegas Facility). Although there could be a cumulative impact resulting from traffic traveling to and from the proposed airport and shipments to and from the NNSS, no data for potential traffic volumes are available for the proposed airport; thus a meaningful analysis would not be possible. This *Final NNSS SWEIS* includes an acknowledgement of the proposed airport and explains why it was not included in the cumulative impacts analysis (see Section 6.2.10).

*Commentor No. 59 (cont'd): Randall H. Walker, Director of Aviation,  
Clark County Department of Aviation*



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***Commentor No. 60: Patricia Sanderson Port,  
Regional Environmental Officer, U.S. Department of the Interior***



United States Department of the Interior

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IN REPLY REFER TO:  
ER# 11/651

*Filed Electronically*

2 December 2011

Linda Cohn  
SWEIS Document Manager  
NNSS Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Subject: Department of Energy (DOE), National Nuclear Security Administration (NNSA)  
Site-Wide Environmental Impact Statement (EIS) for the Continued Operation of the  
Department of Energy/National Nuclear Security Administration Nevada Test Site  
and Off-Site Locations in Clark and Nye Counties, Nevada

Dear Ms. Cohn:

The Department of the Interior has received and reviewed the subject document and has the  
following comments to offer.

**COMMENTS**

**Section 4.1.6.1, Surface Water**

**Pg. 4-65:** The document discusses ephemeral flow along Forty-mile Wash for the period 2002 to 2004, which was a period of minimal surface-water flows. During the 1990's there were several significant flow events in Forty-mile Wash, the largest occurring in 1995 (85 cubic feet per second) when Highway 95 south of the NNSS was closed due to flow in the wash. Although surface-water flow at the NNSS is normally insignificant, we suggest the Final EIS include a discussion of the periodic occurrence of significant surface-water flows, and a discussion of potential environmental impacts associated with site activities.<sup>1</sup>

<sup>1</sup> Estimated Ground-Water Recharge from Streamflow in Forty-mile Wash near Yucca Mountain, Nevada: 1998; USGS WRI-97-4273; Savard, C. S.

60-1

**60-1** DOE/NNSA agrees with the commentator, and Chapter 4, Section 4.1.6.1, of this *Final NNSS SWEIS* has been revised to include additional information on historic flows in Forty-mile Wash from the suggested source document. The potential impacts on surface waters from the proposed action and alternatives, as described in Chapter 5, Section 5.1.6.1, are unaffected, however, by the additional information on historical flows.

60-1  
*cont'd*

**Commentor No. 60 (cont'd): Patricia Sanderson Port,  
Regional Environmental Officer, U.S. Department of the Interior**

**Section 4.1.7.1, Flora**

Pg. 4-97: We suggest the Final EIS include additional information on vegetation and vegetation trends at the Nevada Test Site.<sup>2</sup>

**Section 4.1.7.2, Fauna**

Pg. 4-102: We suggest that the Final EIS include additional information on mammals.<sup>3</sup>

**Section 4.1.7.5, Effects of Past Radiological Tests and Project Activities**

Pg. 4-109: The document states that “while plants and animals that inhabit radiological sites or radioactive waste containment covers may have elevated concentrations of radionuclides in their bodies, the concentrations are below levels considered harmful to the health of the plants or animals.” While this statement is correct, we suggest that the Final EIS reference the abstract of Theodorakis (2001) that describes chromosomal damage associated with radionuclide contamination at the Nevada Test Site.<sup>4</sup>

**Abstract**

We examined effects of radionuclide exposure at two atomic blast sites on kangaroo rats (*Dipodomys merriami*) at the Nevada Test Site, Nevada, USA, using genotoxicity and population genetic analyses. We assessed chromosome damage by micronucleus and flow cytometric assays and genetic variation by randomly amplified polymorphic DNA (RAPD) and mitochondrial DNA (mtDNA) analyses. The RAPD analysis showed no population structure, but mtDNA exhibited differentiation among and within populations. Genotoxicity effects were not observed when all individuals were analyzed.

However, individuals with mtDNA haplotypes unique to the contaminated sites had greater chromosomal damage than contaminated-site individuals with haplotypes shared with reference sites. When interpolation comparisons used individuals with unique haplotypes, one contaminated site had greater levels of chromosome damage than one or both of the reference sites. We hypothesize that shared-haplotype individuals are potential migrants and that unique-haplotype individuals are potential long-term residents. A parsimony approach was used to estimate the minimum number of migration events necessary to explain the haplotype distributions on a phylogenetic tree.

The observed predominance of migration events into the contaminated sites supported our migration hypothesis. We conclude the atomic blast sites are ecological sinks and that immigration masks the genotoxic effects of radiation on the resident populations.

<sup>2</sup> Perennial vegetation data from permanent plots on the Nevada Test Site, Nye County, Nevada: 2003; USGS OFR; 2003-336; Webb, Robert H.; Murov, Marilyn B.; Esque, Todd C.; Boyer, Diane E.; DeFalco, Lesley A.; Haines, Dustin F.; Oldershaw, Dominic; Scoles, Sara J.; Thomas, Kathryn A.; Blainey, Joan B.; Medica, Philip A.

<sup>3</sup> Noteworthy mammal distribution records for the Nevada Test Site: 1990; Article; Journal; Great Basin Naturalist; Medica, P. A.

<sup>4</sup> Integration of genotoxicity and population genetic analyses in kangaroo rats (*Dipodomys merriami*) exposed to radionuclide contamination at the Nevada Test Site, USA: 2001; Article; Journal; Environmental Toxicology and Chemistry; Theodorakis, C. W.; Bickham, J. W.; Lamb, T.; Medica, P. A.; Lyne, T. B.

**60-2**

**60-2** Additional information has been added to Chapter 4, Section 4.1.7.1, regarding vegetation and vegetation trends at the NNSS.

**60-3**

**60-3** Chapter 4, Section 4.1.7.2, of this *NNSS SWEIS* presents general descriptions of the mammals that may be found in various parts of the NNSS. More-detailed lists of species are included in Appendix F. DOE/NNSA believes the level of detail in Section 4.1.7.2 is sufficient for the purposes of this *NNSS SWEIS*. The suggested 1990 reference was cited in *Ecology of the Nevada Test Site: An Annotated Bibliography* (Wills and Ostler 2001), and the species noted in that paper are either mentioned specifically in Section 4.1.7.2 or included in Appendix F, Table F-5, Vertebrate Animal Species (Phylum Chordata) of the Nevada National Security Site, and Table F-1, Sensitive and Protected/Regulated Species Known to Occur on or Adjacent to the Nevada National Security Site.

**60-4**

**60-4** Reference to the suggested report has been added in Chapter 4, Section 4.1.7.5.

**60-2  
cont'd**

**60-3  
cont'd**

**60-4  
cont'd**

**Commentor No. 60 (cont'd): Patricia Sanderson Port,  
Regional Environmental Officer, U.S. Department of the Interior**

If you have any questions concerning our comments, please contact Gary LeCain, USGS  
Coordinator for Environmental Document Reviews, at (303) 236-5050 (x229) or at  
[gglecain@usgs.gov](mailto:gglecain@usgs.gov)

Thank you for the opportunity to review this project.

Sincerely,



Patricia Sanderson Port  
Regional Environmental Officer

cc:

OEPC Staff Contact: Lisa Chetnik Treichel (202) 208- 7116; Lisa\_Treichel@ios.doi.gov  
USGS Senior Advisor for Science Application James F. Devine (703) 648-4423; jdevine@usgs.gov  
OEPC HQ Contact Virginia Reddick;

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2194

**Commentator No. 61: Marylia Kelley, Executive Director, and  
Scott Yundt, Staff Attorney, Tri-Valley CAREs**

**Tri-Valley CAREs**

Communities Against a Radioactive Environment

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Peace Justice Environment  
since 1983

December 2, 2011

Ms. Linda Cohn  
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PO Box 98518  
Las Vegas NV 89193-8518  
By e-mail to [nepa@nv.doe.gov](mailto:nepa@nv.doe.gov)

**Re: Draft NNSS SWEIS Comment from Tri-Valley CAREs**

Tri-Valley CAREs (Communities Against a Radioactive Environment) submits these comments on the Draft Site-Wide Environmental Impact Statement (SWEIS) for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site (NNSS) and Off-Site Locations in the State of Nevada.

Tri-Valley CAREs is a non-profit organization located in Livermore, California. We have undertaken this analysis on behalf of our more than 5,000 members, including those who reside in Nevada near the Nevada Test Site (NTS), as we still call it. Tri-Valley CAREs has monitored activities in the Dept. of Energy (DOE) nuclear weapons complex, including the NTS for twenty-nine years. Since its inception, Tri-Valley CAREs has participated in numerous National Environmental Policy Act (NEPA) administrative review processes involving the nuclear weapons complex, including the scoping process for this draft SWEIS. The organization has also participated in federal litigation to uphold NEPA at NTS and other sites in the DOE National Nuclear Security Administration (NNSA) complex.

In addition, numerous Tri-Valley CAREs staff, board and members have toured NTS. Dozens have camped and demonstrated nearby in connection with the organization's longstanding support of the rights of the Western Shoshone Nation, the Treaty of Ruby Valley, the Comprehensive Test Ban Treaty, the Non-Proliferation Treaty, and other relevant nuclear disarmament initiatives. In general, Tri-Valley CAREs supports the positions taken by the Consolidated Group of Tribes and Organizations included throughout the SWEIS document.

As explained herein, the Draft SWEIS 1) fails to utilize a coherent, complete or legally adequate structure to allow stakeholders to accurately analyze the true environmental impacts of the alternatives, and, 2) fails to provide an accurate, complete or legally adequate substantive analysis of environmental impacts as is required by the National Environmental Policy Act (NEPA).

61-1

61-2

**61-1** DOE/NNSA abides by applicable laws and treaties as they pertain to operations at NNSS and offsite locations in Nevada, including the Comprehensive Test Ban Treaty. Although not directly germane to the scope of this SWEIS, many of the projects and activities described in Chapter 3 support U.S. efforts to address the provisions of the Non-Proliferation Treaty.

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

**61-2** As defined in DOE NEPA Implementing Procedures (10 CFR Part 1021), "site-wide NEPA document means a broad-scope EIS or EA that is programmatic in nature and identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site." DOE/NNSA considered numerous ways to organize and present the large amount of information contained in this *NNSS SWEIS*. Among the methods of presenting the information, DOE/NNSA felt that the method selected would be most easily followed. This *NNSS SWEIS* follows CEQ regulations and incorporates the recommended format at 40 CFR 1502.10-18; Table 3-1 in Chapter 3 and Table S-1 in the Summary, were developed to help the reader to compare proposed activities across the three alternatives; Tables 3-4, 3-5, 3-6, and 3-7 were designed to allow the reader to compare, in a summary fashion, the potential direct and indirect environmental impacts of continuing operations at each of the four DOE/NNSA facilities in Nevada and are arranged so that impacts on each resource at each site can be compared across the three alternatives. Chapter 6, Table 6-15, provides a summary of the cumulative impacts of each of the alternatives by resource area. DOE/NNSA believes the analysis in this *NNSS SWEIS* is accurate and complete and provides a legally adequate substantive analysis of environmental impacts as required by the CEQ regulations.

**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and Scott Yundt, Staff Attorney, Tri-Valley CAREs**

**I. The Draft SWEIS Fails to Utilize a Coherent, Complete or Legally Adequate Structure to Allow Stakeholders to Accurately Analyze the True Environmental Impacts of the Alternatives as is Required by NEPA.**

The Draft SWEIS fails to identify a preferred alternative, improperly excludes a true “No Action Alternative,” fails to analyze reasonable alternatives proposed during scoping and adopts a disjointed and confusing structure, making it extremely difficult for stakeholders to analyze the actual significance of the potential environmental impacts of the alternatives that are included.

**A. Failure to Identify a Preferred Alternative Violates NEPA**

DOE/NNSA fails to identify a preferred alternative in the Draft SWEIS. Thus, commentors and stakeholders have no clear sense of the DOE’s priorities. Because no preferred alternative was identified in the 1996 SWEIS either, and in that instance the agency chose the Expanded Operations Alternative in every program category, commentors and stakeholders are left to assume that the Expanded Operations Alternative in this SWEIS is most likely to be implemented, albeit without the proper NEPA mechanism for agency accountability – the actual naming of a preferred alternative.

**B. Failure to Include a True ‘No Action Alternative’ Violates NEPA**

NEPA requires Environmental Impact Statements (EISs) to include detailed analyses of reasonable alternatives to the “preferred or proposed action,” and that one alternative be a “no action” alternative (10 CFR Part 1502.14). The SWEIS has an unusual way of identifying the alternatives, where continued activities “as is” at the various Nevada NNSA sites is presented as the “no action” alternative. The “project” already exists, but the “no action” alternative is typically associated with any impacts in the absence of the project. The SWEIS does not analyze the equivalent of the “no action” alternative, unlike in the 1996 EIS, and even in the original 1977 EIS for the NTS. In this way the SWEIS is deficient and Tri-Valley CAREs contends the SWEIS is illegal at this point by not containing the equivalent of the “no action” alternative.

DOE/NNSA concluded without explanation that “NNSA will not consider shutting down the NNSS because it does not meet the agency’s purpose and need.” (SWEIS, pp 1-12 – 1-13). However, an EIS is intended to establish how the project affects the environment and to analyze whether there exist alternatives that will entail less of an impact. Furthermore, the EIS should provide a basis of judgment as to whether the impacts from the project are unacceptably high, and if so, require an alternative action, specific mitigation procedures, or that there be no action at all. The NEPA process is not intended to cater to the agency’s “purposes and need” but rather “... to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” (10 CFR Part 1500.1). The “absence of the project” alternative, which in the most conservative sense would be as stated in the 1996 EIS,

“Alternative 2 – Discontinue Operations – All current and planned program activities and NTS operations would be discontinued under this alternative. Only environmental monitoring and site-security functions necessary for human health, safety, and security would be maintained.”<sup>1</sup>

The 1996 EIS also even considered a second alternative that had limited action,

<sup>1</sup> DOE, Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada, August 1996, pg. 1-4.

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**61-3 A. As noted in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. However, DOE/NNSA did acknowledge in Chapter 1, Section 1.4, of the *Draft NNSS SWEIS* that the preferred alternative could be one of the three alternatives in its entirety or a hybrid based on portions of all three alternatives. DOE/NNSA’s Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.**

**B. NEPA, as amended (42 U.S.C. 4321 et seq), does not include a requirement for inclusion of a no action alternative. CEQ “Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act” (40 CFR Parts 1500-1508) do require consideration of a no action alternative in an environmental impact statement (40 CFR 1502.14), as noted by the commentator. In guidance subsequent to publication of 40 CFR Parts 1500-1508, CEQ recognizes two distinct interpretations of no action: (1) situations, such as the ongoing operation of the NNSS, where an agency activity is already being conducted and (2) situations where an agency is proposing a project that may or may not be initiated (51 FR 15618). In the case of the first interpretation of no action, CEQ indicated that: “...[N]o action’ is ‘no change’ from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the ‘no action’ alternative may be thought of in terms of continuing with the present course of action until that action is changed.” For this reason, the definition of “no action” in this *NNSS SWEIS* is compliant with all applicable regulations and guidance. Chapter 3, Section 3.6.1, provides a brief discussion of the reasons a “discontinue operations” alternative was not considered in this *NNSS SWEIS*.**

**C. The commentator’s suggested “curatorship” alternative is discussed in Chapter 3, Section 3.5.2, Transfer Nevada National Security Site to Another Agency, in the *Draft* and in Section 3.6.2 of this *Final NNSS SWEIS* as an alternative considered, but eliminated from further consideration. As required by CEQ NEPA regulations (40 CFR 1502.14(a)), Section 3.6.2 provides a brief discussion of the reasons for eliminating the suggested alternative from further consideration.**

**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and  
Scott Yundt, Staff Attorney, Tri-Valley CAREs**

"Alternative 4 – Alternate Use of Withdrawn Lands – All defense-related activities and most Work for others program activities would be discontinued at the NTS. Certain programs and activities that are not currently included in NTS mission responsibilities are also evaluated. This alternative could include other activities, such as the relinquishment of portions of the NTS, that would be dependent upon future land-use designations and withdrawal status."<sup>2</sup>

The cursory statement in the SWEIS in section 1.5 does not sufficiently discuss why such alternatives were eliminated from consideration as required by law, "... for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated," (10 CFR Part 1502.14).

Thus, because a real No Action Alternative was not examined, the Draft SWEIS is inadequate.

**C. Failure to Include Analyses of Reasonable Alternatives Proposed During Scoping Violates NEPA**

Tri-Valley CAREs submitted detailed comments on the Scope of the Proposed Environmental Impact Statement for Continued Operation of the Dept. of Energy National Nuclear Security Administration Nevada Test Site and Off-Site Location in the State of Nevada Pursuant to The National Environmental Policy Act on October 16, 2009. (Attached for reference) These comments included a detailed recommendation of a reasonable pathway (and offer underlying detailed analysis) through which the NTS could transition out of the NNSA nuclear weapons complex. We offered the key parameters that must be considered under what we termed the "curatorship" alternative and, because it is a reasonable alternative, demanded that an alternative consistent with curatorship be included in the Draft SWEIS. Yet, rather than analyze this alternative as required, the SWEIS simply mentions the concept of our comment on page 1-20, in conjunction with other comments on alternatives, and then responds as follows:

*Response: This SWEIS tiers from NNSA and DOE programmatic EISs that have facilitated decision making regarding the assignment of missions to the NNSA, such as supporting stockpile stewardship, maintaining nuclear testing capability, and disposing LLW and MLLW. These NEPA documents and related decisions are described in Section 1.5 of this SWEIS. This NNSA SWEIS would not provide the basis for a DOE programmatic decision, but would provide the basis for site specific implementation of programmatic decisions that have already been made in existing programmatic EISs and other NEPA documents. DOE NEPA regulations (10 CFR 1021.330(c)) require that large, multiple-facility DOE sites, such as the NNSA, prepare SWEISs. This NNSA SWEIS addresses the full range of missions, programs, capabilities, projects, and activities under the purview of NNSA in Nevada. In response to public comments, conservation and renewable energy projects are addressed under each of the SWEIS alternatives (No Action, Expanded Operations, and Reduced Operations), and the Renewable Energy Operations Alternative was eliminated from consideration as a separate alternative. See Chapter 3, Section 3.5, of this SWEIS for further discussion of these issues.*

The brief statement in the SWEIS quoted above does not sufficiently discuss why our proposed alternative was eliminated from consideration as required by law, "... for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated," (10 CFR Part 1502.14). The discussion of alternatives is the legally required heart of any EIS. 40 CFR § 1502.14.

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**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and  
Scott Yundt, Staff Attorney, Tri-Valley CAREs**

The legally adequate EIS must “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” 40 CFR § 1502.14(a). “The existence of a viable but unexamined alternative renders an environmental impact statement inadequate...” *Southeast Alaska Conservation Council v. FHA*, 2011 U.S. App. LEXIS 9097, 16-17 (9th Cir. 2011) “Informed and meaningful consideration of alternatives — including the no action alternative — is thus an integral part of the statutory scheme.” *Id.* However, this vague summary response with its limited conclusions does not meet the “hard look” required by NEPA and is not a sufficient basis for disposing of this suggested, reasonable alternative.

- To reiterate, the curatorship alternative is reasonable because:
- 1) It is in line with the short term purpose and need of NNSA while taking into account the reality of the financial crisis facing the nation that requires cuts to spending across all programs;
  - 2) Unlike any of the proposed alternatives in the Draft SWEIS, the curatorship approach as recommended would actualize President Barack Obama’s speech in Prague, Czech Republic on April 5, 2009, in which he declared “America’s commitment to seek the peace and security of a world without nuclear weapons;”
  - 3) The phase out of nuclear weapons has begun with the 2010 ratification of the New START. Unlike any of the proposed alternatives in the draft SWEIS, the curatorship approach as recommended reasonably implements the foreseeable post New START wind down of the nuclear weapons complex;
  - 4) It is consistent with the United States’ signing of the Comprehensive Test Ban Treaty (CTBT) and the present priority given to its ratification by the Obama Administration;
  - 5) It conforms to President Obama’s current initiatives to strengthen U.S. and international commitment to the Non-Proliferation Treaty (NPT), which entered into force in 1970.

A curatorship alternative was entirely reasonable and an alternative consistent with curatorship must be included in a revised Draft SWEIS. Thus, because this alternative, and other viable alternatives (including a real No Action Alternative) were not examined, the Draft SWEIS is inadequate.

**D. Failure to Adopt a Coherent Structure for the Draft SWEIS Violates NEPA**

Staff at Tri-Valley CAREs found the document structure extremely disjointed and difficult to approach in any consistent way. Data on specific issues, such as historic contamination, or specific program impacts, had to be chased down throughout all the volumes and beyond, to additional cited documents that were frequently difficult to locate. The Ninth Circuit Court of Appeals stated in *Mothers for Peace v. NRC* that “The application of NEPA’s requirements...is to be considered in light of the two purposes of the statute: first, ensuring that the agency will have and will consider detailed information concerning significant environmental impacts; and, second, ensuring that the public can both contribute to that body of information [via meaningful comments] and can access the information that is made public.” 449 F.3d at 1034.

Together with the limited comment period, an unprogrammatic approach to data presentation and limited access to cited documents, the public’s understanding and analysis of the Draft SWEIS was hampered in violation of NEPA.

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As explained in the response to comment 61-2, DOE/NNSA selected the SWEIS format it felt would be the easiest to follow, and complied with the CEQ regulations at 40 CFR 1502.10-18. As described in DOE/NNSA’s Notice of Availability for this NNSS SWEIS (76 FR 204), copies of SWEIS references were made available in DOE reading rooms and public libraries in 18 cities in Nevada, as well as one each in Utah and Arizona, and were also available via the Internet at the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)). In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and Scott Yundt, Staff Attorney, Tri-Valley CAREs**

**II. Failure of the Draft SWEIS to provide an accurate, complete or legally adequate substantive analysis of environmental impacts as is required by the National Environmental Policy Act (NEPA)**

**A. The Draft SWEIS should be supplemented to provide necessary information that is missing**

Significant information that is essential for public stakeholders to make meaningful analysis of the environmental impacts of the various proposed alternatives is missing from the Draft SWEIS. This includes:

- The SWEIS does not give current levels of NTS contamination from past activities or map its distribution, in order to evaluate what “more” or “less” activity as defined in the SWEIS would really mean.
- The SWEIS does not provide NTS budget figures to understand resource allocation, program impacts and priorities, both within the Test Site mission, and relative to our national budget as a whole.
- The SWEIS does not provide information on plans to address range fires and flash flooding to prevent off-site contamination.

**B. The Expanded Operations Alternative that proposes new projects that will create more waste, and also increases the current waste production from ongoing projects is unacceptable.**

NTS should not be seen as an unlimited radioactive and toxic waste dumping area. The proposed increases of 15 million cubic feet of projected Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste in the Expanded Operations Alternative would result in unreasonable impacts on community health near NTS as well as risks from transportation of that waste on the small rural roads leading to the NTS.

**C. Failure to include an unclassified ‘Intentional Destructive Acts’ Section Violates NEPA**

According to Appendix G.5 *Intentional Destructive Acts*, “NNSS has prepared a separate, classified analysis of the potential impacts of intentional destructive acts.” This violates the holding of The Ninth Circuit Court of Appeals in *Mothers for Peace v. NRC*, “The application of NEPA’s requirements...is to be considered in light of the two purposes of the statute: first, ensuring that the agency will have and will consider detailed information concerning significant environmental impacts; and, second, ensuring that the public can both contribute to that body of information [via meaningful comments] and can access the information that is made public.” 449 F.3d at 1034

By failing to produce an unclassified description of the potential impacts of intentional destructive acts, public stakeholders were unable to make any recommendations, analyses or assessment of the potential environmental impacts of an intentional act at NTS. Thus, the SWEIS failed to ensure that the public has access to information adequate enough to contribute, via meaningful comment in violation of NEPA

Finally, due to the inadequacies detailed above, and those detailed by other commentors, specifically those provided by Consolidated Group of Tribes and Organizations and Healing Ourselves and Mother Earth, Tri-Valley CAREs urges the NNSA to revise the Draft SWEIS and

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**61-5** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4–20 and 4–21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively.

Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

The budget for DOE/NNSA activities at facilities in the state of Nevada is based on funds appropriated by, and reflecting the priorities of, Congress. The level of funding provided to DOE/NNSA varies from year to year based on national security needs and other factors. In addition, the budgets of various mission and program areas are independent of each other; for instance, funds budgeted for Environmental Restoration Program activities may not be diverted to support the Stockpile Stewardship and Management Program. Further, DOE/NNSA does not believe that the inclusion of budget information in this *NNSS SWEIS* would cast any illumination on the potential environmental impacts of the proposed actions addressed under the three alternatives.

Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires. During some wildland fires that occur on the NNSS, DOE/NNSA deploys high-volume air samplers to supplement data from the routine sampling network. These supplemental samplers were deployed during fires in 2002, 2005, 2006, and 2011. None of these sampling activities has indicated substantially elevated levels of manmade radionuclides as a result of the fires. For example, results of sampling during a 2002 fire indicated the presence of cesium-137, plutonium-239 and -240, and americium-241, but in concentrations that were less than 4 percent of the concentration that would result in a dose of 10 millirem per year (DOE/NV 2003). In 2005, there was a series of 31 lightning-caused wildfires, none

**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and Scott Yundt, Staff Attorney, Tri-Valley CAREs**

provide a more thorough analysis that comports with the requirements of NEPA and responds to Tri-Valley CAREs' and other comments in the thoroughgoing manner that the law requires.

For Tri-Valley CAREs,  
/s/  
Marylia Kelley, Executive Director

/s/  
Scott Yundt, Staff Attorney

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61-7  
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of which resulted in samples with activity higher than normally observed. None of the fires occurred in areas with the highest levels of legacy radioactivity in soil, but DOE/NNSA conducted a special evaluation of the onsite and offsite radiation doses that may have occurred if a fire had spread into an area with high surface contamination, such as the SMOKY site in Area 8 of the NNSS. That evaluation found that the radiation dose 2.5 miles downwind of the SMOKY site would be 1 millirem and the highest offsite dose would be around 0.1 millirem at 24.8 miles from the SMOKY site (DOE/NV 2006). As noted in the cited report, "...[t]his finding helps confirm that radioactivity released from wild fires on the [NNSS] would not result in hazards offsite."

As described in Chapter 4, Section 4.1.6.1, of this *NNSS SWEIS*, most of the NNSS surface drainage is in closed basins(i.e., Yucca Flat and Frenchman Flat) and remains on site. The primary portions of the NNSS that have drainage that may flow off site in the event of a large precipitation event or series of events are the western and far southwestern portions of the site. There are no areas of substantial surface contamination within this drainage area. Chapter 5, Sections 5.1.6.1.1, 5.1.6.1.2, and 5.1.6.1.3, have been revised to more clearly describe the potential for offsite impacts on surface waters from DOE/NNSA activities at the NNSS.

**61-6** DOE/NNSA does not consider the NNSS an "unlimited waste dumping area" and does not intend that it will be the sole recipient of offsite-generated DOE waste. Disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant to the *WM PEIS* (DOE/EIS-0200). In accordance with the *WM PEIS ROD* (65 FR 10061) issued on February 25, 2000, DOE decided to continue onsite disposal of LLW at NNSS and certain other DOE sites and to establish regional disposal capacity at the NNSS and the Hanford Site. Specifically, in addition to disposing their own LLW, the NNSS and the Hanford Site would dispose LLW generated at other DOE sites, provided the waste met their respective WAC. DOE decided to treat MLLW at a number of DOE sites, with disposal at either the NNSS or the Hanford Site. Neither decision precludes DOE's use of commercial disposal facilities consistent with DOE Orders and policy. Only a small percentage of the LLW/MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW/MLLW is disposed of at the site where they are generated. About half of the remaining quantities are disposed of at commercial facilities.

The increase in the volume of LLW/MLLW between the No Action and Expanded Operations Alternatives is largely due to sources other than new NNSS projects or increased levels of operation at the NNSS. As shown in Chapter 5, Table 5-49, the

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**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and  
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volume of LLW/MLLW generated at the NNSS increases from about 1 million cubic feet under the No Action Alternative to 1.3 million cubic feet under the Expanded Operations Alternative. Table 5-49 also shows that the volumes of waste for disposal at the NNSS under the two alternatives would increase from 15 million to 48 million cubic feet for LLW and from 900,000 to 4 million cubic feet for MLLW. The large difference in waste disposal volumes between the two alternatives is from an assumed extensive removal of contaminated soil from cleanup activities at Nevada locations outside NNSS, with shipment to the NNSS for disposal, and to increased projections of wastes that may be shipped to NNSS from authorized out-of-state generators. The text in Chapter 3, Section 3.2.2.1, was revised to more clearly indicate the sources of the larger quantity of waste that would be disposed of under the Expanded Operations Alternative.

As addressed in Chapter 5, Section 5.1.11.2.1, of this *NNSS SWEIS*, there may be other options for addressing the soil contamination other than removing it and shipping it to the NNSS for disposal. In accordance with agreements between DOE and other Federal and state agencies, these options may include stabilization in place or use of environmental restoration disposal sites established nearer the points of contamination. The projections of wastes from out-of-state sources are considered upper-bound estimates, and their generation would depend on programmatic and regulatory decisions, funding, and other considerations that are outside the scope of this *NNSS SWEIS*. DOE Order 435.1, *Radioactive Waste Management*, requires that all DOE radioactive waste generators implement a Waste Minimization and Pollution Prevention Program to minimize the generation of waste. Although, for purposes of conservative NEPA analysis, it was assumed that the out-of-state wastes would all be disposed at NNSS, waste managers at DOE sites proactively seek to use commercial disposal facilities if the facilities are compliant, cost-effective, and have WAC under which they are able to accept the DOE waste.

The impacts from shipment of radioactive waste to NNSS disposal are addressed in detail in this *NNSS SWEIS* (e.g., see Chapter 5, Sections 5.1.3, 5.2.3, 5.3.3, and 5.3.4, and Appendix E). DOE/NNSA does not believe that transportation of radioactive waste or other material on roads leading to the NNSS would represent significant risks to public health.

- 61-7** As the commentator notes, DOE/NNSA has prepared an appendix addressing intentional destructive acts. However, the substance of the discussion and analysis is not information that can be made public. As discussed in Chapter 5, Section 5.1.12.3.2, substantive details of terrorist attack scenarios and security countermeasures are not

**Commentor No. 61 (cont'd): Marylia Kelley, Executive Director, and  
Scott Yundt, Staff Attorney, Tri-Valley CAREs**

released to the public because disclosure of this information could be exploited by terrorists to plan attacks. The analysis of intentional destructive acts was prepared in accordance with DOE's 2006 Guidance Memorandum, "Need to Consider Intentional Destructive Acts in NEPA Documents."

The analysis in this *NNSS SWEIS* evaluates potential consequences to a noninvolved worker, an MEI, and the population in terms of physical injuries, radiation doses, and latent cancer fatalities. From this analysis, the following general conclusion can be drawn: the potential consequences of intentional destructive acts (IDAs) depend on the distance to the site boundary and the size and proximity of the surrounding population; the closer and denser the surrounding population, the higher the consequences. As described in Chapter 5, Section 5.1.12.3.2, depending on the nature of a malevolent, terrorist, or intentionally destructive act, impacts may be similar to or could exceed the impacts of accidents analyzed in this SWEIS.

Facilities/locations with amounts of radioactive material sufficient to result in potentially severe impacts are protected by numerous physical, procedural, and operations-based systems that minimize the probability of a successful IDA occurring. In the unlikely event an actual IDA occurred, there are physical features associated with the facilities/locations that would reduce potential impacts for most IDA scenarios and, in any event, DOE/NNSA security and response teams are trained and prepared to respond to an IDA to further reduce potential impacts. Chapter 5, Section 5.1.12.3.2, has been revised to reflect the information in this response.

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**Commentor No. 62: Jay Coghlan and Scott Kovac**  
**Nuclear Watch of New Mexico**



December 2, 2011

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Re: Nevada National Security Site draft Site-Wide Environmental Impact Statement  
Comments (DOE/EIS-0426D)

Dear Ms. Linda M. Cohn,

**Nuclear Watch New Mexico** respectfully submits these comments for the National Nuclear Security Administration's (NNSA's) draft Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada.

**Actually Include The American Indian Perspectives Into All Decisions**

NNSA should follow the positions of the Consolidated Group of Tribes and Organizations throughout the SWEIS document. The Nevada Test Site land rightfully belongs to the Western Shoshone Nation, and their wishes should be paramount. The Treaty of Ruby Valley (1863) grants their Nation the NTS land and more. They should have the final say regarding any of the work mentioned in these comments or in the SWEIS.

**Select a preferred alternative!**

NNSA must clearly identify preferred alternatives for each of the program areas. We do not understand how NNSS has not been able to select preferred alternatives for this draft. Is NNSS trying to avoid public concern by failing to notify citizens that operations at NNSS will increase? We suggest taking a look at the NNSS 2012 Ten Year Site Plan (TYSP). If the Ten Year Site Plan cannot inform NNSS if future operations will increase or decrease, then the Plan is worthless. It looks like this SWEIS incorporates elements of the FY2008 & FY2009 TYSPs. The FY2012 TYSP was released May 23, 2011 with

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- 62-1** This *NNSS SWEIS* contains tribal perspectives developed by CGTO as part of the DOE/NSA NSO American Indian Consultation Program. CGTO recommendations and perspectives are carefully reviewed, considered, and acted upon to the extent practicable.

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

- 62-2** As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS. DOE/NSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

The commentator is correct in stating that development of the *Draft NNSS SWEIS* incorporated information from the FY 2008 and FY 2009 Ten Year Site Plans. The draft SWEIS was distributed in July 2011. Given all that is involved in production of a document like this *NNSS SWEIS*, it was not possible to incorporate information from the FY 2012 Ten Year Site Plan in a timely manner. DOE/NSA considered the FY 2012 Ten Year Site Plan, along with other considerations, as noted above, in identifying its Preferred Alternative. In addition, this *Final NNSS SWEIS* has been updated to reflect the most recent data available in the NNSS annual site environmental reports and the *Ecological Monitoring and Compliance Report*.

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**Commentor No. 62 (cont'd): Jay Coghlan and Scott Kovac**  
**Nuclear Watch of New Mexico**

clearly articulated plans for NNSS, which this SWEIS should make visible for public comment.

**A Primary Emphasis Must Be To Fully Characterize Historical Contamination And Seek Clean-Up Actions**

The amount of contamination at the Nevada Test Site (NTS) and off-site locations from the nuclear testing period of 1952 to 1992 is enormous. Estimates of the extent of manmade radioactive contamination are on the order of 2,000 – 3,000 curies in the soil and 130 million curies in the groundwater. (One curie is 37 billion radiation particles per second – a dangerously high exposure). Thus, it remains an important, if not the most important program at the Test Site to fully characterize and to endeavor to clean up the contamination.

**The SWEIS Must Provide Adequate Information About Current Environmental Impacts**

The public needs to know all of the enormous impacts of past and current Test Site activities to the soil, water and air quality in order to quantify what “more” or “less” activity as defined in the SWEIS would really mean.

**Include A “Discontinue Operations” Alternative**

The August 1996 NTS EIS included a “Discontinue Operations” alternative. This SWEIS must do the same. The scope of the SWEIS needs to include the possibility of closing the NTS in its entirety. Closing the Test Site would be a concrete, confidence-building sign to the world that the United States will not enlarge or re-shape its nuclear stockpile and is sincere in working for nuclear disarmament.

If not closed in its entirety, the Nevada Test Site should be closed to all but “Environmental Restoration.” No new hazards or toxins should be introduced to the NTS, including low or mixed level waste from other military sites. At least one of the test shot sites needs to be characterized fully to track off-site drift of contaminants. Groundwater monitoring stations need to be better designed and placed, and they must test for other contaminants in addition to tritium. Evidence of plutonium migrating much faster than expected needs to be further researched.

**The SWEIS Must Evaluate An Alternative Of Restoring “Clean” Lands To Public Use**

It is unclear from the SWEIS whether all of the withdrawn land is still needed for the existing missions of the NTS, and whether those missions are still important. However, in order to make this assessment, information is needed regarding the contamination and if any areas are clean and suitable for public use. For example, according to the SWEIS there are about 100 radioactive soils sites and that roughly one-fifth have been “closed.” Section 4 of the SWEIS does not show where the 100 sites are and which have been closed. These “clean” sites must be shown. There is some discussion of the contamination of some locations, but the picture is incomplete. It is also not explained what closed means – what is the level of cleanup at a closed site? The SWEIS should explain the nature of the soils analysis. Are samples drawn from various depths per sampling location and, if so, which elements are parts of the analysis? There is mention

**62-2  
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The commentor cites dated information regarding the radiological source term remaining at the NNSS. As noted in Chapter 6, Section 6.3.6.2, Groundwater, the most recent estimate of the underground source term at the NNSS was about 132 million curies as of September 22, 1992, based on a 2001 study by Bowen et al. Only a portion of this source term would be available as part of the hydrologic source term. The hydrologic source term is that portion of the overall underground source term that is available for transport in the groundwater. As noted in Appendix H, Section H.2, between 30 and 38 percent of underground nuclear tests were conducted close enough to the groundwater to potentially contribute to the hydrologic source term. Of the radionuclides produced by an underground nuclear detonation, only those that are readily soluble in water and/or are available to be transported (i.e., those not encapsulated within the melt glass in the detonation cavity or otherwise immobile) may become part of the hydrologic source term.

While active remediation of contaminated groundwater is not feasible, the DOE/NNSA NSO agrees that characterization and cleanup are some of the most important programs at the NNSS. DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2, has been revised, based on information developed for the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4–20 and 4–21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

A recent estimate indicates that about 1,614 curies of radioactivity remains in NNSS surface soils as of January 2012 (Kidman, 2012). To enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

As discussed in Chapter 1, Section 1.4, and Chapter 3, Section 3.1.2.2, the FFACO provides the process for identifying sites that have potential historic (legacy)

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of gamma ray monitoring, which radioactive elements does this detect?

**The Expanded Operations Alternative should include increased programs for Environmental Restoration.**

The NTS/NNSS region is prone to flash flooding and wildfire that can carry contamination offsite. The SWEIS did not, but should have addressed the issue of wildfire. In the Expanded Operations Alternative there are no proposals for new or expanded Environmental Restoration activities. Additional cleanup and environmental restoration would decrease the danger of surface contamination being carried offsite in smoke from fires.

**The Draft SWEIS Should Be Supplemented To Provide More Information**  
The Draft SWEIS should be supplemented to provide necessary information that is missing:

- Show current levels of Test Site contamination from past activities and map its distribution, in order to evaluate what "more" or "less" activity as defined in the SWEIS would really mean.
- Provide Test Site budget figures to understand resource allocation, program impacts and priorities, both within the Test Site mission, and relative to our national budget as a whole.
- Provide information on plans to address range fires and flash flooding to prevent off-site contamination.
- Cross program analysis and cost data are needed to understand and evaluate priorities
  - The SWEIS should provide enough financial budget information for the reader to evaluate the significance of specific programs, both within the Test Site mission, and relative to our economically constrained nation as a whole. There are no data in the SWEIS that show the resource allocation in cost for of each of the programs. For instance, the public has no idea what costs are incurred for the various Stockpile Stewardship experiments, or for environmental restoration projects.
  - The SWEIS under the National Environmental Policy Act (NEPA) should provide sufficient information for an evaluation of the alternatives, and to determine whether there is an alternative that still needs to be considered, and whether a dropped alternative is justified.

**Expanded Explosives Testing And Release Of Dangerous Contaminants Should Not Be Considered**

No resumption of nuclear or any other explosives testing should be considered, until previous contamination to soil and groundwater is fully characterized, mapped out and thoroughly analyzed. The Reduced Operations Alternative, which would disturb the soils, plant life, wildlife and surface drainage of only 430 acres for "explosive", "dynamic" and "biological" experiments, is far preferable to Current Operations at 700 acres, or Expanded Operations, which would disturb 3,335 acres. 120 additional acres should not be destroyed by the use of Depleted Uranium (DU) munitions. DU is proven to cause

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contamination, implementing state-approved corrective actions, and instituting closure actions. Additional information on environmental restoration is included in Appendix A, Section A.1.2.2, Environmental Restoration Program. Additionally, a website ([www.nv.energy.gov/envrmgt](http://www.nv.energy.gov/envrmgt)) has been created to provide additional information concerning the NNSS Environmental Restoration Program.

**62-4** Chapter 4 of this *NNSS SWEIS* describes the existing environments of the NNSS (Section 4.1), Remote Sensing Laboratory (Section 4.2), North Las Vegas Facility (Section 4.3), and TTR (Section 4.4). These descriptions include the current status of the facilities, including areas of land disturbance, contamination, and other past impacts. The potential impacts of proposed DOE/NNSA activities at each of these sites are quantified in Chapter 5, Sections 5.1, 5.2, 5.3, and 5.4, and the cumulative effects of past impacts added to the impacts of activities proposed in this *NNSS SWEIS* and other reasonably foreseeable future actions are quantified in Chapter 6, Section 6.3, for each resource area, including soil, water (surface and groundwater), and air quality.

**62-5** As noted by the commentor, in the *1996 NTS EIS* (DOE EIS-0243, August 1996), DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In the *1996 NTS EIS*, DOE also considered discontinuing all defense-related and most Work for Others Program activities at the NNSS (Alternate Use of Withdrawn Lands Alternative). In its December 9, 1996, *NTS EIS ROD* (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities other than LLW/MLLW management, which was to continue under the Continue Current Operations Alternative. In addition, in this same ROD, DOE decided to implement the public education elements of the Alternative Use of Withdrawn Lands Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Because discontinuing operations at the NNSS was previously considered and DOE decided in 1996 to continue to operate the NNSS at an expanded level, in addition to the continuing need for the NNSS for National Security/Defense Mission programs, both closing the NNSS and discontinuing National Security/Defense Mission programs, projects, and activities are considered unreasonable alternatives at this time.

As noted in Chapter 3, Section 3.1.2.2, and Appendix A, Section A.1.2.2, DOE/NNSA's UGTA Project is conducted pursuant to the FFACO and in consultation with the NDEP. A brief summary of UGTA Project activities is included in Chapter 4, Section 4.1.6.2. DOE/NNSA, in consultation with NDEP, determines the locations

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significant health problems worldwide, especially among children, and its use should be banned. Contamination from biological warfare experiments or training is completely unacceptable.

**Alternatives To Existing Methods Of Land Disposal Must Be Analyzed**

DOE must consider any new technologies and alternatives to existing methods of land disposal, such as nanotechnologies, which could be used to line waste drums to make them last longer.

- Are there any other processes available, or under development, which could be implemented to reduce the volatility, mobility and toxicity of radioactive waste?
- Any new disposal areas must be lined and have leachate collection systems.
  - Examine all new liner technologies.

**Explain the Financial Details**

Please explain how the proposed alternatives will affect the current NTS operating contract.

- Will the future budgets be large enough to accommodate the proposed alternatives, including monitoring and cleanup?

**Impacts On Cultural Resources Must Stop**

The Expanded Operations Alternative activities would potentially affect up to 682 sites; 283 could be considered eligible for inclusion in the National Register of Historic Places. (Pg. S-69) This is unacceptable.

**Type Page S-67**

**Reduced Operations Alternative:**

Particulate Matter10 = 7.2 tons

Particulate Matter2.5 = 5.8 tons

*Carbon Oxide* = 55 tons

Nitrogen Oxides = 36 tons

*Sulfur Oxides* = 1.2 tons

Should be Carbon Monoxide and Sulfur Dioxides

These comments and questions respectfully submitted,

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**62-15**

for new groundwater characterization and monitoring wells based on sampling results from existing wells and state-of-the-art predictive modeling. The wells are designed to state-of-the-art standards to ensure they achieve their purpose(s). Both the UGTA Project and DOE/NNSA's RREM Program analyze water samples for a wide range of radionuclides associated with underground nuclear testing.

Chapter 4, Section 4.1.6.2, has been revised to include more information regarding both the UGTA Project and RREM Program groundwater sampling programs, including the lists of typical radioisotopes analyzed.

As reported by Kersting et al. (1998), groundwater samples taken at well ER-20-5 in 1997 contained low concentrations (from 0.0085 to 0.63 picocuries per liter, or about 4.2 percent of the SDWA limit of 15 picocuries per liter) of plutonium, apparently associated with colloids. Well ER-20-5 is located on the southwestern part of Pahute Mesa, about 4,265 feet south of the Benham underground nuclear test and 984 feet west of the Tybo underground nuclear test. Analysis of the plutonium in the groundwater samples demonstrated that it was from the Benham test, rather than the Tybo test. Kersting et al. noted, "this is the first time Pu [plutonium] has been shown to be transported by groundwater and for a significant distance." A low concentration of plutonium (0.42 picocurie per liter which is 3.8 percent of the SDWA limit of 15 picocuries per liter) was found in subsequent samples taken from well ER-20-5 #1 in 2004 (Eaton et al. 2007). In a study following the discovery of plutonium at well EC-20-5, Smith et al. (2003) noted that, "general experience from the U.S. nuclear testing program based on radiochemical diagnostic data collected from a variety of test matrices suggest that only a small fraction (5 to 10 percent) of the total plutonium from an underground nuclear detonation would be available for transport in groundwater." More-detailed information regarding the potential for plutonium migration in groundwater in and around Pahute Mesa at the NNSS has been added to Chapter 4, Section 4.1.6.2.

**62-6** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Under all alternatives, DOE/NNSA would use all portions of the NNSS for various mission-related purposes. Contaminated soil sites and facilities at the NNSS, TTR,

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and Nevada Test and Training Range are grouped together in CAUs. Each CAU is composed of a number of CASs that exhibit geographical, contamination, and other similarities. CAUs and CASs are managed under the FFACO, in consultation with NDEP. CASs are characterized following specific protocols developed under the FFACO process. CASs and CAUs are closed under the FFACO when conditions specific to each site are met. In general, closure of a CAS/CAU may range from “closure in place” to “clean closure.” Sites where contamination is fairly stable and cleanup activities would be too costly or could unnecessarily spread contamination may be “closed in place.” If a site were in a location where the public, workers, or the environment may be harmed, “clean closure” may be prescribed. The level of cleanup is based, in part, on existing and anticipated future uses of the site and its environs. For this reason, although many CASs/CAUs have been closed under the FFACO, that does not mean that these areas are suitable for public access or use.

Gamma radiation may be produced when a radioactive atom emits an alpha particle (i.e., two neutrons and two protons ejected from the nucleus) or a beta particle (i.e., an ejected electron), which causes the nucleus to have too much energy, resulting in the emission of a gamma photon (gamma photons have no mass and no electrical charge—they are pure electromagnetic energy). Some examples of gamma-emitting radionuclides that may be detected by gamma ray monitoring include cesium-137, iodine-131, cobalt-60, radium-226, zinc-65, and technetium-99m.

- 62-7 Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires.
- Environmental restoration activities at the NNSS, TTR, and Nevada Test and Training Range are driven by the current version of the FFACO. For this reason, the activities considered for environmental restoration under each alternative in this *NNSS SWEIS* are the same (although DOE/NNSA did address cleanup to essentially background levels of radioactivity at several sites on the TTR and Nevada Test and Training Range under the Expanded Operations Alternative for purposes of estimating the greatest volume of radioactive waste that may be generated by the Environmental Restoration Program).
- 62-8 DOE/NNSA believes that cost and budget data are not necessary or useful in understanding and evaluating the environmental impacts of actions addressed in this SWEIS. Future budgets for the NNSS and its various programs are uncertain, and the costs of some future activities have not been defined yet. Therefore, budget and cost data do not provide a meaningful method for defining and distinguishing between

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alternatives in this SWEIS. DOE/NNSA has presented a detailed description of the activities included under each alternative as well as the potential environmental consequences associated with implementing those activities.

- 62-9** DOE/NNSA recognizes the potential for a wildfire or flooding to transport radiological contamination off site. As noted in the response to comment 62-7, above, additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires.

As described in Chapter 4, Section 4.1.6.1, of this *NNSS SWEIS*, most of the NNSS surface drainage is in closed basins (i.e., Yucca Flat and Frenchman Flat) and remains on site. The primary portions of the NNSS that have drainage that may flow off site in the event of a large precipitation event or series of events are the western and far southwestern portions of the site. The main surface water drainages in this area of the NNSS are Fortymile Wash, Topopah Wash, and Rock Valley Wash. However, there are no areas of substantial surface contamination within this drainage area. Chapter 5, Sections 5.1.6.1.1, 5.1.6.1.2, and 5.1.6.1.3, have been revised to more clearly describe the potential for offsite impacts on surface waters from DOE/NNSA activities at the NNSS.

- 62-10** As noted in the response to comment 62-8 above, DOE/NNSA believes that cost and budget data are not necessary or useful in understanding and evaluating the environmental impacts of actions addressed in this SWEIS. DOE/NNSA presented a detailed description of proposed activities included under each alternative in Chapter 3 and Appendix A, as well as the potential environmental consequences associated with implementing those activities in Chapter 5.

- 62-11** The commentor's preference for implementation of the Reduced Operations Alternative and opposition to expanding explosives testing and releases of "dangerous contaminants" is noted. As stated in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. A clear statement to this effect has been added in Chapter 3, Section 3.0.

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DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

As noted in the response to comment 62-3 above, Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The Final SWEIS has been revised to incorporate the additional information from Chapter 4, Section 4.1.6.2, into the analysis of cumulative impacts on groundwater.

DOE/NNSA would not conduct any activities that would involve the intentional release of a biological agent. As briefly noted in Chapter 3, Section 3.1.1.3, and described in more detail in Appendix A, Section A.1.1.3, of this *NNSS SWEIS*, DOE/NNSA would conduct tests, experiments, and training involving the release of biological simulants. Biological simulants are defined in Section A.1.1.3, as follows: "A biological simulant is a biologically derived substance or microorganism that shares at least one physical or biological characteristic of the biological agent it is simulating, has been shown to be nonpathogenic, and can replace the biological agent in testing. Biological simulants are intended to mimic the behavior of potentially more lethal or severely debilitating biological agents that may be used in warfare or by terrorist organizations." A biological agent is defined as "a pathogenic microorganism or any naturally occurring, genetically manipulated, or synthesized component of biological origin that is capable of causing death, disease, or other biological malfunction in humans, animals, or plants, or causing deterioration of food, water, equipment, or supplies."

- 62-12** As addressed in Chapter 4, Section 4.1.11.1.1.3, of this *NNSS SWEIS*, safe disposal of LLW and MLLW at NNSS is accomplished through operational procedures, compliance with NNSS WAC, the Radioactive Waste Acceptance Program, risk assessments, and disposal unit closure and is verified through air, groundwater, and soil monitoring. Waste disposal occurs in accordance with authorizations issued by DOE and with permits for MLLW issued by external regulatory agencies. The authorization and permit approval processes are based on formal, quantitative analyses of worker and public health and safety during construction, operation, and closure, as well as consideration of possible long-term (thousands of years) impacts on the public and the environment after the disposal facilities are closed. The results of the analyses

**Commentor No. 62 (cont'd): Jay Coghlan and Scott Kovac**  
**Nuclear Watch of New Mexico**

must demonstrate that disposal activities would comply with all applicable regulatory requirements.

DOE would continue to consider new technologies for waste management as they become available, including treatment to reduce the volatility or mobility of radioactive wastes and disposal technologies, such as the use of liners and leachate collection systems. These technologies would be implemented when mandated by DOE or external regulatory requirements, or if determined to be cost-effective in reducing risks. In the meantime, the continuation of existing disposal technologies at NNSS have been assumed, resulting in a conservative assessment of the potential impacts of waste disposal.

- 62-13** How the proposed alternatives would affect the current NNSS operating contract is a consideration that is outside the scope of the SWEIS, with the exception of the socioeconomic analysis, which estimates changes in staffing levels, which in turn affects traffic, housing, salaries, etc., projected for each alternative.
- Future budgets are uncertain at this point, and past budgets are not a reliable indicator of future budgets. DOE/NNSA has evaluated a range of activity levels (presented in three action alternatives) that could support mission needs under varying budget levels. This range of activity levels includes environmental monitoring and cleanup activities conducted in compliance with the most recent FFACO.
- 62-14** The high number of impacted cultural sites is unlikely to occur. It was based on previous cultural resources surveys done on the NNSS and was used as an upper-level estimate of what could be found. Should cultural sites be identified in the development of projects, the NNSS would consult with the Nevada State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and, as necessary, implement mitigation measures such as avoidance of significant cultural resources, evaluation and data recovery of significant archaeological resources, and archival documentation of significant resources would be undertaken. These mitigation measures are described in Chapter 7, "Mitigation Measures," Section 7.10, Cultural Resources.
- 62-15** The commentor is correct; the naming conventions of the pollutants has been revised in the Summary, Table S-15, of this final SWEIS.

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**Commentor No. 63: Bill Helmer, Tribal Historic Preservation Officer,  
Big Pine Paiute Tribe of the Owens Valley**



**BIG PINE PAIUTE TRIBE OF THE OWENS VALLEY  
Big Pine Paiute Indian Reservation**

Linda Cohn, SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
PO Box 98518  
Las Vegas, NV 89193

RE: Comments on the *Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (NNSS SWEIS)*

Dear Ms. Cohn:

The Big Pine Paiute Tribe of the Owens Valley (Tribe) welcomes the opportunity to comment on the future direction of the Nevada National Security Site (NNSS), formerly known as the Nevada Test Site. The Tribe endorses all the comments in the Site-Wide EIS (SWEIS) contributed by the American Indian Writers Subgroup of the Consolidated Group of Tribes and Organizations (CGTO). Danelle Gutierrez, Big Pine Tribal Council Secretary, is a member of the American Indian Writers Subgroup and contributed to their document within the SWEIS. The following comments are meant to supplement the American Indian Writers Subgroup document.

**Alternatives for the Nevada National Security Site (NNSS) needs to be expanded.**

The three alternatives described in the SWEIS are too narrow and do not provide a true alternative vision for the NNSS. The "No Action" Alternative is actually an Action Alternative which provides for current operations of the NNSS. A true "No Action" Alternative needs to be included which calls for the discontinuance of current operations with a focus on restoration and the co-management of the NNSS lands with the CGTO. Such an alternative would be the most environmentally preferable since it would not continue the practice of storing low level radioactive waste to this already contaminated area. Current Congressional and Presidential mandates change frequently and should not be used as an excuse to limit real, environmentally sound alternatives.

**Big Pine Tribal Office**  
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- 63-1 DOE/NNSA appreciates and considers all comments and acknowledges the commentator's endorsement of the AIWS text.
- 63-2 DOE/NNSA believes the No Action Alternative in this *NNSS SWEIS* fully complies with current NEPA requirements and guidance (i.e., Council on Environmental Quality, (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR Parts 1500-1508), CEQ's "Forty Most Asked Questions Concerning CEQ's New National Environmental Policy Act Regulations" (46 FR 18026), and DOE "National Environmental Policy Act Implementing Procedures" (10 CFR Part 1021). In the 1996 *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada* (DOE EIS-0243, August 1996), DOE considered a Discontinue Operations Alternative. DOE/NNSA's reasons for not addressing a similar alternative in this *NNSS SWEIS* were addressed in Section 3.5.2 of the *Draft NNSS SWEIS* and may be found in Section 3.6.2 of this *Final NNSS SWEIS*.

DOE/NNSA does not believe that co-management of the NNSS with the Consolidated Group of Tribes and Organizations (CGTO), as suggested by the commentator, is an appropriate alternative for operation of the NNSS. The missions, programs, and projects conducted at the NNSS are entrusted to DOE/NNSA by Congress, and the lands of the NNSS were withdrawn for purposes of nuclear weapons testing and other related purposes. In addition, DOE/NNSA conducts a vigorous Environmental Restoration Program at the NNSS, which is managed in consultation with the Nevada Division of Environmental Protection under the Federal Facility Agreement and Consent Order. DOE/NNSA has and will continue to consult closely with CGTO and provide opportunities for visits to the NNSS for culturally related purposes upon request and on a nonconflicting basis, as well as seek additional appropriate roles for CGTO to fulfill in certain DOE/NNSA activities at the NNSS, such as habitat restoration and management of cultural resources.

The commentator also suggests that the Reduced Operations Alternative should consider "phasing out of storing low-level radioactive waste and not include large-scale solar development. One of the primary purposes for continuing operations of the NNSS identified in Chapter 1, Section 1.2, of this *NNSS SWEIS* is to "provide for the disposal of LLW and MLLW from across the DOE complex." The majority of low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) disposed at the NNSS is generated by clean-up of legacy contamination from past nuclear weapons research, development, and testing at various laboratories, production facilities, the NNSS, and other locations. As radioactive contamination is removed from these sites

**Commentor No. 63 (cont'd): Bill Helmer, Tribal Historic Preservation Officer, Big Pine Paiute Tribe of the Owens Valley**

The "Expanded Operations Alternative" and the "Reduced Operations Alternative" are too similar to be distinct Alternatives. The "Reduced Operations Alternative" should include the phasing out of storing low-level radioactive waste and not include large scale solar developments as part of its alternative.

**The "Environmental Consequences" and "Cumulative Impacts" sections need to be revised to that environmental impacts are clearly shown.**

The SWEIS is a large, disjointed document which doesn't clearly state the contaminated state of the NNSS and how continued operations will add to its environmental degradation. The Council on Environmental Quality's NEPA regulations state:

**Sec. 1502.8 Writing.**

Environmental impact statements shall be written in plain language and may use appropriate graphics so that decision makers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts.

The above regulation was not followed, and the SEIS needs to be rewritten and reorganized in order to meet this requirement of the law.

Sincerely,

Bill Helmer  
Tribal Historic Preservation Officer  
Big Pine Paiute Tribe of the Owens Valley

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**63-3**

it must be properly managed and disposed. The NNSS operates and maintains facilities specifically designed for the safe disposal and long-term confinement of radioactive wastes. It is important to note that only a small percentage of the LLW/MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW/MLLW is disposed of at the site where they are generated. About half of the remaining quantities are disposed of at commercial facilities.

Various levels of commercial solar power generation facility development are considered under the three alternatives in this SWEIS. DOE/NNSA included consideration of commercial solar power generation at the NNSS based on its long-term support for development of renewable energy sources. Consideration of this type of development at the NNSS was not based on any particular proposed activity but as a means to informing any future decision by DOE/NNSS to support such a proposal. If a commercial solar power generation facility were proposed at the NNSS in the future, it would be subject to an appropriate project-specific National Environmental Policy Act review.

**63-3** While recognizing that this SWEIS must address a wide range of technical activities conducted across a large geographic area, DOE/NNSA has sought to describe proposed activities and their environmental effects in plain language and made use of graphics and tables to replace lengthy text descriptions.

DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively.

Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

**Commentor No. 64: Carolyn G. Goodman, Mayor,  
City of Las Vegas**



CAROLYN G. GOODMAN  
MAYOR

November 30, 2011

National Nuclear Security Administration  
Nevada Site Office  
Attn: Linda M. Cohn, NEPA Compliance Officer  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Subject: Draft Site-Wide Environmental Impact Statement (EIS) for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada

Dear Ms. Cohn:

Thank you for the opportunity to comment on the Draft Site-Wide EIS for the NNSS. The city of Las Vegas strongly opposes the shipment and storage of low and mixed level nuclear waste in the metropolitan Las Vegas Valley. The City opposes all legislation and policies that would require or allow the transportation of radioactive waste near or through the City limits. The City would be responsible for emergency response services in the event of an incident and is concerned about the potential negative financial impact such transportation will have on millions of tourists and hundreds of businesses located in the City.

As you know, the EIS considers an "Unconstrained Case" in which shipments of radioactive waste would be routed through Las Vegas, either by truck or rail. This issue was resolved long ago with a commitment by the Department of Energy (DOE) and the State of Nevada to avoid metropolitan Las Vegas. The Draft EIS asserts that the commitment to avoid metropolitan Las Vegas was made because "major highways, such as Interstate 15 and U.S. Route 95, were unable to accommodate increased traffic volumes," and suggests that the DOE might now go back on its commitment because "transportation infrastructure through metropolitan Las Vegas . . . have been expanded and improved." (Draft EIS, page S-21.)

However, the concern is not just about traffic. The City's priority has always been to protect its citizens and businesses. The DOE should adhere to its existing commitment to keep shipments of radioactive waste, whether by truck or rail, away from the City. The Draft EIS does not adequately analyze the foreseeable public safety consequences of the Unconstrained Case, which are detailed in the attached technical and legal comments. If the DOE chooses to proceed with the Unconstrained Case, it is reasonably foreseeable that the decision will result in a traffic accident or incident in which radioactive waste would be released into a residential or tourist area within the City.

If you have any questions or comments, please contact Randy Fultz at 229-2176.

Sincerely,

Carolyn G. Goodman  
Mayor  
City of Las Vegas

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- C. Elizabeth N. Freewell, City Manager
- Orlando Sanchez, Deputy City Manager
- Brad Jerbic, City Attorney
- Jorge Cervantes, Director of Public Works

**64-1** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

64-1

64-2

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**64-2** Please refer to the response to comment 64-1 above.

DOE performs transportation analyses to determine comparative risks among alternatives using risks calculated for entire routes. The risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor necessary for the purposes of this *NNSS SWEIS*. It should be noted that waste transportation accidents cover a range of severities, most of which would result in no or small, localized release of radioactive material. Though not developed specifically for Las Vegas, Chapter 5, Table 5-13, presents the potential human health impacts of a severe accident occurring in an urban area.

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**DRAFT COMMENTS ON DRAFT SITE-WIDE ENVIRONMENTAL  
IMPACT STATEMENT FOR THE CONTAINED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY  
ADMINISTRATION NEVADA NATIONAL SECURITY SITE AND OFF  
SITE-LOCATIONS IN THE STATE OF NEVADA**

The city of Las Vegas is opposed to the shipment and temporary storage of low and mixed level nuclear waste in the metropolitan Las Vegas Valley. The City opposes all legislation and policies that would require or allow the transportation of radioactive waste near or through the City limits. The City is concerned about the movement of radioactive materials by rail or truck through the City, since City officials would be responsible for emergency response services in the event of an incident. The potential negative financial impact such transportation will have on the millions of tourist and hundreds of businesses located in the City would be devastating to our economy.

The City is also concerned that the railroads could store rail cars within City limits that contain radioactive materials. The City is opposed to storing any radioactive materials on railcars on City property due to numerous public safety hazards. The City has a long standing history opposing the transportation of nuclear waste that includes the following actions:

- In 2008, Mayor Oscar Goodman and City Attorney Brad Jerbic testified in opposition at the Surface Transportation Board's hearing relating to the Department of Energy's application for authority to build the proposed Caliente Line, to transport spent nuclear fuel and high level waste for disposal
- In 2006, the City supported a resolution by the National League of Cities that encouraged cities to determine the public safety impacts resulting from transportation of high level nuclear waste
- In 2002, the City supported a resolution by the U.S. Conference of Mayors regarding the Yucca Mountain Nuclear Waste Repository that stated during the course of transporting high level waste to Yucca Mountain, a single terrorist attack could result in thousands of cancer deaths and cost up to \$17 billion in clean up costs
- In 2002, the City supported a letter written by the U.S. Conference of Mayors to President Bush regarding the concerns about the transportation of spent nuclear fuel and high level waste from reactors across the country to Yucca Mountain in Nevada or any repository

- |      |  |
|------|--|
| 64-3 | 64-3 As discussed above in response to comment 64-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.  |
| 64-4 | 64-4 DOE/NNSA understands that the city opposes storing radioactive materials on railcars within city limits. Operation of a rail-to-truck transfer station would be the responsibility of a commercial shipper, who would need to comply with all applicable laws and regulations. DOE/NNSA would encourage generators and shippers to make shipments expeditiously, and it is expected that the incentive of payment would minimize the amount of time a shipper would keep shipments at the transfer station. |
| 64-5 | 64-5 Please refer to the response to comment 64-3 above.   |

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada**

**RESOLUTIONS/PROCLAMATIONS (CONTINUED)**

- In 2001, the City supported a resolution proposed by the Southern Nevada Regional Planning Coalition to coordinate strategies on Yucca Mountain that states Southern Nevada continues to be one of the nation's fastest growing regions and is experiencing significant construction and traffic congestion, inconsistent with the transportation of nuclear waste through the Las Vegas Valley.
- In 2000, the city of Las Vegas declared itself to officially be a nuclear-free zone and opposed all legislation that would require or allow transportation of radioactive waste near or through the city of Las Vegas.
- In 2000, the Las Vegas City Council declared "Nevada is Not a Wasteland Day" opposing the creation of a high-level nuclear waste repository at Yucca Mountain which would pose a deadly risk to millions of people along waste shipment routes across the country and would directly threaten the health and safety of hundreds of generations of Nevadans.
- In 1998, the Las Vegas City Council passed a resolution requesting the Department of Energy to exclude the use of highway routes over Hoover Dam and through the metropolitan Las Vegas Valley for the transport of low level radioactive waste to the Nevada Test Site.
- In 1995, the Las Vegas City Council passed a resolution opposing the rail spur alignment through the Las Vegas Valley as proposed in Senate Bill S-167 and House Bill HR-1020 that require the transportation of nuclear waste through Las Vegas and Clark County.
- In 1992, the Las Vegas City Council passed a resolution supporting the creation of a city of Las Vegas Yucca Mountain Nuclear Repository Committee to monitor issues related to the proposed high level nuclear waste repository at Yucca Mountain that includes the transportation of nuclear waste.
- In 1991, the Las Vegas City Council passed a resolution restating the City's opposition to the location of a high level nuclear waste repository at Yucca Mountain that strongly opposed the transportation of high level radioactive waste anywhere in Southern Nevada.
- In 1985, the Las Vegas City Council passed a resolution reconfirming opposition to location of a nuclear waste deposit facility in Southern Nevada that opposed the transportation of high-level radioactive waste anywhere in Clark County.
- In 1983, the Las Vegas City Council passed a resolution regarding the possible location of a nuclear waste deposit facility in Southern Nevada that opposed the transportation of nuclear waste on our streets, past our homes, schools, and businesses.

64-5  
*cont'd*

*Response side of this page intentionally left blank.*

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada

**AIR QUALITY**

- In SWEIS, RADTRAN 6 and RISKIND were used to estimate the average radioactive impact to the human health. These models estimate average effects along the transportation route in incident free and accident case. The average person-rem information estimated does not reveal information on maximum exposure to the residents that live downwind from the location of the accident. Also, these models do not consider the topography of the area. Therefore, additional model analyses using EPA's AERMOD may be needed to calculate the individual maximum exposure by estimating the concentration on particulate matter that is contaminated with radioactive material utilizing the local topography information and real meteorological data from the McCarran Airport.

**ECONOMIC**

- Las Vegas is already one of the most economically depressed metropolitan cities in the nation. It is believed that transportation of low level radioactive waste through the Las Vegas Valley would have a significant impact to any future businesses or residents looking to relocate to the Las Vegas.
- URBAN TRANSIT, LLC (UT) has prepared a Vulnerability Assessment report for the rail transportation corridor through Clark County, Nevada for the Clark County Department of Comprehensive Planning. In the report, UT states that access to rail corridor, staging or maintenance facilities are easily achieved. Rail corridor, staging or maintenance facilities lack of control of access and security. Also, HAZMAT shipments and nuclear waste shipments will be utilizing the same rail corridor. Given that it is a reasonable assumption that the overall attractiveness to an attack would be greatly increased as a single attack would create the possibility of a radiological materials release coupled with HAZMAT release. The urban section of the rail corridor presents a particularly attractive target to terrorists due to the proximity of nearby critical assets, which could be affected by a radiological or HAZMAT release. An attack of this nature would exponentially increase the magnitude and difficulty of recovery operations. Any attack would decimate the Las Vegas economy and its future.

64-6

64-7

- 64-6 RADTRAN 6 and RISKIND are standard, state-of-art analysis codes specifically developed for determining impacts from radioactive materials, including accidental releases. The EPA AERMOD is not suitable for such analyses because it only addresses particulate dispersion and does not incorporate the calculation of radiological impacts.

The consequences of potential accidents with the greatest impacts (maximum foreseeable accidents) were calculated with the results shown in Appendix E, Table E-16, of this *Final NNSS SWEIS*. This analysis used a constant-density urban population out to a distance of 50 miles, based on census data projected to 2016, and used generic atmospheric conditions, as described in Section E.6.4, because an accident could occur at any location along a route. To estimate the most conservative (greatest) impacts, neutral atmospheric conditions were assumed when calculating impacts on the population within a 50-mile radius of the accident, and stable atmospheric conditions were assumed when considering impacts on an MEI.

- 64-7 Chapter 5, Section 5.1.12.3, of this SWEIS describes the approach that DOE/NNSA used (including vulnerability assessment methodology) in evaluating the impacts of hypothetical IDAs, the results of which are documented in a classified Appendix to this SWEIS.

In regard to scenarios involving radioactive waste shipments, DOE/NNSA conducted a detailed analysis of the potential human health effects associated with both normal operations and accident scenarios, as presented in Chapter 5, Section 5.1.3.1, of this SWEIS. However, DOE/NNSA did not attempt to quantify any adverse socioeconomic impacts associated with waste transportation under normal operations or accident scenarios. In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

Furthermore, the *Final NNSS SWEIS* (see Chapter 1, Section 1.4 and Chapter 5, Section 5.1.3.1.2.2) notes that DOE/NNSA is continuing to honor its previous commitments regarding transportation routing in the Las Vegas, Nevada, area and will not make any decisions affecting these commitments in this *NNSS SWEIS*.

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

**Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada**

**ECONOMIC (CONTINUED)**

- The city of Las Vegas and its affiliates (Las Vegas Redevelopment Agency, City Parkway V, Inc.) have invested more than \$120 million in Symphony Park™, home to the Smith Center for the Performing Arts and the Cleveland Clinic Lou Ruvo Center for Brain Health. Hauling radioactive material would jeopardize the city's investment in Symphony Park, and deter future investments from private developers and investors.
- Tourism is the life-blood of the Las Vegas. Any suggestion that there is radioactive material being transported in Las Vegas along the resort corridor must be avoided due to the negative impact it would have on the City. The impact of an accident or public safety incident involving radioactive materials would be devastating.
- Trucks hauling radioactive material labeled with a yellow radioactive placard traveling along the I-15 resort corridor would create a negative advertisement for Las Vegas tourism, which could have significant impacts on the economy. The proposed 15,000 shipments per year would translate to about 60 shipments per day or two to three shipments every hour.

**HUMAN HEALTH**

- The waste material to be hauled will include both low-level and mixed-level waste. The definition of the low-level waste is anything other than the spent fuel rods. Hence, the waste being transported may actually be quite high and harmful to human health, as this material could have been in direct contact with the fuel rods. Also, military waste from the weapons could be hauled through the City as well.
- On the page S-24 of the Draft Site-Wide EIS, the risk of an accident involving the release of radiation is about one chance in 2,600,000 annually, for the No Action and Reduced Operations Alternative. The Expanded Operation Alternative basically increases the risk of an accident by 97 percent, in other words making it twice as risky. This value seems questionable since the number of shipments is increasing by 550 percent from 2,300 to 15,000 shipments per year. Therefore, the risk would be expected to also increase 550 percent. In return, this significantly increases the latent cancer fatality level from 1/50,000 to about 1/9,000.

64-7  
*cont'd*

64-8

- 64-8 The definition of LLW presented in Chapter 12 of this *NNSS SWEIS* is radioactive waste that is not classified as HLW, TRU waste, SNF, or byproduct material as defined by Section 11e(2) of the Atomic Energy Act of 1954, as amended. Some LLW can be highly radioactive, but much of the waste transported to NNSS for disposal is lightly contaminated material such as waste from cleanup activities (building debris, contaminated soil) and materials that are incidentally contaminated (anticontamination clothing, plastic, paper, shoe covers).

The text in the *Draft NNSS SWEIS* Summary, page S-24, that the commentor references relates to a consequence assessment for a maximum reasonably foreseeable accident; that is, what would the consequence be if an accident were to occur, and it does not present "risk." Note that frequency or probability is not the same as risk. The term "risk" incorporates both frequency and consequences. The next paragraph in the Summary shows the risks associated with all shipments on all routes. The text in the Summary in this *Final NNSS SWEIS* has been revised to clarify that the first part of the discussion relates to consequences; it has also been clarified that a revised frequency of  $3.2 \times 10^{-7}$  is for the route that has the highest frequency and traverses an urban area. The frequency of  $3.2 \times 10^{-7}$  is equivalent to 1 chance in 3,100,000, which is noted in the Summary of this *Final NNSS SWEIS*. The data summarize information from Appendix E, Table E-16. The accident frequency in question is for transport of 20-foot International Organization for Standardization containers along the route from the upper Midwest. Table E-11 shows that there would be about double the number of this type of shipment from the upper Midwest under the Expanded Operations Alternative compared to the No Action and Reduced Operations Alternatives.

See the response to comment 64-6 regarding the analytical codes that were used in the transportation analysis. Transportation analyses performed in support of DOE NEPA activities consider the potential impacts on the population along the transportation routes. As stated in Appendix E, Section E.4, the analysis uses Web-TRAGIS to select the routes and calculate the population densities along each route. Because the Web-TRAGIS uses census block population data, the estimated population densities do not include people that temporarily occupy a location or newly developed areas. However, the analysis of impacts on an MEI provides a conservatively high estimate of the risks that could be imposed on anybody as a result of transportation activities. In this *NNSS SWEIS*, analyses were performed to show the incident-free impacts on different types of MEIs that could be encountered along a route, as described in Appendix E, Section E.5.3. These analyses were performed for all cargo types considered (e.g., a shipment of LLW, TRU waste, different types of special nuclear materials), with the cargo type causing the greatest dose to the resident being shown in

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada

**HUMAN HEALTH (CONTINUED)**

- The Human Health modeling done by RADTRAN 6 and RISKIND is not the best model to assess chronic effect of radioactive materials staying in one location for extended period of time. Since the Las Vegas downtown and Arden are potential places for Union Pacific Railroad to temporarily park the railcars, the Las Vegas downtown and Arden facility may become a storage site for radioactive materials for a period of time. The City is redeveloping the downtown area with a master development plan of Symphony Park. The Symphony Park will have multiple high rise residential condos and hotels with high population density less than 100 feet from the railcar parking area. Therefore, SWEIS need to reevaluate and properly analyze the human exposure in this particular scenario.
- Considering that only 40 percent to 70 percent of the trucks will require the class seven radioactive placard labels, the first responder may encounter radioactive waste shipment that may not have radioactive labeling creating higher risk for potential exposure hazardous to the first responders and to the environment if mishandled by the responders. As a potential human health impact, SWEIS needs to properly address such scenario as well.
- The population dose (person-rem) on Table E-17 of page E-51 shows that the dose utilizing Arden to the NNSS via I-15 to US-95 is 60 person-rem; via I-215 to CC-215 to US-95 is 73 person-rem, and through the Pahrump is 80 person-rem. Since Pahrump route is less congested and less populated, the population dose should be lower than I-15 to US95. The result is counter intuitive. The calculations presented are not transparent. SWEIS should provide information regarding the independent third party that conducted the QA/QC of the calculations performed. If the calculations were not performed by the independent third party, the numbers may be skewed or biased. From Apex to the NNSS, via CC-215 and US-95 it is 37 person-rem, and via I-15 and US-95 it is 150 person-rem, which makes more sense. However, calculations completed on Henderson to NNSS route are questionable as well. If the calculation made an error, the corrected results should be re-circulated considering SWEIS relies on these results to make transportation recommendation. Additional public commenting time should be provided.

64-8  
cont'd

Table E-15. Based on Table E-15, a person residing within 100 feet of a truck route would receive a maximum dose of  $2.4 \times 10^{-7}$  rem per shipment for the highest-dose cargo at the regulatory dose limit set by DOT, assuming the individual is outside and is directly exposed to the radiation emanating from the cargo. If that individual were exposed to all 80,000 shipments analyzed under the Expanded Operations Alternative, the total dose would be about 20 millirem over a 10-year period. The results show that, despite assuming a close proximity to the route, exposure to every shipment, and the receipt of the maximum dose per shipment, the overall incident-free risk would still be small. A site-specific analysis would not be expected to result a different conclusion.

As discussed in Appendix E, Section E.3.1, specific requirements for packages used to transport radioactive materials are detailed in 49 CFR Part 173, Subpart I. These regulations limit the amount of radionuclide activity that can be transported in certain types of packages and provide design requirements that packages must meet. Design requirements for the different types of packages and the placarding required on transport vehicles are commensurate with the level of risk associated with the shipment. Shipments that do not require Class 7 placards would not pose a sufficient health or safety risk to an individual that would require informing the public of the contents.

The transportation analyses were performed in accordance with *A Resource Handbook on DOE Transportation Risk Assessment* (DOE 2002). Subsequent to analyses being prepared, a qualified analyst performed a review to ensure that the assumptions, models, and calculations were appropriate and correct. The calculations of population doses along the routes from the Las Vegas, Nevada, area to NNSS have been re-evaluated, and the revised results have been included in this *Final NNSS SWEIS*. As a result, the population impacts are closer to each other, as shown in Appendix E, Table E-17 of this *Final NNSS SWEIS*. Regardless of the route taken, the population doses are comparable and demonstrate that the transport of LLW presents a very low risk. The radiation dose to the population along a route comprises three primary components: the “on-link” dose (dose to other travelers on the road), doses at rest stops (such as stops for refueling or rest), and “off-link” doses (doses to the population along the route). Generally, the contributions to the total population dose from on-link exposures and rest stop exposures are similar in magnitude and dominate the population dose. On-link exposures are slightly larger in urban areas (where the traffic density is higher), while rest-stop exposures are slightly larger when accounting for longer distances through rural areas. Taking both the on-link and rest-stop population doses into account leads to small differences among the various routes from Las Vegas to NNSS.

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

Draft Site-Wide Environmental Impact Statement (EIS)  
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**PUBLIC SAFETY/EMERGENCY MANAGEMENT/EMERGENCY SERVICES**

- In 2006, the City supported a feasibility study, conducted by Clark County, which cited the need for a Regional Emergency Operations Center in the event nuclear waste is shipped through the City. Funding for this project has yet to be realized, and the capability to support a regional response to an incident involving nuclear waste is severely constrained by this.
- There is the apparent lack of study on the impact to public safety not just in response, but also in recovery if the program is allowed to expand in the way it is being presented. The increase in the fiscal cost estimate remains largely attributable to the identification of the training and equipment demands emanating from additional stations in the downtown area near the Union Pacific railroad because of the rail scenario and the additional population and structures in and around downtown Las Vegas. In addition, the Las Vegas Fire and Rescue believes that the construction of other stations in the northwest portion of the City near the convergence of the north Clark County Route-215 and US Highway 95 near the mixed level nuclear waste truck routes will require substantial additional equipment and training of personnel to mitigate potential accidents and incidents.
- Las Vegas Fire and Rescue (LVFR) shares concerns about public safety impacts with valley wide emergency responders regarding response to a nuclear waste incident. A nuclear event in the City's asymmetrical landscape due to accidental or terrorism related release would cause a strain on City resources and possibly overwhelm our local response capabilities. The risk would be difficult to define and resource requirement would be costly to maintain.
- LVFR views this as a high risk low frequency event. Events that do not happen frequently but may have catastrophic results require more training and additional stored resource. Training would be in the form of field training exercises and situational training exercises involving local, state and federal assets.
- Current response plans would need to be assessed and formal mutual aid agreements with neighboring counties should be established. Planning for these events require time, money and resources from all valley wide agencies. Plans need to include mass evacuations whether mandatory or voluntary. Plans also need to address storage and rail transportation. HAZMAT resources are currently spread thin as LVFR responds valley wide.

64-9

DOE/NNSA extended the original 90-day comment period by 36 days, allowing a review period of 126 days. The revised results of the transportation analysis in the Las Vegas area do not affect the overall conclusions because the impacts along these routes are comparable; no additional comment period is deemed necessary.

- 64-9 DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada. It is at Clark County's discretion, rather than DOE/NNSA's, as to how the grant program funds may be used to plan for and enhance capabilities to respond to emergencies in Las Vegas or other areas within the county.

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

**Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada**

**PURPOSE AND NEED**

- The Purpose and Need Statement does not mention the need to evaluate alternative trucking transportation routes through the Las Vegas metro area. Therefore, if a trucking route change is proposed, a separate Environmental Assessment or Environmental Impact Statement (EIS) would be required to change the route through the Las Vegas Valley, considering that the decision is very controversial. A proper Purpose and Need Statement to address hauling material through the Las Vegas Valley would have resulted in including many more impacted entities. Under National Environmental Policy Act, all impacted entities should be given the opportunity to be Cooperating Agencies as each entity may have additional information on the transportation route impact.

**TRANSPORTATION**

- The number of shipment is estimated to increase from 2,300 to 15,000 per year. This poses a substantial increase in risk for potential accidents and spill incidents in the Las Vegas Valley.
- The proposed transfer stations at Arden and Apex are not secured. Under the proposed scenario, it is likely that trailers would be parked at these unsecured locations for extended periods of time. If you consider the nature of the radioactive materials, this would create security concerns on local, state and federal levels.
- On page 4-32 of the Draft Site-Wide EIS, statistical table shows projected traffic counts to be 220,000 vehicles per day (vpd) on CC-215, over 350,000 vpd on I-15 and almost 300,000 vpd on US-95 by the year 2020. The EIS states that the Level of Service (LOS) along these corridors will be at LOS—F, which means the roadway capacities are at the failure level with increased potential for congestion and accidents.
- Nevada Department of Transportation (NDOT) reports of accident/crash data from 2008 to June 2011 show that SR-160 from I-15 to Mause Road had a total of 1,515 crashes compared to 10,580 crashes between SR-160 and CC-215 on I-15 and US-95, and compared to total of 2,078 crashes between I-15 and US-95 on CC-215. Clearly, SR-160 appears to be safer than I-15, US-95 or CC-215.
- Statistically, there are over 8.3 times as many crashes on the proposed unconstrained routes through the Las Vegas Valley as there are on the existing constrained route.

7

**64-10**

**64-10** DOE/NNSA believes that its purpose and need, as described in this *NNSS SWEIS* is sufficient. One of the primary purposes for continuing operations of the NNSS identified in Chapter 1, Section 1.2, of this *NNSS SWEIS* is to “provide for the disposal of LLW and MLLW from across the DOE complex.” Implicit in that activity are other ancillary activities, such as transportation, excavation/filling/closure of disposal cells, and groundwater and vadose zone monitoring. The impacts of transportation of LLW/MLLW from their points of origin to the NNSS are analyzed and presented in Chapter 5, Sections 5.1.3.1.1 (No Action), 5.1.3.1.2.1 (Expanded Operations Constrained Case), 5.1.3.1.2.2 (Expanded Operations Unconstrained Case), and 5.1.3.1.2 (Reduced Operations). However, as noted in Chapter 1, Section 1.4, of this *NNSS SWEIS*, “Although an analysis of LLW/MLLW shipping routes is included in this SWEIS, decisions on routing would not be made as part of this NEPA process. This analysis was undertaken to develop a greater understanding of the potential environmental consequences of shipping such waste through and around metropolitan Las Vegas, Nevada, and to inform any highway routing revisions to NNSA’s waste acceptance criteria.” Although the City of Las Vegas was not a cooperating agency in the preparation of this *NNSS SWEIS*, DOE/NNSA activated a Transportation Working Group to help evaluate the impacts identified for the alternatives and routing options analyzed. That group included representatives from the State of Nevada, including the Attorney General’s office, the Nevada Department of Transportation, and the Nevada Highway Patrol; the cities of Las Vegas, North Las Vegas, Henderson, and Boulder City; and Nye, Lincoln, and Clark Counties. Members of the Transportation Working Group provided input from government entities that could be affected by any changes in the current radioactive waste transportation routing policy in the NNSS WAC.

**64-11**

**64-11** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation

2-220

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**TECHNICAL COMMENTS**

**Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada**

**TRANSPORTATION (CONTINUED)**

- There are 80 times as many people in the Las Vegas metro area (unconstrained alternative) as there are in the Pahrump area (constrained alternative). As a result, the potential impact to the population at large is 80 times greater to be exposed to the radioactive material if an accident would occur.
- Statistically, from 2008 to June 2011, the number of accidents/crashes has dropped about 45 percent on SR-160. This is a result of the roadway improvements throughout the SR-160 corridor for the last four years. Therefore, SR-160 still represents the safer route as compared to I-15, US-95 or CC-215. SR-160 has been greatly improved. NDOT has further improvement plans in the future.
- Project NEON is NDOT's number one state priority project south of the Spaghetti Bowl. It is a \$1.5 billion project that extends two miles south of the I-15/US-95 Interchange. This interstate transportation corridor is presently the last segment of I-15 widening plan and it is expected to be under construction for the next 20 years. Construction and traffic detours will certainly increase traffic congestion and accident rates within the corridor.
- During the August 11, 2011 Transportation Working Group field trip to the Nevada National Security Site (NNSS) conducted by the Department of Energy (DOE), the DOE personnel at the NNSS has stated that there were no accidents reported for hauling material through the Las Vegas Valley utilizing the Constrained Route. This route should remain as preferred option to be used in the future.

**WATER QUALITY**

- In the Las Vegas Metropolitan area, a network of concrete storm water conveyance system has been constructed to transport storm water from highways, freeways, and streets into the Las Vegas Wash and the Lake Mead that happens quickly during a storm event. If an accident were to occur during a rainfall event, radioactive material would be washed into the Lake Mead, having a devastating impact to the drinking water supply for Southern Nevada, Southern California and Arizona. For the Las Vegas Metropolitan area residents, the drinking water intake is directly downstream of Las Vegas Wash. In the rural area, storm water is allowed to infiltrate into the soil. In case of an accident on a rural highway, such as SR-160 during a rain event, the radioactive waste would contaminate the soil allowing for the future remediation effort to remove the impacted soil, which would not be an option for the Las Vegas area.

64-11  
*cont'd*

64-12

routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas, Nevada (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

The data presented in Chapter 5, Table 5-9, of the *Draft and Final NNSS SWEIS* indicate that the number of LLW or MLLW shipments from out of state to the NNSS would increase from about 2,600 shipments per year under the No Action Alternative to about 8,000 shipments per year under the Expanded Operations Alternative. While it is true there are more traffic accidents on the highways in central Las Vegas than there are on the more rural State Route 160, a more appropriate statistic is the rate of accidents, that is, the number of accidents per vehicle-mile traveled. Data are not readily available to differentiate collision rates among the route segments identified in the comment; however, the estimated radiological and traffic fatality risks for the entire routes as shown in Table 5-14 (truck) and Table 5-15 (rail-to-truck) are comparable between the Constrained and Unconstrained Cases.

64-12 The transportation analysis in this NNSS SWEIS (see Appendix E) explains that accidents span a range from more-frequent, low-severity accidents to less-frequent, high-severity accidents. An accident could occur during any weather condition. The likelihood of an accident in Nevada resulting in even a small release from a typical LLW shipment in a Type A container would range from about 1 chance in 100,000 per shipment in a suburban area to 1 chance in 4,000,000 per shipment in an urban area. By specifying a particular weather condition, such as a large rainstorm, the likelihood of an accident occurring simultaneously with a thunderstorm weather condition is lower by at least a factor of 30, assuming thunderstorms occur about 12 days per year (Gorelow and Stachelski 2012). Waste shipments must meet the NNSS WAC, which stipulate, among other requirements, that the waste be free of liquids. Therefore, radioactive wastes would not be in a form that would be readily transported by water

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**



**LEGAL COMMENTS**

**Draft Site-Wide Environmental Impact Statement (EIS)  
for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada**

An EIS must "[r]igorously explore and objectively evaluate all reasonable alternatives". (40 CFR § 1502.14.) An EIS must include a discussion of "the environmental impacts of the alternatives", including "any adverse environmental effects which cannot be avoided". (40 CFR § 1502.16.) It must include discussions of "[i]ndirect effects and their significance", as defined in § 1508.8. (*Id.*) That section makes clear that "[e]ffects and impacts . . . are synonymous", and that indirect effects "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." (40 CFR § 1508.8.) Economic and social effects must be discussed in a situation, like this one, in which they are interrelated with physical effects: "When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." (40 CFR § 1508.14.) An EIS must also "[i]nclude appropriate mitigation measures". (40 CFR § 1502.14.)

An EIS must take a hard look at the project's effects on safety, and consider the risk and effects of a possible accident:

Although NEPA is primarily concerned about the environment, the regulations state that, in determining whether a federal action would "significantly" affect the environment, the agency should consider "[t]he degree to which the proposed action affects public health and safety." 40 C.F.R. § 1508.27. The agency is therefore responsible for taking a "hard look" at the project's effect on safety. *See Metro Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772, 775, 103 S. Ct. 1556, 75 L. Ed. 2d 534 (1983) (holding that the Nuclear Regulatory Commission properly considered the risk and effect of a possible nuclear accident, though it did not need to consider the effect of such risk on the psychological well-being of residents).

(*City of Las Vegas v. FAA*, 570 F.3d 1109, 1115 (9th Cir. 2009).)

**64-13**

through storm drains and dispersed in the lake. In the unlikely event that an accident severe enough to breach a waste container were to occur during a rainstorm, most of the radioactive materials would remain near the accident location. It should also be noted that radioactive waste or materials with high concentrations of radionuclides capable of resulting in significant environmental contamination are transported in more-secure and rugged packages, such as Type B packaging, with possible use of microencapsulation or other technologies designed to put the contents in a less-dispersible form, even under severe impact forces. Use of these technologies would reduce the probability of a release below those expressed above.

- 64-13** As described in Chapter 1, Section 1.1, DOE/NNSA is aware of, and has prepared the SWEIS to comply with, CEQ regulations (40 CFR Parts 1500–1508).

Additionally, DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.

**64-14**

- 64-14** As stated in the response to comment 64-2, in consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

Please see the response to 64-8 regarding the population considered along the transportation route. The consequences of potential accidents with the greatest impacts (maximum foreseeable accident) on routes near Las Vegas, Nevada, were calculated, and the results are shown in Appendix E, Table E-16, of this *Final NNSS SWEIS*. This analysis used census data projected to the year 2016, as well as generic atmospheric conditions described in Section E.6.4, because an accident could occur at any location along a route. To estimate the most-conservative (greatest) impacts, neutral atmospheric conditions were assumed when calculating impacts on the population within a 50-mile radius of the accident, and stable atmospheric conditions were assumed when considering impacts on an MEI.

DOE/NNSA performs transportation analyses to determine comparative risks among alternatives using risks calculated for the entire route. The risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor

2-222

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**

**LEGAL COMMENTS**

The Draft EIS does not rigorously evaluate the most obvious effect of the project, which is also the effect of greatest concern: a release of radioactive waste in the residential and tourist areas of metropolitan Las Vegas. Because it does not rigorously evaluate this effect, the Draft EIS overlooks physical, health, social, and economic effects of a release. Nor does it provide for any mitigation measures, nor even the most obvious: a program for containing any release, cleaning it up, and responding to the concerns of citizens and the media.

Is it reasonably foreseeable that there will be truck accidents and releases of radioactive waste as a result of the project? Of course it is. The Draft EIS concedes as much, because it evaluated radiologic risks from "all reasonably conceivable accidents" and from a "maximum reasonably foreseeable accident".

In addition to calculating the radiological risks that would result from all reasonably conceivable accidents during transportation of radioactive materials, this SWEIS assesses the highest consequences of a maximum reasonably foreseeable accident with a radioactive release frequency greater than  $1 \times 10^{-7}$  (1 chance in 10 million) per year in an urban or suburban population area along the route.

(Draft EIS, page 5-40.) But the Draft EIS has narrowed its evaluation so that it looks only at some of the effects of these accidents, and it evaluates those effects in ways that are artificially constrained. The Draft EIS does not provide a realistic discussion of reasonably foreseeable accidents or their effects.

If thousands of trucks each year carry radioactive waste through metropolitan Las Vegas, it is obvious that there will be accidents involving these trucks. Sooner or later, there is likely to be a severe accident. The Draft EIS recognizes that traffic-accident fatalities will result from the project, and it provides estimates of the number of fatalities. (Draft EIS, pages 5-39, 5-58, 5-59.) If the accidents are severe enough to kill people, they could be severe enough to scatter material across the highway, or to result in a fire. The Draft EIS refers to these events as being of "extremely low probability":

Radioactive material would be released during transportation accidents only when the package carrying the material is subjected to forces that exceed the package design standard. Only a severe fire and/or a powerful collision, both events of extremely low probability, could damage a transportation package of the type used to transport radioactive material to the extent that radioactivity would be released to the environment with significant consequences.

64-14  
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necessary for the purposes of this *NNSS SWEIS*. The transportation of LLW/MLLW and other radioactive materials would use existing highways and railroads. Because no new land acquisition and construction would be required to accommodate these shipments, this SWEIS focuses on potential impacts on human health and safety and the potential for accidents along shipment routes. It should be noted that the transport of radioactive materials and wastes occurs daily on the Nation's highways, including highways in Las Vegas, as a result of commercial and government activities (e.g., materials for nuclear medicine); therefore, the transportation activities analyzed in this *NNSS SWEIS* do not present a new or unique hazard that would require specific locations along a route to be analyzed or analysis of other aspects such as economic impacts.

As suggested in this comment, working jointly with the State of Nevada, DOE/NNSA established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada.

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**

**LEGAL COMMENTS**

(Draft EIS, page 5-40.) But powerful collisions and fires are not "events of extremely low probability" on the highways. Truck crashes kill people, as the Draft EIS recognizes in its calculation of traffic fatalities. Crashes also cause fires. No model is needed to recognize that a truck crash are reasonably foreseeable consequences of the transporting materials by truck. In any case, after the disasters of Fukushima Daiichi and the Deepwater Horizon spill, DOE should not cavalierly dismiss common types of accidents as being "of extremely low probability". Nor should the Draft EIS ignore even uncommon accidents that are reasonably foreseeable. The Draft EIS appears not to have considered the results of a vulnerability assessment prepared by Nevada by UNLV. The Draft EIS also appears not to have considered the likelihood of a runaway train—which occurred in Las Vegas only a few years ago.  
(<http://www.lvrj.com/opinion/9491752.html>.)

Fortunately, the Draft EIS seems to agree that a crash and fire are reasonably foreseeable. To "estimate the consequences of maximum reasonably foreseeable offsite transportation accidents", the Draft EIS assumed "a high-impact and high-temperature fire accident". (Draft EIS, page E-49.)

If there is "a high-impact and high-temperature fire accident", radioactive material will be released. The Draft EIS makes clear that Type A packages are not designed to withstand a fire, and are apparently not even designed to withstand falling off a truck. (Draft EIS, pages E-3, E-4.) Yet "Type A packages are transported on common flatbed or covered trailers". (Draft EIS, page E-21.) If, therefore, a flatbed truck carrying Type A packaging is involved in a serious crash and fire, there will be a release of radioactive material.

The Draft EIS appears to assume that in a crash and fire, only one Type A container will fail:

When multiple Type B or shielded Type A shipping casks are transported in a shipment, a single cask was assumed to have failed in the accident. It is unlikely that a severe accident would breach multiple casks.

(Draft EIS, page E-50.) This assumption seems plainly wrong. The Draft EIS assumes that there are 80 Type A containers on a truck. (Draft EIS, page E-24.) Surely in an accident more than one will fail.

The Draft EIS also appears to assume relatively low, homogenous population densities, even in urban areas. These assumptions are plainly wrong for Las Vegas, where hundreds of thousands of tourists are likely to be congregating a short distance downwind of the accident site.

**64-14  
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2-224

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**

**LEGAL COMMENTS**

The real problem with the Draft EIS, however, is not that the assumptions used in its model are off. The real problem is that its discussion of the results of an accident are limited to overly technical risk estimates that have little or no meaning to the affected public.

The Draft EIS should provide a clear explanation of what would happen if there is a release of radioactive material in Southern Nevada. If there is a spill, the strong winds common in Las Vegas Valley are likely to blow radioactive waste into highly populated areas where there are casinos, hotels, residences, and government buildings. No computer model is needed to reach this conclusion, which is obvious—I-15 and US 95 are lined with casinos, hotels, and residences, and both City Hall and the Clark County Government Center are not far from the Spaghetti Bowl—but a model should be used to evaluate the full area of contamination. The Draft EIS should include a map showing the residents of Las Vegas whose homes may be in the area contaminated with radioactive waste.

The headlines will read “Radioactive Waste Release in Las Vegas”, or perhaps “Radioactive Waste Disaster In Las Vegas”, and people will begin to take evasive action.

In response to inquiries by the press, DOE can be expected to reassure the public that the release is only of low-level radioactive waste, and that people should not overreact. But it is entirely foreseeable that people will start taking their own measurements, that at least one of these measurements will show elevated levels, and that a professor or radioactive-waste professional will tell the press that radiation at that elevated level carries unacceptable risks. DOE’s credibility, in the eyes of the public, will be impaired, and people will take more evasive action. Meanwhile, the press will ask the DOE what it is doing to contain and clean up the mess, and DOE will not have an answer that the public considers acceptable.

The release will result in serious traffic disruption. Traffic will have to be re-routed onto streets not designed for the crush of traffic that I-15 and US 95 handle. There will be accidents, including, fender-benders, and potentially deaths resulting from the re-routed traffic.

The areas affected by wind-blown radioactive waste are likely to be cordoned off in some way to avoid public exposure. If the cordoned-off areas include government buildings—City Hall and the Clark County Government Center are close to I-15 and US 95—then government operations will be affected. The cordoned-off areas will most likely involve casinos and hotels, whose operations will, at the very least, be seriously disrupted. The cordoned-off areas will almost certainly include residential areas, resulting in displaced residents who will need to be attended to.

Conventions will be cancelled, as will vacation reservations made by individuals and families. The contaminated areas will most likely close until they are decontaminated, which will not be immediate. Contaminated areas are likely to retain a stigma for years or decades, which will affect the property value of residences and the willingness of tourists to visit casinos and hotels.

**64-14  
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**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**

**LEGAL COMMENTS**

Although Las Vegas is in the desert, from time to time there are hard rains that result in flash floods. If the radioactive release is followed by rain, radioactive waste will be washed into Lake Mead, which is both the recipient of stormwater from Las Vegas Valley and the source of drinking water from Las Vegas Valley.

The public will be concerned about the potential for radioactive waste in its drinking water. Experts will tell the press that some radioactive materials, like tritium, cannot be removed by the treatment techniques used by drinking-water plants. Public concern may spread to Los Angeles and Southern California, which receive much of their drinking water supply from the Colorado River downstream of Las Vegas. Public concerns will require governments to take action. It should be obvious that a release in metropolitan Las Vegas will have consequences far beyond those considered in the Draft EIS. The Draft EIS should therefore be revised to provide a proper evaluation of these effects.

The Draft EIS should also provide for mitigation of these effects. At the very least, there should be a plan for containing and cleaning up any release of radioactive waste. Despite the length of the Draft EIS, however, there is almost nothing on mitigation. Here is the section on mitigating the risks from transportation *in its entirety*:

Radiological and nonradiological risks to the public would result from overland transport of radioactive and nonradioactive wastes. These risks would be reduced by choosing (to the extent practicable) waste transportation routes that minimize both impacts from potential exposure to radiation during incident-free transport and postulated accidents and the potential for traffic accidents. Other measures to mitigate impacts could include (to the extent practicable) scheduling transports of wastes during periods of lighter traffic volume and training local emergency response personnel.

(Draft EIS, page 7-3.) No one disputes that the risks can be reduced "by choosing ... waste transportation routes that minimize ... postulated accidents". Consistent with this statement, DOE should choose transportation route that minimize postulated accidents *by avoiding metropolitan Las Vegas*.

It should also be obvious that DOE should have a mitigation plan for responding to the release of radioactive waste. But the Draft EIS appears not to discuss responses to foreseeable releases. DOE's intent seems to be to leave the mess for local authorities. Leaving the mess to someone else is not acceptable mitigation.

**64-14  
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2-226

**Commentor No. 64 (cont'd): Carolyn G. Goodman, Mayor,  
City of Las Vegas**

**LEGAL COMMENTS**

Although the mitigation analysis for transportation (quoted above) is short, the mitigation analysis for socioeconomics is even shorter:

No adverse impacts are expected over the course of the next 10 years.  
Therefore, no mitigation measures are proposed.

(Draft EIS, page 7-3.) How can this be? Does DOE really think there will be no socioeconomic impacts from a release of radioactive waste in metropolitan Las Vegas?

In short, the Draft EIS does not sufficiently consider the effects of a release of radioactive waste in metropolitan Las Vegas, and provides no mitigation for those effects. The Draft EIS should be revised and re-circulated for additional comments. It should be revised to include a full evaluation of these effects, and to eliminate the Unconstrained Case. It should be obvious that the better alternative is to continue doing what DEO long ago committed to—i.e. to route shipments so that they avoid metropolitan Las Vegas as much as possible.

**64-15**

**64-16**

**64-15** In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

**64-16** As noted in the response to comment 64-2, in consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; this should mitigate the concerns raised by the commentor.

Please refer to the response to comment 64-14 regarding the level of analysis of transportation impacts included in this *NNSS SWEIS*; as indicated, it is not reasonable or practical to evaluate impacts on individual localities along transportation routes.

**Commentor No. 65: Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**



STATE OF NEVADA

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December 2, 2011

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Ms. Linda Cohn, SWEIS Document Manager  
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P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Re: State of Nevada Comments on the DOE/NNSA Draft Site-Wide EIS  
for the Nevada National Security Site and Off-Site Locations in Nevada

Dear Ms. Cohn:

Attached are the State of Nevada's comments on the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in Nevada*. These comments reflect input from various State of Nevada agencies, including the Nevada Attorney General's Office, the Nevada Agency for Nuclear Projects in the Office of the Governor, the Nevada Division of Environmental Protection, the Nevada Division of Water Resources, the Nevada Department of Transportation, the Nevada Highway Patrol, and the Nevada Division of Emergency Management.

Thank you for the opportunity to comment on this extremely important document. Should you have questions with regard to these comments, or if you would like additional information, please contact me at 775-684-1237 or Mr. Robert Halstead, Executive Director of the Nevada Agency for Nuclear Projects, at 775-687-3744.

Sincerely,

CATHERINE CORTEZ MASTO  
Attorney General

By:

MARTA A. ADAMS  
Chief Deputy Attorney General  
(775) 684-1237

MAA/cg  
Attachment

cc: Governor Brian Sandoval  
Attorney General Catherine Cortez Masto  
Nevada Congressional Delegation  
Nevada Commission on Nuclear Projects  
Legislature's Committee on High-Level Radioactive Waste

Telephone 775-684-1100 • Fax 775-684-1108 • www.ag.state.nv.us • E-mail aginfo@ag.nv.gov

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

**STATE OF NEVADA COMMENTS ON THE  
DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE DEPARTMENT OF  
ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS  
IN THE STATE OF NEVADA<sup>1</sup>**

December 2, 2011

**Introduction**

The State of Nevada appreciates the opportunity to provide comments on the Department of Energy's (DOE) draft Site-Wide Environmental Impact Statement for Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site (NNSS) and Off-Site Locations in Nevada (draft EIS).

Nevada is very concerned that the draft EIS appears to be setting the stage for abandonment by DOE of a long-standing agreement between the State and DOE whereby low-level radioactive waste (LLW) and mixed hazardous and low-level radioactive waste (MLLW) are required to be transported to NNSS using highway routes that avoid the heavily populated Las Vegas metropolitan area (see letter from Governor Sandoval to Energy Secretary Chu – Attachment C). The original agreement between then-Governor Kenny Guinn and then-Secretary of Energy Bill Richardson also banned waste shipments over Hoover Dam. However, that has since become moot due to security restrictions put in place following the 9/11 ban on such shipments from traversing the Dam. Under the “unconstrained routing scenario” evaluated in the draft EIS, DOE is proposing to abdicate this agreement and allow shipments of LLW and MLLW directly through the Las Vegas Valley using I-15, the I-15/US 95 interchange (known as the Spaghetti Bowl), and the Las Vegas Beltway. In addition, the unconstrained routing scenario would allow waste to be shipped over the new Hoover Dam bypass bridge and funnel waste into the Las Vegas metro area from the south. As discussed in more detail later in these comments, the State of Nevada strongly opposes shipments of LLW, MLLW or other NNSS-related nuclear materials through the Las Vegas metropolitan area or the Hoover Dam bypass bridge and will aggressively contest any decision to undertake such shipments using all means available.

The State is also concerned that the discussion of groundwater contamination from past NTS (Nevada Test Site)/NNSS activities does not appear to be sufficient for assessing the

<sup>1</sup> These comments were prepared with input from the following State of Nevada agencies: The Nevada Attorney General's Office, the Nevada Agency for Nuclear Projects in the Office of the Governor, the Nevada Division of Environmental Protection, the Nevada Division of Water Resources, the Nevada Department of Transportation, the Nevada Highway Patrol, and the Nevada Division of Emergency Management.

- 65-1** In Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*, DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).
- 65-2** While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas, Nevada (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).
- 65-2** Groundwater resources at the NNSS, including groundwater use, depth to groundwater, recharge and discharge, water supply systems, and groundwater monitoring and quality, are described in Chapter 4, Section 4.1.6.2, of this SWEIS. Chapter 5, Section 5.1.6.2, provides estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic and projected future demands on this groundwater to support ongoing and proposed projects and activities under each alternative. Chapter 6, Section 6.3.6.2, analyzes the potential cumulative impacts of past nuclear weapons testing on groundwater. When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal

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cumulative loss of this resource as a result of those activities. Nor does the information contained in the draft EIS provide an adequate basis for evaluating the value of that resource which has been – and will continue to be – lost to present and future generations as a result of past, present and future contamination. Specifically, the 2011 Nevada Legislature passed a resolution tasking the Attorney General's Office, the State Department of Conservation and Natural Resources, and the Governor's Office Agency for Nuclear Projects to prepare a report for the 2013 Legislature addressing "whether Nevada could potentially receive monetary compensation from the Federal Government for contamination of the environment in Nevada with radioactive and other hazardous contaminants as a result of military exercises, nuclear weapons testing and other activities conducted by the Federal Government in Nevada." Contamination from NTS/NNSS activities will of necessity be a major focus of this investigation, and the information contained in the final EIS must be such that it provides a full and complete picture of the groundwater resource that has been removed from the public domain and rendered unavailable for beneficial use, the level and distribution of contamination of that resource, and the potential, if any, for future beneficial uses of the resource.

The draft EIS fails to identify any areas of NNSS or off-site locations that might be candidates for return to public use or, in the alternative, for opening up access for certain public purposes/activities. Even under the "Reduced Operations" alternative, there is no consideration of freeing up land currently removed from the public domain that might be released due to reduced need for national security, waste management, or other purposes. The final EIS should contain a section dealing specifically with the potential relinquishment of any areas of NNSS that are potentially reasonable candidates for return to the public domain<sup>2</sup>. One such area might be the former NNSS portion of the former Yucca Mountain site and Area 25, since most of this area has not been contaminated by weapons testing or other NNSS activities and it is located on the southwestern boundary of NNSS close to the Amargosa Valley and US 95. Likewise, there could be other sections of NNSS that are appropriate candidates for relinquishment or for some sort of alternative public uses.

In scoping comments for the Site-Wide EIS, the Nevada Attorney General suggested that DOE consider circumstances that would require perpetual withdrawal of those areas of NNSS where there is soils and groundwater contamination from past atmospheric and below-ground nuclear testing and for which DOE has no path forward for clean-up and remediation. While far exceeding the 10 year time horizon established for the current EIS, it would be helpful for the final EIS to evaluate a potential future scenario in which DOE must maintain sole control of vast areas of NNSS that must remain isolated from other uses in perpetuity. This alternative would require DOE to seek congressional legislation to establish a perpetual withdrawal of land, and it would have significant implications in terms of long-term stewardship, costs, etc.

<sup>2</sup> To do this, the final EIS might establish criteria for identifying areas that are candidates for possible relinquishment or opening to additional public uses, such as areas with little or no radiological or other contamination, areas located in proximity to NNSS borders, areas where there would be no security concerns for other NNSS activities, etc.

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reserved water right at the NNSS to support its mission requirements, one of which includes complying with the FFACO to characterize and monitor locations that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

In response to comments, Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe the current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4–20 and 4–21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater. DOE/NNSA is continuing to work through UGTA to seek additional and enhanced data regarding the extent of groundwater contamination at the NNSS.

Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and sensitive activities on site.

Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.

Although DOE/NNSA activities require the entire NNSS (about 1,360 square miles), these activities are not inconsistent with periodic visits by the public (including American Indians for purposes related to their cultural affiliation with the lands of the NNSS) or certain commercial activities proposed to be developed on the site (e.g., commercial solar power generation facilities). Public visits and commercial

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**General Comments**

**Summary**

**Summary – Introduction (S.1)**

The discussion of the history leading up to the 1996 Final EIS for the Nevada Test Site (NTS) and Off-Site Locations in Nevada and associated Record of Decision should note that the 1996 EIS resulted from litigation brought by the State of Nevada over the permitted uses of NTS under the original land withdrawal legislation that contained clear language as to the specific mission and uses for the NTS. While progress has been made over the years, the issue remains technically unresolved.

There continue to be unresolved land use issues associated with NNSS that are not adequately addressed in the draft EIS. As Nevada has noted in numerous comments and communications over the years, the original 1952 administrative land withdrawal for the Nevada Test Site (Public Land Order 805) specified its use as a “weapons testing site.” In 1994, the State of Nevada filed a complaint in the U.S. District Court in Las Vegas, alleging that the land withdrawals for NTS do not include waste disposal from offsite sources as an intended use of the land. A settlement agreement signed in April 1997 committed DOE to initiate “consultation with the United States Department of the Interior concerning the status of existing land withdrawals for the NTS with regard to low-level waste storage/disposal activities.” Although DOE has indicated that consultations with the Department of Interior have concluded, the State has continuing concerns about off-site waste disposition. These matters are not addressed in the draft EIS.

**Summary – Table S-1**

In the table comparing the three alternatives, under “Work for Others Program”, in the Expanded Operations Alternative, there is the bullet that states: “Conduct experiments using existing boreholes at NNSS to sequester emissions such as radionuclides.” Is NNSS permitted to do borehole injection for this purpose? How does this comport with the State’s permitting process for underground injection wells or for hazardous waste disposal pursuant to the Resource Conservation and Recovery Act (RCRA) program administered by the Nevada Division of Environmental Protection (NDEP)? How is it determined what radionuclides and in what amounts are permitted to be “sequestered” in existing boreholes? The groundwater under NNSS is already contaminated with 130 million curies of radiation. Will this add to the contamination of the groundwater? If not, why not? How are provisions of Nevada’s Water Pollution Control Law met with respect to this prospective groundwater contamination to be addressed?

**Summary – Decisions Resulting from the Site-Wide EIS (S.2.5)**

Nevada does not agree with the statement that, “decisions on routing [LLW, MLLW and other radiological materials shipments] would not be made as part of this National Environment Policy

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activities are and would be conducted under the safeguards and security protocols of DOE/NNSA, which limit the frequency and nature of public visits and could restrict commercial activities from time to time. For this reason, DOE/NNSA is able to allow properly cleared and escorted public visitation and the development of commercial projects without hindering its national security activities while continuing to protect the offsite public.

With respect to Yucca Mountain, DOE recognizes that it has an obligation to remediate lands disturbed by its past activities, including those associated with the former Yucca Mountain Repository Project. When funds have been appropriated by Congress for this purpose, DOE plans to prepare a detailed proposal to remediate the lands and close the infrastructure and buildings, then undertake further NEPA review, as appropriate.

The original land withdrawals for the NNSS were made between 1952 and 1965 and do not have an expiration; thus, it is expected that DOE/NNSA will maintain responsibility for the NNSS for the foreseeable future. As discussed in Chapter 1, Section 1.2, Congress and the President have established the core missions of DOE/NNSA and, as a result, DOE/NNSA retains a corresponding, long-term stewardship of the NNSS, separate and apart from the legal basis for control of the real estate. This is evidenced by the DOE/NNSA NSO policy to implement, maintain, and enforce institutional controls that restrict access to, and use of, the NNSS and to ensure the continuity of appropriate institutional controls in the future (DOE/NNSA/NSO Policy NSO P454.X, Institutional Control of the Nevada Test Site, 2008).

DOE/NNSA believes there remain no open or unresolved land use issues relative to ongoing or proposed activities at the NNSS and the public land orders that provide the jurisdictional basis for DOE’s stewardship and management of the lands constituting the NNSS. Furthermore, DOI has not identified any unresolved issues with respect to the current land withdrawal status.

As described in Chapter 4, Section 4.1.1.3, as part of the April 1997 Settlement Agreement resolving State of Nevada litigation regarding radioactive waste disposal at the Nevada Test Site (now the NNSS), DOE committed to initiate “consultation with the United States Department of the Interior (“DOI”) concerning the status of the existing land withdrawals for the NTS with regard to low-level waste storage/disposal activities.” The consultation process with DOI was initiated by DOE shortly thereafter and concluded in November 2009, with DOE/NNSA’s acceptance of custody and control of the approximately 740 acres constituting the NNSS Area 5 RWMC. As required by the Settlement Agreement, DOE conveyed the results of its consultation

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Act (NEPA) process." The transportation of LLW, MLLW and other nuclear materials shipments into and out of NNSS is a major driver of impacts associated with NNSS activities. Different routing scenarios will result in vastly different manifestations of impacts. For example, routing tens of thousands of waste shipments through the densely populated Las Vegas metropolitan area, along the state's major tourism corridor, and through the heart of the most important economic area of the state will potentially cause impacts far different from a routing scheme that utilizes rural highways through sparsely populated areas of the state. The analyses contained in the final EIS must be directly related to any such routing decisions, and such decisions must be part of the NEPA process.

**Summary – Transportation and Traffic (S.3.1.2)**

Nevada contends that the "Unconstrained Case" for routing of LLW and MLLW shipments into NNSS for disposal should not have been included in the draft EIS at all. As noted above, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed in 1999 that shipments of LLW and MLLW being imported to the NTS/NNSS from other DOE facilities would use highway routes that avoid the heavily populated metropolitan Las Vegas area, including the interchange known as the 'Spaghetti Bowl' where Interstate 15 and US 95 meet. (At the time, DOE also agreed to keep LLW and MLLW shipments off Hoover Dam, but that has since become moot because of Homeland Security restrictions that were instituted following 9/11.) This arrangement was part of a larger, albeit informal, agreement whereby Governor Guinn agreed not to challenge the Record of Decision for DOE's Waste Management Programmatic Environmental Impact Statement designating NNSS/NTS as a regional disposal site for LLW and MLLW resulting from clean-up activities at other DOE locations. In exchange, Secretary Richardson agreed to certain "equity considerations" on the part of DOE, a key one of which was the highway routing concession.

The inclusion of the "Unconstrained Case" in the draft EIS appears to represent an attempt by DOE to abrogate this agreement which has served the best interests of both DOE and Nevada for over 12 years. Nevada intends to pursue every avenue available to assure that DOE continues to honor this agreement and shipments of LLW and MLLW continue to be routed away from the Las Vegas metro area.

Overall, the analysis of transportation impacts contained in the draft EIS is inadequate. It relies entirely on an overly general evaluation of radiological effects associated with such shipments and fails to consider route specific conditions and factors critical to understanding how transportation impacts will be felt and how they relate to key economic and other conditions unique to the State of Nevada and varying conditions along different routing alternatives. No effort is made, for example, to assess the economic impacts associated with waste transportation to the site (potentially impacting Nevada's major population areas and economic sectors). Likewise, no attempt was made to assess impacts to property values along shipping routes, impacts to tourism, impacts to economic development from negative perceptions of risk and/or

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to the State of Nevada in a letter dated December 18, 2008. These actions relative to the status of land withdrawals and LLW storage/disposal activities satisfy the provisions of the Settlement Agreement between DOE and the State of Nevada.

DOE/NNSA believes the commentor is referring to a proposed project to support NASA in their development of nuclear rocket motors, including the use of existing boreholes on the NNSS to examine for proof-of-concept the use of deep alluvial basins for sequestering radionuclide emissions. As mentioned in Chapter 3, Section 3.2.1.3, proof-of-concept tests would use a surrogate, such as xenon spiked with a radionuclide that has a short half-life, in a borehole to evaluate the effectiveness of alluvium for sequestering radionuclide emissions. DOE/NNSA also explains in Chapter 3, Section 3.2.1.3, that it needs to identify applicable regulatory requirements for these proof-of-concept experiments prior to their conduct.

As described in Chapter 5, Section 5.0, a number of projects and activities addressed in this SWEIS are in their early phases of development and their potential environmental impacts are less well-known than ongoing or more fully developed proposed activities. To assess potential environmental impacts from all such activities, it was necessary for DOE/NNSA to estimate at a programmatic level certain aspects of the more conceptual proposed activities. Based on this approach, DOE/NNSA estimated the potential environmental impacts from this proposed project and concluded in Section 5.1.6.2.2.1 that "Any radioactive materials released in the subsurface in this [proof-of-concept tests]...would have short half-lives, be used well above the groundwater table, and are not expected to adversely affect groundwater quality."

In addition, as noted in Chapter 4, Section 4.1.5.4.2, and Chapter 6, Section 6.3.6.2, of this *Final NNSS SWEIS*, the total underground radiological source term, decay-corrected to September 23, 1992, is about 132 million curies, based on a 2001 study by Bowen et al. However, only a portion of that source term would be available to become incorporated in the hydrologic source term, as explained in Section 6.3.6.2 and Appendix H.

**65-7**

As stated in the response to comment 65-1 above, in Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*, DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over

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accidents involving waste, etc. The transportation analyses contained in the draft EIS are incomplete and seriously deficient.

Summary – Socioeconomics (S.3.1.1)

Assessing only the employment effects and population effects on area communities misses entirely potentially significant economic and other impacts associated with NNSS activities, especially those related to radioactive waste and radiological materials transportation through heavily populated urban areas. The draft EIS ignores the potential impacts associated with the stigmatizing effects of nuclear-related activities on areas and economic/industrial sectors. This is especially significant in the event of accidents or terrorism/sabotage incidents occurring in or near the Las Vegas metropolitan area. Extensive research by the State of Nevada, independent researchers and even DOE-affiliated researchers have documented the potential for impacts to property values along shipping routes, negative economic impacts due to suppressed tourism and other commercial activities, etc. Any analysis of socioeconomic impacts is deficient if it fails to address the unique effects of nuclear activities and nuclear waste/materials shipments on unique local conditions.

Summary – Groundwater Hydrology (S.3.1.4)

The information contained in the draft EIS is insufficient to assess the full nature of contamination of the groundwater resource underlying NNSS and the value of that resource which has been (and will continue to be) lost to present and future generations of Nevadans as a direct result of past, present and future NNSS activities.

The draft EIS states that tritium has been found in Well ER-EC-11, but ignores the September 1997 report by scientists from the U.S. Department of Energy's Lawrence Livermore and Los Alamos National Laboratories that showed plutonium attached to colloids from an underground nuclear weapons test at Pahute Mesa had migrated almost a mile from the where the test took place. This finding contradicts DOE's predictions about how fast plutonium can move through the underground rock. Until this report, DOE and its scientists had contended that plutonium movement would be very slow - several inches or feet over hundreds of years.

Summary – Figure S-9

The Table indicates that the range and abundance of desert tortoises in the "former Yucca Mountain Site" portion of NNSS is "unknown." Given the extensive environmental and other studies conducted for the now-defunct Yucca Mountain program, it is difficult to believe that this is accurate.

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the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the 1996 NTS EIS [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process.

Once waste generators have selected the mode of transportation and satisfied the requirements to protect health and safety through appropriate packaging, carriers have the responsibility for selecting a route that minimizes radiological risk. The routes analyzed within the SWEIS (Constrained Case) reflect transportation routes that have been used by carriers in the past that are consistent with the NNSS WAC and are representative of routes that carriers are likely to use in the future.

Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011). While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

As discussed above in response to comment 65-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

DOE performs transportation analyses to determine comparative risks among alternatives using risks calculated for entire routes. The risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor necessary for the purposes of this NNSS SWEIS. The transportation of LLW/MLLW and other radioactive materials would use existing highways and railroads and, as

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General****Summary – Waste Management (S.3.1.9)**

The draft EIS should have included information on the amount of Greater-Than-Class-C (GTCC) waste that could be disposed of at NNSS under the Yucca Mountain alternative considered in the draft EIS for Disposal of GTCC Waste. Since the draft GTCC EIS specifically identifies NNSS as an alternative for each of the disposal alternatives addressed in the draft GTCC EIS (boreholes, trenches and vaults), the draft NNSS site-wide EIS should have included GTCC waste in its analysis of impacts resulting from potential future NNSS activities. In the alternative, if NNSS is no longer being considered as a disposal site for GTCC waste – something the State of Nevada has long advocated – the draft EIS should stipulate to that fact clearly and without equivocation.

**Summary – Waste Management (S.3.1.9)**

Table S-11 summarizes “Waste Generated and Disposed at the Nevada National Security Site.” Under the No Action and Reduced Operations alternatives, 15.9 million cu.ft. of LLW and MLLW are projected for disposal at NNSS, while the Expanded Operations alternative contemplates a three-fold increase to 52 million cu.ft. Nevada is concerned that the draft EIS fails to evaluate potential disposal alternatives for such waste and the differential impacts associated with disposal at NNSS vs. disposal at available commercial facilities. There has long been concern that DOE’s use of NNSS for disposal of LLW and MLLW resulting from clean up of other DOE sites around the country represents unfair and government-subsidized competition with existing commercial disposal facilities such as the Energy Solutions facility in Utah and the Waste Control Specialists (WCS) facility in Texas. At the very least, the draft EIS should have contained an evaluation of the relative costs and impacts associated with existing disposal options (i.e., NNSS, Energy Solutions, WCS) and a supportable rationale for using NNSS as the preferred site for the large waste volumes projected in the draft EIS.

There is also no rationale given for maintaining the same level of LLW and MLLW disposal under the “Reduced Operations” alternative, when for other NNSS activities, the draft EIS assumes reduced levels of activity. Why did the draft EIS not assume greater use of commercial facilities under the “Reduced Operations” alternative?

**Summary – Areas of Controversy (S.4.2)**

In discussing the controversy surrounding the “Unconstrained Case” for routing LLW and MLLW shipments, the draft EIS asserts that using I-15 and the Las Vegas beltway through metropolitan Las Vegas is now acceptable because of improvements to the area’s highway system that were not in place when the original agreement was made:

“DOE/NNSA committed to avoid [routes that transit metro Las Vegas] at a time when major highways, specifically I-15 and U.S. Route 95, were unable to accommodate the growing traffic volume. Since then, these highways have been widened and otherwise

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such, would represent a small fraction of the existing national and local (Nevada) highway and railway traffic. Because no new land acquisition and construction would be required to accommodate these shipments, this SWEIS focuses on potential impacts on human health and safety and the potential for accidents along shipment routes. In addition, the transport of radioactive materials and wastes occurs daily on the Nation’s highways as a result of commercial and government activities; therefore, the transportation activities analyzed in this *NNSS SWEIS* do not present a new or unique hazard that would require specific locations along a route to be analyzed or analysis of other aspects such as economic impacts. This approach is consistent with CEQ’s guidance to agencies that EISs “focus on significant environmental issues and alternatives” (40 CFR 1502.1) and discuss impacts “in proportion to their significance” (40 CFR 1502.2(b)). Appendix E, Section E.6, was revised to include additional discussion of this point.

As described in Appendix E, Sections E.4 and E.4.1, route characteristics that are important to the radiological risk assessment, and therefore are discriminating factors when comparing the alternatives, include the total shipment distance and population distribution along the route. The population density along each analyzed route was projected to 2016, assuming state-level population growth rates between 2000 and 2010.

**65-14**

Regarding perceived risks that the public may have in association with the transport of radioactive materials and wastes, DOE/NNSA did not attempt to quantify any adverse socioeconomic impacts associated with waste transportation under normal operations or accident scenarios. In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

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Please see the response to comment 65-9 above regarding the perceived risk and stigma associated with the transportation of SNF and HLW in consideration of the environmental analyses in this *NNSS SWEIS* and stakeholder comments, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

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improved, the Bruce Woodward Beltway (Interstate 215 and Clark County Route 215) around Las Vegas has been expanded, and the bypass bridge has been constructed nearby Hoover Dam." (draft EIS, p.S-94)

While I-15 and the beltway have undergone almost constant reconstruction over the past decade in an effort to mitigate ever-increasing traffic, congestion and gridlock continue to be major problems. Since 1999, the population of the Las Vegas metropolitan area has increased exponentially, and the rationale for keeping waste shipments out of the area is stronger and more compelling now than it was in 1999.

The new Hoover Dam bypass bridge has created a whole new area of traffic congestion and gridlock due to the extremely heavy tourist traffic to and from both sides of the bridge and the increased numbers of large trucks using the route. Traffic is routinely backed up for miles approaching the new bridge.

Summary – Issues to be Resolved (S.4.3)

The issue involving allowable land uses and the inconsistency between the language of the original (and still current) land withdrawal orders and legislation and the evolving mission and activities ongoing or planned for NNSS still needs to be resolved (see discussion above). The draft EIS should address this matter and set forth a clear path towards resolving it (i.e., a commitment to seek congressional action to change the allowable land uses as specified in proposed legislation).

As discussed above, potential relinquishment of areas of NNSS for public use should be addressed in a separate section of the final EIS.

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Introduction and Purpose and Need for Agency Action (1.0)

See comments for S.1 above

Decisions to be Supported By this Site-Wide Environmental Impact Statement (1.4)

The fact that the draft EIS does not identify a preferred alternative can be seen as a significant shortcoming of the document and DOE's approach to the NEPA process for NNSS. Without an identified preferred alternative, neither the State of Nevada nor other interested or affected parties are afforded insight into DOE's realistic vision for NNSS over the next 10 years. DOE should have sufficient information from its analysis of current and possible future uses of NNSS to clearly articulate a preferred alternative. Only by doing so can affected parties provide comments and feedback on how realistic DOE's judgment may be and whether impacts associated with the preferred alternative have been adequately identified and addressed.

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**65-11** DOE/NNSA believes the analysis in this SWEIS is sufficient for purposes of differentiating among the alternatives considered for continued operation of the NNSS. Chapter 6, Section 6.3.6.2, provides DOE/NNSA's estimation of potential cumulative environmental impacts on groundwater resources resulting from past nuclear weapons testing on the NNSS.

Although DOE/NNSA believes the groundwater analyses in the *Draft NNSS SWEIS* were sufficient for purposes of differentiating among alternatives, as noted in the response to comment 65-2 above. In response to a number of requests, this *Final NNSS SWEIS* has been revised to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed for the FFACO and in coordination with NDEP, to better describe current knowledge of the extent of groundwater contamination at the NNSS.

As reported by Kersting et al. (1998), groundwater samples taken at well ER-20-5 in 1997 contained low concentrations (from 0.0085 to 0.63 picocuries per liter, or about 4.2 percent of the SDWA limit of 15 picocuries per liter) of plutonium, apparently associated with colloids. Well ER-20-5 is located on the southwestern part of Pahute Mesa, about 4,265 feet south of the Benham underground nuclear test and 984 feet west of the Tybo underground nuclear test. Analysis of the plutonium in the groundwater samples demonstrated that it was from the Benham test, rather than the Tybo test. Kersting et al. noted, "this is the first time Pu [plutonium] has been shown to be transported by groundwater and for a significant distance." A low concentration of plutonium (0.42 picocurie per liter which is 3.8 percent of the SDWA limit of 15 picocuries per liter) was found in subsequent samples taken from well ER-20-5 #1 in 2004 (Eaton et al. 2007). In a study following the discovery of plutonium at well EC-20-5, Smith et al. (2003) noted that, "general experience from the U.S. nuclear testing program based on radiochemical diagnostic data collected from a variety of test matrices suggest that only a small fraction (5 to 10 percent) of the total plutonium from an underground nuclear detonation would be available for transport in groundwater." More-detailed information regarding the potential for plutonium migration in groundwater in and around Pahute Mesa at the NNSS has been added to Chapter 4, Section 4.1.6.2.

DOE/NNSA, in consultation with NDEP, developed a UGTA Corrective Action Strategy to address the contamination created by the testing of nuclear devices in shafts and tunnels at the NNSS. The UGTA Corrective Action Strategy is discussed in detail in Chapter 4, Section 4.1.6.2, of this *Final NNSS SWEIS*.

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The use of bounding alternatives such as in the draft EIS may be appropriate for new programs or projects/facilities in their early stages, but NNSS/NTS has been in existence for six decades. At this stage, DOE knows – or should know – with great specificity what activities are likely to be undertaken at the site during the next 10 years. The final EIS should clearly specify a preferred alternative.

Relationship Between this Site-Wide EIS and other NEPA Analyses (1.5)

The draft EIS fails to identify DOE's draft EIS for Disposal of Greater-Than-Class-C Waste and its relationship to activities evaluated for the draft NNSS site-wide EIS. As noted above, as long as NNSS is identified as a site for the waste disposal alternative contained in the draft GTCC EIS, the implication of GTCC waste disposal at NNSS must be fully evaluated in the draft EIS. In the alternative, a definitive statement indicating that NNSS is no longer being considered for GTCC waste disposal must be included in the final EIS.

The discussion of the Record of Decisions (ROD) for DOE Waste Management Programmatic EIS should include the agreement between Nevada Governor Guinn and Energy Secretary Bill Richardson regarding equity considerations for designation of NNSS as a regional disposal facility for LLW and MLLW, including commitments to use shipping route that avoid the Las Vegas metropolitan area and commitments to provide emergency response/preparedness assistance for rural communities along shipping routes.

Site Overview and Update (2.0)

Physical Changes (2.5.2)

In the discussion of the Area 5 Land Transfer, the draft EIS states that "This consultation process [required as part of the 1997 Settlement Agreement with the State of Nevada over allowable land uses at NNSS] concluded with NNSA's formal acceptance of custody and control of approximately 740 acres constituting the Area 5 RWMC in land transfer action." The transfer of a small amount of land from one federal entity to another does not represent the conclusion of the overall land use issue that is at the heart of the State's concerns and that prompted Nevada's legal action in the 1990s. The land withdrawal legislation for NTS/NNSS specifies that the withdrawn land is to be used for weapons testing activities. In recognition of the evolving mission of NNSS and the range of current and proposed activities undertaken there, DOE needs to seek congressional action broadening the existing land withdrawal language. Until that is done, the "consultation" required by the 1997 Settlement Agreement cannot be concluded.

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**65-12** Figure S-11 in the Summary is the same as Figure 4-24 in Chapter 4. Both figures are based on desert tortoise surveys conducted on the NNSS that did not include the Yucca Mountain site because, at the time of the surveys, that area was under the jurisdiction of the Yucca Mountain Repository Project. Although desert tortoises are indeed known to occur within the area identified as the "Former Yucca Mountain Site" in Figures S-11 and 4-24, DOE/NNSA does not have compatible data to use in developing these figures. For purposes of the analysis in this *NNSS SWEIS*, desert tortoise population density on the "Former Yucca Mountain Site" was assumed to be similar to that on adjacent areas of the NNSS. A clarifying statement has been added to the text in Section 4.1.7.3.

**65-13** As the commentor notes, DOE has issued a *Draft GTCC EIS* (DOE/EIS-0375) that evaluates the potential impacts of a variety of technologies and locations for the disposal of GTCC LLW and DOE GTCC-like waste. A Notice of Availability of the *Draft GTCC EIS* for public comment was published in the *Federal Register* on February 25, 2011 (76 FR 10574). Although the *Draft GTCC EIS* does not address an alternative involving GTCC waste disposal at Yucca Mountain, the commentor correctly notes that the NNSS is one of the evaluated candidate sites. DOE has not yet made a decision regarding GTCC waste disposition. Therefore, rather than evaluating GTCC waste management at the NNSS as a mission assigned to the NSO, it is discussed as a reasonably foreseeable future action in this *NNSS SWEIS* in Chapter 6, "Cumulative Impacts." Section 6.2.1.2 includes a description of the facility, and Section 6.3 presents the cumulative impacts of the activities evaluated in this *NNSS SWEIS*, as well as other activities, including construction and operation of a GTCC waste disposal facility.

Disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant to the *WM PEIS* (DOE/EIS-0200). In accordance with the *WM PEIS* ROD (65 FR 10061) issued on February 25, 2000, DOE decided to continue onsite disposal of LLW at NNSS and certain other DOE sites and to establish regional disposal capacity at the NNSS and the Hanford Site. Specifically, in addition to disposing their own LLW, the NNSS and the Hanford Site would dispose LLW generated at other DOE sites, provided the waste met their respective WAC. DOE decided to treat MLLW at a number of DOE sites, with disposal at either the NNSS or the Hanford Site. Neither decision precludes DOE's use of commercial disposal facilities consistent with DOE Orders and policy. Only a small percentage of the LLW/MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW/MLLW is disposed of at the site where they are generated. About half of the remaining quantities are disposed of at commercial facilities.

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State of Nevada, Office of the Attorney General**

Description of Alternatives (3.0)

Comparison of Mission-Based Program Activities Under the Proposed Alternatives (Table 3-1)

Under the Environmental Management Mission "Expanded Operations Alternative," the Table notes that the currently closed Area 3 Radioactive Waste Management Site (RWMS) would be opened for disposal of authorized and/or permitted waste. The State of Nevada would likely object to the re-opening of the Area 3 RWMS for LLW or MLLW disposal unless there is a firm DOE commitment that any future waste disposal would be in strict compliance with RCRA Part B requirements for hazardous and mixed waste disposal facilities and with NRC requirements for LLW disposal facilities.

Expanded Operations Alternative (3.2)

Waste Management Program (3.2.2.1)

The Expanded Operations Alternative postulates a more than threefold increase in LLW and MLLW imported into NNSS for disposal. Because of the transportation implications and impacts associated with such a major increase in waste volumes, the State of Nevada has serious concerns about such a proposal. Before DOE moves to significantly increase the amount of LLW and/or MLLW imported to NNSS for disposal, DOE should assess availability of commercial disposal facilities and clearly document why NNSS should be used in favor of one or more available commercial sites. It is Nevada's position that NNSS should be the disposal choice of last resort, and that DOE should be working to minimize the amount of waste imported to NNSS for disposal and maximize the use of available commercial disposal locations rather than competing with the private sector as a waste disposal operator.

The draft EIS indicates that under the Expanded Operations Alternative, "... NNSS would treat and store various types of MLLW received from on- and offsite generators. MLLW treatment capacity would be developed within the Area 5 RWMC, including macroencapsulation, stabilization/microencapsulation, sorting/segregating, bench-scale mercury amalgamation of both onsite- and offsite-generated MLLW." The importation of offsite MLLW for treatment at NNSS represents a significant augmentation in the waste management mission for NNSS. Nevada contends that such a program would necessarily require additional NEPA reviews and documentation and should not be considered without consultation with and concurrence of the State. Before any such program is considered, DOE should be required to demonstrate that no other commercial facilities or existing DOE facilities are available for such MLLW waste treatment.

Nondefense Mission (3.2.3)

One activity not mentioned in the draft EIS that could prove beneficial to both DOE and the State of Nevada under an Expanded Operations Alternative would be the establishment of a

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Issues such as disposal costs are outside the scope of this *NNSS SWEIS*, the purpose of which is to evaluate environmental impacts of the continued operation of the NNSS. DOE/NNSA notes, however, that the intent of this *NNSS SWEIS* is not to support competition with existing commercial disposal facilities, but to provide NEPA analysis for NNSS disposal of LLW and MLLW that could be received from authorized DOE generators. Commercial disposal capacity may or may not exist in the future, and such capacity may or may not be cost-effective at the time of waste generation. For purposes of this NEPA analysis, it was conservatively assumed that the projected quantities of LLW and MLLW from out-of-state sources would all be disposed at NNSS. But as LLW and MLLW are generated in the future, waste generators would make contemporary decisions about the use of particular DOE or commercial treatment and disposal facilities in accordance with Section I (2)(F)(4) of DOE's *Radioactive Waste Management Manual* (DOE M 435.1-1). The provisions of this Section allow for use of non-DOE facilities for the storage, treatment, or disposal of DOE radioactive wastes based on considerations that include cost-effectiveness.

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The same quantities of LLW and MLLW were assumed to be disposed under the Reduced Operations Alternative as under the No Action Alternative because most of the waste would come from offsite generators. Therefore, lower levels of onsite operations would not have a large effect on the quantities of waste received for disposal. This results in a conservatively large estimation of impacts. Actual quantities of waste that may be delivered to NNSS under any of the alternatives may be smaller than the quantities projected, depending on programmatic and regulatory decisions, funding, and other considerations that are outside the scope of this *NNSS SWEIS*. In addition, as discussed in the previous paragraph, as LLW and MLLW are generated in the future, waste generators would make decisions at that time about the use of particular DOE or commercial treatment and disposal facilities in accordance with DOE Order 435.1, *Radioactive Waste Management*.

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65-14 Comment noted. Please see the response to comment 65-1 above.

65-15

DOE/NNSA believes there remain no open or unresolved land use issues relative to ongoing or proposed activities at the NNSS, and that the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. For additional information, please see the response to comment 65-5 above.

In addition, returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part

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program for identifying potentially exploitable minerals and oil and gas resources within NNSS. As noted elsewhere in these comments, numerous reports have suggested the possibility of favorable geologic conditions for oil and/or natural gas reserves under NNSS. And given developments in detection technologies and major changes mining economics over the past several decades, there may also be potentially exploitable minerals within the boundaries of NNSS. Since there have been little or no investigations of mineral/oil and gas potential at the site over the years, a new program to investigate possible exploitable resources might be in order, recognizing that any such program would have to be compatible with site security and the other missions of NNSS.

Under the Conservation and Renewable Energy Program for the Expanded Operations Alternative (3.2.3.2), the draft discusses the possibility of a Geothermal Demonstration Project, even though there are no proposals to develop such a project at this time. A mineral/oil and gas exploration program might likewise be presented in the final EIS as something that should be considered under Expanded Operations conditions.

Reduced Operation Alternative (3.3)

The inclusion of a Reduced Operations Alternative in the draft EIS appears to be problematic in that it may not represent a reasonable alternative for evaluation. DOE needs to document the circumstances that would result in "reduced operations" at NNSS (i.e., reductions from activity levels currently occurring and described in the No Action Alternative). The draft EIS does not currently justify including a Reduced Operations Alternative in the NEPA analysis for NNSS.

Identification of the Preferred Alternative (3.6)

As noted above, the fact that the draft EIS does not identify a preferred alternative can be seen as a significant shortcoming of the document and DOE's approach to the NEPA process for NNSS and may be in violation of the spirit if not the letter of NEPA. Without an identified preferred alternative, neither the State of Nevada nor other interested or affected parties are afforded insight into DOE's realistic vision for NNSS over the next 10 years. DOE should have sufficient information from its analysis of current and possible future uses of NNSS to clearly articulate a preferred alternative. Only by doing so can affected parties provide comments and feedback on how realistic DOE's judgment may be and whether impacts associated with the preferred alternative have been adequately identified and addressed. The final EIS should clearly specify a preferred alternative.

The Affected Environment (4.0)

In addition to the specific areas identified in this section of the draft EIS as constituting the 'affected environment' for the purposes of inclusion in the "region of influence" for NEPA analysis, the draft EIS should have identified the actual and proposed transportation routes used for LLW, MLLW and other radioactive materials shipments into NNSS as part of the overall

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of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and otherwise sensitive testing, experimental, and training activities on site.

Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.

As noted in Chapter 3, Section 3.4, of this *NNSS SWEIS*, CEQ regulations for implementing NEPA (40 CFR 1502.14(e)) require an agency to identify its preferred alternative or alternatives, if one or more exists, in the draft EIS. DOE/NNSA had not identified a preferred alternative prior to issuance of the *Draft NNSS SWEIS*; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

The NNSS is a multi-mission facility serving a large number of customers both within and outside of the Federal Government. It is a test and experiment, research and development, and training facility that must respond to a wide variety of needs. Often, an event elsewhere in the world may spur a need for a particular test or experiment. For this reason, it is not possible to predict with certainty what specific activities or level of effort may be required from year to year. The No Action Alternative in this *NNSS SWEIS* reflects the use of existing facilities and ongoing projects to maintain operations consistent with those experienced in recent years at the NNSS and offsite locations in Nevada. The activities and levels of effort considered under the Expanded Operations Alternative represent DOE/NNSA's best judgment of the potential maximum that may occur, based on actual proposals or serious expressions of interest by DOE/NNSA elements, other agencies, and organizations. The Reduced Operations Alternative represents what DOE/NNSA considers the minimum level of operations that may reasonably be expected over the next 10 years.

Chapter 1, Section 1.5, has been clarified to indicate that this Section summarizes past and ongoing NEPA compliance reviews and associated decisions (i.e., RODs and Findings of No Significant Impact [FONSI]) that are germane to the estimation

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affected environment. A major driver of impacts associated with activities occurring or projected to occur at NNSS is the transportation of radioactive waste/materials. Such impacts affect area that are not located on or even adjacent to NNSS and the other offsite locations addressed in the draft EIS. Consequently, the affected environment for the purposes of this NEPA review should have included, at a minimum, communities located along transportation routes in Nevada as well as Inyo and San Bernardino Counties, California (where existing shipping routes converge and where large numbers of waste shipments are already occurring). In addition, environmentally sensitive areas along shipping routes should also have been identified and considered as part of the affected environment.

The affected environment for NNSS proper should also include the areas down gradient from the site in terms of groundwater flows and direction. In addition to areas of Nye County identified in the draft EIS, the affected environment should also include areas of Inyo County, California and Death Valley where groundwater underlying NNSS (and subject to NNSS-related contamination) is known to discharge. The inclusion of Inyo County and Death Valley as part of the affected environment is also important not only in terms of assessing the potential for long-term contamination, but also for evaluating impacts of any increased groundwater usage at NNSS that might affect the quality and/or volume of water available in those areas.

**Public Land Orders and Withdrawals (4.1.1.3)**

As noted elsewhere in these comments, there continue to be unresolved land use issues associated with NNSS that are not adequately addressed in the draft EIS. As Nevada has noted in numerous comments and communications over the years, the original 1952 land withdrawal for the Nevada Test Site (Public Land Order 805) specified its use as a "weapons testing site." In 1994, the State of Nevada filed a complaint in U.S. District Court in Las Vegas, alleging that the land withdrawals for NTS do not include waste disposal from offsite sources as an intended use of the land. A settlement agreement signed in April 1997 committed DOE to initiate "consultation with the United States Department of the Interior concerning the status of existing land withdrawals for the NTS with regard to low-level waste storage/disposal activities." Although DOE has indicated that consultations with the Department of Interior have concluded, the State has continuing concerns about off-site waste disposition. These matters are not addressed in the draft EIS.

The discussion of the "Area 5 Land Transfer" in the draft EIS is inaccurate. The transfer of a small amount of land from one federal entity to another does not represent the conclusion of the overall land use issue that is at the heart of the State's land use-related concerns and that prompted Nevada's legal action the 1990s. The land withdrawal legislation for NTS/NNSS specifies that the withdrawn land is to be used for weapons testing activities. In recognition of the evolving mission of NNSS and of the range of current and proposed activities undertaken there, DOE needs to seek congressional action broadening the existing land withdrawal language. Until that is done, the "consultation" required by the 1997 Settlement Agreement cannot be concluded.

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of potential direct, indirect, and cumulative environmental impacts resulting from the implementation of the projects and activities under each of the three alternatives. DOE, in its *Draft GTCC EIS* (DOE/EIS-0375) for instance, is considering the NNSS as one of a number of locations for the disposal of GTCC and GTCC-like waste. As this is a reasonably foreseeable future action (see Chapter 6, Section 6.2), DOE/NNSA analyzed the disposal of this waste at the NNSS in Section 6.3 under Cumulative Impacts.

DOE/NNSA limited the discussion in Chapter 1, Section 1.5, to NEPA compliance reviews and resulting decisions, as articulated in RODs and FONSIs. Policies, such as that policy described by the commentor, as well as regulatory actions such as Executive Orders, each of which are used to shape the environmental analyses, are discussed in the appropriate Sections throughout the SWEIS. The agreement discussed by the commentor, for instance, is described in Section 5.1.3.1.

DOE/NNSA believe there remain no open or unresolved land use issues relative to ongoing or proposed activities at the NNSS, and that the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. For additional information, please see response to comment 65-5 above.

Under the Expanded Operations Alternative, the Area 3 Radioactive Waste Management Site (Area 3 RWMS) could be opened to receive LLW generated from environmental restoration and other activities at DOE/NNSA sites in the State of Nevada. Specifically, this action could be triggered by a need for additional disposal space beyond that available in the Area 5 RWMC for the disposal of large on-site remediation debris, or soils from clean-up activities on the NTTR. There is no near-term need to use the Area 3 RWMS, however, should DOE/NNSA identify a need to reopen the Area 3 Radioactive Waste Management Site in the future, it would first undertake detailed consultation with the State of Nevada, and would limit disposal to in-state generated, non-hazardous LLW.

The management and disposal of MLLW is regulated by DOE under the Atomic Energy Act of 1954, as amended, and by EPA and the State of Nevada under RCRA. DOE/NNSA does not plan to establish a MLLW disposal cell at the Area 3 RWMS.

The management and disposal of LLW is regulated by DOE through its authority under the Atomic Energy Act. This act authorizes DOE to establish standards to protect health and minimize danger to life or property for activities under DOE's jurisdiction. DOE has issued a series of Departmental orders to establish a system of standards and requirements to ensure safe operation of DOE facilities. The

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Regional Transportation System (4.1.3.2.1)

Reference to DOE's "verbal commitment" to the State of Nevada to use LLW and MLLW shipping routes that avoid metropolitan Las Vegas and Hoover Dam (page 4-28) understates the full importance and weight of this commitment. The agreement dealing with routing of nuclear waste shipments into NNSS for disposal was initiated by Governor Kenny Guinn with then-Energy Secretary Richardson in 1999. Governor Guinn agreed not to challenge DOE's record of decision on its Waste Management Programmatic EIS designating the NTS (now NNSS) as a regional disposal site for LLW and MLLW. In exchange, Secretary Richardson agreed to certain "equity considerations," including the commitment to keep LLW and MLLW out of the Las Vegas metropolitan area. It now appears that DOE is considering unilateral abrogation of that agreement and is using the draft NNSS site-wide EIS (DOE/EIS-0426-D) as the vehicle for doing so.

DOE currently enforces the routing requirements using the waste acceptance criteria for NNSS. In order to be eligible for disposing waste at NNSS, shippers transporting the material are required to use approved routes specified in the waste acceptance criteria (i.e., routes that avoid the Las Vegas metropolitan area).

In the draft EIS, DOE analyzes two scenarios for shipping waste to NNSS for disposal. The "Constrained Scenario" assumes that waste will continue to be shipped to the site using routes that avoid Las Vegas – as is currently the case. The "Unconstrained Scenario" postulates the use of multiple intermodal transfer sites in Clark County and elsewhere (where waste is transferred from rail to trucks for the final leg of the trip to NNSS) and the use of the interstate highway system for transporting waste from these intermodal locations to NNSS. The Unconstrained Scenario assumes waste would be shipped into Las Vegas on I-15 from both directions and on to NNSS via the LV beltway and/or the Spaghetti Bowl.

Should DOE abandon the agreement currently in place with the State, between 26,000 and 94,000 shipments of LLW and MLLW could transit the Las Vegas metropolitan area on I-15, the Spaghetti Bowl and the Beltway, according to the draft EIS (Table E-11, p. E-41). The draft EIS claims that improvements to I-15 through Las Vegas and the addition of the beltway routes now makes it acceptable to ship radioactive wastes through the Las Vegas metropolitan area. Use of the new Hoover Dam bypass bridge would allow shipments to also come into I-15 and the Spaghetti Bowl from the south. However, population growth in the Las Vegas Valley has far exceeded the development of transportation infrastructure. Traffic congestion and gridlock continue to be major problems – as great or even greater than in 1999 when the agreement to keep waste shipments out of the Las Vegas area was made.

It is difficult to grasp DOE's motivation for seeking to abandon the current approach for routing waste shipments to NNSS because that approach has worked exceedingly well for over 12 years. While trucks are now required to use routes that transit rural areas and rural communities, the counties along those routes are compensated by receiving substantial amounts of funds for

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Nuclear Regulatory Commission does not have regulatory authority for DOE radioactive waste disposal facilities. Additional discussion may be found in Chapter 9, Section 9.1.11.

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As discussed in the response to comment 65-13, disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant to the *WM PEIS* (DOE/EIS-0200), and it is not DOE's intent that the NNSS be the sole recipient of offsite-generated waste.

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In addition, as discussed in the response to comment 65-13, the intent of this *NNSS SWEIS* is not to support competition with existing commercial disposal facilities, but to provide NEPA analysis for NNSS disposal of LLW and MLLW that could be received by authorized DOE generators. As LLW and MLLW are generated in the future, waste generators would make decisions about the use of particular DOE or commercial treatment and disposal facilities in accordance with Section I (2)(F)(4) of DOE's *Radioactive Waste Management Manual* (DOE M 435.1-1). The provisions of that Section allow for use of non-DOE facilities for the storage, treatment, or disposal of DOE radioactive wastes based on considerations that include cost-effectiveness.

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An expansion of MLLW treatment capabilities and capacities would be undertaken in accordance with applicable laws and regulations. As the authorized regulating authority for RCRA hazardous waste, NDEP would necessarily be involved in any expansion of MLLW treatment capabilities. The appropriate evaluation under NEPA would be performed for any expansion of MLLW treatment capacity.

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65-21 DOE/NNSA has not needed to and is not proposing to conduct exploration of oil and/or gas reserves and is unaware of any such proposal by others. A description of oil and gas reserves at the NNSS is included in Chapter 4, Section 4.1.5.2.5, based on the most current available information. There have been no studies conducted since the *1996 NTS EIS* (DOE EIS-0243, August 1996) to update that information. A geothermal demonstration project was included in the discussion of the Expanded Operations Alternative (Chapter 3, Section 3.2.3.2) because there has been a recent proposal for this activity.

DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate, and thus the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

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emergency preparedness planning and emergency response. As part of the arrangement that implemented the original routing agreement, DOE increased the fee charged for disposing of waste at NNSS by fifty cents per cubic foot. The money generated by that increase goes into a special fund administered by the Nevada Division of Emergency Management and is passed through to counties impacted by LLW and MLLW shipments. This arrangement has been very successful in building emergency management and response capabilities in rural counties and is widely viewed as a positive and welcome form of assistance. It has also garnered considerable good will for DOE in the rural counties.

The State of Nevada is strongly opposed to any effort to abrogate the 1999 routing agreement and will aggressively contest any such move on DOE's part in any and all forums available.

Socioeconomics (4.1.4)

The approach to the assessment of socioeconomic impacts in the draft EISA is incomplete and inadequate. Assessing only the employment-related and population-related effects on area communities misses entirely potentially significant economic and other impacts associated with NNSS activities, especially those related to radioactive waste and radiological materials transportation through heavily populated urban areas. The draft EIS ignores the potential impacts associated with the stigmatizing effects of nuclear-related activities on areas and economic/industrial sectors. This is especially significant in the event of accidents or terrorism/sabotage incidents occurring in or near the Las Vegas metropolitan area. Extensive research by the State of Nevada, independent researchers and even DOE-affiliated researchers has documented the potential for impacts to property values along shipping route, negative economic impacts due to suppressed tourism and other commercial activities, etc. Any analysis of socioeconomic impacts is deficient if it fails to address the unique effects of nuclear activities and nuclear waste/materials shipments on unique local conditions.

The description of socioeconomic conditions in the Region of Influence (ROI) must include a description of the economic sectors and other factors susceptible to impacts caused by stigmatizing events and/or economic suppressant characteristics of NNSS-related activities. These economic sectors include most importantly the tourism/visitor/gaming sector of Clark County, property values and types of property susceptible to property value diminution along shipping routes, etc. The importance of the tourism/visitor sector in Las Vegas and Clark County to the economic well-being of the region and the entire state cannot be overstated. To ignore the importance of this sector in the description of the socioeconomic ROI for analysis in the draft EIS renders the entire assessment inadequate.

Regions of Influence (4.1.4.1)

The draft EIS identifies the ROI for analysis as comprising Nye and Clark Counties in Nevada. The draft EIS should have identified the actual and proposed transportation routes used for LLW, MLLW and other radioactive materials shipments into NNSS as part of the ROI. A major driver

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**65-22** The Reduced Operations Alternative represents DOE/NNSA's judgment as to potential lower levels of activities at its facilities in Nevada based on the assumption that requirements of some missions and programs may be less in the future than at present. Some of these reduced requirements may be driven by accomplishment of mission goals, such as a reduced need to conduct dynamic experiments because data gathered under the Stockpile Stewardship and Management Program are determined to provide sufficient assurance of the safety and reliability of the United States' nuclear weapons stockpile. Funding is another consideration that could drive selection of reduced operations for a particular mission or program. Inclusion of the Reduced Operations Alternative in this *NNSS SWEIS* is intended to provide DOE/NNSA with flexibility in its decisionmaking for the NNSS, TTR, and other facilities in Nevada to best reflect realistic future scenarios.

**65-23** The alternatives addressed in this *NNSS SWEIS* represent DOE/NNSA's best judgment as to the specific activities and range of operational levels at which those activities may be conducted over the next 10 years. In Chapter 1, Section 1.4, of the *Draft NNSS SWEIS*, DOE/NNSA stated that it may choose to implement any alternative in its entirety or select a hybrid that incorporates parts of the different proposed alternatives. The analyses of the alternatives in this SWEIS analyzed impacts at the alternative, mission, and program level to allow comparisons of the impacts at various levels across the alternatives. As noted in the response to comment 65-16, above, DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

**65-24** Chapter 5, Section 5.1.3.1, was clarified to state that the ROI includes the public living within 0.5 miles of either side of the route between a U.S. region (as depicted in Appendix E, Figures E-2 and E-3) and the NNSS for incident-free impacts, as well as a population within 50 miles of a postulated accident. There could be numerous possible routes between a given origination point and the NNSS; therefore, it is common practice to analyze a specific route as determined using the TRAGIS computer code (as described in Appendix E, Section E.4). DOE performs transportation analyses to determine comparative risks among alternatives using risks calculated for the whole route. See the response to comment 65-9 regarding the analysis of specific local conditions.

Regarding evaluation of impacts on environmentally sensitive areas along shipping routes, DOE/NNSA uses existing roadways and railways and is not proposing any modifications to these routes or adding new road or rail infrastructure. Normal use of existing transportation infrastructure does not add additional impacts that have not

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of impacts associated with activities occurring or projected to occur at NNSS is the transportation of radioactive waste/materials. Such impacts affect areas that are not located on or even adjacent to NNSS and the other offsite locations addressed in the draft EIS. Consequently, the ROI for the purposes of this NEPA review should include, at a minimum, communities located along transportation routes in Nevada as well as in Inyo and San Bernardino Counties, California (where existing shipping routes converge and where large numbers of waste shipments are already occurring). In addition, environmentally sensitive areas along shipping routes should also have been identified and considered as part of the ROI.

The ROI for NNSS proper should also include the areas down gradient from the site in terms of groundwater flows and direction. In addition to areas of Nye County identified in the draft EIS, the affected environment should also include Inyo County, California and Death Valley where groundwater underlying NNSS (and subject to NNSS-related contamination) is known to discharge. The inclusion of Inyo and Death Valley as part of the ROI is also important not only in terms of assessing the potential for long-term contamination, but also for evaluating economic and other impacts of any increased groundwater usage at NNSS that might affect the quality and/or volume of water available in those areas.

**Police Protection (4.1.4.6.2) and Fire Protection (4.1.4.6.3)**

For each of these sections, the draft EIS should include descriptions of police and fire protection capacities for each local government located along LLW and MLLW shipping routes as contained in the draft EIS. Limiting the description to only police and fire in Clark and Nye counties is inadequate given that the potential for impacts to occur from waste transportation extends to communities along all prospective shipping routes,

In addition, the description of police and fire protection does not include a description of emergency response and preparedness conditions (especially preparedness for radiological accidents and emergencies) within the counties. The draft EIS should contain a comprehensive description of each county's emergency management system, the numbers of personnel trained and equipped (and at what level), the mutual aid agreements that exist to support regional emergency response, and any other factors that relate to the existing capabilities of local governments to deal with events involving radiological and hazardous waste/materials.

**Health Care (4.1.4.6.4)**

As for police and fire protection, the draft EIS fails to describe health resources for local communities located along LLW and MLLW shipping routes. This section of the draft EIS also should include descriptions of facilities and capabilities for treating and dealing with radiological health emergencies. The rote listing of hospitals contained in the draft EIS is wholly inadequate for assessing whether conditions are adequate for treating radiation-related health conditions that could result from NNSS-related activities and/or NNSS related nuclear/hazardous materials transportation. Simply documenting the existence of a hospital or other medical facility is not

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- 65-33 cont'd**
- been already imposed by the roadways on environmentally sensitive areas along these routes.
- 65-25** DOE/NNSA believes that the description of the affected environment in the *Draft NNSS SWEIS* is appropriate. The description of the affected environment (including the ROI) for each resource in this SWEIS encompasses the areas where discernible direct and indirect impacts of the proposed action would occur. The ROI, and its ability to capture the range of potential impacts, is borne out by the analyses in Chapter 5 of this SWEIS. Chapter 4, Section 4.1.6.2, Chapter 5, Section 5.1.6.2, and Chapter 6, Section 6.3.6.2, describe current knowledge of the extent of radiological groundwater contamination on the NNSS, as well as the limited movement of contaminants that has been observed and predicted. DOE/NNSA agrees that the collective effect of numerous projects in the region could extend to Inyo County and Death Valley; therefore, the ROI for the analysis of cumulative impacts extended to cover reasonable portions of those areas (see Figure 6-1).
- 65-34**
- Although DOE/NNSA believes the description of the affected environment in the *Draft NNSS SWEIS* was appropriate, in response to a number of specific requests by commentors, this *Final NNSS SWEIS* has been revised to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. As noted in the response to comment 65-2 above, Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed for the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS.
- 65-35**
- 65-36**
- 65-37**
- 65-26** DOE/NNSA believes there remain no open or unresolved land use issues relative to ongoing or proposed activities at the NNSS, and that the land withdrawals are not restrictive with respect to NNSS activities in support of its missions. For additional information, please see the response to comment 65-5 above.
- 65-27** As discussed above in response to comment 65-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.
- 65-28** The commentator is correct that shippers transporting LLW/MLLW are required under the NNSS WAC to use routes that avoid the Las Vegas, Nevada, area. Additional information may be found in Chapter 5, Section 5.1.3.1.

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enough to evaluate whether NNSS-related health effects can be dealt with and what the impact might be if such capabilities were needed and not available.

Faulting and Seismic Activity (4.1.5.2.3)

The draft EIS should note that NNSS is located in a major seismic area as designated by the U.S. Geologic Service (USGS). This is important in evaluating the types of activities that may or may not be appropriate for NNSS.

Geologic Resources (4.1.5.2.5)

This section of the draft EIS should acknowledge that NNSS has been off limits for any commercial mineral or oil/gas exploration for more than six decades and that the potential for currently exploitable mineral deposits and/or oil and gas reserves are presently unknown.

Groundwater (4.1.6.2)

The draft EIS appears to do an adequate job of describing the hydrologic basins underlying NNSS and the movement of groundwater (as it is currently understood) within those basins. What is missing is a description of the total groundwater resource that has been effectively removed from the public domain as a result of NNSS activities and potential contamination resulting from those activities. The 2011 Nevada Legislature passed a resolution tasking the Attorney General's Office, the State Department of Conservation and Natural Resources, and the Governor's Office Agency for Nuclear Projects to prepare a report for the 2013 Legislature addressing "whether Nevada could potentially receive monetary compensation from the Federal Government for contamination of the environment in Nevada with radioactive and other hazardous contaminants as a result of military exercises, nuclear weapons testing and other activities conducted by the Federal Government in Nevada." Contamination from NTS/NNSS activities will of necessity be a major focus of this investigation, and the information contained in the final EIS must be such that it provides a full and complete picture of the groundwater resource that has been removed from the public domain, the existing level and distribution of contamination of that resource, and the potential, if any, for future uses of the resource.

Nevada Division of Water Resources Comments

All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS), and not otherwise. Any waters developed and utilized for a beneficial use whether from a surface water or underground source must be done so in compliance with the referenced chapters of the NRS for the subject parcels of land wholly situated within the State of Nevada.

No use of surface water or groundwater is to occur unless a permit is issued for such, or a waiver for groundwater monitoring and/or exploration is granted by this office. Any water or

- 65-29      65-37      As discussed above in response to comment 65-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.  
*cont'd*
- 65-38      DOE/NNSA had analyzed the potential environmental impacts associated with the transportation of additional quantities of LLW/MLLW (relative to the No Action Alternative) under the Expanded Operations Alternative. The health impacts reported in Chapter 5, Section 5.1.3.1, as well as the traffic-related impacts in Section 5.1.3.2, were based on the existing routing commitments (i.e., the Constrained Case). DOE/NNSA concluded that the transportation of additional quantities of LLW/MLLW, coupled with associated vehicle traffic (e.g., worker commutation) under the Expanded Operations Alternative, would provide a moderately high contribution when compared to projected traffic volumes in Clark and Nye Counties. Additional details may be found in Section 5.1.3.2.
- 65-39      65-30      As discussed above in response to comment 65-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.
- 65-40      65-31      In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE is not aware of any more recent information that would change this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.
- 65-41      65-32      In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE is not aware of any more recent information that would change this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

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monitoring wells, or boreholes that are proposed to be drilled within the described lands are the ultimate responsibility of the entity requesting the drilling and must be plugged and abandoned as required in Chapter 534 of the NRS and Nevada Administrative Code. If artesian water is encountered in any well or borehole it shall be controlled as required in NRS § 534.060(3).

Waste Management (4.1.11)

Waste Disposal Support Activities (4.1.11.1.3)

The discussion of Waste Acceptance in the draft EIS (page 4-149) should acknowledge that, in addition to meeting other requirements for waste disposal at NNSS, waste generators are required to ship waste to the site using those only highway routes that have been approved (i.e., routes that avoid the metropolitan Las Vegas area).

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Environmental Consequences (5.0)

Transportation and Traffic (5.1.3)

The analysis of transportation impacts is deficient because it fails to consider unique local conditions along the highway and rail routes that DOE proposes to use under the unconstrained case. Under the unconstrained case, DOE proposes to make as many as 26,000 to 80,000 out-of-state waste shipments to NNSS, over a 10-year period, using numerous combinations of highway and rail routes not currently used for shipments of LLW and MLLW. Many or all of these proposed shipments could traverse the Las Vegas metropolitan area.

The draft EIS fails to identify unique local conditions along the potential unconstrained case transportation routes in Nevada, and fails to assess the impacts of transportation of LLW and MLLW upon these unique local conditions. For each of the potential highway and rail routes that DOE might use under the unconstrained case, the draft EIS should have, but failed to, assess the impacts of transportation within the 800 meter (1/2-mile) region of influence (ROI) along each route (a 1,600 meter or 1-mile corridor centered along each highway and rail line). The transportation impact assessment should have, but failed to, specifically address potential adverse impacts on iconic locations and venues; special events of national and international significance; highly populated areas; and critical local infrastructure, located within one-half mile (800 meters) of the shipping routes which DOE proposes to use.

DOE's failure to assess transportation impacts on unique local conditions is particularly egregious regarding the proposed truck shipments through downtown Las Vegas, where multiple daily shipments could travel within 800 meters (one-half mile) of the world-famous Las Vegas Strip. The following figure shows a portion of the 800-meter ROI along the I-15 and US-95 route, including the intersection of these routes known locally as the Spaghetti Bowl, that DOE

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**65-43**

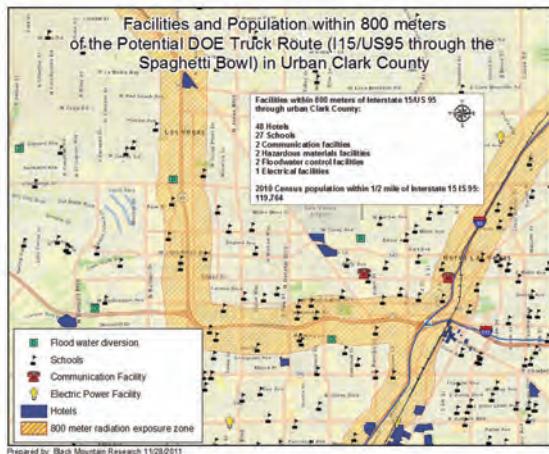
**65-44**

- 65-33** Please see the response to comment 65-9 regarding analysis of specific local communities along analyzed routes. As stated in the response to comment 65-24, there could be numerous possible routes between a given origination point and the NNSS. DOE does not have any requirements to specify that carriers use certain routes, except as committed to the State of Nevada regarding routes around the Las Vegas region (see the response to comment 65-14). DOE/NNSA revised Chapter 5, Section 5.1.3.1, to indicate that the transportation analysis includes a ROI covering 0.5 miles on both sides of the transportation corridors from the generator regions.
- 65-34** As noted in the response to comment 65-25, above, DOE/NNSA believes that the description of the affected environment in the *Draft NNSS SWEIS* is appropriate. Impacts on groundwater quality and availability resulting from proposed activities at the NNSS are addressed in Chapter 5, Section 5.1.6.2, and cumulative impacts are addressed in Chapter 6, Section 6.3.6.2. Further, DOE/NNSA has revised Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, of this *Final NNSS SWEIS* to enable the public to better understand current knowledge of the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS.
- 65-35** It is not practical or necessary to identify emergency responder capabilities along all possible routes. As stated in the response to comment 65-9, the transport of radioactive materials and wastes occurs daily on the Nation's highways as a result of commercial and government activities; therefore, the transportation activities analyzed in this *NNSS SWEIS* do not present a new or unique hazard. Appendix E, Section E.3.3, of this *Final NNSS SWEIS* has been revised to describe how emergency response actions would be taken, keeping in mind that local first responders would most likely be the first to be on the scene of an accident.
- 65-36** Please refer to the response to comment 65-35 regarding the need to describe first responder capabilities along transportation routes. In addition, DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In

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proposes to use under the unconstrained case described in the draft EIS. According to the 2010 census, almost 120,000 people reside in the ROI along the portion of the route that travels through urban Clark County.



The draft EIS transportation risk analysis in Appendix E, using the RADTRAN model, fails to adequately evaluate the impacts on the resident population of using this route for LLW and MLLW shipments by truck, compared to the routes currently used for shipments to NNSS, and fails to adequately evaluate the population impacts of this route compared to other potential highway routes identified by DOE. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case highway routes to iconic locations such as the Las Vegas Strip, much of which located within, and immediately adjacent, to the one-half-mile ROI for truck shipments. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case highway routes to major government and law enforcement facilities, some of which are located less than one-half mile from the unconstrained case routes for truck

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addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada. There are mutual aid agreements between NNSA/NSO and several of the counties in Nevada.

**65-37** Please refer to the response to comment 65-35 regarding the need to describe first responder capabilities (and by extension, health care resources such as hospitals) in all local communities along transportation routes. Text has been added to the *Final NNSS SWEIS* in Chapter 3, Section 3.3, and Appendix E that describes DOE's program for responding to transportation accidents. DOE uses DOE Order 151.1C, *Comprehensive Emergency Management System*, as a basis to establish a comprehensive emergency management program that provides detailed, hazard-specific planning and preparedness measures to minimize the health impacts of accidents involving loss of control over radioactive material or toxic chemicals. The NNSS provides technical assistance to other Federal agencies and to state and local governments. Contractors are responsible for maintaining emergency plans and response procedures for all facilities, operations, and activities under their jurisdiction and for implementing those plans and procedures during emergencies. Contractor, state, and local government plans are fully coordinated and integrated. The Transportation Emergency Preparedness Program was established by DOE to ensure its operating contractors and state, tribal, and local emergency responders are prepared to respond promptly, efficiently, and effectively to accidents involving DOE shipments of radioactive material. This program is a component of the overall emergency management system established by DOE Order 151.1C.

DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada.

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shipments. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case highway routes to schools, hospitals, and other difficult-to-evacuate locations.

The draft EIS transportation impact analysis fails to consider potential impacts of truck shipments of LLW and MLLW on the non-resident and visitor population of Las Vegas and Clark County.

The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case highway routes to events of national and international significance, such as major conventions that may draw 50,000 or more visitors, major air shows and auto races that may draw more than 100,000 visitors, and events such as the World Series of Poker and New Year's Eve celebrations which are broadcast live around the world.

The draft EIS transportation impact analysis also failed to consider unique local conditions regarding the potential use of rail-to-truck intermodal shipments of LLW and MLLW to NNSS. The following figure shows the 800-meter (one-half-mile) ROI along the Union Pacific rail line through downtown Las Vegas. This rail route could be used for thousands of LLW and MLLW shipments to intermodal transfer facilities in the Las Vegas metropolitan area. Rail shipments to a potential intermodal facility in Caliente, Nevada, might also use this rail route. According to the 2010 census, more than 48,000 people reside within one-half mile (800 meters) of the unconstrained case rail route that travels through urban Clark County.

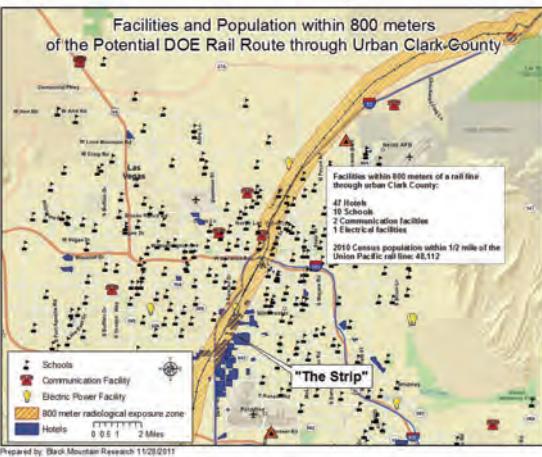
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65-45

- 65-38 Chapter 4, Section 4.1.5.2.3, of this *NNSS SWEIS* describes the geological faults and seismic risks in the area of the NNSS. That Section also states that DOE policy is to design, construct, and operate DOE facilities so that workers, the general public, and the environment are protected from the impacts of natural phenomena hazards (including seismic events). Section 4.1.5.2.3 also provides additional information on the standards used for siting, constructing, and operating DOE facilities to reduce risks to buildings, workers, the public, and the environment from seismic events.
- 65-39 Although DOE/NNSA activities are not inconsistent with periodic visits by the public or certain commercial activities proposed to be developed on the site (e.g., commercial solar power generation facilities), public visits and commercial activities are and would be conducted under the safeguards and security protocols of DOE/NNSA, which limit the frequency and nature of public visits and could restrict commercial activities from time to time. For this reason, DOE/NNSA is able to allow properly cleared and escorted public visitation and the development of commercial projects without hindering its national security activities while continuing to protect the offsite public. To date, there have been no proposals by any commercial entity to conduct oil and gas exploration on the NNSS. If such a proposal were made, DOE/NNSA would evaluate it under its Real Estate and Operating Permit process to determine whether it could be conducted in a manner that would not interfere with other mission-related activities, would not present a potential safeguards and/or security conflict, and would meet other requirements for conducting work at the NNSS. Chapter 4, Section 4.1.5.2.5, of this *Final NNSS SWEIS* has been revised to discuss the potential for hydrocarbon resources within the NNSS.
- 65-40 As stated in the response to comment 65-2 above, groundwater resources at the NNSS, including groundwater use, depth to groundwater, recharge and discharge, water supply systems, and groundwater monitoring and quality, are described in Chapter 4, Section 4.1.6.2, of the SWEIS. Chapter 5, Section 5.1.6.2, provides estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic and projected future demands on this groundwater to support ongoing and proposed projects and activities under each alternative. Chapter 6, Section 6.3.6.2, analyzes the potential cumulative impacts of past nuclear weapons testing on groundwater. When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right at the NNSS to support its mission requirements, one of which includes complying with the FFACO to characterize and monitor locations that have sustained adverse environmental impacts

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The draft EIS transportation risk analysis in Appendix E, using the RADTRAN model, fails to adequately evaluate the impacts on the resident population of using this route through Las Vegas for LLW and MLLW shipments by rail, compared to the routes currently used for direct truck shipments to NNSS; the draft EIS also fails to adequately evaluate the population impacts of truck shipments through the Las Vegas metropolitan area from intermodal facilities, compared to the routes currently used for direct truck shipments to NNSS, and other potential highway routes identified by DOE.

The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case rail route to iconic locations such as the Las Vegas Strip, much of which is located within, and immediately adjacent, to the one-half-mile ROI for rail shipments. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case rail route to major government and law enforcement facilities, some of which are located less than one-half mile from the unconstrained case route for rail shipments. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case rail route, and the

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from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

In response to comments, DOE/NNSA has revised Chapter 4, Section 4.1.6.2, to further describe current knowledge of the extent of groundwater contaminated by past weapons testing; new figures have been included to illustrate the distribution of that groundwater. Chapter 6, Section 6.3.6.2, also has been revised, based on available information developed in compliance with the FFACO and in coordination with NDEP, to estimate potential cumulative impacts associated with the distribution of contaminated groundwater in the future.

- 65-41 As stated in the response to comments 65-2 and 65-40 above, when the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right at the NNSS to support its mission requirements.
- As described in Chapter 9, Section 9.1.6, DOE/NNSA complies with *Nevada Revised Statutes 2011*, Chapter 534, as a matter of comity, holding to the position that state licensing requirements do not apply to the Federal Government and its contractors as a matter of law under the principle of Federal supremacy and associated case law. The UGTA Project, for example, voluntarily complies with Chapter 534.
- 65-42 As indicated in the response to comment 65-14, DOE intends to maintain its agreement with the State of Nevada regarding the transport of LLW and MLLW. However, Chapter 4, Section 4.1.11.1.3, is not a presentation or discussion of the specific contents or requirements of the NNSS WAC; rather, it is a discussion of the process by which generators are permitted to send waste to the NNSS for disposal.
- 65-43 As indicated in the response to comment 65-1, in Chapter 5, Section 5.1.3.1, of both the *Draft* and *Final NNSS SWEIS*, DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. In consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

The transportation analyses performed for this *NNSS SWEIS* are not “deficient,” but are appropriate and sufficient for the purposes of NEPA. See the response to

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resulting truck shipments from intermodal facilities, to schools, hospitals, and other difficult-to-evacuate locations.

The draft EIS transportation impact analysis fails to consider potential impacts of rail shipments of LLW and MLLW on the non-resident and visitor population of Las Vegas and Clark County. The draft EIS transportation impact analysis fails to consider the proximity of the unconstrained case rail route to events of national and international significance, such as major conventions that may draw 50,000 or more visitors, major air shows and auto races that may draw more than 100,000 visitors, and events such as the World Series of Poker and New Year's Eve celebrations which are broadcast live around the world.

The draft EIS analysis of transportation impacts is deficient because it fails to provide sufficient details about the LLW and MLLW shipment radionuclide inventories to allow evaluation of the transportation risks reported in Tables 5-11 through 5-16, draft EIS pages 5-49 to 5-60. The draft EIS fails to provide representative and maximum radionuclide inventories for each category of shipment container type listed in Table 5-9. The draft EIS should have provided the representative and maximum inventory of each major radionuclide based on data from past and current NNSS shipment profiles, for each category of LLW and MLLW package: (1) drums; (2) B-25 boxes; (3) Sealand containers; (4) B-12 boxes; and (5) Type B containers. The data provided in Appendix E, Radionuclide Inventories, draft EIS pages E-25 to E-27, do not allow reviewers to validate the purported environmental consequences for incident-free shipments, accidents, and acts of sabotage or terrorism.

The draft EIS' failure to provide sufficient information on radionuclide inventories is particularly glaring regarding LLW and MLLW shipments containing Strontium-90. According to the values provide in Table E-5, Strontium-90, with a concentration of 1.8 curies per cubic foot, is the predominant radionuclide to be shipped to NNSS over the 10-year period covered by the draft EIS, representing a cumulative inventory of 28.6 to 93.6 million curies of Strontium-90 shipped to NNSS for disposal. If the data in Table E-5 is correct, Strontium-90 would be the primary driver of transportation impacts - including incident-free shipments, severe accidents, and acts of sabotage and terrorism - over the 10-year period.

The draft EIS should have provided clear and unambiguous information on: (1) the maximum allowable concentration of Sr-90 shipped to NNSS in Type A and Type B packages; (2) the origination, number, and routes to NNSS for shipments containing Sr-90; (3) the maximum release of Sr-90 in a severe accident; (4) the maximum release of Sr-90 in a successful terrorist attack or act of sabotage; and (5) the health effects and economic impacts of a large-scale release of Sr-90 in an urban area such as Las Vegas.

The draft EIS provides no information on transportation accident cleanup costs and other economic impacts of releases following severe accidents. For both Type A and Type B container shipments, the greatest likelihood of release and dispersal would follow a transportation accident in which the package was engulfed in a long-duration, high-temperature fire. In the Final

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comment 65-9 regarding analysis of specific local communities along analyzed routes. The analysis is based on an evaluation of impacts on those within 0.5 miles of the transportation routes analyzed. As stated in Appendix E, Section E.4, the Web-TRAGIS computer code is used to select the routes and calculate the population densities along each route. Because the Web-TRAGIS code uses census block population data, the estimated population densities do not include people that temporarily occupy a location. Therefore, individuals in municipal facilities such as airports, local government buildings, and schools along routes, as well as other large venues such as hotels and casinos, were not specifically accounted for in the analysis. However, the analysis of impacts on an MEI provides a conservatively high estimate of the risks that could be imposed on anybody as a result of transportation activities. In this *NNSS SWEIS*, analyses were performed to show the incident-free impacts on different types of MEIs that could be encountered along a route, as described in Appendix E, Section E.5.3. These analyses were performed for all cargo types considered (e.g., a shipment of LLW, TRU waste, different types of special nuclear materials); the cargo type causing the greatest dose to the resident is shown in Table E-15. Based on the data in this table, a person within 100 feet of a truck route, which would be an individual residing along the edge of an interconnecting highway, would receive a maximum dose of  $2.4 \times 10^{-7}$  rem per shipment for the highest-dose cargo at the regulatory dose limit set by the DOT, assuming the individual is outside and is directly exposed to the radiation emanating from the cargo. If that individual were to be exposed to all 80,000 shipments analyzed under the Expanded Operations Alternative, he or she would receive a total dose of about 20 millirem over a 10-year period. As shown in Chapter 4, Section 4.1.12.1, this same individual would receive a dose of about 355 millirem per year from naturally occurring background radiation. The results show that, despite assuming a close proximity to the route, exposure to every shipment, and the receipt of the maximum dose per shipment, the overall incident-free risk would still be small. A site-specific analysis would not be expected to result in greater impacts.

The consequences of potential accidents with the greatest impacts (maximum foreseeable accident) on routes near Las Vegas were calculated, and the results are shown in Appendix E, Table E-16, of this *Final NNSS SWEIS*. This analysis used census data projected to the year 2016. Table E-16 also shows the consequences an accident with the greatest impacts (maximum reasonably foreseeable accidents) if the accident occurred in an urban area along the route. This analysis used a constant-density urban population out to a distance of 50 miles based on census data projected to 2016. The maximum foreseeable accident analyses used generic atmospheric

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Supplemental Environmental Impact Statement for Yucca Mountain (2008), DOE estimated the probability of such an accident involving a Type B container at 5 in one million per year, with cleanup costs in an urban area ranging from a few hundred thousand dollars up to \$10 billion. State of Nevada analyses conclude that the releases and resulting cleanup costs could be much greater. The transportation risk analysis in this draft EIS is insufficient under NEPA because it does not evaluate the cleanup costs and other economic impacts of LLW and MLLW accidents, resulting in release and dispersal of radioactive materials. The Final Site-wide EIS must evaluate the cleanup costs and economic impacts of the maximum credible accidents, as specified in Appendix E, for both Type A and Type B container shipments.

Additionally, the Final Site-wide EIS must evaluate the cleanup costs and economic impacts of maximum credible LLW and MLLW accidents in the event that such accidents were to occur in the Las Vegas metropolitan area along the potential routes identified in the unconstrained case. The probability of such accidents is greater than one in one million per year for all locations. The infrastructure conditions, traffic characteristics, and vehicle speeds along I-15, I-215, and US-95 would allow such accidents to occur in Las Vegas. The Final Site-wide EIS should include a review of severe accidents that have occurred on those routes, such as the August 10, 2011 gasoline tanker explosion on I-15 in Las Vegas.

The draft EIS provides no information on cleanup costs and other economic impacts following a successful act of terrorism or sabotage against a DOE shipment of LLW or MLLW. Since the EIS acknowledges that such attacks could result in release of radioactive materials, an evaluation of cleanup costs in the Final Site-wide EIS is required under NEPA.

The draft EIS provides no information on DOE and/or DOE contractor liability for cleanup costs and other economic impacts resulting from a transportation accident or sabotage/terrorism incident. The Final Site-wide EIS must address DOE and DOE contractor liability for such costs, including liability for precautionary evacuations.

The discussion of acts of sabotage or terrorism on page E-34 is inaccurate and misleading. It wrongly asserts that the consequences of attacks on shipments to NNSS are bounded or enveloped by the analyses in the 2002 EIS for Yucca Mountain. Analyses by the State of Nevada concluded that radioactive releases resulting from successful acts of sabotage could be hundreds or thousands of times greater.

The analysis of transportation impacts is deficient because it fails to specifically address the transportation risks associated with shipping LLW and MLLW in Type A containers by rail. In the rail environment, Type A packages could be subjected to much greater accident impact forces, crush forces, and fire durations and temperatures than in highway accidents. Rail shipments would typically travel through urban centers, often on routes co-located with petroleum and natural gas pipelines, unlike truck shipments on suburban beltways. The entire concept of intermodal shipments proposed in the draft EIS, especially for shipments of LLW and MLLW containing significant quantities of Sr-90 (several hundred to more than 1,000 curies per

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conditions, as described in Section E.6.4, because an accident could occur at any location along a route. To estimate the most conservative (greatest) impacts, neutral atmospheric conditions were assumed when calculating impacts on the population within a 50-mile radius of the accident, and stable atmospheric conditions were assumed when considering impacts on an MEI. Because it is not reasonable to try to determine impacts on every type of facility possible along a route, analyses that use conservative assumptions that would envelope the possible impacts are performed, as shown in Section E.7.

**65-44** Please refer to comment 65-43. In addition, in consideration of the environmental analyses and stakeholder comments DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

**65-45** Please refer to comment 65-43.

Historically, occasional rail shipments of LLW have been made, with transfer to trucks for the final leg of the trip to the NNSS. Because this mode of transport may be used in the future, an analysis of rail shipment to NNSS was conducted in this *NNSS SWEIS* to determine the overall route impacts for comparison to results obtained for only truck transport. To envelope the impacts associated with rail shipments, DOE assumed that all waste shipments would occur by rail, with the cargo transferred at five different transfer station locations. The transfer station locations analyzed were selected to cover the geographic area where a transfer station facility might be located and to maximize possible impacts. DOE does not plan to establish or promote any transfer station facility; thus, a detailed analysis of the operations at a transfer station facility is beyond the scope of this *NNSS SWEIS*. If a commercial carrier decides to use a transfer station facility, then that carrier must abide by applicable laws and regulations governing those operations. It should be noted that DOE published two reports regarding operations at transfer station facilities. In the first report, *Life-Cycle Cost and Risk Analysis of Alternative Configurations for Shipping Low-Level Radioactive Waste to the Nevada Test Site* (DOE 1999a), and as shown in Appendix E, Table E-15, of this *NNSS SWEIS*, the dose to a transfer station facility worker would be up to  $3.4 \times 10^4$  person-rem per container transferred. In a second report, *Intermodal and Highway Transportation of Low-level Radioactive Waste to the Nevada Test Site* (DOE 1999b), accident consequences associated with a large fire near the LLW shipping containers were provided. The consequences to a population within 50 miles would be no (up to  $1.7 \times 10^4$ ) fatalities for a population of about 195,000 people. DOE has added this information to Appendix E of this *Final NNSS SWEIS*.

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shipment), is unproven from a logistical or economic standpoint, let alone regarding public safety and protection of the environment.

The State of Nevada opposes rail shipments of LLW and MLLW through Las Vegas on the Union Pacific mainline between Arden and Valley. Even in the case of Caliente, DOE may not be able to require the railroads to avoid shipping through Las Vegas. Intermodal operations at Arden or Valley would not reduce the number of truck shipments through the Las Vegas metropolitan area. Indeed, if intermodal operations were allowed, it might encourage DOE to increase the amount of LLW and MLLW shipped to NNSS, thus resulting in increased truck shipments through the Las Vegas Valley. Intermodal operations at Arden would not necessarily reduce the number of shipments using SR160, and might result in more shipments on SR160. The intermodal operations themselves would be controversial anywhere in the Las Vegas Valley. The perceived risk issues associated with intermodal operations for LLW and MLLW are complicated by DOE OCRWM's previous consideration of intermodal operations for spent nuclear fuel and high-level radioactive waste shipments to Yucca Mountain from locations in and near Las Vegas.

The transportation impact assessment is also deficient because of its failure to address perceived risk impacts directly related to previous DOE consideration of transportation routes to Yucca Mountain through the Las Vegas Valley. Public perception of radioactive materials transportation risks is complicated in Nevada by the past 25 years of controversy over Yucca Mountain shipments, and specifically by concern in southern Nevada about high-level nuclear waste shipments to Yucca Mountain through Las Vegas by truck and by rail. DOE identified such routes (I-15, I-215, and US 95 for trucks; and the Union Pacific mainline between Arden and Apex for rail) in the 2002 FEIS and 2008 SEIS. These are precisely the routes that DOE proposes to use, along with the I-15/US 95 interchange, for LLW and MLLW shipments under the "unconstrained" routing and intermodal options identified in NNSS Site-wide draft EIS.

To the extent that perceived risk can be managed, as in the case of DOE transuranic waste shipments to the Waste Isolation Pilot Plant (WIPP) facility in New Mexico, it has done so by selecting routes that avoid highly populated areas, and by following extra-regulatory safety and security protocols developed in close cooperation with, and publicly endorsed by, the affected states, state regional groups such as the Western Governors Association, and affected Indian tribes. The National Academy of Sciences (NAS) 2006 report *Going the Distance* provides a comprehensive review of transportation risks and risk management. The NAS recommends adoption of the WIPP transportation model, plus additional measures for managing the social impacts of spent fuel and HLW shipments, including creation of a social science advisory group. Under the approach recommended by the NAS, DOE, as the shipper of radioactive materials and the manager of the receiving facility, is responsible for managing perceived risk. The current agreement between DOE and Nevada is an example of the type of social risk management recommended by the NAS.

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In addition, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

DOE/NNSA used conservative assumptions to determine the radionuclide inventories for LLW and MLLW. The approach to developing the inventories used in the impact analysis is discussed in Appendix E, Section E.4.2. As explained in that section, many different radioactive waste streams, each with a unique radionuclide inventory, would be transported to the NNSS for disposal. To make the analysis more manageable and to provide conservatism for accident analysis purposes, the largest concentration of each radionuclide across all contact-handled LLW streams received in FY 2009 was assumed to be present in a shipment. The radionuclide concentration for each radioisotope was proportionally adjusted for each type of container based on container volume. The purpose of this assumption is to provide a reasonable and encompassing estimate of the waste container contents to yield conservatively high estimates of the potential accident risks, as reported in Chapter 5, Tables 5-11, 5-12, and 5-14 through 5-16, and the consequences are reported in Table 5-13. In most cases, the actual inventory for each shipment would be less than the assumed inventory listed in Appendix E, Table E-5. Therefore, one should not consider the inventory in Table E-5 for any assessments other than the purposes intended. Incident-free impacts reported in the tables are based on the assumptions regarding external package dose rates described in Section E.5.1.

Please refer to the response to comment 65-46; as indicated, the maximum radionuclide volumetric concentration received in 2009 was adjusted and applied to all analyzed container types to provide a reasonable and conservative estimate of container contents.

Please refer to the response to comment 65-46 regarding the development of radionuclide inventories for transportation analyses. The radionuclide inventory concentrations provided in Appendix E, Section E.4.2, for the different radioactive material inventories were used for the accident analysis. The methodology for performing the accident analysis is presented in Section E.6.1. Note that incident-free impacts were determined using the dose rate external to the transport package, as discussed in Section E.5.1, and were not calculated using the radionuclide inventory in the cargo. Acts of sabotage or terrorism are discussed in Section E.6 and in a classified appendix.

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Impacts to State and Local Government Enforcement and Response

The Nevada Highway Patrol (NHP) notes that the unconstrained routing case analyzed in the draft EIS, combined with the drastically increased numbers of shipments in the Expanded Operations Scenario could have a substantial impact on NHP's HazMat/RadMat permitting resources and could double or triple the statewide requirement.

NHP also notes that the draft EIS contains little or no discussion of accident/incident response requirements under any of the alternatives. The potential for long-term road closures increases with the numbers of shipments, and such road closures have wide ranging impacts for highways, local communities, the state, and others.

Socioeconomics (5.1.4)

The assessment of socioeconomic impacts contained in the draft EIS suffers from two serious omissions. First, as noted above in the discussion dealing with Region of Influence (ROI), the draft EIS fails to address impacts to communities and the environment located along transportation routes into NNSS for LLW and MLLW. Potential impacts in the entire range of socioeconomic areas/conditions along the current and prospective shipping routes should have been identified and assessed in a location-specific manner. To ignore the impacts and potential impacts associated with NNSS-related nuclear and hazardous materials transportation is to ignore what is arguably the largest potential source of socioeconomic impacts associated with NNSS activities and renders the draft EIS deficient in this regard.

Second, the draft EIS fails to assess or even recognize what is potentially the most significant category of socioeconomic impacts from NNSS activities on the economic and social fabric of Nevada communities and the state as a whole. This involves the potential for nuclear-related NNSS activities and the transportation of nuclear waste/nuclear materials to general stigmatizing or otherwise economic-suppressing impacts in the event of accidents or incidents. Nevada's unique tourism/visitor-based economy is especially vulnerable to such impacts, as has been documented by state, DOE and independent researchers over the past two decades. The draft EIS fails to evaluate the effect of such stigmatizing events associated with waste transportation, especially as related to events that might occur within or in close proximity to the Clark County/Las Vegas metropolitan area. A LLW or MLLW accident or incident occurring in an area associated with the state's major economic sector (i.e., the Las Vegas Strip) could have wide-ranging economic consequences for the area, region and the entire state by suppressing tourism and the resultant visitor spending which drives the Nevada economy. Likewise, state and even DOE-sponsored research has documented the potential for adverse property value impacts associated with nuclear waste transportation and along nuclear waste shipping routes. The final EIS should be expanded to include a comprehensive assessment of the potential for such impacts within Nevada and specifically within communities located along current and prospective LLW and MLLW shipping routes.

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**65-49** Please refer to the response to comment 65-46 regarding caution about using the inventory values in Appendix E, Table E-5, as well as the response to comment 65-48 that addresses how incident-free and accident impacts are determined. As discussed in Section E.4.2, the radionuclide concentrations identified in Table E-5 represent the highest concentrations of each radionuclide received in 2009 from a generator site. This inventory is applied to all shipments in this NNSS SWEIS transportation analysis to ensure a conservative analysis and to make sure that the analysis accounts for the possibility of packages with comparatively high radionuclide concentrations. In actuality, only a few shipments would have packages with high concentrations, and most packages would contain low concentrations of radionuclides, including strontium-90. For example, in calendar year 2009, the average strontium-90 concentration was less than 10 microcuries per cubic foot (total strontium-90 curies received divided by total volume received from all generators).

This NNSS SWEIS does not list limits on radionuclides to be transported to and disposed of at the NNSS; instead, limits are incorporated by reference to existing controlling documents. As stated in Appendix E, Section E.3.1, radioactive materials shipped in Type A packages are subject to specific radioactivity quantity limits identified as A1 and A2 values in 49 CFR 173.435 (e.g., 8.1 curies of strontium-90 per Type A package). Wastes containing radionuclides in quantities exceeding Type A limits are shipped in Type B packages. There is no regulatory limit in 49 CFR Part 173 on the total curies of strontium-90 in a Type B package, but the certificate of compliance for a given Type B package may limit the curie content. Type B packages are designed and tested to withstand the conditions of normal transport, as well as accident conditions. Additionally, as stated in Section E.4.2, waste shipped for disposal would have to meet the NNSS WAC. As indicated above, the analysis assumes a single conservative concentration value for all contact-handled LLW and MLLW, which is intended to encompass the characteristics of future shipments; specific origins, numbers, and routes of shipments with high concentrations of strontium-90 over the next 10 years are not known.

The health effects in terms of the consequences of a maximum reasonably foreseeable accident are presented in Chapter 5, Table 5-13. The strontium-90 inventory used in this accident, assuming the inventory concentration in Appendix E, Table E-5, would be about 1,750 curies. In this accident, all radioactive materials in the cargo were assumed to be at risk of being released. As stated in Section E.6.5, radiological consequences were calculated by assigning radionuclide release fractions on the basis of the type of waste, the type of shipping container, and the accident severity category. The quantity of strontium-90 released in the maximum reasonably

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A full assessment of the standard and special (stigma-related) impacts would be especially important with respect to the Expanded Operations Alternative because of the vastly increased amount of LLW and MLLW that would be shipped to NNSS under that alternative. The numbers of waste shipments under that alternative increase significantly, as do the frequency of shipments and the numbers of potential routes that would be used.

An assessment of socioeconomic impacts must also include impacts associated with proposals for intermodal operations at various locations in Nevada (as well as those in Arizona, Utah, and California). The use of intermodal sites for LLW and MLLW transport has the potential to impact the areas around those sites significantly. In the event of an accident or incident involving nuclear materials, the resulting clean up and investigations could render a transfer site inoperative, resulting in significant economic impacts to the site itself and to the surrounding area. Likewise, stigma or media-induced effects resulting in suppression of other economic activity could have serious consequences. The final EIS should contain a separate socioeconomic impact section that addresses potential impacts to intermodal sites identified in the draft EIS.

Assessing only the employment effects and population effects on area communities misses entirely potentially significant economic and other impacts associated with NNSS activities, especially those related to radioactive waste and radiological materials transportation through heavily populated urban areas. The draft EIS ignores the potential impacts associated with the stigmatizing effects of nuclear-related activities on areas and economic/industrial sectors. This is especially significant in the event of accidents or terrorism/sabotage incidents occurring in or near the Las Vegas metropolitan area. Extensive research by the State of Nevada, independent researchers and even DOE-affiliated researchers have documented the potential for impacts to property values along shipping route, negative economic impacts due to suppressed tourism and other commercial activities, etc. Any analysis of socioeconomic impacts is deficient if it fails to address the unique effects of nuclear activities and nuclear waste/materials shipments on unique local conditions.

Cumulative Impacts (6.0)

Transportation (6.3.3)

The discussion of transportation-related cumulative impacts does not come close to identifying the full range and breadth of such impacts associated with the collective assortment of activities for which radioactive waste and radioactive materials transportation is a major part. The analysis focuses almost exclusively on estimating collective radiation doses for the total amount of material shipped. However, the major cumulative impacts will likely not be due to the cumulative radiation exposures, although under certain circumstances, such exposures could prove significant (i.e., in worst case accidents or in the event of terrorism or sabotage). Rather, the cumulative impacts will be felt in terms of the burdens placed of specific highways, infrastructure, local governments/communities, emergency response and preparedness

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foreseeable accident was calculated to be approximately 1.3 curies. The consequence of this maximum reasonably foreseeable accident, which has a likelihood of about 1.2 in a million years in a suburban area within the State of Nevada, was estimated to be 27 person-rem, as shown in Table 5-13. This table also shows the consequence of this accident in an urban area anywhere along the transportation route to be 180 person-rem (the probability of this accident occurring along an urban route in Nevada is less than 1 chance in 10 million and was not evaluated separately). The accident consequences are based on no evacuations or relocation of the exposed population. If such activities were performed, the results presented in Table 5-13 would be less.

Economic impacts of an accident include direct costs associated with radiation surveys, cleanup, and continued monitoring, as well as indirect costs such as temporary or longer-term relocation of residents, temporary or longer-term loss of employment, destruction or quarantine of agricultural products, land use restrictions, and public health and medical care. The extent of contamination and the related costs would depend on many factors, including the quantity and type of radioactive material involved, type of release (spill, fire), the location of the accident, meteorological conditions, and surrounding land uses. Because of the myriad of factors associated with a specific accident, a full quantitative, site-specific, accident analysis that incorporated emergency response and cleanup activities was not performed for this NNSS SWEIS. Appendix E, Section E.6, was revised to include additional discussion of this point.

Economic impacts of an accident include direct costs associated with radiation surveys, cleanup, and continued monitoring, as well as indirect costs such as temporary or longer-term relocation of residents, temporary or longer-term loss of employment, destruction or quarantine of agricultural products, land use restrictions, and public health and medical care. The extent of contamination and the related costs would depend on many factors, including the quantity and type of radioactive material involved, type of release (spill, fire), the location of the accident, meteorological conditions, and surrounding land uses. In preparing the *Yucca Mountain FEIS* (DOE/EIS-0250), DOE elected to include information on cleanup costs. That EIS includes the evaluation of transport of SNF and HLW with orders of magnitude of more concentrated radioactivity than the vast majority of the radioactive wastes evaluated in this SWEIS. Therefore, the impacts and cleanup costs of an accident involving the types of wastes transported under this SWEIS would be orders of magnitude less than those evaluated in the *Yucca Mountain FEIS*. Appendix E, Section E.6.7, provides additional discussions of the consequences of an accident.

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capabilities, etc. These cumulative impacts would be route- and location-specific, occurring along a finite number of readily identifiable highways and rail transfer locations.

Groundwater (6.3.6.2)

The draft EIS states that “[i]t is difficult to reasonably estimate the volume of groundwater that may have some level of radionuclide contamination resulting from past underground nuclear testing.” The same statement will likely be true with respect to the volume of groundwater eventually contaminated as a result of present and future activities. However, a significant cumulative impact of past, current and future NNSS activities is the total amount of groundwater underlying NNSS that is and will continue to be unavailable for use by communities and the public outside NNSS. Uses for which NNSS groundwater might otherwise be used but for the sequestration of the land and restriction of access to non-NNSS users include irrigation, water for municipal water systems, commercial & industrial activity, among others. While some undetermined volume of the groundwater underlying NNSS may be or may become contaminated due to NNSS activities (past, present or future), the entire amount of that groundwater resource is effectively removed essentially forever from the public domain. For a water deficient region like southern Nevada, that in itself is a significant cumulative impact, and it should be identified and quantified, to the extent possible, in the final EIS.

Waste Management (6.3.11)

Radioactive Waste

Cumulative impacts from the disposal of radioactive waste (LLW and MLLW) are influenced greatly by the greatly increase waste volumes (i.e., 52 million cu. ft.) from off-site generators assumed to be disposed of under the Expanded Operations Alternative. Such impact would be reduced considerably were DOE required to make optimal use of available commercial disposal facilities. As noted elsewhere in these comments, the State of Nevada believes that NNSS should be the disposal option of last resort for waste coming from off-site generators. DOE should not be competing (in a government subsidized manner) with private industry in the waste disposal business. Moreover, as NNSS mission evolves and focuses on important national security, alternative energy, training and other core activities, distancing NNSS from its image as a contaminated waste disposal site would seem to be in the interests of DOE, its constituents and the State of Nevada.

Mitigation Measures (7.0)

Transportation (7.3)

The draft EIS states that radiological and nonradiological transportation risks would be reduced or mitigated by selecting routes that minimize impacts, scheduling shipments during lighter traffic volume periods, and training emergency response personnel. While appropriate

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- 65-51** Please see the response to comment 65-50 regarding inclusion of cost data in the SWEIS. The analysis of transportation accidents is based on a large amount of data regarding frequency and severity of accidents and encompasses the type of accident referred to by the commentor. Whereas accidents such as the tanker truck explosion are spectacular and newsworthy, they are among the low-probability, severe accidents that are an element of the transportation analysis. Based on national highway accident statistics, as explained in Appendix E, Section E.6.2, the likelihood of a severe accident with high consequences in the urban area around Las Vegas, Nevada, is less than 1 chance in 10 million per year for the total number of miles that would be traveled under the Expanded Operations Alternative; therefore, the consequences of such an accident were not specifically included for this portion of the route. Table E-16 provides the consequences of the most severe accident with the likelihood of equal and greater than 1 chance in 10 million, consistent with DOE guidance and normal practice. The transportation analyses in this SWEIS consider all ranges of accidents, from a fender-bender to a “most-severe” impact with long-duration fires in all segments of the travel, including in an urban area (see Chapter 5, Section 5.1.3.1).
- 65-52** Please see the response to 65-50.
- 65-53** The Price-Anderson Act of 1957, as amended (revised in 1967, 1975, and 1988 and extended by the Energy Policy Act of 2005) requires all NRC licensees and DOE contractors to enter into agreements of indemnification for personal injury and property damage due to any nuclear or radiological incident, regardless of who may be liable. Section 604 of the act limits the indemnity provided by DOE for its contractors to \$10 billion for each nuclear incident, including legal costs, subject to adjustment for inflation.
- 65-54** As stated in Appendix E, Section E.6.6, the quantity of nuclear material in a shipment that would be transported to NNSS would be smaller than the quantity in a SNF cask that was analyzed in the *Yucca Mountain FEIS* (DOE/EIS-0250); therefore, the impacts would be bounded.
- 65-55** As discussed in Appendix E, Section E.3.1, requirements for Type A packages are detailed in 49 CFR Part 173, Subpart I. Commonly used Type A packages include 55-gallon drums and steel boxes. The regulations and limits on the radioactive contents of Type A packages apply to transport of material by either truck or rail. Similar to the accident analysis for truck transport, the analysis of rail transport is based on a range of accidents of various frequencies and severities. Consequently, the human health impacts presented in Chapter 5, Table 5-11 do reflect consideration of

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mitigation measures, the draft EIS does not go far enough in identifying mitigation measures necessary for the types of major radiological materials shipping campaigns associated with activities contemplated in the draft EIS. First, simply stating that routes would be selected to minimize risk is unacceptably vague in the case of NNSS and the State of Nevada. DOE and Nevada have already implemented an extremely successful mitigation measure that significantly reduces the risks of radiological accidents or incidents occurring in the state's heavily populated urban areas – namely the requirement that waste coming in to NNSS for disposal must use highway routes that avoid the Las Vegas metro area. Nevada insists that DOE continue to honor this agreement. In addition, any future waste shipments in northern Nevada should be routes so as to avoid the densely populated and traffic-congested Reno-Sparks metro area. The prohibition on the use of Hoover Dam for LLW and MLLW shipments should be extended to the new Hoover Dam Bypass Bridge because of the traffic congestion on either side of the bridge and because use of the bridge funnels waste into the metro Las Vegas area.

Second, DOE should be prepared to provide certain transportation infrastructure improvements, should those be necessary and shown to further transportation risk reduction strategies. One example would be the need for improvements along CA Route 127. CA 127 is one of the rural routes identified as part of the strategy for minimizing risk by keeping shipments out of urban Las Vegas. However, CA 127 continues to be problematic due to difficult road conditions (lack of shoulders, poor pavement in places, etc.) and the potential for flooding during heavy rains. Improvements to this route would make its use for LLW and MLLW shipments much more acceptable to the state of California and lead to increased usage, thereby furthering the goal of avoiding heavily populated urban Las Vegas.

Finally, an effective mitigation approach to transportation impacts is through avoidance – reduce the overall number of shipments by making greater use of commercial LLW and MLLW disposal options rather than disposing waste at NNSS.

Socioeconomics (7.4)

The final EIS might note that a major socioeconomic impact mitigation measure is already in place and should be continued. The requirement that waste shipments be routed so as to avoid the densely populated and economically important Las Vegas metropolitan area avoids the potential for significant socioeconomic impacts in the event of an accident or incident involving a radiological waste shipment.

*Volume 2*

Radioactive Release Characteristics (E.6.5)

The draft EIS radioactive release fractions are based on unreliable and untested assumptions about shipping package performance in severe accidents. Using these release fractions results in a systematic and significant under-estimation of accident consequences. This in turn results in

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statistics specific to rail transport of the waste. The accident risks reflect the range of possible accidents that could occur, including accidents involving long-duration fire and other severe accidents.

Packages containing LLW have been shipped by rail in the past in support of DOE operations. These packages were shipped to a rail-to-truck transfer station, transferred to trucks without incident, and safely transported by truck from the transport station to the NNSS. If rail is used for LLW shipments, carriers would comply with all applicable laws and regulations that are designed to protect human health and the environment. Type B packages would not be transported by rail and are only analyzed for the truck mode of transport. In addition, as noted in the response to comment 65-49, the inventories presented in this *NNSS SWEIS* were developed to ensure a conservative analysis; packages with those inventories would be rare.

**65-56** DOE/NNSA notes the commentator's opposition to rail shipments through Las Vegas, Nevada, and agrees that the number of truck shipments from the Las Vegas area to NNSS would not decrease through the use of rail.

**65-57** DOE/NNSA conducted a detailed analysis of the potential human health effects associated with transportation of radioactive wastes and materials under both normal operations and accident scenarios. These analyses are presented in Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS*. However, DOE/NNSA did not attempt to quantify any adverse socioeconomic impacts associated with waste transportation under normal operations or accident scenarios. In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE considered these issues, guided by the results of its own research and that of the state of Nevada, and by appropriate conclusions from reviews of this subject by the Nuclear Waste Technical Review Board in 1995 and other research that includes an independent economic study prepared in 2003. Based on that evaluation, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this *SWEIS*.

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systematic underestimation in the per-shipment risk factors used to calculate the transportation risk analysis results reported in Section 3.7, draft EIS pages E-34 to E-53. In particular, the per-shipment risk factors for routes through Las Vegas, stated in Table E-18, page E-53, fail to sufficiently assess both accident and incident free risks. The conclusion that "all of these risks are small" is unsubstantiated and misleading. Moreover, the comparative risk analysis ignores the unique local conditions previously mentioned.

Shipments of low-level waste come in different sizes and shapes, primarily in 55-gallon drums, with varying inventory. A great uncertainty is the release percentage for each accident severity category. According to Table E-11, most of the proposed DOE LLW and MLLW shipments would be made in type A containers. Since the 1977 report, "Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes," (NUREG-0170, December 1977), only the analysis for the type B casks has been updated via the Modal study and more recent Sandia study. All package performance analyses for LLW shipments in Type A containers, including the most recent West Valley study, refer back to NUREG-0170, produced in 1977. The releases in each NUREG-0170 accident severity category have no engineering basis. RADTRAN can be employed for the dose assessment, but the releases for each accident severity category for each type of shipment must be revised.

The accident severity categories from NUREG-0170 are attached (Attachment A). In the Final EIS, DOE must explain in detail how the NUREG-0170 categories have been used in the transportation risk analysis. In the 1977 analyses using Model I, fires greater than 15 minutes release the entire contents. Under Model II, the same fire would release 1% of their contents. But Type A containers must satisfy only normal conditions of transport (10 CFR Part 71.71). Depending on the weight of the container (>11,000 lbs to more than 33,100 lbs), the drop ranges from 4 feet to 1 foot. In addition to a slight compression load, the package must pass a penetration test, the drop of a 13 lb steel cylinder from a height of 40 inches (1 m). These tests are far less than a container might endure in a real highway crash involving a fire, and are far less than would be expected in severe rail accidents.

LLW shipments containing higher activity materials are generally transported in Type B containers. However, these type B containers for Class B and C LLW are not the same as spent fuel casks, and their expected performance in severe accidents is not the same. This is a concern regarding the proposed LLW and MLLW shipments to NNSS including Sr-90 at a concentration of 1.8 Ci/cubic foot (Table E-5). Presumably these are 4,000-8,400 Type B container shipments of LLW and MLLW listed in Table E-11. The average Sr-90 content is stated to be 1.8 Ci/f3, but some shipments could have very high concentrations, high enough to be considered for disposal in a geologic repository rather than burial in a surface landfill. However, our concern here is that the draft EIS does not explain how the release fractions and resulting per-shipment risk factors were developed for LLW and MLLW shipments containing Sr-90. This is a matter of significant safety and environmental concern because DOE proposes to ship these Sr-90-containing LLW and MLLW shipments through downtown Las Vegas and through suburban Las Vegas under the unconstrained case routing.

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*cont'd*

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- 65-58 Addressing public perceptions of the risks associated with transporting radioactive waste and materials is not within the scope of this SWEIS. In addition to the example included in the comment, it should be noted that the Blue Ribbon Commission on America's Nuclear Future issued a final report in which they recognized the success of these types of cooperative activities and recommended the establishment of legislation and processes for the transport of SNF and HLW (BRC 2012). As previously noted, in consideration of the environmental analyses and stakeholder comments, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. DOE believes the existing regulatory structure is sufficient to manage risks associated with LLW/MLLW transportation and that reaffirming its commitment regarding routing restrictions in the Las Vegas, Nevada, area addresses the substance of this comment.
  - 65-59 The vast majority of the LLW/MLLW shipments to the NNSS do not require special permits. The few DOE/NNSA shipments that would require a permit from the State of Nevada should not impact the Nevada Highway Patrol permitting resources. Nonetheless, in consideration of the environmental analyses and stakeholder comments, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.
  - 65-60 Whenever material is shipped, the possibility exists that a traffic accident could result in vehicular damage, injury, or death. Even when drivers are trained in defensive driving and taking great care, there is a risk of a traffic accident. To date, DOE and its predecessor agencies have a successful 50-year history of transporting radioactive materials with minimal issues. Transportation accidents could result in road closure and traffic delays. Appendix E, Section E.3.2, states that DHS is responsible for establishing policies for and coordinating civil emergency management, planning, and interaction with Federal Executive agencies that have emergency response functions in the event of a transportation incident. Guidelines for response actions are outlined in the National Response Framework in the event of a transportation incident involving nuclear material.
- DHS would use the Federal Emergency Management Agency, an organization within the Department, to coordinate Federal and state participation in developing emergency response plans and to be responsible for the development and maintenance of the Nuclear/Radiological Incident Annex to the National Response Framework. The Nuclear/Radiological Incident Annex describes the policies, situations, concepts of operations, and responsibilities of the Federal departments and agencies governing

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Moreover, it is not clear that the DOE accident analysis takes into account alpha and beta emitting radionuclides. Regarding Sr-90 shipments, the discussion regarding tritium containers is instructive: “tritium canisters would be transported to the Savannah River Site (note that this analysis does not evaluate the transportation of tritium because tritium is a beta-emitter and, therefore, would not be a significant source of an external radiation dose).” (p. E-22) The implication here is that DOE is only taking into account direct gamma doses, and not inhalation or ingestion of radioactive material, particularly alpha and beta emitters.

Acts of Sabotage or Terrorism (E.6.6)

The draft EIS states that “a classified appendix has been prepared for this SWEIS that includes impact analyses for intentional acts of destruction related to transportation.” If DOE plans to rely upon classified information in order to meet its NEPA responsibilities, the State of Nevada requests that arrangements be made to allow Nevada personnel and contractors with appropriate security clearance to review these classified sources.

DOE states that it has evaluated the impacts of acts of sabotage and terrorism on transportation of spent nuclear fuel and high-level radioactive waste shipments (DOE 1996, 2002a). DOE states that “the sabotage event evaluated in the Yucca Mountain EIS (DOE 2002a) was considered as the enveloping analysis for this SWEIS.” The spectrum of accidents considered ranges from a direct attack on a cask from afar to hijacking and exploding a shipping cask in an urban area. Both of these actions would result in damaging the cask and its contents and releasing radioactive materials. The fraction of the materials released is dependent on the nature of the attack (type of explosive or weapon used). The State of Nevada has evaluated potential sabotage events and disputes DOE’s claim that the Yucca Mountain EIS provides “an enveloping analysis.” For example, DOE does not consider the possibility of a 2-hole cask penetration. DOE does not consider the possibility of a container being pressurized. Nevada’s critique of previous DOE sabotage studies is documented in the attached report by Radioactive Waste Management Associates (Attachment B).

**Additional Specific Comments**

Waste Management

Page 3-21, 3.1.2.1; 3-38, 3.2.2.1; 4-143, 4.1.11.1.1 and Table 4-7

There should be a defined, publicly accessible decision process that would be followed prior to a decision to re-open the Area 3 RWMS.

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the immediate response and short-term recovery activities for incidents involving release of radioactive materials to address the consequences of the event.

**65-61** In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE is not aware of any more recent information that would change this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS. However, potential impacts on human health accounted for attributes of the entire length of the potential routes for all waste shipments.

**65-62** Please see the response to comment 65-49 for a discussion of the nature of potential socioeconomic impacts from a transportation accident, and the rationale for why individual site-specific analyses incorporating response and cleanup costs were not performed in this SWEIS. However, potential impacts on human health accounted for attributes of the entire length of the potential routes for all waste shipments, to include intermodal sites. Appendix E, Section E.6.7, provides additional discussions of the consequences of an accident.

**65-63** As stated in the response to comment 65-57 above, in the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated the perceived risk and stigma associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE is not aware of any more recent information that would change this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.

**65-64** Chapter 6, Section 6.3.3, of this *NNSS SWEIS* addresses cumulative impacts resulting from transportation. The impacts related to increased burdens on local highways and infrastructure are addressed in the first paragraph of that section. DOE/NNSA recognizes the increased burden placed on local community emergency responders by its transportation of radioactive wastes and materials. DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination

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Page 1-20, Table 1-2; 2-13, 2.5.2; 4-146, 4.1.11.1.1.2, Footnote 13; 4-7, 4.1.1.3

How does the transfer of custody resolve NNSS land withdrawal issue with regard to the purposes of the land withdrawals not including the waste disposal component?

Page 1-146, 4.1.11.1.1.2

"It is estimated that the currently unused portion of the Area 5 RWMC could accommodate disposal of several million cubic yards of waste." When is it expected that the 3.5 million cubic feet reserve capacity threshold (Table 4-47) will be reached? Expected threshold dates should be tabulated for each alternative.

Page 4-147, 4.1.11.1.1.2; 5-205, 5.1.12.1.4

Is there a decision record explaining why the 1,100 cubic feet (102 55-gallon drums) of TRU waste inadvertently disposed in 1986 in a now inactive trench were not located and removed when the error was discovered in 1989? If there is such a document, it should be included in the draft EIS references. It was not until nearly 20 years after the fact that the safety issue was "resolved" by analysis (Shott, et al. 2008). Even though the exact location of the drums was not known, the search and removal could have been accomplished when the error was first discovered.

Page 4-150, 4.1.11.1.1.3

Are the waste profiles routed to NDEP for concurrent review accessible for public review at NDEP? If not, why not?

Reference Gordon, 2009a is in an unreadable embedded font, and thus of no value.

Table E-5, Page E-26, Low-Level and Mixed Low-Level Radioactive Waste Radionuclide Concentrations, indicates a relatively high concentration for Sr-90. Recognizing that this is the maximum level (for calculation), how much waste at this concentration (1.80 curies per cubic foot) has been disposed and is expected to be disposed in the future; where has it and will it come from; and, was it (will it) be disposed in DOT Type B containers as it appears would be required by NNSS Waste Acceptance Criteria, January 2011?

Page 4-154, 4.1.11.1.4; Page 5-232, 5.3.3.1

Why is the source of tritium at NLVF not remediated and, thus, this waste stream and transport of liquid waste eliminated?

Facility Accidents

Page 5-206, 5.1.12.2

"Because the same types of activities occur at the facilities under all of the alternatives, the accident scenarios and consequences would be the same across the alternatives. Differences in

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of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada. Additional information has been provided in Chapter 6, Section 6.3.3, to address the cumulative impacts on local governments.

As noted in Chapter 5, Sections 5.1.6.2.1, 5.1.6.2.2, and 5.1.6.2.3, no impacts on groundwater quality were identified as a result of activities at the NNSS over the next 10 years under any of the alternatives in this NNSS SWEIS. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

Some groundwater is affected by radiological contamination resulting from past underground nuclear testing. In 1996, the State of Nevada and DOE/NNSA entered into a FFACO that directs the environmental restoration of legacy contamination from nuclear weapons testing at the NNSS and other locations in Nevada. Under the FFACO, DOE/NNSA, in consultation with NDEP, developed a UGTA Corrective Action Strategy to address the contamination created by the testing of nuclear devices in shafts and tunnels at the NNSS. The objective of the UGTA Corrective Action Strategy is to analyze and evaluate each UGTA CAU through a combination of data and information collection and evaluation, as well as modeling of groundwater flow and contaminant transport. As noted in Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, of this NNSS SWEIS, DOE/NNSA's UGTA Project, in compliance with the FFACO and in coordination with NDEP, is conducting a long-term effort to characterize the levels and flow directions and rates of groundwater that was contaminated by underground nuclear weapons testing at the NNSS. Pursuant to the terms, conditions, and goals of the FFACO, DOE/NNSA will characterize and monitor the groundwater, both on and off of the NNSS, with the goal of first

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accident frequencies due to the level of operations are within the uncertainty range of the accident events.” Tables 5-55, 5-56, and G-16 should include the uncertainty ranges for the values shown.

References at the bottom of the final paragraph should be to Tables 5-55 and 5-56, not 5-51 and 5-52.

Page 5-207, Table 5-55; Page 5-208, Table 5-56; Page 5-213, 5.1.12.2.2; Page G-34, G.3.3.1.4

Tracer Radionuclide Experiments are only discussed under the Expanded Operations Alternative. As described, these experiments currently are only conceptualized, and the analyses of consequence and risk are based on broad assumptions with no basis in fact. The potential environmental impacts of experiments and associated possible accidents at the scale discussed are sufficiently uncertain that any plan to proceed with such an activity should be the subject of an Environmental Impact Statement and full public NEPA process. In the ROD for the Final SWEIS, NNSA should commit to NEPA analysis of any plan for Tracer Radionuclide Experiments as discussed in this draft.

Page 5-207, Table 5-55

Footnote c should be applied, along with footnote a, to the columns titled LCF Risk.

Page 5-208, Table 5-56; Page G-42, G.3.7; G-50, Table G-19; Page G-52, Table G-20

Where is the analytical basis for the aircraft crash and fire documented? The aircraft sortie rate has been updated (USAF 2007), and should have been further updated, based on more complete and comprehensive available data and projections, for this 2011 draft. Also, Nevada’s admitted contentions in the Yucca Mountain Nuclear Regulatory Commission’s licensing proceeding took issue with the assumptions and calculation method used by DOE in its analysis of military aircraft crash frequency.

Page 5-209 and 5-210, 5.1.12.2.1

Paragraph 2, line 2 should reference Tables 5-55 and 5-56, not Tables 5-51 and 5-52. And, in paragraph 3, the reference should be to Table 5-55, not Table 5-52.

Final paragraph, line 1 should reference Table 5-55, not Table 5-51.

Page G-46, Table G-18

Whole numbers are not shown in accord with footnote b.

Page 5-212, 5.1.12.2.1; Page G-48, G.3.7.1.1

Nonproliferation Test and Evaluation Complex: “Future experimental activities could include evaluating the potential impacts of releases of larger quantities of chemicals such as chlorine. It is anticipated that any such proposed experiments would undergo a thorough environmental and

establishing a “contaminant boundary” and, based on that boundary, establishing a “regulatory boundary” for groundwater contamination. The contaminant boundary is defined as a probabilistic model-forecast perimeter and a lower hydrostratigraphic unit boundary that delineates the extent of radionuclide-contaminated groundwater (i.e., water exceeding SDWA radiological standards) from underground testing over the next 1,000 years (FFACO 2011). Ultimately, DOE/NNSA and NDEP will develop a regulatory boundary for each CAU, which would provide protection for the public and the environment from the effects of migration of radioactive contaminants. If radionuclides were to reach this boundary, the DOE/NNSA NSO would submit to NDEP for approval a plan to meet specific CAU regulatory boundary objectives (FFACO 2011). As noted in Section 4.1.6.2, a long-term closure monitoring well network will be designed, in consultation with NDEP, installed, and used for monitoring groundwater to ensure public health and safety. Additional information has been added in Section 6.3.6.2 to address the potential extent of radiological contamination that would exceed the contaminant boundary levels over the next 1,000 years in the Frenchman Flat and Pahute Mesa areas of the NNSS. Based on these modeled estimates, it is unlikely that radiologically contaminated groundwater exceeding Safe Drinking Water Standards would reach areas where it would be used by the public, based on the current boundaries of the NNSS and Nevada Test and Training Range.

Although the commentor implies that the unavailability of groundwater beneath the NNSS has adversely affected “irrigation, water for municipal water systems, commercial & industrial activity, among others,” there is no evidence cited to support that implication. As stated in Chapter 6, Section 6.3.6.2, “To date, it has not been demonstrated that lack of access to NNSS groundwater has adversely affected development in the region. However, it is possible that the restrictions imposed on future groundwater withdrawals within the Amargosa Desert Hydrographic Basin by Nevada State Engineer Order 1197, combined with a lack of access to other sources of water, could constrain certain types of development.”

As noted in Chapter 6, Section 6.1, of this *NNSS SWEIS*, for DOE/NNSA contributions to cumulative impacts, the analysis primarily uses the Expanded Operations Alternative because it tends to result in the highest estimates of the potential cumulative impacts associated with the alternatives analyzed. The basis for the estimate of radioactive wastes that may be disposed at the NNSS over the next 10 years is explained in Appendix A, Section A.2.2.1, as follows: “These waste volumes are based on: (1) projections of the respective waste types that are designated for disposal at the NNSS, as well as those without a designated disposal

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safety review prior to authorization of a test involving larger quantities of hazardous materials.” The potential environmental impacts of experiments and associated possible accidents at the scale discussed are sufficiently uncertain that any plan to proceed with such an activity should be the subject of an Environmental Impact Statement and full public NEPA processes. In the ROD for the Final SWEIS, NNSA should commit to NEPA analysis of any plan for large quantity chemical release experiments as discussed in this draft.

Geologic Resources

Page 4-55, 4.1.5.2.5

The discussion of potential for oil and gas reserves at NNSS should be updated. Since 1996, there has been a growing interest in hydrocarbon potential in central Nevada, and numerous reports have been published on the geology and hydrocarbon potential of the region. There also is a growing interest in oil and gas leases on public land in the region. With appropriate security and access controls, it does not seem likely that permitting oil and gas exploration on selected parts of the site would compromise the site’s national security mission.

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NNSS has been effectively closed to the public since the late 1940s. Given the 80+ years of technological advances in the art of mineral exploration since then and the significant changes in terms of mineral values that have occurred, there could very well be economically viable mineral deposits, i.e., gold, silver, etc, on NNSS.

Railroad Valley, the only place in Nevada with oil and gas production, is only 50 or so miles from the northern boundary of NNSS. Since no one has been allowed to do any exploration for oil and/or gas on NNSS, there is no basis for the statement in the draft EIS that there is little, if any, potential for oil and/or gas deposits on NNSS. In fact, a local geologist (Alan Chamberlain) prepared a report in the 1990s suggesting that an overthrust belt occurring on the NTS might be indicative of exploitable oil and/or gas reserves, but that hypothesis has never been tested.

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location, as projected in DOE’s Waste Information Management System Database as of April 2010, and (2) input from prospective waste generators regarding potential waste streams and/or volumes that are not currently included in the database.”

DOE/NNSA is aware that the estimated volume of radioactive waste under the Expanded Operations Alternative is high, that many of those waste streams that had no designated disposal path in the Waste Information Management System Database would likely be disposed at facilities that may be developed at the site of generation of the waste, and that many of them will likely be disposed at licensed commercial facilities. Currently, approximately 90 percent of LLW generated by DOE is disposed in onsite facilities at the site of generation; about 5 percent is disposed at licensed commercial disposal facilities, and about 5 percent is disposed at NNSS. Further, because of funding restrictions and other issues, a number of the waste streams included in the estimated volumes may not be generated during the next 10 years. However, for purposes of presenting a conservative analysis (i.e., avoiding underestimating impacts), the large volume addressed under the Expanded Operations was used in this NNSS SWEIS.

It remains DOE policy for its generators of LLW/MLLW to give first consideration to disposal at the site where the waste is generated. However, a DOE LLW/MLLW generator may seek an exemption to use licensed commercial disposal facilities. In August 2009, guidance was issued by the DOE Environmental Management Program (DOE 2009) that reiterated DOE’s commitment to the State of Nevada that the NNSS would not be the sole disposal site for offsite-generated waste. This guidance also informed site managers of the Environmental Management Program’s intention to change DOE policy to make NNSS the “disposal site of last resort” for LLW/MLLW.

**65-67** As stated in response to comment 65-1, no changes will be made to existing DOE/NNSA transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

**65-68** DOE/NNSA and its contractors are users of the roadways much as other organizations and individuals are. Generally, DOE sees it as the responsibility of the transportation agencies at the state and Federal levels to plan for and fund highway maintenance and upgrades. The states and the Federal Government both collect fuels taxes, one purpose of which is to fund road improvements.

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**Comments of the Nevada Division of Environmental Protection**

U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518  
Attn: NNSS SWEIS Document Manager

RE: *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Nevada National Security Site and Off-Site Locations in the State of Nevada*

Dear Ms. Cohn:

The Nevada Division of Environmental Protection, Bureau of Federal Facilities staff (NDEP) appreciates the opportunity to review and provide comment on the above-referenced document. The NDEP's comments focus on the technical accuracy of statements made in regard to the U.S. Department of Energy's (USDOE) Environmental Management Program, which includes the Environmental Restoration Projects (Industrial Sites, Soil Sites and Underground Test Area Projects) waste management activities, and the Environment, Safety and Health Program. The NDEP regulates the USDOE at the Nevada National Security Site (NNSS) and the two Nevada Off-Sites under an AGREEMENT IN PRINCIPLE and the FEDERAL FACILITY AGREEMENT AND CONSENT ORDER.

The NDEP understands that the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Nevada National Security Site and Off-Site Locations in the State of Nevada* (document) was at least two years in production. However, during this time, projects and work continued, yet it appears that the most current information has not been incorporated. Also, during review of the document, it would appear that the USDOE contractor preparing the document may not have accessed information or utilized institutional knowledge and other resources available from National Nuclear Security Administration/Nevada Site Office (NNSA/NSO) personnel. It is important to the NDEP that all statements and descriptions of projects, programs and activities under the NDEP's oversight are correct and complete. The NDEP therefore submits the attached technical comments so that the *Final Site-Wide Environmental Impact Statement for the Continued Operation of the Nevada National Security Site and Off-Site Locations in the State of Nevada* can present an accurate, complete and up-to-date depiction of all activities under the regulatory purview of the NDEP.

The technical comments provided below are grouped into **General, Waste Management, Underground Test Area (UGTA) and Safe Drinking Water/Water Pollution Control** categories. NDEP's comments include corrections to responses, citations and figures and discuss the need for updating and/or clarifying information throughout the document. The NDEP also raises questions and provides comments for the Expanded Operations Alternatives in the Environmental Restoration Program (ERP) that are not addressed consistently throughout the document. Additionally, the NDEP has pointed out that some of the technical information

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**65-69** This *NNSS SWEIS* evaluates the transportation and disposal of two different quantities of LLW/MLLW: 15.9 million cubic feet for the No Action and Reduction Operations Alternatives and 52 million cubic feet for the Expanded Operations Alternative. The quantities were selected to provide a conservative analysis of two levels of operation. In practice, only a small percentage of the LLW/MLLW generated by DOE is disposed at the NNSS. Approximately 90 percent of the DOE LLW/MLLW generated annually is disposed at the site where it is generated. Of the remaining 10 percent, approximately one-half is disposed at a commercial disposal facility in Clive, Utah, and the balance is disposed at the NNSS. Much of the waste volume shipped to NNSS cannot be disposed at other DOE facilities or at currently available commercial facilities (D'Agostino 2011).

**65-70** As noted in the response to comment 65-1 above, in consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

**65-71** The release fractions used in the transportation analysis are based on information derived from credible technical reports. Appendix E, Sections E.5 and E.6, provide details on the analysis approach and methods and describe the sources for the information used in this SWEIS. The methods and source documents are widely accepted and standard bases for DOE EISs. Additional discussion regarding the approach to the analysis, including the sources of analytical data, is provided below in the response to comment 65-72. Please refer to the response to comment 65-43 regarding analysis of unique local conditions.

**65-72** The Type A packages used in the transportation analysis for this *NNSS SWEIS* are listed in Appendix E, Table E-4; other Type A packages could be used. Similar packages have been used by DOE and other industries, including waste shipments performed under NRC regulations. As described in Section E.5.1, in this SWEIS, all LLW/MLLW Type A packages are contact-handled. Remote-handled LLW/MLLW wastes are placed in Type B packages that provide both additional shielding and protection during transport. In this SWEIS, these materials were assumed to have been placed in drums and then placed inside a thick-walled Type B cask, such as the CNS 10-160B, before transport.

In the accident analysis, depending on the severity of accident (i.e., collision speed and/or ensuing fire), some or all of the packages on a vehicle were assumed to fail. A failed package could lead to a fraction of material being released. As stated

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State of Nevada, Office of the Attorney General**

provided in the document is not accurate because the document contractor may not have had access to all of the relevant information. The NDEP is therefore recommending that the NNSA/NSO ERP staff review specified sections to verify overall accuracy.

**General Comments:**

1. Page 1-25, Last Box, **Project Shoal, Central Nevada Test Area, and the Tonopah Test Range** and Page 2-13, First Paragraph, **Transfer of Responsibility for Project Shoal and the Central Nevada Test Area** – The **Response** should state that remediation of the **surface CAUs** at the Project Shoal and Central Nevada Test Area were completed but “remediation” of the **subsurface CAUs** at these two sites is ongoing. **65-94**
2. Pages 4-91 to 4-93 – **Routine Radiological Environmental Monitoring Plan** - What is the relationship, if any, between the well monitoring conducted for CEMP, RREM, UGTA and NNSS potable supply programs? It is unclear if the content this Section is all part of the RREM Plan discussion. The discussions are fragmented and unclear. **65-95**
3. Page 5-12, Section 5.1.1.1.2 – How can it be stated that “there would be no land use impacts resulting from the continuation of EM Mission activities at the current levels of operations under the No Action Alternative because activities would not change” when the land is being impacted by these activities? Also, in regards to the **Environmental Restoration Program** paragraph, should the “temporary impacts” of restoration activities carried out in areas that are not consistent with the designated land use identified for that land area be stated in this SWEIS so they can be commented on? **65-96**
4. Page 5-86, **Environmental Restoration Program** – Elsewhere in the document (Page 5-96, Section 5.1.6.1.2.2), it is stated that if operations expanded more work could be done in the UGTA Project. How then can expanded impacts be the same as the No Action impacts? **65-97**
5. Page 5-109. Second Paragraph – Why is it stated that there would be no changes to environmental restoration activities under Expanded Operations given what is stated in Section 5.1.6.1.2.2 under **Environmental Restoration Program – Underground Test Area Project**? **65-98**
6. Page 5-121 and Page 5-122, **Section 5.1.7.1.1.2** – The NDEP requests that the NNSA/NSO’s ERP staff review this section for accuracy in both text and numbers given. **65-99**
7. Page 5-130, **Environmental Restoration Program** – Why is it stated that there would be no changes to environmental restoration activities under Expanded Operations given what is stated in Section 5.1.6.1.2.2 under **Environmental Restoration Program – Underground Test Area Project**? **65-100**

in Appendix E, Section E.6.5, the fractions of radioactive material released from the shipping container were based on recommended values from NUREG-0170, *Radioactive Material Transportation Study* (NRC 1977) and the DOE handbook, *Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facility* (DOE 1994). For wastes transported in high-integrity containers, release fractions were calculated using a crash model similar to that used in the *Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement* (DOE 1997). For soft-liners in 20-foot International Organization for Standardization containers, release fractions were determined using the method described in the *DOE West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE 2003).

As presented in Appendix E, Section E.4, since the publication of NUREG-0170, there have been two affirmations of its conclusions (NUREG/CR-4829), *Modal Study* (NRC 1987), and NUREG/CR-6672, *Reexamination Study* (NRC 2000), each using improved tools and information that supported the earlier studies. While the conservatism of the conditional probabilities and release fractions for each accident severity category from these studies can be argued, these studies, as well as the others mentioned in Section E.6, are still considered the only reliable sources for this information.

Depending on the waste form and type, the analysis considers all radionuclides within the failed packages listed in Appendix E, Tables E-5 through E-9. Given the material at risk (all inventory in the cargo), the severity category conditional probability, and the associated release and respirable fractions, the RADTRAN 6 computer code calculates the consequences in terms of total effective dose to the population residing within the 50 miles of the road. The results on a per-shipment basis are listed in Table E-10.

Please refer to the response to comment 65-49 regarding the inventory of strontium-90 in the LLW/MLLW packages. The radionuclide concentrations shown in Appendix E, Table E-5, are representative of the maximum concentration received in 2009 at NNSS and are not average values. Maximum concentrations are assumed to be conservative. In reality, a waste package would not have the suite of all of the radionuclides shown in Table E-5.

As stated in the response to comment 65-14, in consideration of the environmental analyses and stakeholder comments, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.

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8. Page 5-178, **Environmental Restoration Program** – Why is it stated that there would be no changes to environmental restoration activities under Expanded Operations given what is stated in Section 5.1.6.1.2.2 under **Environmental Restoration Program – Underground Test Area Project?**
9. Page 9-18, **Federal Facility Agreement and Consent Order, as amended (February 2008)** – the date of amendment needs to be changed.
10. Page S-28, Figure S-7 Title – The Corrective Action Units (CAUs) shown on this Figure are UGTA CAUs at NNSS. There are more CAUs throughout NNSS than just the UGTA CAUs. The title of this Figure is misleading.
11. Pages A-23 to A-25, Section A.1.2.2, **Environmental Restoration Program** – While this Section is referenced on Page 3-19, why can it not be moved to Chapter 2 since all the activities have occurred since 1996, the date of the implementation of the FFACO?

**Waste Management Comments:**

12. Page 4-142, **Table 4-47, Area 5, Radioactive Waste Management Complex, Disposal**, Regulated asbestos LLW – The **Remarks** should be updated to reflect that Pit 6 has been closed.
13. Page 4-142, **Table 4-47, Area 5, Radioactive Waste Management Complex, Storage, Hazardous waste** – The **Remarks** should be updated to refer to the permitted storage of hazardous waste prior to shipment to offsite TSDF(s).
14. Page 4-142, **Table 4-47, Area 5, Radioactive Waste Management Complex, Closure Activities** – The **Remarks** should be updated to reflect the current status in FY12, and that the 92 acre site has been physically closed.
15. Page 4-143, Section 4.1.11.1.1, Second paragraph, Last Sentence – “This 2002 ROD also...” should be “This 2000 ROD also...”
16. Page 4-148, Last paragraph, Third Sentence – The statement “In December 2005, NDEP reissued the interim-status permit...” is incorrect. The 2005 permit was a full-blown RCRA permit. Also, there was no interim-status permit issued previously. The Pit 3 operated under interim status but there was no formal permit issued by NV.
17. Page 4-149, Second Paragraph – The text should be updated to reflect the current status in FY12.

The RADTRAN 6 calculations do take into account inhalation and ingestion. The tritium canisters were not analyzed because the risk associated with transport of the canisters would be very small compared to the other materials and wastes that were analyzed.

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| <b>65-101</b> | <b>65-73</b>  | DOE/NNSA has provided an opportunity for appropriately cleared personnel from the State of Nevada to review the classified appendix.  |
| <b>65-102</b> | <b>65-74</b>  | The amount of radioactive materials (in curies) transported in various waste types by each carrier through the State of Nevada is orders of magnitude less than that in a single SNF cask that was analyzed in the <i>Yucca Mountain FEIS</i> (DOE/EIS-0250). Therefore, the dose estimates provided in the <i>Yucca Mountain FEIS</i> bound any potential dose from intentional destructive acts involving a transport in this <i>NNSS SWEIS</i> . As noted in Appendix E, Section E.6.6, while it is not possible to determine terrorists' motives and targets with certainty, DOE considers the threat of terrorist attacks to be real and makes all efforts to reduce any vulnerability to this threat.   |
| <b>65-103</b> | <b>65-75</b>  | Under the Expanded Operations Alternative, the Area 3 Radioactive Waste Management Site (Area 3 RWMS) could be opened to receive LLW generated from environmental restoration and other activities at DOE/NNSA sites in the State of Nevada. Specifically, this action could be triggered by a need for additional disposal space beyond that available in the Area 5 RWMC for the disposal of large on-site remediation debris, or soils from clean-up activities on the NTTR. There is no near-term need to use the Area 3 RWMS, however, should DOE/NNSA identify a need to reopen the Area 3 Radioactive Waste Management Site in the future, it would first undertake detailed consultation with the State of Nevada, and would limit disposal to in-state generated, non-hazardous LLW.   |
| <b>65-104</b> | <b>65-105</b> |   |
| <b>65-106</b> | <b>65-106</b> |   |
| <b>65-107</b> | <b>65-107</b> |   |
| <b>65-108</b> | <b>65-108</b> |   |
| <b>65-109</b> | <b>65-109</b> |   |
| <b>65-110</b> | <b>65-76</b>  | As described in Chapter 4, Section 4.1.1.3, as part of the April 1997 Settlement Agreement resolving State of Nevada litigation regarding radioactive waste disposal at the Nevada Test Site (now the NNSS), DOE committed to initiate “consultation with the United States Department of the Interior (“DOI”) concerning the status of the existing land withdrawals for the NTS with regard to low-level waste storage/disposal activities.” The consultation process with DOI was initiated by DOE shortly thereafter and concluded in November 2009, with DOE/NNSA’s acceptance of custody and control of the approximately 740 acres constituting the NNSS Area 5 RWMC. As required by the Settlement Agreement, DOE conveyed the results of its consultation to the State of Nevada in a letter dated December 18, 2008. These actions relative |

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18. Page 4-150, Fourth paragraph – The discussion about real-time radiography is misleading. It is performed on waste forms only and only on select MLLW packages and there are size restrictions on those. It is in reality a test of limited utility and not performed on all packages, only a small percentage.

19. Page 9-3, **Waste Management**, Fourth Listing – The FFACO does NOT govern waste management activities at NNSS. The Agreement in Principle (AIP) governs these activities. The AIP is not listed in Table 9-1 and needs to be included. The FFACO needs to be moved to another, new category in Table 9-1 and the Sections following the table where each reference is explained changed accordingly. Also, the Nevada Administrative Code governs Water Pollution Control and Safe Drinking Water activities at NNSS. This information needs to be included in this section.

**Safe Drinking Water/Water Pollution Control Comments:**

20. Pages 4-17 and 4-18, **Water Supply** - The NDEP requests that the NNSA/NSO's ERP staff review this section for overall accuracy. As an example, Wells C-1, 5c and 16D are no longer on-line. Well 16D needs to be replaced with Well J-14.

21. Page 4-79, **Groundwater Supply**, Second Paragraph – Wells C-1, 5c and 16D are no longer on-line. Well 16D needs to be replaced with Well J-14. Also, Permits "NY-4099-12NC" and "NY-4098-12NC" should be "NY-4099-12NTNC" and "NY-4098-12NTNC," respectively.

22. Page 4-80, **Table 4-26, Water Service Area C and Water Service Area D:** Wells C-1, 5c and 16D are no longer on-line. Well 16D needs to be replaced with Well J-14. Also, it should be clarified that water is hauled into Areas 26 and 27 (**Water Service Area C**) from Area 25 (**Water Service Area D**).

23. Page 9-27, **Table 9-2, Drinking Water** – "NY-4098-12NC" and "NY-4099-12NC" should be "NY-4098-12NTNC" and "NY-4099-12NTNC," respectively.

**Underground Test Area Comments:**

24. Page 3-24, **Underground Test Area** – The first sentence should state "...continue to develop groundwater flow and transport models..."

25. Page 3-57, **Commercial Solar Power Generation Facilities, Operation** – It is not clear how the stated sustainable yield of the Forty-mile Canyon, Jackass Flats Subdivision Basin was obtained or calculated as it is not referenced nor is it consistent with the number(s) on the Nevada Division of Water Resources' (NDWR) website. Some type of reference should be cited for this Table.

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to the status of land withdrawals and LLW storage/disposal activities satisfy the provisions of the Settlement Agreement between DOE and the State of Nevada.

Additionally, DOE/NNSA believes the land withdrawals are not restrictive with respect to NNSS activities in support of its missions.

The reference to 3.5 million cubic feet in Chapter 4, Table 4-47, refers to an operational signal to construct a new disposal unit. That is, a new disposal unit would be excavated and prepared when the capacity in the existing disposal unit(s) falls below 3.5 million cubic feet. This operational signal is independent of the capacity of the entire Area 5 RWMC.

It is estimated that the Area 5 RWMC would be filled to capacity after approximately 20 years of receiving the waste volumes identified under the No Action Alternative or Reduced Operations Alternative, and after approximately 12 years of receiving the waste volumes identified under the Expanded Operations Alternative. However, as discussed in Chapter 5, Section 5.1.11.2.1, additional capacity could be made available by constructing larger and/or deeper disposal units.

Leading up to closure of the 92 acres within which the TRU waste disposal trench is located, a Special Analysis (Shott et al. 2008), was conducted in compliance with DOE Order 435.1, *Radioactive Waste Management*, and the DOE/NNSA NSO Area 5 Radioactive Waste Management Site (Area 5 RWMS) LLW Disposal Authorization Statement. Based on the conclusions of the Special Analysis, DOE/NNSA determined that the potential dose to the public resulting from leaving the waste in place would be well below the 40 CFR Part 191 (Compliance Certification) standards and no groundwater contamination would occur within 10,000 years. However, removal of the TRU waste would create potential release of radiation to the environment and an unnecessary health risk to workers. The TRU waste disposal trench was recently closed under the FFACO (1996 [as amended March 2010]), via the February 2012 *Closure Report for the 92-Acre Area and Corrective Action Unit 111: Area 5 WMD Retired Mixed Waste Pits, Nevada National Security Site, Nevada* (DOE/NV-1472).

The waste profiles routed to NDEP for evaluation are draft documents describing waste streams under consideration by DOE/NNSA for management and disposition at the NNSS. As such, these waste streams are subject to DOE/NNSA's deliberative process and are not be available to the public.

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26. Pages 4-45 to 4-62, Section 4.1.5 – The NDEP requests that NNSA/NSO's ERP staff review this section for overall accuracy. While individual sentences may be true statements, the compiled paragraphs do not necessarily present a true, complete picture of a given subject. An example is the last paragraph of 4.1.5.2.1. Besides not giving a complete description of the past underground nuclear testing in Frenchman Flat and Yucca Flat, it is not clear why this paragraph is in a section titled, "Site-Specific Geology."
27. Page 4-65, Section 4.1.6.1, *NNSS-Specific Conditions*, Fifth Paragraph – The NDEP requests that the NNSA/NSO's ERP staff review this paragraph for overall accuracy. Again, the individual sentences may be true, but it is not clear if the paragraph presents a complete, true picture of conditions around all the craters.
28. Page 4-73, Section 4.1.6.2, **Hydrogeologic Setting**, Second Paragraph, First sentence and Page 4-75, Table 4-24, "Total" Row – To be consistent, the range for the perennial yield for the 10 hydrographic basins stated in the text should be shown on the table.
29. Page 4-75, Table 4-24, Footnote "d" – These values of perennial yield are indicated to have come from the NDWR website. However, when the values listed in the Table are compared to the website, there are several inconsistencies. Either the values in the Table should be corrected or a new reference given.
30. Pages 4-73 to 4-93, Section 4.1.6.2, **Groundwater** - The NDEP requests that the NNSA/NSO's ERP staff review this entire section for overall accuracy. While individual sentences may be true statements, the compiled paragraphs may not necessarily present a true, complete picture of a given subject.
31. Page 4-83, **Groundwater Monitoring and Quality**, First Sentence – Water use is Nevada is appropriated by the NDWR but regulated by the NDEP. This sentence should be rewritten.
32. Page 4-84, First Paragraph, Second Sentence – "...variances issued by the State of Nevada Division of Health." should be "...permits issued by the State of Nevada, Division of Environmental Protection."
33. Page 4-84, Third Paragraph – The cited reference for this paragraph (DOE2008l) is a programmatic NEPA document for the DOE weapons complex, not a NNSS-specific reference. The SWEIS should reference at least one independent, site-specific scientific report addressing the subject of this Section, for example, USGS WRIR 96-4109 (Laczniak et al., 1999).

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| <b>65-119</b> | 65-80 A revised reference was substituted for the cited reference, Gordon 2009a, has been re-saved in portable document format (pdf), and is now readable.   |
| <b>65-120</b> | 65-81 The assumed concentrations of strontium-90 are meant to account for delivery of small radioactive sources and other possible waste streams that could be delivered in Type A packages. As addressed in the response to comment 65-49, the radionuclide inventory assumed for transportation analysis was representative of the highest concentration of each radionuclide received in 2009 (see Appendix E, Section E.4.2). In developing this SWEIS, a full records search was not performed to determine the numbers of containers with specific concentrations of selected radionuclides. This SWEIS also does not include a detailed projection of waste containers by site and radionuclide concentration, but uses a conservative analysis of expected waste shipments as a basis for the analysis. The provision in the NNSS WAC allows for, rather than requires, disposal of waste in Type B packages. Waste containers shipped within Type B packages are normally removed from the packages and disposed of, leaving the Type B package available for shipment of other radioactive materials or waste. |
| <b>65-121</b> | 65-82 Chapter 4, Section 4.3.12, addresses the 1995 accident that resulted in tritium contamination in the North Las Vegas Facility, Building A-1. The contamination was cleaned up to the extent practical, but some of the tritium penetrated into the concrete floor of the facility. The tritium continues to emanate from the concrete and condenses in the form of water vapor from the air by the building cooling system.  |
| <b>65-122</b> | 65-83 The uncertainty range referred to in the cited passage is the range of uncertainty in the frequency of the accident occurring. The estimated annual frequency of occurrence of the listed accidents is presented in Chapter 5, Table 5-56, and Appendix G, Table G-20, under the respective columns indicating frequency. The text was clarified to indicate that the difference in accident frequencies across the alternatives falls within the frequency ranges of the accident events.   |
| <b>65-123</b> | 65-84 The table callouts have been corrected.  |
| <b>65-124</b> | 65-85 The tracer experiments are described in Chapter 3, Section 3.2.1.3, and would include underground and open-air release of radioactive noble gases with short half-lives. The potential impacts of conducting these experiments were evaluated for relevant resource areas; for example, see Chapter 5, Sections 5.1.5.2.1 (Geology and Soils), 5.1.6.2.2.1 (Hydrology), and 5.1.7.2.1.1 (Biological Resources). For  |
| <b>65-125</b> |  |
| <b>65-126</b> |  |

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- 34. Pages 4-90 to 4-91 – **Underground Test Area Project**, First Paragraph, Fourth Sentence – The reference to “compliance boundary” is out-of-date. Section 3 of Appendix VI of the Federal Facility Agreement and Consent Order has been revised. This sentence should be revised accordingly.
- 35. Pages 4-90 to 4-91 – **Underground Test Area Project**, Second Paragraph – To be completely accurate, it should be specified which groundwater model is being referenced in the first sentence. Also at the end of the first sentence, “...each major area...on NNSS” should be changed to “...each UGTA CAU.” “area” at the end of the second sentence should be changed to “CAU.” In the fourth sentence, “Results of the site-specific...” should be changed to “Results of the CAU-specific...”
- 36. Pages 4-90 to 4-91 – **Underground Test Area Project**, Third Paragraph – It is not clear why only Pahute Mesa work is described in this section; “ER-20-48” should be “ER-20-8”, and the last sentence makes no sense for the work that has been done and is ongoing for the Pahute Mesa CAUs. Again, the NDEP requests that the NNSA/NSO’s ERP staff review this section for overall accuracy and that a more complete description of the entire UGTA Project be given, including citing specific references for the work that has been completed for each of the UGTA CAUs. The paragraphs in this Section discuss very random topics and there is no clear succession from one paragraph to the next.
- 37. Page 4-93, Second and Third Full Paragraphs – These paragraphs appear to contain statements related to widely different SWEIS groundwater topics. The purpose and placement of the paragraphs is unclear. They should be more clearly tied to preceding discussions.
- 38. Page 5-93, **Environmental Restoration Program – Borehole Management Program** – The NDEP requests that the NNSA/NSO’s ERP staff review this section for accuracy of numbers and years.
- 39. Page 5-102, Table 5-23 and First Full Paragraph on the page, Last Sentence – for Subdivision 227a, the sustainable yield is presented as a range in the table but the values in the table do not match those given in the footnote to the table or the values given in the text. They should be consistent. On what basis is the range of 880 to 4,000 acre-feet per year being used in the SWEIS? Also, for Table 5-23, *Sustainable Yield* is indicated in the table footnote as derived from Chapter 4, Tables 4-24, 4-27, and 4-30. In Table 4-24, the *Perennial Yield* is listed for the basins. In the glossary (Chapter 12), neither term is defined. It is not clear therefore, if the two terms are being used interchangeably.
- 40. Page 5-104. Second and Fourth Paragraphs – The NDEP requests that the NNSA/NSO’s ERP staff review this section for accuracy.

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human health protection, the experiments would be designed in accordance with the limitation identified in this *NNSS SWEIS*, such that releases associated with individual experiments under normal operations would not cause a dose to an offsite MEI above 1 millirem per year (see Appendix G, Section G.2.3.2). This *NNSS SWEIS* analysis also considers an accident scenario involving 10 radionuclides with up to 2,700 curies each. These analyses provide sufficient information on the potential impacts of the tracer experiments. It should be noted that, in addition to this *NNSS SWEIS* analysis, evaluation in the realm of safety analyses would be conducted prior to authorizing these experiments. Those evaluations would identify requirements to ensure the safe conduct of the experiments.

There is a single instance in the table for which the risk to an individual is calculated to equal or exceed 1 as addressed in the table footnote c. The callout is appropriately included in the one cell in the table where that occurs.

65-87 The accident analysis in this *NNSS SWEIS* used the previous analysis in the *1996 NTS EIS* (DOE EIS-0243, August 1996) as a starting point. The basic approach was to update the *1996 NTS EIS* as appropriate with the results of more-recent safety and environmental analyses. The level of detail of the updated analyses depended on the potential magnitude of the impacts of the potential accident and, to a lesser extent, the probability of that accident. All of the accidents of interest fell into the broad “extremely unlikely” (1 in 10,000 to 1 in a million years) or lower (beyond extremely unlikely) frequency categories. The frequency estimates were made primarily to ensure that the accident did not fall into a much more frequent accident category, such as 1 in 100 to 1 in 10,000 years, and therefore merited much more-detailed evaluation to ensure that the accident risks were adequately portrayed.

For example, for aircraft crashes in areas at TTR, the 1996 analyses were reviewed as a part of the accident analysis process and found to be conservative. A more refined analysis of the probability of an aircraft actually hitting or sliding close enough to radioactive material to cause a release would have resulted in a much lower frequency estimate. The aircraft sortie frequency was updated based on the USAF 2007, as discussed in Appendix G, Sections G.3.3.2.2, G.3.6.2, and G.3.7. The crash frequencies did not assume any new flight restrictions. The frequencies of accidents initiated by an aircraft crash into a radioactive material storage area were found to be well within the “extremely unlikely” frequency category, and even an order of magnitude increase in aircraft overflights would not change that categorization.

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41. Page 5-106, Table 5-25, and First Full Paragraph on the page, Second Last Sentence – For Subdivision 227a, the sustainable yield is presented as a range in the table but the values in the table do not match those given in the footnote to the table or the values given in the text. On what basis is the range of 880 to 4,000 acre-feet per year being used in the SWEIS?
42. Page 5-110, Section 5.1.6.2.3, Fifth Paragraph, Last Three Sentences and Page 5-111, Table 5-26 – For Subdivision 227a, the sustainable yield is presented as a range on the table but the values in the table do not match those given in the footnote to the table or the values given in the text on Page 5 – 110. And, after using the range of 880 to 4,000 acre-feet per year twice prior to this use, the basis for the range is given? The basis should be stated at first use.
43. Page 5-127, **Section 5.1.7.1.3.2** – There appears to be a contradiction in the first and third paragraphs of this section in regards to how much desert tortoise habitat would be affected by UGTA activities. The first paragraph states one-half would not be within habitat and the third paragraph states most UGTA work would be sited outside of tortoise habitat. “One-half” is not “most.”
44. Page 5-136, **Environmental Restoration Program** – As stated above, there appears to be a contradiction in the second and third sentences of this section in regards to how much desert tortoise habitat would be affected by UGTA activities. The second sentences states “most” groundwater characterization and monitoring well activity would be sited outside desert tortoise habitat. The third sentence states that it is assumed that one-half of all groundwater characterization and monitoring wells installation would occur in desert tortoise habitat. “One-half” is not “most.”
45. Pages 6-40 to 6-42, **Groundwater** – Why is this information first cited in Chapter 6, essentially at the back of the document, and not in an earlier chapter? The information presented in these paragraphs is not an analysis of cumulative environmental impacts to groundwater, but a programmatic description of the UGTA program and a history of underground nuclear testing. Wherever this information is placed in the document, the NDEP does request that the NNSA/NSO's ERP staff review this section for accuracy in both text and numbers stated.
46. Page 6-42, First Paragraph, Fourth Sentence – This is oversimplified and misleading. The factors given in the next sentence effect the concentration at a location and do not indicate slower velocities. The use of the term “apparent front of a contaminated zone” needs further explanation if this section remains as written.
47. Page 6-42, Third Paragraph, Fifth Sentence – This entire paragraph presents a very simplified calculation “for purposes of illustration”. The fifth sentence presents a conclusion “it is unlikely that groundwater contamination ...” based on this very

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The potential radiological impacts of these accidents were found to be very small (less than 1 person-rem to the population within 50 miles), especially compared with the operational accidents analyzed. Based on this level of impacts, the accident would typically be dismissed from further consideration unless the likelihood of the accident was high. The probability of an aircraft crashing in such a manner to impact a sensitive area with radioactive material and cause a release of that material was also found to be very small and to fall within the “extremely unlikely” frequency category. As both the estimated radiological consequences are very small and the accident probabilities are very low, the risks were judged low enough that more-detailed analysis was not deemed necessary. Thus, more-detailed evaluation of the probabilities of an aircraft crash into a radioactive material area that would cause damage to containers sufficient to cause a release was not warranted.

**65-88** The table callouts have been corrected.

**65-89** The table callouts have been corrected.

**65-90** The referenced footnote is more appropriate to a table showing accident consequences, where the results are the number of latent cancer fatalities that would be expected if the accident occurred. The footnote for Appendix G, Table G-20, was revised to indicate that the risk for the population is the risk of a single latent cancer fatality when the annual accident frequency is taken into account. Therefore, whole numbers were not added to the table entries.

**65-91** The potential environmental impacts associated with normal operations at the Nonproliferation Test and Evaluation Complex were previously evaluated in the *Final Environmental Assessment for Activities Using Biological Simulants and Releases of Chemicals at the Nevada Test Site* (DOE/EA-1494). As described in that EA, a set of protocols and conditions for conducting tests using chemicals (or biological simulants) were established to support performing work related to combating terrorism. The proposed expansion in this SWEIS is an extension of the same sort of work and the same protocols for ensuring the work can be done safely. As indicated in this *NNSS SWEIS*, any proposals to use larger quantities of chemicals would undergo a thorough environmental evaluation; one component of that evaluation would be to conduct appropriate NEPA review. Section 5.1.12.2.1 and G.3.7.1.1 in this *NNSS SWEIS* were modified to state more clearly that the environmental review includes determining whether additional NEPA reviews would be required.

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simplified calculation. Presenting **any conclusion** at this point is not appropriate because the project work is ongoing at Pahute Mesa. As stated in the last sentence in the previous paragraph, the DOE/NNSA, in consultation with NDEP, is developing additional characterization wells to obtain additional data to help refine model predictions for groundwater flow and transport.

48. Page 6-43, Second Paragraph, Last Two Sentences – The conclusion given in the last sentence is misleading given the material presented in the previous sentence. Increases in precipitation (such as storms associated with "El Nino" events) can produce ponding and increase infiltration and possibly fast pathways to groundwater.
49. Page 6-43, **Table 6-7** – Why is the total for NNSS and TTR presented in this Table as they are two different locations and one has no bearing on the other?
50. Page 6-44, Third Paragraph – This paragraph is confusing and the last sentence is very disjointed.
51. Page 6-63, **Hydrology**, Middle Column under *Groundwater*, First and Second Paragraph – The NDEP requests that the NNSA/NSO's ERP staff review the first sentence for accuracy. The second sentence is a conclusion that is not referenced to any study or document and is not appropriate as it is not related to a "Cumulative Impact" of various proposed activities.
52. Page 8-5, Section 8.1.2.1.2 – Why is UGTA not mentioned in this Expanded Operations section?
53. Pages 9-10 and 9-11, **Fluid Management Plan for the UGTA Project** – The agreement between the State of Nevada and the NNSA is not "called" the Fluid Management Plan for the UGTA Project" (FMP). The agreement is "documented" in the FMP.
54. Page S-27, **Groundwater Quality**, First Paragraph, First Sentence – "...and requirements set by the State of Nevada Division of Health." should be "...and requirements set by the State of Nevada, Division of Environmental Protection."
55. Page S-27, **Groundwater Quality**, Second Paragraph, Last Sentence - The NDEP requests that the NNSA/NSO's ERP staff review this sentence for accuracy.
56. Page S-93, Last Paragraph on Page, Last Two Sentences - The NDEP requests that the NNSA/NSO's ERP staff review these sentences for accuracy.
57. Page S-95, Second Paragraph – The last sentence gives the impression that the CAU-models have not even been started. This is not the case and the sentence should be rewritten.

- 65-92 Chapter 4, Section 4.1.5.2.5, has been updated to reflect information that has become available regarding the potential for oil, gas, and mineral resources at the NNSS. It should be noted that there have been no proposals for conducting exploration of the NNSS for oil, gas, or other minerals. If such a proposal were made, the DOE/NNSA NSO would evaluate it pursuant to relevant procurement and contracting regulations and policies and in consideration of other factors, such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.
- 65-93 DOE/NNSA has conducted a thorough review of activities and environmental resource descriptions, as suggested by NDEP. As a result, numerous changes have been made to Chapter 4, Sections 4.1.5 (Geology and Soils) and 4.1.6.2 (Hydrology – Groundwater). These changes include revised descriptions of subsurface geology, subsurface water movement, and CAUs associated with the FFACO.
- 65-94 To clarify the status of the Project Shoal and Central Nevada Test Area, the second and third sentences in the paragraph cited by the commentator now read: "The DOE/NNSA Environmental Management Program completed surface remediation at these sites before the transfer; the remaining work is associated with long-term surveillance (groundwater monitoring) and maintenance. These sites are no longer under DOE/NNSA control and, by agreement with the DOE Office of Legacy Management, are not further addressed in this *NNSS SWEIS*."
- 65-95 As discussed under the Section heading, Groundwater Monitoring and Quality, on page 4-83 of the *Draft NNSS SWEIS*, which precedes the RREM Program discussion, several groups regularly test water at and surrounding the NNSS. The DOE/NNSA NSO RREM Program samples wells, springs, and surface-water sites, to determine radionuclide levels. The UGTA Project samples a network of deep wells to help determine where contaminants are present in groundwater, in which direction these contaminants are moving, and how quickly. UGTA wells that are not designated as source-term characterization wells are made available for monitoring under the RREM Program. In addition to the RREM Program and UGTA Project sampling efforts, CEMP performs independent, annual monitoring of 29 springs and water supplies in communities surrounding the NNSS.
- 65-96 DOE/NNSA considers environmental restoration activities to be consistent with all land use designations. As defined in Chapter 5, Section 5.1.1, Land Use, the criteria for land use impacts include: "Compatibility of proposed activities with existing land

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

58. Page A-23, **Underground Test Area Project** – Some of the first sentence verb tenses give the impression that this work has not even been started. This is not the case and the sentence should be rewritten. Also, the NDEP requests that the NNSA/NSO's ERP staff review this section for accuracy.
59. Pages A-24 to A-25, **Borehole Management Program** – The NDEP requests that the NNSA/NSO's ERP staff review these sentences for accuracy.
60. Page A-43, **Underground Test Area Project** – It is stated that activities would occur "at a potentially accelerated rate" for Expanded Operations. This statement is not consistent with statements made in other sections of the document under "Expanded Operations."
61. Page H-3, Section H.1, First Paragraph – Were UGTA tests actually conducted on Buckboard Mesa?
62. Page H-3, Section H.1, Second Paragraph – Why is the impact on groundwater not mentioned in this paragraph?
63. Page H-5, Second Paragraph, Third and Fourth Sentences – The third sentence refers to "crushing and fracturing the rock in the near-test environment" and the fourth sentence indicates "the rock is no longer crushed, but merely compressed; it then returns to its original state". These sentences need to be written clearer.
64. Page H-9, Fourth and Fifth Paragraphs – The use of "probably" in these two paragraphs begs the question of how much is actually known about leaching activities. These sentences should be re-worded.
65. Page H-10, Last Sentence – As the final thought of the document, the curies of tritium currently available should be calculated and provided.

Again, these comments are submitted so that the *Final Site-Wide Environmental Impact Statement for the Continued Operation of the Nevada National Security Site and Off-Site Locations in the State of Nevada* will present an accurate, complete and up-to-date depiction of all activities under the regulatory purview of the NDEP. If you have any comments or questions, please contact Christine Andres at 702-486-2850, ext. 232.

Sincerely,

T. H. Murphy, Chief  
Bureau of Federal Facilities

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- use and land use designations both on the NNSS and the surrounding areas." To clarify, DOE/NNSA has added a statement in Chapter 5, Section 5.1.1, indicating that all land use designations are compatible with environmental restoration activities. Impacts on the land surface as a result of DOE Office of Environmental Management missions are evaluated under Section 5.1.5, Geology and Soils, and Section 5.1.7, Biological Resources.
- The text in Chapter 5, Section 5.1.6.1.2.2, of the *Draft NNSS SWEIS*, which is referenced by the commentor, was erroneous and has been corrected in the *Final NNSS SWEIS* to reflect that the impacts of the UGTA Project under the Expanded Operations Alternative would be the same as those under the No Action Alternative. The text commented on from the *Draft NNSS SWEIS* (Section 5.1.5.2.2) continues to be correct and has not been changed in this *Final NNSS SWEIS*.
- The text in Chapter 5, Section 5.1.6.2.2, (addressing groundwater impacts) of the *Draft NNSS SWEIS*, which is referenced by the commentor, was erroneous and has been corrected in this *Final NNSS SWEIS* to reflect that the impacts of the UGTA Project under the Expanded Operations Alternative would be the same as under the No Action Alternative (versus the statement that no changes to activities were proposed). However, the text commented on from the draft SWEIS (Section 5.1.6.1.2.2, regarding surface-water impacts) continues to be correct and has not been changed in this final SWEIS.
- The DOE/NNSA NSO has reviewed Chapter 5, Section 5.1.7.1.1.2, and no changes have been made. The numbers presented in this section are conservative estimates of future land disturbance associated with the UGTA Project and other DOE Office of Environmental Management activities and their associated impacts on biological resources, such as wildlife habitat.
- The text in Chapter 5, Section 5.1.6.1.2.2, of the *Draft NNSS SWEIS*, which is referenced by the commentor, was erroneous and has been corrected in the *Final NNSS SWEIS* to reflect that the impacts of the UGTA Project under the Expanded Operations Alternative would be the same as those under the No Action Alternative. The text commented on from the draft SWEIS (Section 5.1.7.2.1.2) continues to be correct and has not been changed in this final SWEIS.
- The text in Chapter 5, Section 5.1.6.1.2.2, of the *Draft NNSS SWEIS*, which is referenced by the commentor, was erroneous and has been corrected in the *Final NNSS SWEIS* to reflect that the impacts of the UGTA Project under the Expanded Operations Alternative would be the same as those under the No Action Alternative.

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

The text commented on from the draft SWEIS (Section 5.1.10.2.2) continues to be correct and has not been changed in this final SWEIS.

- 65-102** The text has been corrected by eliminating reference to the date.
- 65-103** As suggested by this comment, the title of Figure S-7 in the Summary has been revised to “Underground Test Area Corrective Action Units and Underground Nuclear Test Locations at the Nevada National Security Site.” The title to a corresponding figure, Figure 4-19 in Chapter 4, has been revised as well.
- 65-104** The cited Section in Appendix A contains some background information to provide context for the public, but it also outlines general future activities by the DOE/NNSA Environmental Restoration Program. DOE/NNSA activities under the Environmental Restoration Program have been included in Section 2.5.3.
- 65-105** The commentor is correct; Pit 6 was closed on March 31, 2011. The text in Chapter 4, Table 4-47, was modified to reflect the current closure status.
- 65-106** The text in Chapter 4, Table 4-47, indicating that hazardous waste is temporarily stored pending shipment off site, was revised to indicate that there is a permitted facility for storage.
- 65-107** DOE/NNSA agrees that the status of the 92-Acre Area has changed since the table was developed. The text in Chapter 4, Table 4-47, regarding closure of the 92-Acre Area in Area 5, was updated to reflect the current closure status.
- 65-108** The commentor is correct; the reference to the year of the WM PEIS ROD addressing LLW and MLLW management was corrected to 2000.
- 65-109** The text in this paragraph was revised to correct the previous errors in wording and more-accurately reflect the evolution of MLLW disposal. The revised text in Chapter 4, Section 4.1.11.1.2, indicates that Pit 3 operated under interim status until it was permanently closed in late 2010, and that a permit reissued in 2005 removed the previous restriction on receiving MLLW for disposal from outside Nevada. A new MLLW disposal cell was excavated in 2010, and a new RCRA Part B permit covering MLLW disposal at NNSS was issued in December 2010.
- 65-110** DOE/NNSA agrees; in finalizing Chapter 4, Section 4.1.11.1.2, the status of waste management facilities and activities in Area 5 was updated.

ATTACHMENT A

NUREG-0170 ACCIDENT SEVERITY CATEGORIES

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

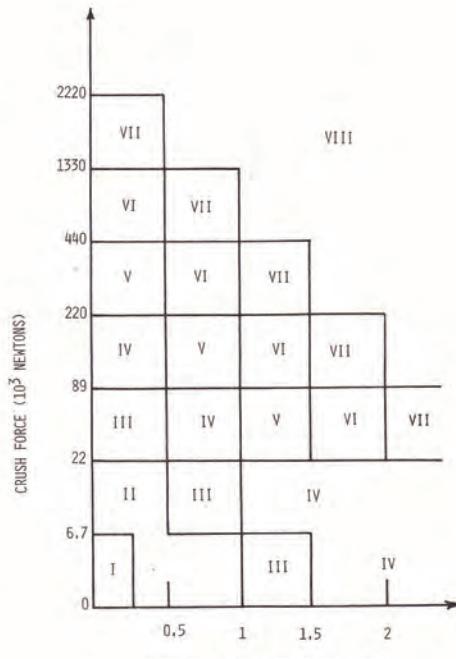


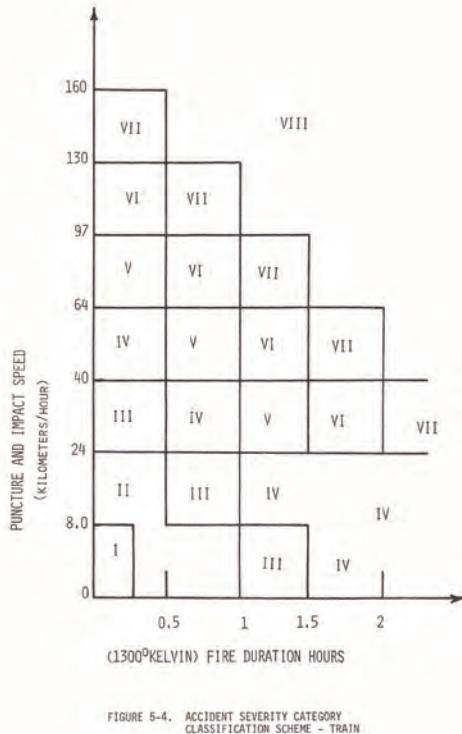
FIGURE 5-3. ACCIDENT SEVERITY CATEGORY CLASSIFICATION SCHEME - MOTOR TRUCKS

5-10

- 65-111 The discussion of real-time radiography was revised to more accurately reflect its use and purpose. The revised text in Chapter 4, Section 4.1.11.1.3, indicates that real-time radiography is performed on a predetermined number of packages, based on the approved waste profile, and that there are size and weight limitations associated with the equipment.
- 65-112 The Agreement in Principle has been added to Chapter 9, Table 9-1, under "Environmental Quality," and a description of the Agreement In Principle added to Section 9.1.1. The commentator is correct in that the FFACO does not govern waste management activities per se, but represents other requirements that are germane to waste management at the NNSS (consistent with the intent of Table 9-1). Therefore, the FFACO continues to be listed under "Waste Management" in Table 9-1. The Nevada Administrative Codes that govern water pollution control and safe drinking water were included in Table 9-1 under Hydrology, and were described in Section 9.1.6.
- 65-113 DOE/NNSA has reviewed the cited pages from the draft SWEIS. Wells C1, 5c, and 16d are still on line. A statement identifying the new Well J-14 has been added to Chapter 4, Section 4.1.6.2, of this final SWEIS, but it is not a replacement for Well 16d.
- 65-114 As noted in the response to comment 65-113 above, DOE/NNSA has reviewed the cited pages from the draft SWEIS. Wells C1, 5c, and 16d are still on line. A statement identifying the new Well J-14 has been added to Chapter 4, Section 4.1.6.2, of this final SWEIS, but it is not a replacement for Well 16D.  
  
Several years ago, DOE/NNSA changed the status of the two systems referenced by these permit numbers to transient from nontransient, non-community drinking water systems. The referenced permit numbers shown in Chapter 9, Section 9.2, Table 9-2, are correct.
- 65-115 As noted in the response to comment 65-113 above, DOE/NNSA has reviewed the cited pages from the draft SWEIS. Wells C1, 5c, and 16d are still on line. A statement identifying the new Well J-14 has been added to this final SWEIS, but it is not a replacement for Well 16d. This final SWEIS has been edited to clarify that Area 25 (Water Service Area D) is the source of water trucked to Areas 26 and 27.
- 65-116 As noted in the response to comment 65-113 above, several years ago, DOE/NNSA changed the status of the two systems referenced by these permit numbers to transient

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**



5-14

from nontransient, non-community drinking water systems. The referenced permit numbers shown in Chapter 9, Table 9-2, Table 9-2, are correct.

- 65-117 The change has been made to this final SWEIS, as suggested by the commentor.
- 65-118 In this final SWEIS, DOE/NNSA has simplified the yield estimates by using only the single values published by Nevada Division of Water Resources (NDWR) on its public website in 2009.
- 65-119 Chapter 4, Section 4.1.5, was reviewed by the DOE/NNSA NSO Environmental Restoration Program staff geologists and revised and updated. The last paragraph of Section 4.1.5.2.1 in the *Draft NNSS SWEIS* has been moved to Section 4.1.5.4.2 in this *Final NNSS SWEIS*. In addition to this change, numerous revisions have been made throughout Sections 4.1.5.2, 4.1.5.2.1, 4.1.5.2.3, and 4.1.5.2.5 to clarify and update the text. Further, Section 4.1.5.4.1, which addresses radiological contamination of NNSS soils, has been revised to provide the reader with a clearer understanding of areas of the NNSS that are contaminated.
- 65-120 The DOE/NNSA NSO has reviewed this section, and no changes have been identified. This Section provides an overview of surface water and drainage conditions on the NNSS. This paragraph was not intended to provide a comprehensive description of physical conditions near test craters, only an acknowledgement that craters can alter natural drainage pathways.
- 65-121 In this final SWEIS, DOE/NNSA has simplified the yield estimates by using only the single values published by NDWR on its public website in 2009.
- 65-122 The perennial yield values for each basin used in Chapter 4, Table 4-24, in the draft SWEIS were based on the values published by NDWR on its public website in 2009, with the exception of Basin 160 (Frenchman Flat) and the lower value cited for Basin 227A. Please note that the perennial yield displayed on several hydrographic area summaries from the NDWR website are a combined yield for several basins and, therefore, will not match Table 4-24. Table 4-24 in the draft SWEIS displays the perennial yield of each individual basin. Footnote "d" stated that, although the NDWR lists the perennial yield as 4,000 acre-feet per year, studies conducted by DOE show a range of values as low as 880 acre-feet per year. In this final SWEIS, DOE/NNSA has simplified the yield estimates by using only the single values published by NDWR on its public website in 2009.

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

		RELEASE FRACTIONS			
		Model I			
		Type A	Type B	CAU (Exposure)	
LGA	DECLASS	0	0	0	0
I	I	1.0	1.0	0	0
II	II	1.0	1.0	0	0
III	III	1.0	1.0	1.0	1.0
IV	IV	1.0	1.0	1.0	1.0
V	V	1.0	1.0	1.0	1.0
VI	VI	1.0	1.0	1.0	1.0
VII	VII	1.0	1.0	1.0	1.0
VIII	VIII	1.0	1.0	1.0	1.0

5-22

- 65-123** This comment addresses the entire Affected Environment description for groundwater on the NNSS (Chapter 4, Section 4.1.6.2). Specific comments by this commentator within this Section have been addressed individually, and changes have been made as appropriate in this final SWEIS. DOE/NNSA has also conducted a comprehensive review of this section, as requested by the commentator, and made additional changes to the subtopic discussions of Hydrogeologic Setting, Groundwater Recharge and Discharge, and Groundwater Monitoring and Quality. These additional changes are primarily limited to clarification of existing sentences and citation of more recent references.
- 65-124** The sentence has been revised as suggested by the commentator in this final SWEIS.
- 65-125** The sentence has been revised in this final SWEIS, as suggested by the commentator.
- 65-126** The noted citation was used in error. The correct citation is Bowen et al. 2001, “Nevada Test Site Radionuclide Inventory, 1951-1992.” The text in this *NNSS SWEIS* has been changed accordingly. In addition, in the same paragraph, the same citation was used in error in the sentence describing Figure 4-13 in Chapter 4 and has been deleted. The source of the figure is noted on the figure, i.e., FFACO 2010.
- 65-127** The first paragraph under subheading, “Underground Test Area” has been revised, consistent with Appendix VI, Section 3, of the FFACO, dated May 2011.
- 65-128** The second paragraph under the subheading “Underground Test Area Project” in Chapter 4, Section 4.1.6.2, has been updated in this final SWEIS to describe the two-step process using the regional three-dimensional flow model, as well as the CAU-specific groundwater flow and transport models developed from the regional model. The additional changes to the text have been made as suggested by the commentator.
- 65-129** The DOE/NNSA NSO has reviewed the range of SWEIS sections identified by NDEP, especially as they pertain to UGTA Project activities. Chapter 4, Section 4.1.6.2, of this final SWEIS has been expanded to provide a more comprehensive discussion of the UGTA Project, including completed activities and ongoing efforts. The well-labeling error pointed out by the commentator (ER-20-48) has been corrected.
- 65-130** The DOE/NNSA NSO has reviewed this section, and no changes have been identified. These topics have been included in a summarized manner in Chapter 4, Section 4.1.6.2, to provide an overview of other groundwater protection activities and policies.

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

		Model II		Model III		Model IV	
		1985 No Pu Pu		1985 No Pu Pu		1985 No Pu Pu	
	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0
1	.01	.0	.0	.0	.01	.0	.0
1	.1	.0	.0	.0	.1	.0	.0
1	1.0	.0	.0	.0	1.0	.0	.0
1	1.0	.01	.0	$3.18 \times 10^{-7}$	1.0	.0	.0
1	1.0	.05	.01	$3.18 \times 10^{-5}$	1.0	.0	.0
1	1.0	.1	.1	$3.12 \times 10^{-3}$	1.0	.0	.1

5-23

- 65-131** The DOE/NNSA NSO has reviewed this section for accuracy, and no changes have been identified.

**65-132** Text has been added to Chapter 4, Section 4.1.6.2, of this *Final NNSS SWEIS* to explain the difference between the terms “perennial yield” and “sustainable yield” as they are used in this analysis. Perennial yield is a measure of the total amount of groundwater that may be withdrawn from a basin on an annual basis without depleting average water levels. Sustainable yield is the perennial yield of a basin minus any previously allocated rights. The apparent inconsistency noted in the comment is a function of the use of these two different terms. While the draft SWEIS applied a range of values for the perennial (and sustainable) yield for Basin 227A and compared that range to projected future water uses, this final SWEIS has been amended to reflect single values (based on 2009 estimates published by NDWR) for perennial yield.

**65-133** The DOE/NNSA NSO has reviewed Chapter 5, Section 5.1.6.2.1.2, as requested, and no changes have been identified.

**65-134** For clarity, this final SWEIS has been amended to reflect single values (based on 2009 estimates published by NDWR) for perennial yield. In addition, the differences between the terms “perennial yield” and “sustainable yield,” which considers previously allocated rights from a basin, have been clarified in Chapter 4, Section 4.1.6.2.

**65-135** Please see the response to comment 65-134 above.

**65-136** The text in Chapter 5, Section 5.1.7.1.3.2, has been revised to reflect that, although most of the characterization and monitoring wells to be developed under the UGTA Project over the next 10 years would be located outside of desert tortoise habitat, one-half of those wells were assumed to be within tortoise habitat for purposes of the analysis. Including one-half of the wells that would potentially be developed was done to make the analysis more conservative and to ensure the impacts are not underestimated.

**65-137** The third sentence stated, “For purposes of this analysis, it was assumed that one-half of such well development (250 acres of land disturbance) would occur in desert tortoise habitat.” This was meant to indicate that DOE/NNSA was conservative in its assumptions to preclude underestimating potential impacts. To clarify this, the word “However” has been inserted at the beginning of the cited third sentence.

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

ATTACHMENT B

POTENTIAL CONSEQUENCES OF A SUCCESSFUL SABOTAGE ATTACK  
ON A SPENT FUEL SHIPPING CONTAINER

2-273

**65-138** DOE/NNSA believes that the information in Chapter 6, Section 6.3.6.2, Groundwater, is an appropriate analysis of cumulative environmental impacts on groundwater. CEQ defines "cumulative impact" in 40 CFR 1508.7 as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal or person undertakes such other actions." As noted in Section 6.3.6.2, "Past underground nuclear testing resulted in a cumulative impact on groundwater under the NNSS." As noted in Sections 5.1.6.2.1, 5.6.2.2, and 5.6.2.3, there are no proposed actions under any of the alternatives in this *NNSS SWEIS* that would impact groundwater quality, the only cumulative impact on groundwater quality is that resulting from underground nuclear weapons testing at the NNSS, as described. The brief history of underground nuclear weapons testing and DOE/NNSA's UGTA Project are included for background. Although there are no activities proposed in this *NNSS SWEIS* that may impact groundwater, the contamination that resulted from underground nuclear weapons testing will continue to impact the groundwater for some undefined period of time into the future. The potential future impacts of groundwater contamination are discussed in the first portion of Section 6.3.6.2. DOE/NNSA's UGTA Project scientists reviewed this section for accuracy prior to issuance of the *Draft NNSS SWEIS* and re-reviewed it prior to publication of this *Final NNSS SWEIS*.

In response to a number of requests from commentors, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. As noted in the response to comment 65-2 above, Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS.

- 65-139** The cited paragraph has been revised and the phrase "apparent front of a contaminated zone" removed.
- 65-140** DOE/NNSA agrees with the commentor. The fifth sentence of the paragraph has been deleted.
- 65-141** The sentences of concern to the commentor are in a paragraph addressing the performance and composite assessments for the radioactive waste disposal facilities in Areas 3 and 5 of the NNSS. The two concluding sentences of that paragraph are:

2-274

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

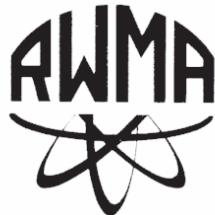
**Potential Consequences of a Successful Sabotage Attack  
on a Spent Fuel Shipping Container:**

Updated Analysis  
Revised Final Version

**Prepared for the State of Nevada  
Agency for Nuclear Projects**

**Marvin Resnikoff, Ph.D. and Jackie Travers  
Radioactive Waste Management Associates**

**November 2008**



**Radioactive Waste Management Associates  
526 W. 26<sup>th</sup> Street #517  
New York, NY 10001**

“Further, the Intergovernmental Panel on Climate Change, in its Fourth Assessment Report estimates that although increases in precipitation extremes (such as storms associated with “El Niño” events) are possible for the Great Basin, annual-mean precipitation is projected to decrease in the southwest United States (IPCC 2007). This would tend to make it even more unlikely that a path to groundwater would develop in the future.”

Since 1993, DOE/NNSA has been conducting groundwater monitoring at pilot wells at the Area 5 RWMC (annual groundwater reports are available at the Office of Scientific and Technical Information [www.osti.gov] and the DOE/NNSA NSO website [www.doe.nv.gov]). Vadose zone (the zone of aeration in the upper levels of the soil) monitoring has been going on since 1994 (annual summary reports are available since 2004 at the OSTI and NSO/DOE websites noted above). Cumulative monitoring results of the vadose zone are summarized in annual waste management monitoring reports. Monitoring of the vadose zone at waste pits, covers, and lysimeters show no percolation below the root-zone (about 6 feet). Precipitation infiltrating into the root-zone is taken by evapotranspiration: water movement in the upper few meters of alluvium occurs by root uptake, liquid advection, thermal vapor transport, and isothermal vapor transport. Upward liquid fluxes dominate at depth through the waste zone. Of particular note in relation to the comment, a 25-year, 24-hour storm occurred in February 1998, and several short-duration, high-intensity storms occurred during September 2007 and December 2010. None of these precipitation events resulted in producing a pathway to groundwater. Chapter 6, Section 6.3.6.2, has been revised to provide additional support for the conclusion in the two sentences in question.

- 65-142** The commentor is correct. The NNSS and TTR are in different locations. Within the context of the cited table and the comment, NNSS is located in the Death Valley Basin and TTR in the Central Region (NDWR 2006). There is likely no hydrologic connection between the two locations. The reason the two sites were shown together on the table was to display DOE/NNSA's cumulative groundwater demand in southern Nevada. (As stated in Chapter 6, Section 6.3.6.2, both the Remote Sensing Laboratory and the North Las Vegas Facility obtain their water from municipal providers and have little direct effect on groundwater availability.) Text has been added in Section 6.3.6.2 to clarify the reasons for combining TTR and NNSS water use, even though there are no known hydrographic connections between the two sites.
- 65-143** The cited paragraph has been revised to improve readability.

**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

Sabotage Consequences  
Resnikoff, Travers

Page 1  
RWMA

**Consequences of a Successful Sabotage Attack on a Spent Nuclear Fuel Shipping Container**

This report updates our previous report<sup>1</sup> of the potential consequences of a successful sabotage attack on a truck or rail cask containing spent nuclear fuel (SNF). Since carrying out our previous analysis, much has changed in the ensuing six years. In the most recent Department of Energy (DOE) Supplemental Environmental Impact Statement (SEIS)<sup>2</sup> for Yucca Mountain, DOE uses smaller capacity rail casks, the spent fuel that would be transported to the repository has a higher burn up (resulting in a larger radioactive inventory for each fuel assembly shipped), and the population density along shipping routes has been escalated to the year 2067 (50 years after the proposed repository opening). However, DOE continues to assume that a sabotage attack would utilize a single weapon, and DOE assumes smaller fractional radioactive releases in a successful sabotage event. In this report, a successful sabotage attack using explosive devices would completely perforate the cask, creating an exit hole for radioactive materials to escape. This greatly increases the potential releases and potential consequences.

To estimate the economic consequences of a sabotage attack on a truck or rail cask transporting spent nuclear fuel through an urban area, we first determine the amount of radioactive material being released, and then calculate the air and surface concentrations resulting from this release. Following a sabotage attack on a spent nuclear fuel cask, a plume of radioactive material is wafted and deposited downwind of the sabotage site. The release of radioactive material will impact people downwind who are outdoors, as well as people who are downwind and indoors, depending on the response time of emergency responders in reaction to the sabotage attack. Being that urban areas are heavily populated and often support a large tourist population, buildings such as offices, hotels, and casinos will be in the path of the dispersing radioactive material released from the sabotaged cask. These buildings can import radioactive materials inside of their facilities if they are unable to shut off their ventilation systems before the contamination plume has dispersed to their location. To simplify the calculations we follow the SEIS and assume a person remains outside for two hours following the event and for a full year thereafter. We do not assume a person ingests contaminated food or water.

<sup>1</sup> RWMA, 2002. Lamb, M. et al., *Potential Consequences of a Successful Sabotage Attack on a Spent Fuel Shipping Container: An Analysis of the Yucca Mountain EIS Treatment of Sabotage*. Radioactive Waste Management Associates, April 2002.

<sup>2</sup> USDOE, 2008. *Final Supplemental 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-0250F-S1, June 2008. The SEIS incorporates by reference the radiological impact analyses contained in the accompanying DOE Final EIS for the Nevada Rail Transportation Corridor (DOE/EIS-0250-F-S2) and the Final EIS for a Rail Alignment for the Construction and Operation of a Railroad in Nevada (DOE/EIS-0369), June 2008.

- 65-144** The commentor is referring to Chapter 6, Table 6-15, Summary of Cumulative Impacts. The first sentence of concern to the commentor states, “Past underground nuclear testing has contaminated an unknown volume of groundwater beneath the NNSS.” This sentence is accurate. The second sentence states, “That contamination is not expected to impact publicly available water supplies within the next 100 years.” The commentor is correct in stating that this is not referenced to any study or document; however, based on current understanding of groundwater flow rates in the Pahute Mesa area and as described in Section 6.3.6.2, travel times were calculated between Pahute Mesa and Oasis Valley by Rose et al. (2002). Those travel times ranged from 337 to over 6,191 years (95 percent confidence limits). The second sentence has been revised to reflect these referenced estimated groundwater travel times.
- 65-145** Chapter 8, Section 8.1, addresses unavoidable impacts. Unavoidable impacts from Environmental Restoration Program activities were not included under any of the alternatives in the *Draft NNSS SWEIS*. Sections 8.1.1.1.2, 8.1.2.1.2, and 8.1.3.1.2 have been revised in this *Final NNSS SWEIS* to address unavoidable impacts resulting from Environmental Restoration Program activities.
- 65-146** For the UGTA Project, the Fluid Management Plan (FMP) was developed in lieu of a state-approved water pollution control permit for all fluids produced during drilling, construction, development, testing, experimentation, or sampling of wells. The FMP is a comprehensive attachment to the UGTA Waste Management Plan (WMP) (DOE/NV-343-Rev. 3, May, 2009). The WMP is a state-approved document which includes the FMP and requires the UGTA Project to draft a specific Fluid Management Strategy (FMS) when conducting activities mentioned above (e.g., drilling). This activity-specific FMS would also be approved by the State of Nevada and must adhere to the guidelines provided by the FMP. Chapter 9, Section 9.1.6, of this *NNSS SWEIS* has been clarified to include this information.
- 65-147** The text in the Summary, Section S.3.1.4, has been corrected as suggested by this comment.
- 65-148** The DOE/NNSA NSO has reviewed the Summary, Section S.3.1.4, and no changes have been identified.
- 65-149** The DOE/NNSA NSO has reviewed the Summary, Section S.4.2, and no changes have been identified.

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It would be difficult to calculate the downwind contaminated surface concentrations for every urban area in the United States because all cities vary in physical and atmospheric conditions. To obtain a population density representative of United States urban areas, the DOE SEIS<sup>3</sup> combines the population densities of the 20 most populated urban areas in the United States, based on the 2000 United States Census. Las Vegas, Nevada, is not considered one of the 20 most populated urban areas in the 2000 United States Census data, and therefore the SEIS included Las Vegas resident and tourist populations in the urban area population density. In its SEIS, DOE projects the urban population density to the year 2067, based on the assumption that the Yucca Mountain repository opens for operation in 2017 and remains in operation for 50 years. To project the urban population density to 2067, DOE used the Bureau of the Census population estimates for the years 2000 through 2030, and population estimates for 2026 through 2030 to extrapolate national urban population densities to the year 2067. In the state of Nevada, DOE used data from the state demographer and the computer model, REMI (Regional Economic Model, Inc.), to extrapolate population densities to the year 2067. The radioactive plumes we generate are superimposed on a map of the City of Las Vegas and its environs, since a successful attack in downtown Las Vegas may have the greatest impact of any of the cities in the United States.

**Potential Spent Fuel Shipments through Las Vegas**

The SEIS provides information on the potential numbers of shipments to Yucca Mountain through Las Vegas, and the highway and rail routes that DOE would use for these shipments. The SEIS assumes about 8 percent of the rail shipments would travel through downtown Las Vegas on the Union Pacific mainline if the Caliente rail access option is developed. State of Nevada studies indicate that 40-80 percent of the rail shipments could use the Union Pacific Railroad (UPRR) through Las Vegas if the Caliente rail line is built, resulting in one or more rail shipments per week through downtown for 50 years. In addition to rail shipments, the SEIS assumes about 2,500 to 5,000 truck shipments to Yucca Mountain, about one or two shipments per week over 50 years, all of which would travel through the Las Vegas metropolitan area.

The potential impacts of these shipments on Las Vegas, for both routine transportation and accidents and incidents, can be evaluated in relation to the regions of influence for occupational and public health and safety. In the Rail Alignment EIS<sup>4</sup>, DOE defines the region of influence (ROI) for radiological impacts of incident-free transportation as "the area 0.8 kilometer (0.5 mile) on either side of the centerline of the rail alignment." DOE defines the affected environment for public radiological impacts as: (1) residents within the region of influence, "including persons who live within 0.8 kilometer (0.5 mile) of either side of the centerline of the rail alignment;" and (2) individuals at locations "such as residences or businesses near the rail alignment." For radiological impacts of transportation accidents and

<sup>3</sup> USDOE, 2008, pp. 6-4 to 6-5.

<sup>4</sup> USDOE, 2008b, pp. 3-3 to 3-5.

- 65-150 The text in the Summary, Section S.4.3, has been revised to clarify that the CAU models have been developed and continue to undergo improvements.
- 65-151 The noted sentence in Appendix A, Section A.1.2.2, of this *Final NNSS SWEIS* has been revised to reflect more accurately that activities have been ongoing and will continue. In addition, Section A.1.2.2 has been reviewed by the DOE/NSA NSO Environmental Restoration Program and been revised to reflect the current status of the program.
- 65-152 The Borehole Management Program discussion in Appendix A, Section A.1.2.2, has been updated to reflect the current status of the program.
- 65-153 The *Draft NNSS SWEIS*, Section A.2.2.2, regarding the UGTA Project, states: "Activities would continue as identified under the No Action Alternative, but at a potentially accelerated rate." Chapter 3, Section 3.2.2.2, of the *Draft NNSS SWEIS* states: "The UGTA and Industrial Sites Projects, remediation of Defense Threat Reduction Agency sites, and Borehole Management Program would all continue as under the No Action Alternative, although the pace of cleanup activities could be accelerated." The perception that there is an inconsistency in the description of the UGTA Project in other parts of the document may be due to the analyses of potential impacts. In Chapter 5, for resources that may experience a greater or lesser impact due to accelerating UGTA Project and other environmental restoration projects, the potential acceleration is noted. Where there would be no difference in impacts from the No Action Alternative, the potential for accelerating these activities may not be mentioned.
- 65-154 Danny Boy was a 1962 cratering test with a yield of only 430 tons conducted on Buckboard Mesa. As a cratering test, Danny Boy was shallowly buried. There is no expectation that this test would have any interaction with the regional groundwater system; therefore, it is not part of the UGTA Project; however, it is considered an underground test.
- 65-155 The cited paragraph has been revised to mention that groundwater may be impacted by underground nuclear weapons testing. Appendix H, Section H.2, Radiological Contamination of the Geologic Media and Groundwater, addresses the effects of underground nuclear weapons testing on groundwater.
- 65-156 The sentences cited by the commentor have been revised to improve clarity.
- 65-157 The two paragraphs have been reworded.

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sabotage, DOE defines the ROI as "the area 80 kilometers (50 miles) on either side of the centerline of the rail line."

Figure 1 below shows the potential DOE highway and rail routes through metropolitan Las Vegas and the routine (incident-free) radiological region of influence (ROI), one-half mile (800 meters), on each side of the routes. An analysis prepared for the State of Nevada, based on 2005 Bureau of Census estimates, concluded that about 95,000 residents currently live within one-half mile of the rail route, and about 113,000 residents currently live within one-half mile of the highway routes. There are also 34 hotels with 49,000 hotel rooms located within one-half mile of the rail route. The State of Nevada estimates that more than 1.8 million residents live within the 50 mile region of influence for accidents and sabotage, along potential truck and rail routes, in southern Nevada and adjacent areas of Arizona, California and Utah.<sup>5</sup>



<sup>5</sup> Halstead, RJ, et al. 2008. *State of Nevada Perspective on the U.S. Department of Energy Yucca Mountain Transportation Program*, Paper presented at Waste Management 2008, Phoenix, AZ, February 25, 2008. <http://www.state.nv.us/nucwaste/news2008/pdf/wm2008perspective.pdf>

- 65-158** The rough calculation of the hydrologic source term for tritium in groundwater at the NNSS presented in the last paragraph of Appendix H was not intended to be a conclusive statement. Determining the actual hydrologic source term would be an extremely complex and unnecessary effort for purposes of the discussion in Appendix H. The calculation of a hypothetical hydrologic source term for tritium in the paragraph cited by the commentor was intended only to be an example based on a simple calculation. In keeping with this simplistic approach, the potential hydrologic source term of tritium, as of April 2016 (about 2 half lives of tritium), has been added to the SWEIS. In addition, the text has been revised to state more clearly the intent and high level of uncertainty of the estimated hydrologic source term for tritium noted in Appendix H.

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Figure 1. Potential Rail and Highway Routes through Las Vegas and 0.5-Mile Radiological Region of Influence (ROI) for Incident-Free Transportation

Figure 2 below shows the DOE potential national highway and rail routes to Yucca Mountain and the radiological region of influence (ROI) for sabotage and accidents, 50 miles (80 kilometers), on each side of the routes. Nationally, about 218 million people lived within the 50-mile ROI for transportation sabotage and accidents in 2000, according to an analysis based on 2000 Census data prepared for the State of Nevada.<sup>6</sup>

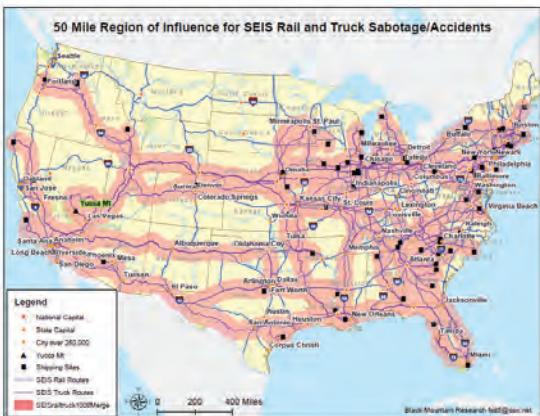


Figure 2. Potential National Rail and Highway Routes and 50-Mile Radiological Region of Influence (ROI) for Sabotage and Accidents

<sup>6</sup> Dilger, F. 2008. 50-Mile Region of Influence for Yucca Mountain Transportation Sabotage and Accidents. Memorandum prepared for State of Nevada Agency for Nuclear Projects, October 21, 2008.

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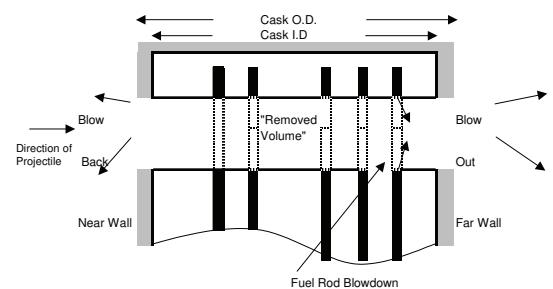
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**Truck and Rail Potential Sabotage Scenarios**

The chosen scenario for a sabotage attack on a truck carrying spent nuclear fuel through Las Vegas incorporates an attack that successfully penetrates both walls of the fuel cask, as seen in Figure 3 below.<sup>7</sup> Similar to the SEIS, we assume the spent fuel burnup is 60GWD/MTU and is 10 years cooled. The truck cask contains four PWR fuel assemblies. As we discuss below, the total Cesium-137 released from the sabotaged truck cask is 1.76E+04 Ci. The truck sabotage attack site is assumed to be located on the near south side of Las Vegas at the intersection of I-15 and I-215, south and west of Las Vegas Boulevard ("The Strip"). Both highways and this intersection are identified in the SEIS as segments of the planned transportation routes to Yucca Mountain.



**Figure 3. Simplified Diagram of Spent Fuel Cask and release pathways following Successful Terrorist Attack**

The scenario for a sabotage attack on a rail cask transporting spent nuclear fuel through Las Vegas also incorporates an attack that successfully penetrates both walls of the fuel cask. The rail cask is the proposed TAD cask, containing 21 PWR fuel assemblies, as assumed in the SEIS. The rail casks actually used for shipments to the repository could be larger, with

<sup>7</sup> Collins, HE. 2003. *Recommendations for a Consequences Study of a Terrorist Attack Against SNF Shipments to Yucca Mountain*, Final Draft Report, Prepared for Nevada Agency for Nuclear Projects, April, 2003.

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capacities of 24, 26, 28 or more PWR assemblies. The spent fuel burnup is assumed to be 60 GWD/MTU and the fuel has been cooled 10 years. In this scenario, the total Cesium-137 released from the sabotaged rail cask, as discussed below, is 4.35E+04 Ci. The rail sabotage attack site is assumed to be located on the Union Pacific Railroad line just north of Flamingo Road, and west of I-15 and Las Vegas Boulevard ("The Strip"). This rail line is identified in the SEIS as a segment of the planned transportation routes to Yucca Mountain.

**Release Assumptions**

The release from the rail cask is based on the following assumptions:

1. Assume attack on 21-PWR TAD, with internal arrangement based on NAC diagram (3-5-5-5-3), Fig. 4.

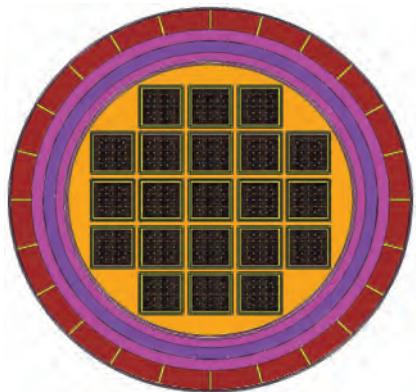


Figure 4. TAD Rail Cask<sup>8</sup>

2. Assume rail overpack design based on existing designs for NUHOMS, HOLTEC, and NAC rail casks.

<sup>8</sup> Pennington, CW, 2007. From Observations to Lessons Learned: TAD Specification Development and Proof of Concept Design Effort. NEI Dry Storage Information Forum, Clearwater Beach, FL, May 16, 2007.

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2. Assume successful attack using at least two weapons comparable to the TOW-2 warhead or the M3A1 demolition charge, first weapon penetrates cask 80-90%, second weapon placed in entry hole of first weapon, results full perforation (100% penetration) and an exit hole on the opposite side of cask. (A horizontal attack on the side of the cask was assumed. Another orientation would perhaps be more adverse).
3. Assume weapons penetrate 5 of the 21 PWR assemblies in the TAD.
4. Assume reference PWR assembly physical dimensions from Yucca Mountain FEIS<sup>9</sup> (8.27" x 8.27" x 145.67", for a volume of 9,962.8 cubic inches).
5. Assume a cylindrical core of SNF equal in diameter to the blast hole is pulverized and ejected from the cask.
6. Assume that the blast hole has an average diameter of 6", and the volume of pulverized SNF pellets ejected from the cask is about 2.3 % of the total volume of the 5 PWR assemblies penetrated by the blasts or  $5.48 \times 10^3$  of the total cask inventory[alternately, if the hole diameter is 4 inches, the volume ejected would be about 1.0 %; if the hole diameter is 2.5 inches (Army FM 5-250 rates the M3A1 as penetrating at least 20 inches of armor plate, with an average hole diameter of 2.5 inches), then the volume ejected would be about 0.4 %]. For the TAD cask, we make the same assumption as the SEIS, that all the Cs and I in the swept mass is volatilized and is in respirable size. In addition, the Cs in the gap between the cladding and the fuel pellet, 10% of the Cs inventory in the five fuel assemblies is released. We further assume that all this Cs, 2.9% of the TAD cask inventory of Cs, is released outside the cask. We realize that this is not the assumption made by Luna<sup>10</sup>, but the conditions for the TAD cask and the Sandia experiment are different. The Sandia and GAR experiments<sup>11</sup> differ from real life conditions in that rail casks and inner canisters are pressurized. Within tens of seconds, the internal cask pressure should allow all internal aerosols to be vacated from the cask. We also accept Luna's assumption that 2% of the swept mass is aerosolized, so  $1.096 \times 10^{-3}$  of the particulate cask inventory is released as an aerosol. The deposition velocity of the aerosol is assumed to be 1 cm/sec. For the inventory that is released and is not aerosolized, 98% of the released particulates, the deposition velocity is assumed to be 10 cm/sec; these heavier particles fall closer to the cask. Cs is not released as a non-aerosolized particle.
7. Assume the cask is carrying the SEIS reference PWR SNF (60 GWDT/MTHM, 4.0 % initial enrichment, 10-years cooled, per page 6-9)
8. Assume the radionuclide inventories provided in SEIS Table G-15, page G-28 (for example, Cs-137, 71,600 curies/assembly) to estimate the release.
9. For the truck cask, 2 of 4 of the PWR assemblies have a swept volume of 2.3%. With a similar reasoning for the TAD cask, we determine that 6.15E-2 of the truck cask inventory of I and Cs are released as an aerosol, and 2.3E-4 of the truck inventory of particulates are

<sup>9</sup> USDOE, 2002, p. A-25.

<sup>10</sup> Luna RE, 2006. *Release Fractions from Multi-Element Spent Fuel Casks Resulting from HEDD Attack*. WM 2006 Conference, February 28-March 2, 2006.

<sup>11</sup> GRS, 1994. Pretzsch, G and F Lange, 1994. *Experimental Determination of the Release of UO2 from a Transport Container for Spent Fuel Elements after Shaped Charge Bombardment*, Gesellschaft für Anlagen und Reaktorsicherheit, Report GRS A-2157, May 1994.

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released as an aerosol. For the non-respirable portion of particulates, 1.13E-2 of the cask inventory is released, with a deposition velocity 10 cm/sec. None of the Cs inventory is released as a nonrespirable particulate.

We contrast our assumptions regarding Cs release with those of DOE in Table 1 below.

**Table 1. Cesium Release Assumptions**

Size Particle	Release Time	SEIS No Exit Hole	RWMA Exit Hole
Respirable	Immediate	1 fuel assembly (fa) broken, all Cs in swept mass respirable (gap + matrix); range of release heights	Cs in 6" diameter swept mass of fa respirable (gap + matrix), released <sup>a</sup> ; height 1.5m truck; 2.5 m rail
	Blowdown	Cask pressurized from breached fuel assembly; no Cs released from unbroken section of fa	Cs in gap of breached fuel assemblies released; 10% of Cs in gap
Non-Respirable	Immediate	No Cs released	No Cs released
	Blowdown	No Cs released	No Cs released

Notes: a. 5 of 21 fuel assemblies in TAD cask breached; 2 of 4 in truck cask breached

In Table 2 below, we compare the inventory, release fractions and total Cs-137 released in the SEIS and in this report. We also compare these releases with those in more severe accidents, Categories 5 and 6. Several aspects of the total Cs-137 releases should be noted:

1. In our calculation, the total Cs release from a rail cask is greater than from a truck cask. This is because we assume, in a two-hole model, that Cs that was assumed to be deposited on other surfaces within the cask in the Luna model, is released from the exit hole. It is also true that the entire rail cask is assumed to be pressurized; contrary to the actual physical situation, Luna<sup>12</sup> does not have the cask pressurized.
2. As our calculations below show, a sabotage event with an exit hole releases over 100 times as much cesium as a 1-hole sabotage event.
3. As seen below, the sabotage event releases 10 times as much cesium as the most severe rail accident, category 6.

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<sup>12</sup> Luna, 2006.

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Table 2. A Comparison of Cesium-137 Releases

<b>Sabotage</b>						
Source	Mode	Inventory	Release Fraction	Total Cs-137		Comments
				Release	Comments	
SEIS	Rail	1.86E+06*	7.15E-06	1.33E+01	26 fuel assemblies, all Cs respirable	4 fuel assemblies, 60GWD/MTU, 10 yrs cooled
	Truck	2.86E+05	5.15E-04	1.47E+02	2-hole, 21 fuel assemblies, 60 GWD/MTU, 10 yrs cooled	
RWMA	TAD, Rail	1.50E+06	2.90E-02	4.35E+04	2-hole, 21 fuel assemblies, 60 GWD/MTU, 10 yrs cooled	2-hole, 4 fuel assemblies, 60 GWD/MTU, 10 years cooled
	Truck, alt 4	2.86E+05	6.15E-02	1.76E+04	2-hole, 4 fuel assemblies, 60 GWD/MTU, 10 years cooled	
<b>Accident</b>						
YMF/EIS	Rail, Cat 5	1.58E+06	2.00E-04	3.16E+02		
	Rail, Cat 6	1.58E+06	2.00E-03	3.16E+03		
RWMA	Rail, Cat 5	1.58E+06	6.60E-03	1.04E+04		
	Rail, Cat 6	1.58E+06	6.60E-02	1.04E+05		

\* All inventory and total Cs-137 quantities presented as curies of Cs-137.

**Downwind Contaminated Surface Concentrations**

The computer programs RISKIND<sup>13</sup> and Hotspot<sup>14</sup> were used to calculate the downwind contaminated surface concentrations that would result from potential sabotage attacks on a truck and rail cask transporting spent nuclear fuel through Las Vegas. As input parameters to the RISKIND and Hotspot programs, we used the average wind speed and direction of Las Vegas, 4.47 m/sec from the southwest, and the Pasquill Stability category D to represent neutral atmospheric conditions. Release heights of 1.5m<sup>15</sup> and 2.5m<sup>16</sup> were used for the truck and rail scenarios, respectively, assuming that the missile used in the sabotage attack hits the middle of both the truck and rail casks. Similar to the SEIS, we assume a short term exposure during passage of the radioactive cloud of two hours. We also assume that the contaminated areas are not decontaminated for one year, representing the dose one would be exposed to through direct gamma radiation from groundshine. To maximize the population exposure, we assume no indoor shielding, the assumption made by DOE.

<sup>13</sup> "RISKIND, Version 2.0." Argonne National Laboratory. SY Chen and BM Biwer, bmbiwer@anl.gov.

<sup>14</sup> "Hotspot, Version 2.06." Lawrence Livermore National Laboratory, <https://www-gs.llnl.gov/hotspot/index.htm>. Steve Hoffmann, contact.

<sup>15</sup> RWMA, 2002.

<sup>16</sup> Adkins, et al. 2006. Spent Fuel Transportation Package Response to the Baltimore Tunnel Fire Scenario. NUREG/CR-688

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Chapter 5 of the SAND96-0957 document<sup>17</sup> outlines the approach used to designate surface concentration clean up categories, and the RADTRAN 5 economic model couples these clean up categories with their appropriate remediation cost per square kilometer of contaminated surface. The SAND96-0957 document outlines areas considered to be "lightly contaminated" as those areas ranging in surface concentrations of  $0.2\text{-}0.4 \mu\text{Ci}/\text{m}^2$ . Remediation actions associated with these levels of contamination include non-destructive decontamination activities such as washing and scrubbing, removing topsoil, as well as other "surface" decontamination activities. Areas considered to be "moderately contaminated" are those areas exhibiting surface contamination levels of  $0.4\text{-}2.0 \mu\text{Ci}/\text{m}^2$ . Remediation actions associated with moderately contaminated surfaces include destructive decontamination, such as replacement of roofing, flooring, furniture, and all landscaping. Areas contaminated beyond the level of  $2.0 \mu\text{Ci}/\text{m}^2$  are considered to be "heavily contaminated." Remediation of surfaces that are heavily contaminated is thought to be impractical, so the costs associated with heavily contaminated surface clean up are a result of condemnation, acquisition, demolition, disposal, and restoration of property.

Downwind contaminated surface concentrations were calculated over the distance of 0.05 to 80.0 km from both the truck and rail sabotage attack sites using the RISKIND computer program. Figures 5 and 6 plot the downwind surface contamination isopleths for both the truck and rail sabotage scenarios in terms of lightly, moderately, and heavily contaminated surface concentrations. Figures 5a and 6a display surface contamination isopleths out to 80 km, for truck and rail sabotage events, respectively; Figures 5b and 6b display the close-in isopleths, out to 10 km from the potential sabotage event. As seen, major areas of Las Vegas, including The Strip, would be impacted by a sabotage event. As seen in Figures 5a and 6a, the surface contamination isopleths are not complete at a distance of 80 km downwind from the sabotage attack site, due to the fact that the parameters of the RISKIND computer program do not allow one to obtain surface concentrations for areas that extend past 80 km downwind of a sabotage site. Due to this limitation, we used the computer program Hotspot to calculate the surface contaminations beyond the scope of 80 km downwind from each sabotage site. Hotspot allows its users to calculate surface concentrations up to a maximum of 200 km downwind of an accident site.

The resulting outdoor Cs-137 downwind surface concentrations of the truck and rail cask sabotage attacks are listed in Tables 3 and 4, respectively. The contaminated surface areas were calculated in both the RISKIND and Hotspot computer programs. The areas calculated by RISKIND only account for contaminated areas that fall within a distance of 80 km downwind from the sabotage attack sites, therefore they do not account for the total area that is contaminated by the Cs-137 released from a sabotaged truck or rail cask. Hotspot was then used to calculate the area of the contaminated surfaces that fall within 200 km

<sup>17</sup> SAND96-0957. Chanin, D.I. and Murlin, W.B. *Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents*. May 1996. 6, p.5.15

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downwind of the sabotaged cask. The completed isopleth representing heavily contaminated areas (those containing surface concentrations greater than  $2.0 \mu\text{Ci}/\text{m}^3$ ) does not extend past 200 km downwind of both the truck and rail sabotage sites, and Hotspot was able to accurately calculate the total area of heavily contaminated surfaces. The moderately and lightly contaminated isopleths dispersed from both the truck and rail sabotage sites are not complete by 200 km downwind of the sabotage site, and the limitations inherent of the Hotspot computer program would not allow us to calculate those total areas.

**Table 3. Downwind Cs-137 Surface Concentrations: Truck Sabotage Attack.**

Contamination Category	Contaminated Surface Area (km <sup>2</sup> )	
	RISKIND	HotSpot
Heavily Contaminated	537.6	682.0
Moderately Contaminated	207.8*	not calculated
Lightly Contaminated	158.6*	not calculated

\* The isopleths for moderate and light contamination extend further than 80 km, the contaminated surface areas of moderate and light contamination are much greater than those listed.

**Table 4. Downwind Cs-137 Surface Concentrations : Rail Sabotage Attack.**

Contamination Category	Contaminated Surface Area (km <sup>2</sup> )	
	RISKIND	HotSpot
Heavily Contaminated	591.2	1000.0
Moderately Contaminated	344.3*	not calculated
Lightly Contaminated	N/A	Not calculated

\* The isopleth for moderate contamination extends further than 80km, the contaminated surface areas of moderate contamination is greater than that listed.

**Economic Consequences**

The RADTRAN 5 economic model provides the clean up costs per square km associated with lightly, moderately, and heavily contaminated areas in 1995 dollar values. These values, which hold for a transportation accident or sabotage, have been converted to 2008 dollar values through a Consumer Price Index Ratio obtained from the Federal Reserve Bank of Minneapolis. The RADTRAN 5 cost estimates for the remediation of a mixed-use urban area are given in Table 5. We apply these cost estimates to the contaminated areas listed in Tables 3 and 4. It is important to note that the cleanup costs in Table 5 are based on a

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population density of 1344 persons/km<sup>2</sup>, whereas the projected population density for an urban area in year 2067 is 4 times greater, according to the SEIS.

**Table 5. Cost Estimates Obtained from RADTRAN 5 Economic Model.**

Contamination Category	Surface Concentration Range ( $\mu\text{Ci}/\text{m}^2$ )	Cost/km <sup>2</sup> , 1995 dollars	Cost/km <sup>2</sup> , 2008 dollars
Lightly Contaminated	0.2-0.4	\$128,000,000	\$181,000,000
Moderately Contaminated	0.4-2.0	\$183,000,000	\$259,000,000
Heavily Contaminated	>2.0	\$395,000,000	\$558,000,000

Tables 6 and 7 display the contaminated areas and the economic consequences of a sabotage attack on a truck and rail car transporting spent nuclear fuel through Las Vegas in terms of lightly, moderately, and heavily contaminated areas. It is important to note that the calculated clean up costs listed in Tables 6 and 7 cover the total cost of clean up for those areas categorized as heavily contaminated (calculated by Hotspot), but these tables do not cover the total cost of clean up for those areas categorized as moderately and lightly contaminated due to the limitations of the RISKIND and Hotspot computer programs. As seen in Figures 5a and 6a, if we were to complete the isopleths for moderately and lightly contaminated areas, the contamination plumes would extend much further out than 80 km and the cost of clean up for the whole contaminated area would be much greater than the costs presented in Tables 6 and 7.

**Table 6. Cs-137 Clean Up Costs: Truck Sabotage Attack (w/ Exit Hole) in Las Vegas.**

Contamination Category	Total Contaminated Surface Area ( $\text{km}^2$ )	Maximum Distance of Contamination Plume (km)	Total Cost 2008 Dollars
Heavy	682.0	146	\$380,863,759,036.15
Moderate	207.8*	80*	\$53,756,122,621.37
Light	158.6*	80*	\$28,701,679,107.26
<b>Total</b>	<b>1048.4 *</b>		<b>\$463,321,560,764.78</b>

\*The isopleths for moderate and light contamination extend further than 80 km, the total moderately and lightly contaminated surface areas are greater than listed, and the total contaminated surface area is >>1048.4 km<sup>2</sup>.

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**Table 7. Clean Up Costs: Rail Sabotage Attack (w/Exit Hole) in Las Vegas.**

Contamination Category	Total Contaminated Surface Area (km <sup>2</sup> )	Maximum Distance of Contamination Plume (km)	Total Cost, 2008 Dollars
Heavy	1000.0	200	\$558,451,259,583.79
Moderate	344.3*	80*	\$89,077,096,945.24
Light	N/A	N/A	
<b>Total</b>	<b>1344.3*</b>		<b>\$647,528,356,529.03</b>

\* The isopleth for moderate contamination extends further than 80 km, the total moderately contaminated area is greater than listed, and the total contaminated surface area is >>1344.3 km<sup>2</sup>.

**Comparison to Previously Calculated Clean Up Costs**

RWMA's previous report<sup>18</sup> of the potential economic consequences of a successful sabotage attack on a truck or rail cask transporting spent nuclear fuel calculated clean up costs through both the RADTRAN 4 and RADTRAN 5 economic models. Table 8 lists the estimated clean up costs resulting from a successful sabotage attack on both a truck and rail cask carrying spent nuclear fuel, calculated by both RADTRAN 4 and RADTRAN 5. The values in Table 8 have been translated from 2000 dollar values listed in our previous report to 2008 dollar values through a Consumer Price Index Ratio obtained from the Federal Reserve Bank of Minneapolis. All cost values listed in Table 8 are based on maximum Cs-137 release fractions stated in the Yucca Mountain FEIS<sup>19</sup> document. It should be noted that the values listed in Table 8 account for a sabotage attack that incorporates the penetration of only one cask wall. The addition of an exit hole due to the total penetration of a missile through both cask walls would increase the amount of Cs-137 released, therefore increasing the cost of clean up. Both the RADTRAN 4 and RADTRAN 5 economic models were originally used for a comparison of the two estimates due to several differences between the inherent input parameters of both economic models. These differences are discussed below.

**Table 8. RWMA Previously Calculated Cs-137 Clean Up Costs.**

Economic Model	Truck	Rail
RADTRAN 4	\$22,272,431,174.87	\$3,478,503,295.85
RADTRAN 5	\$45,808,635,129.90	\$7,007,056,998.84

RADTRAN 4 and RADTRAN 5 are economic models that were developed by Sandia National Laboratories and can be used to estimate economic consequences of a potential

<sup>18</sup> RWMA, 2002.  
<sup>19</sup> USDOE, 2002.

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accident, such as a sabotage attack on a truck or rail cask transporting spent nuclear fuel. The RADTRAN 4 economic model estimates clean up costs based on the population density of the area surrounding the sabotage attack and the time, in days, it takes to evacuate the contaminated area. RADTRAN 4 also assumes that once individuals have been evacuated from the contaminated area, they will be allowed to return after only ten days past the incident, as long as ground contamination levels are less than 40 times the EPA's Protective Action Guide's<sup>20</sup> clean up criterion of  $0.2 \mu\text{Ci}/\text{m}^3$ . This assumption will greatly underestimate the actual clean up cost of a sabotage attack because it does not account for the cost of relocating evacuated individuals for a period longer than 10 days. Our previous report calculated four different clean up cost estimates for the maximum Cs-137 release fractions stated in the YM FEIS. These four cost estimates accounted for population densities of both 5404 or 6905 persons/km<sup>2</sup>, and an evacuation time of either 1 or 7 days. The estimated clean up costs listed under RADTRAN 4 in Table 8 represent the greatest of the 4 economic costs calculated for both the train and rail cask sabotage attack scenarios. The RADTRAN 4 estimated cost values for both truck and rail in Table 8 are derived from a surrounding population density of 6905 persons/km<sup>2</sup> and an evacuation time of 7 days.

Chapter 5 of the SAND96-0957 document<sup>21</sup> outlines the approach used to designate surface concentration clean up categories, and the RADTRAN 5 economic model couples these clean up categories with their appropriate remediation cost per square kilometer of contaminated surface. The SAND96-0957 document outlines areas considered to be lightly, moderately, and heavily contaminated based on a range of decontamination factors that would be adequate for ground contamination clean up. A decontamination factor is a measurement used to evaluate the effectiveness of the radioactive contamination treatment. A decontamination factor can be measured as DF = 100/percent of contamination remaining after treatment. According to the EPA's Protective Action Guides, all radioactively contaminated areas should be decontaminated to a level below  $0.2 \mu\text{Ci}/\text{m}^3$ .

The SAND96-0957 document categorizes areas considered to be lightly contaminated as those areas where a decontamination factor of 2 would be sufficient for remediation. Areas ranging in surface concentrations  $0.2\text{--}0.4 \mu\text{Ci}/\text{m}^3$  would be considered lightly contaminated. Remediation actions associated with these levels of contamination include non-destructive decontamination activities such as washing and scrubbing, removing topsoil, as well as other "surface" decontamination activities. Areas considered to be moderately contaminated are those areas where a decontamination factor between 2 and 10 would be sufficient for remediation. Areas exhibiting surface contamination levels of  $0.4\text{--}2.0 \mu\text{Ci}/\text{m}^3$  would be considered moderately contaminated. Remediation actions associated with moderately contaminated surfaces include destructive decontamination, such as replacement of roofing, flooring, furniture, and all landscaping. Areas considered to be heavily contaminated must have a decontamination factor greater than 10, and these areas are contaminated beyond the

<sup>20</sup> SAND96-0957.  
<sup>21</sup> *Ibid.*

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level of  $2.0 \mu\text{Ci}/\text{m}^2$ . According to Sandia it is impractical to remediate surfaces that are heavily contaminated, so the costs associated with heavily contaminated surface clean up are associated with condemnation, acquisition, demolition, disposal, and restoration of property.

The RADTRAN 5 economic model is different from RADTRAN 4 in that it assumes a population density of 1344 persons/ $\text{km}^2$ , and calculates clean up cost estimates as a function of meteorological stability. RADTRAN 5 accounts for all Pasquill Stability Classes (A-F) and their associated probability of occurrence. The total clean up cost presented by the RADTRAN 5 economic model is the averaged total cost of clean up under all of the Pasquill Stability Classes. The clean up costs for both a truck and rail sabotage attack calculated by RADTRAN 5 are twice the costs calculated by the RADTRAN 4 economic model.

Our most recently calculated clean up costs for a sabotage attack on a truck and rail cask transporting nuclear fuel (Tables 6 and 7) greatly surpass the previously calculated clean up costs calculated by both RADTRAN 4 and RADTRAN 5. Our most recent clean up costs were calculated using RISKIND 2.0 which allowed us to use more precise calculation parameters than those inherently presented in the RADTRAN 4 and RADTRAN 5 economic models. RISKIND 2.0 allowed us to account for the average wind speed, wind direction, and meteorological conditions of the specific location of Las Vegas. It also allowed us to geographically map and calculate the Cs-137 surface contamination levels of the areas covered by a contamination plume dispersed as a result of a sabotage attack on a truck or rail cask transporting spent nuclear fuel. These calculated areas were then classified as either heavily, moderately, or lightly contaminated based on the clean up categories presented in the SAND96-0957 document to more precisely estimate the clean up cost of the entire affected area. Figures 5 and 6 display the contamination plume overlaying Las Vegas for both a truck and rail cask sabotage attack. Each isopleth is designated as either lightly, moderately, or heavily contaminated.

Our most recently calculated clean up cost for a sabotage attack on a truck cask transporting spent nuclear fuel through Las Vegas is 21 times greater than the estimated cost calculated by RADTRAN 4, and 10 times greater than the estimated cost calculated by RADTRAN 5. But as stated above, the full costs we have estimated only extend to 80 km. The largest differences between our most recent and previously estimated clean up costs can be seen in the rail cask sabotage scenarios. Our most recently calculated clean up cost for a sabotage attack on a rail cask transporting spent nuclear fuel is 186 times greater than the estimated cost calculated by RADTRAN 4, and 92 times greater than the calculated cost of RADTRAN 5.

There are several differences between the factors and fuel descriptions that went into our most recent calculations and those that were used in the previously calculated clean up costs that must be considered. However, the differences we have accounted for in our most

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recent calculations follow the guidelines presented by the DOE in its SEIS<sup>22</sup>. In our current calculations, the spent nuclear fuel has a shorter cooling period of 10 years in comparison to the previous cooling period of 15 years, which would increase the activity of Cs-137 in the cask inventory by up to 11%. The current fuel used to calculate our current clean up costs has a greater burnup, 60 GWD/TMU, than the previously used fuel which had a burnup of 50 GWD/MTU. This change also signifies that the fuel in the cask inventory will be hotter and will have a greater activity than the fuel used to calculate our previous cost estimates. In our previous report, it was assumed that the sabotage attack weapon only penetrated one side of the truck and rail cask, and in our most recent calculations, we assumed that the sabotage weapon used penetrates both sides of the truck and rail cask, creating an exit hole for the cask inventory, allowing more of the cask inventory to be released from the cask. Differences in release heights from the sabotaged truck and rail casks can also be accounted for in our most recent clean up cost estimates. In our most recent report, we assume that the weapon used to sabotage a truck cask penetrates the cask wall at the center of the cask, or at 1.5 meters above the ground. We assume the same for the rail cask, which places the center of the cask at 2.5 meters above the ground. The previously used release heights for the truck and rail casks were 1.508 and 2.08 meters, respectively.

**Cost Underestimate Considerations**

Due to reasons presented in the SAND96-0957 document<sup>23</sup>, our calculated clean up cost estimates for Las Vegas are greatly underestimated. Our most recent clean up costs for a truck and rail cask sabotage attack, calculated according to the clean up categories presented in the SAND96-0957 document, are “well-founded estimates” but in no way serve as an upper bound of the potential remedial costs of a sabotage attack on a truck or rail cask transporting spent nuclear fuel through Las Vegas.

For each of the clean up costs associated with areas designated as lightly, moderately, and heavily contaminated, a specific time period is assumed for the completion of clean up. For lightly contaminated areas, it is assumed that all clean up will be carried out within a period of 3 months; the first month for planning, the second month for clean up, and the third month for certification and the resettling of inhabitants. For moderately contaminated areas, a clean up period of 6 months is assumed, as well as an assumed clean up period of 1 year for areas that are designated as heavily contaminated. Given the size of the areas that qualify as lightly, moderately, and heavily contaminated, listed in Tables 6 and 7, it is unlikely that these areas will be completely decontaminated and resettled within the time frames designated to each of the clean up categories. It could take months, even years, for the multiple parties involved in forming clean up strategies to agree on their plans, and years for completed clean up action to be carried out.

<sup>22</sup> USDOE, 2008.

<sup>23</sup> SAND96-0957. Appendix G.

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There are several other areas in which the estimated clean up costs stated in the SAND96-0957 document lack realistic cost parameters that would have to be included in the clean up costs of the Las Vegas area. For one, the cost estimates for mixed-use urban areas do not include downtown business districts or high-rise apartment buildings<sup>24</sup>. Las Vegas is covered by high-rise casinos, hotels, business offices, and apartment buildings, and the inclusion of these buildings in decontamination plans would increase the cost of clean up.

The cost of on-site clean up is included in the total remedial cost, but the cost of evacuating, decontaminating, and monitoring the populace affected by the contamination plume dispersed from the sabotaged rail or truck cask is not included in the overall estimated clean up costs. This cost, however, would be minor in relation to other factors considered, but it is a factor that cannot be ignored and will still contribute to total clean up costs.

The total clean up cost estimates given in SAND96-0957 are also based on the monetary amounts that competitive contractors would bid for similar projects<sup>25</sup>. The idea of working in an area that is radioactively contaminated may cause many workers to increase their cost of payment. Supplying workers with newly required equipment, such as protective clothing and filtered breathing apparatuses, will also increase the cost of clean up<sup>26</sup>. The location of Las Vegas in relation to other populated areas could also affect the total clean up cost. Man-power, equipment, and equipment suppliers may be scarce in the areas surrounding Las Vegas, and the import of workers and equipment from outside cities for a clean up period of up to one year would greatly increase the cost of clean up. Along with an increase in worker pay and equipment cost, Chanin and Murfin's cost estimate did not account for the inclusion of health physics programs to ensure that occupational exposures to the radioactive contamination are monitored<sup>27</sup>.

The costs of rerouting traffic and setting up detours were also not included in the cost estimates. As seen in Figures 5 and 6, a contamination plume from a sabotage attack in Las Vegas would lie directly over Interstate 15, as well as some of the smaller roads used to travel outside of Las Vegas, such as Lake Mead Boulevard, Las Vegas Boulevard, and Interstate 95. Evacuation routes avoiding these affected roadways would have to be planned out, and the cost of constructing a detour could be as high as \$235 per meter of detour length (6-2). The decontamination of these roadways, especially Interstate 15 which lies directly along the center of heavily contaminated isopleths, could involve the use of fixatives such as road oils or organic binders. Water was the only fixative considered in the given cost estimates, and the use of non-water fixatives would increase the cost of decontamination<sup>28</sup>.

<sup>24</sup> SAND96-0957, p. 6-2.

<sup>25</sup> SAND96-0957, p. F-3.

<sup>26</sup> SAND96-0957, p. F-9.

<sup>27</sup> SAND96-0957, p. F-9.

<sup>28</sup> SAND96-0957, p. F-4.

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Government overhead costs, such as the cost of overseeing the work to be completed, were also not included in the cost estimates. Past radioactive decontamination projects suggest that the total government overhead cost could be as great as the actual cost of the clean up work, and Chanin and Murfin believe it would be reasonable to double the cost estimates to cover the costs of all indirect costs associated with clean up<sup>29</sup>. This would put the total clean up costs of a sabotage attack on a truck and rail car transporting spent nuclear fuel through Las Vegas at \$926,643,121,529.55 and \$1,295,056,713,058.05, respectively.

It also must be considered that our calculated clean up costs are extremely underestimated due to the limitations of the RISKIND and Hotspot computer programs. The moderately and lightly contaminated surface areas used to calculate the total clean up costs do not account for the total areas that would be contaminated as a result of a Cs-137 contamination plume released from a sabotaged truck or rail cask transporting spent nuclear fuel. The total areas of those surfaces designated as moderately and lightly contaminated could not be calculated through the use of RISKIND or Hotspot, and the limitations of the Hotspot program lets us know that the farthest distance the moderately and lightly contaminated isopleths could reach is beyond the distance of 200 km downwind of the sabotaged truck or rail cask. The actual areas covered by these moderate and light contamination levels would be much greater than the areas that were used to calculate our most recent clean up costs, therefore greatly increasing the cost of clean up. In addition, RADTRAN 4 and 5 have population densities  $\frac{1}{4}$  the projected population density in 2067.

**Radiation Exposures**

**Population Exposure**

In this section we compare the radiation exposures to the urban population and surrounding population areas out to 80 km in the SEIS with our results in a sabotage event. The SEIS assumes material is released from the entrance hole whereas we assume a release from an exit hole, what we call a 2-hole event. The RWMA and SEIS fuel burnups (60,000 MWd/MTU) and cool down periods (10 years) are the same; the assumed population densities constitute an average of 20 of the largest cities in the United States are also the same. The meteorology (Pasquill Category D) and wind speed (4.47 m/s for Las Vegas) are also the same. To ensure that our methodology is the same as the SEIS, we reproduced the SEIS numbers for a 26 PWR fuel assembly rail cask and a 4 PWR fuel assembly truck cask. The population exposure results for the SEIS for truck and rail casks appear in Tables 9a and 9b below. Note that even though the rail cask has 6  $\frac{1}{2}$  times the inventory of the truck cask, the population exposures from a truck cask (47,000 person-rem) are greater than for a

<sup>29</sup> SAND96-0957, p. 6-2, F-3.

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rail cask (32,000 person-rems), according to the SEIS. This is an upshot of DOE's assumption that in a sabotage event with no exit hole, the internal pressurization within a rail cask is less than for a truck cask, and therefore the blowdown releases are less. For a rail cask, according to DOE, more of the pressurization from the broken fuel rods is absorbed or diluted by the larger internal space of a rail cask. Note also that the population exposure is due to respirable and non-respirable particulates. The respirable particles have a deposition velocity 1 cm/sec; the primary exposure from respirable particles is due to inhalation during the passing cloud.

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Table 9a. SEIS Population Dose for Truck Sabotage Event

Respirable Acute Dose Ring Letter	Radius (km)	Donut Area (km <sup>2</sup> )	Revised Pop Den (persons/km <sup>2</sup> )	Release Height 1m	Release Height 16m	Release Height 32m	Release Height 48m	Release Height 64m	Totals (person- rem)
A	8.05	203.33	5012	7.46E+02	2.11E+03	7.93E+02	9.02E+02	4.38E+02	4.99E+03
B	16.09	609.99	2956	1.25E+02	3.51E+02	1.49E+02	1.90E+02	8.74E+02	3.95E+03
C	24.14	1016.65	2112	6.04E+01	2.25E+02	8.95E+01	1.06E+02	5.67E+01	5.31E+02
D	32.18	1423.31	1342	2.94E+01	1.06E+02	5.08E+01	6.05E+01	3.48E+01	2.04E+02
E	40.23	1829.98	899	1.52E+01	5.72E+01	3.33E+01	4.26E+01	2.28E+01	1.71E+02
F	80.45	15249.76	390	2.59E+01	1.01E+02	7.66E+01	9.82E+01	5.27E+01	3.54E+02
									7.39E+03

Non-Resp Long- Term Dose Ring Letter	Radius (km)	Donut Area (km <sup>2</sup> )	Revised Pop Den (persons/km <sup>2</sup> )	Release Height 1m	Release Height 16m	Release Height 32m	Release Height 48m	Release Height 64m	Totals (person- rem)
A	8.05	203.33	5012	1.25E+03	6.71E+03	8.94E+03	1.10E+04	5.31E+03	3.32E+04
B	16.09	609.99	2956	3.38E+01	3.51E+02	9.54E+02	1.72E+03	1.17E+03	4.23E+03
C	24.14	1016.65	2112	1.54E+01	8.24E+01	2.79E+02	5.23E+02	3.73E+02	1.27E+03
D	32.18	1423.31	1342	4.41E+00	2.32E+01	8.57E+01	1.68E+02	1.22E+02	4.03E+02
E	40.23	1829.98	899	1.47E+00	7.83E+00	3.21E+01	6.34E+01	4.76E+01	1.52E+02
F	80.45	15249.76	390	9.16E-01	4.99E+00	2.50E+01	4.98E+01	3.88E+01	3.94E+04
									4.68E+04

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Table 9b. SEIS Population Dose for Rail Sabotage Event

Respirable		Radius (km)	Donut Area (km <sup>2</sup> )	Revised Pop Density (Persons/km <sup>2</sup> )	Release Height 1m		Release Height 16m		Release Height 32m		Release Height 48m		Release Height 64m		Totals (person-rem)
Action	Donut Ring Letter				Release Height 1m	Release Height 16m	Release Height 32m	Release Height 48m	Release Height 64m						
A	8.05	203.33	5012	1.09E+02	3.26E+02	3.43E+02	3.69E+02	1.68E+02	1.32E+03						
B	16.09	609.99	2956	1.80E+01	7.61E+01	1.01E+02	1.34E+02	7.20E+01	4.01E+02						
C	24.14	1016.65	2112	8.11E+00	3.45E+01	4.67E+01	6.28E+01	3.46E+01	1.87E+02						
D	32.18	1423.31	1342	3.79E+00	1.62E+01	2.26E+01	3.06E+01	1.70E+01	9.02E+01						
E	40.23	1829.98	899	2.02E+00	8.72E+00	1.24E+01	1.69E+01	9.46E+00	4.95E+01						
F	80.45	15249.76	390	3.43E+00	1.52E+01	2.26E+01	3.09E+01	1.74E+01	8.95E+01						
															2.13E+03
Non-Resp Long- Term		Radius (km)	Donut Area (km <sup>2</sup> )	Donut Pop Density (Persons/km <sup>2</sup> )	Release Height 1m		Release Height 16m		Release Height 32m		Release Height 48m		Release Height 64m		Totals (person-rem)
Donut Ring Letter	Radius (km)				Release Height 1m	Release Height 16m	Release Height 32m	Release Height 48m	Release Height 64m						
A	8.05	203.33	5012	9.54E+02	5.04E+03	6.69E+03	8.21E+03	3.98E+03	2.49E+04						
B	16.09	609.99	2956	1.96E+01	2.63E+02	7.15E+02	1.29E+03	8.77E+02	3.16E+03						
C	24.14	1016.65	2112	4.26E+00	6.20E+01	2.09E+02	3.92E+02	2.79E+02	9.46E+02						
D	32.18	1423.31	1342	1.15E+00	1.74E+01	6.43E+01	1.26E+02	9.11E+01	3.00E+02						
E	40.23	1829.98	899	3.57E-01	5.91E+00	2.41E+01	4.75E+01	3.56E+01	1.13E+02						
F	80.45	15249.76	390	1.98E-01	3.77E+00	1.88E+01	3.74E+01	2.91E+01	8.93E+01						
															2.95E+04
															3.16E+04

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The non-respirable particles have a deposition velocity of 10 cm/sec; the greatest population exposure is closer to the sabotage event, within the A population ring; the exposure is primarily due to 1-year direct gamma groundshine. Note also that a 1-hole sabotage event has differing release heights: 1 m (4%), 16 m (16%), 32 m (25%), 48 m (35%) and 64 m (20%). The percents are the relative contributions at the different heights. For a sabotage event with an exit hole, what we call a 2-hole event, we assume one release height, at the center of the cask.

Our calculations for a sabotage event with an exit hole, appear in Tables 10a and 10b below.

**Table 10a. Population Exposure. Truck  
Sabotage with Exit Hole**

Pop Exp Ring Letter	Distance (km)	Pop Dens (pers/km <sup>2</sup> )	Resp Exp (pers-rems)	Nonresp Exp (pers- rems)		Total
				Exposure	Total	
A	0.05 – 8.05	5012	1.80E+06	2.63E+05	2.06E+06	
B	8.05 – 16.09	2956	2.95E+05	5.37E+03	3.00E+05	
C	16.09 – 24.14	2112	1.34E+05	1.31E+03	1.35E+05	
D	24.14 – 32.18	1342	6.32E+04	3.91E+02	6.36E+04	
E	32.18 – 40.23	899	3.48E+04	1.67E+02	3.50E+04	
F	40.23 – 80	390	6.15E+04	1.13E+02	6.16E+04	
	Total		2.39E+06	2.70E+05	<b>2.66E+06</b>	

**Table 10b. Population Exposure. TAD  
Rail Cask Sabotage with Exit Hole**

Pop Exp Ring Letter	Distance (km)	Pop Dens (pers/km <sup>2</sup> )	Resp Exp (pers-rems)	Nonresp Exp (pers- rems)		Total
				Exposure	Total	
A	0.05 – 8.05	5012	4.47E+06	4.87E+05	4.96E+06	
B	8.05 – 16.09	2956	7.45E+05	1.05E+04	7.56E+05	
C	16.09 – 24.14	2112	3.36E+05	2.49E+03	3.38E+05	
D	24.14 – 32.18	1342	1.61E+05	8.01E+02	1.62E+05	
E	32.18 – 40.23	899	8.66E+04	2.78E+02	8.69E+04	
F	40.23 – 80	390	1.53E+05	1.87E+02	1.53E+05	
	Total		5.95E+06	5.01E+05	<b>6.45E+06</b>	

As seen, in a sabotage event with an exit hole, the population exposures from the 21 PWR fuel assembly TAD rail cask are greater than for the truck cask.

In Table 11 below, we compare the SEIS calculations without an exit hole to our calculations with an exit hole.

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

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**Table 11. Comparison Population Exposures.  
Sabotage Event with and without an Exit Hole**

	SEIS No Exit Hole (Pers.-rems)	RWMA With Exit Hole (Pers.-rems)
Rail*	32,000	6,450,000
Truck	47,000	2,660,000

\* SEIS rail cask has 26 PWR fuel assemblies; the TAD rail cask has 21 fa.

As seen, a sabotage event with an exit hole has a much greater population exposure, more than a factor of 50 greater, due to a much greater radionuclide release. Though we have not carried out the calculations in this report, the radionuclide release for a pressurized rail cask with only an entrance hole would also have a much greater population exposure than the above SEIS population exposures. The SEIS population exposures are based on fuel assemblies being pressurized and not the cask itself, which is not the physical reality. The Holtec HI-STAR cask, for example, is pressurized to 100 psig, implying the blowdown effect would be much greater, and also implying that the rail cask would have a greater release than the truck cask.

**Maximum Exposed Individual**

In this section we compare the radiation exposure to the maximum exposed individual (MEI). The SEIS considers the MEI residing at 100 meters from the sabotage event. The exposure is due to inhalation of the passing cloud, and a long-term 1-year exposure, due to groundshine. As seen in Table 12, the exit hole produces exposures that are 500 to 1000 times greater than those without an exit hole.

**Table 12. Comparison MEI  
Sabotage Event W/ and W/O Exit Hole**

	SEIS w/out Exit Hole (rems)	RWMA w/ Exit Hole (rems)
Rail	27.08	43,800
Truck	43.25	24,000

The calculated dose to the maximum exposed individual at 100 m is for a time period of one year and is primarily due to groundshine, direct gamma from deposited radionuclides. But the acute doses that occur within the immediate aftermath of a sabotage event due to passage of the radioactive cloud are primarily due to inhalation, as shown in Table 13 below. In Table 13 we have separated out the acute doses, within the first two hours of a sabotage event, from the one year doses.

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

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**Table 13. MEI Acute Doses at 100 m  
Sabotage Event w/ Exit Hole**

		Truck (rems)	Rail (rems)
Respirable	Inhalation	600	1380
	Groundshine	4	10
Non-Respirable	Cloudshine	3	6
	Groundshine	5	2
<b>Total</b>		<b>612</b>	<b>1398</b>

As seen, the greatest contributor to the acute dose at 100 m is inhalation of the passing cloud. Groundshine is also important, particularly if a person remains for 1 year, since the direct gamma dose rate is 5 rems/hour (rail). Groundshine is essentially an X-ray machine that cannot be turned off. Over a one year period, the direct gamma doses can exceed 20,000 rems to a person residing at 100 meters from a truck sabotage event and double that for a rail sabotage event.

High acute radiation doses due to inhalation have important implications for first responders and residents near the sabotage event. Since the greatest contributor to the acute dose is inhalation, persons should remain indoors till the radiation cloud passes, to avoid inhaling radioactive material. Following the passage of the radioactive cloud, residents should be evacuated since the direct gamma dose rate is 5 rem/hr (truck) and 12 rem/hour (rail). First responders should not enter near the sabotage event without self-contained breathing apparatus. In the longer term, because of the high direct gamma dose rates near the event, the command center should obviously be established upwind.

According the US Environmental Protection Agency's (EPA) Manual of Protective Action Guides and Protection Actions for Nuclear Incidents, sheltering is the preferred protective action when the primary risk comes from the inhalation of radioactive particulates in short-term plumes. There is no recognized threshold for the minimum level at which sheltering should be implemented, but the minimum threshold for evacuation is 1 rem. Additional thought should be given to disseminating information to those affected in sheltering to limit air exchange rates by sealing cracks and openings with cloth, weather stripping, or tape and to use wet towels or handkerchiefs as a mask to filter inhaled air. The US EPA recommends that sheltered buildings should be opened to reduce the airborne activity trapped inside and that individuals should leave the high exposure areas as soon as possible following the cloud passage to avoid further exposure from deposited radioactive materials.<sup>30</sup>

The dose limits recognized by the US EPA for workers performing emergency services are as follows:

- 5 rem dose limit for all activities

<sup>30</sup> US Environmental Protection Agency. 1992. Manual of Protective Action Guides and Protection Actions for Nuclear Incidents, Second Printing.

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
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- 10 rem dose limit for protecting valuable property
- 25 rem dose limit for life saving or protection of a large population
- >25 rem for life saving or protection of large populations only on a voluntary basis when the individual has been fully informed of the risks involved.

These doses could easily be exceeded for emergency workers in the sabotage events discussed above. The US EPA further recommends that prophylactic administration of potassium iodide be considered as a thyroid blocking agent to workers performing emergency services and other relevant groups receiving whole-body doses greater than 25 rem.<sup>31</sup>

In Table 14, we list the expected health effects associated with whole body absorbed doses received within a few hours as recognized by the US EPA. Prodromal effects are forewarning symptoms of more serious health effects associated with large doses of radiation.<sup>32</sup>

**Table 14. Health Effects Associated with Whole-Body Absorbed Doses Received Within a Few Hours<sup>33</sup>**

Whole Body Dose (rem)	Early Fatalities
140	5%
200	15%
300	50%
400	85%
460	95%
Whole Body Dose (rem)	Prodromal Effects
50	2%
100	15%
150	50%
200	85%
250	98%

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<sup>31</sup> USEPA; 1992.

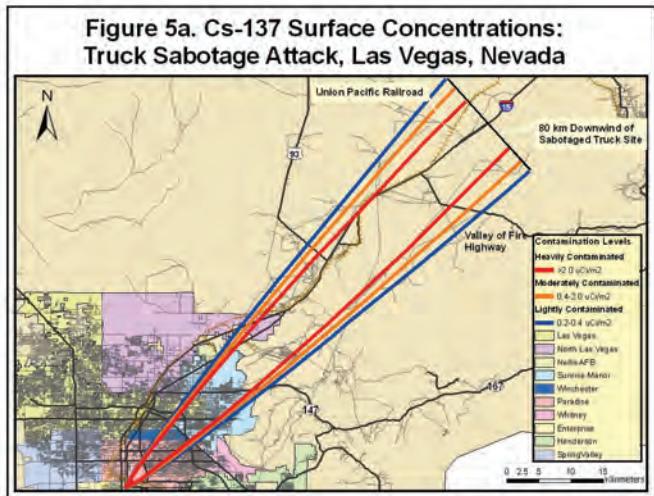
<sup>32</sup> USEPA; 1992.

<sup>33</sup> USEPA; 1992.

Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General

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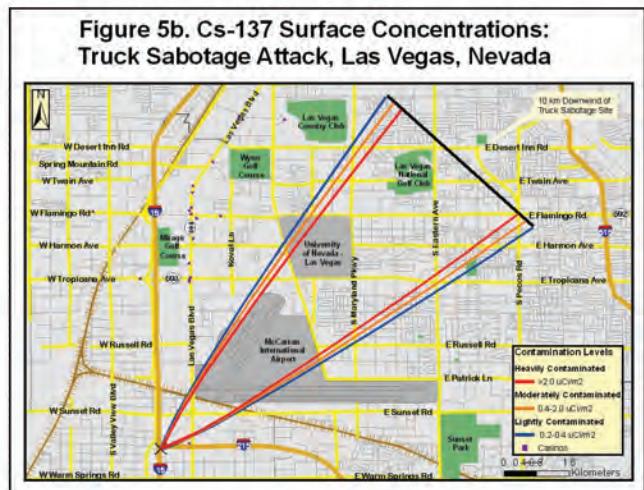


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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

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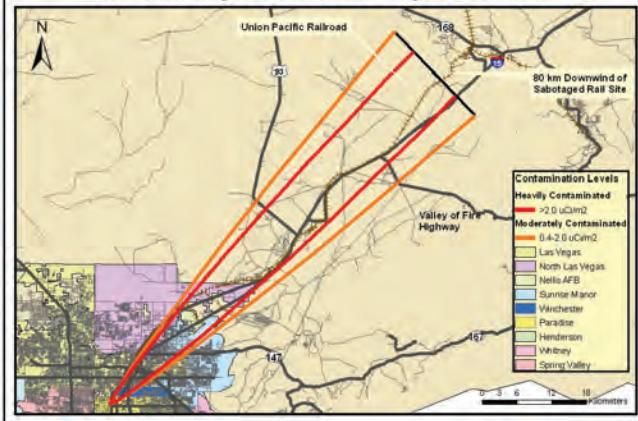
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State of Nevada, Office of the Attorney General**

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**Figure 6a. Cs-137 Surface Concentrations:  
Rail Sabotage Attack, Las Vegas, Nevada**

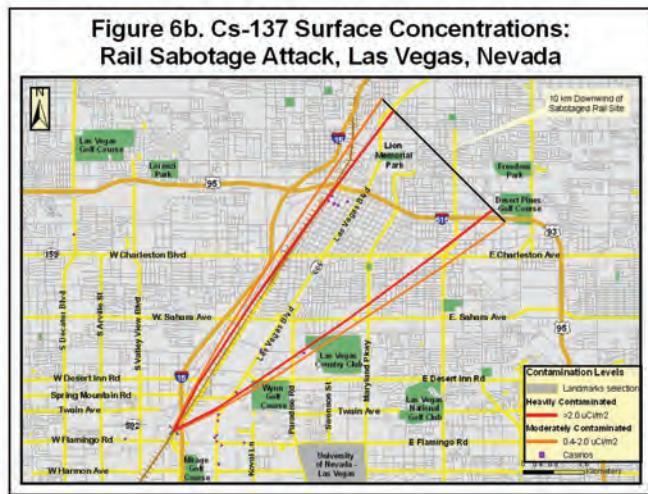


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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

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State of Nevada, Office of the Attorney General**

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

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USDOE, 2008b. "Final Supplemental 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 – Nevada Rail Transportation Corridor," DOE/EIS-0250F-S2, and "Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada," DOE/EIS-0369. (Cited as Rail Alignment EIS)

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

ATTACHMENT C

LETTER FROM GOVERNOR BRIAN SANDOVAL TO SECRETARY OF ENERGY STEVEN CHU  
REGARDING DOE'S PROPOSED UNCONSTRAINED ROUTING SCENARIO

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

ONE HUNDRED ONE NORTH CARSON STREET  
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SEP 20 2011

Agency for Nuclear Projects

**Office of the Governor**

September 16, 2011

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Re: Transportation of Low-Level, Mixed Hazardous and Radioactive Waste

Dear Secretary Chu:

In 1999, Nevada Governor Kenny Guinn and Energy Secretary Bill Richardson agreed that shipments of low-level radioactive waste (LLW) and mixed hazardous and radioactive waste (MLLW) being imported to the Nevada Test Site (now known as the Nevada National Security Site –NNSS) for disposal from other U.S. Department of Energy (DOE) facilities would use highway routes that avoid the heavily populated metropolitan Las Vegas area, including the interchange known as the 'Spaghetti Bowl' where Interstate 15 and US 95 meet. (At the time, DOE also agreed to keep LLW and MLLW shipments off Hoover Dam, but that has since become moot because of Homeland Security restrictions that were instituted following 9/11.) This arrangement was part of a larger, albeit informal, agreement whereby Governor Guinn agreed not to challenge the Record of Decision for DOE's Waste Management Programmatic Environmental Impact Statement designating NNSS/NTS as a regional disposal site for LLW and MLLW resulting from clean-up activities at other DOE locations. In exchange, Secretary Richardson agreed to certain "equity considerations" on the part of DOE, a key one of which was the highway routing concession.

To implement the agreement, DOE instituted certain extra-regulatory mechanisms to assure that waste shipments would stay out of metro-Las Vegas and off of Hoover Dam. DOE amended its waste acceptance criteria for NNSS to specifically require that waste slated for disposal at the site must be transported there using only the agreed-upon routes. In addition, DOE increased the fee charged to waste generators for disposing material at NNSS by fifty cents per cubic foot, with the additional monies dedicated a special fund for rural local governments located along shipping routes. Those funds are used by these local governments to create and enhance their emergency preparedness and response capabilities.

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**Commentor No. 65 (cont'd): Catherine Cortez Masto, Attorney General,  
State of Nevada, Office of the Attorney General**

Hon. Steven Chu, Ph.D  
Secretary of Energy  
U.S. Department of Energy  
Page 2 of 2

For over 12 years this arrangement has worked to the mutual benefit of DOE and the state of Nevada. Now, however, it appears that DOE/NNSS, through the vehicle of the site-wide environmental impact statement (EIS) for the test site, is considering abandoning its long-standing agreement. The draft of the EIS that was released for public comment on July 29<sup>th</sup> contains an "unconstrained" transportation scenario that assumes renewed shipments of waste along through the Las Vegas metro area along I-15, the Las Vegas beltway, the Spaghetti Bowl and the new Hoover Dam bypass bridge.

The rationale for this proposed action appears to be financial. The draft EIS postulates the use of intermodal shipments of waste to NNSS, with the material being transported from DOE's generator sites by rail and then off-loaded onto trucks at locations proximate to Interstate 15 for the last leg of the trip to NNSS. The draft EIS asserts that using I-15 and the Las Vegas beltway through metro Las Vegas is now acceptable because of improvements to the area's highway system that were not in place when the original agreement was made. This is emphatically not the case. Since 1999, the population of the Las Vegas metro area has increased exponentially. While I-15 and the beltway have undergone almost constant reconstruction over the past decade in an effort to mitigate ever-increasing traffic, congestion and gridlock continue to be major problems.

I am deeply concerned that DOE/NNSS appears to be setting the stage for abandoning the extremely successful agreement that has served the interests of both DOE and the State of Nevada exceeding well for over twelve years. I am asking that you reaffirm DOE's commitment to the routing arrangement for LLW and MLLW shipments originally agreed to by Governor Guinn and Secretary Richardson in 1999. I very much appreciate your attention to this matter.

Sincere regards,  
  
BRIAN SANDOVAL  
Governor

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***Commentor No. 66: Richard Spotts***

THURSDAY, DECEMBER 1, 2011, 7:49 A.M.

NNSS SWEIS TOLL-FREE VOICE MAILBOX

MR. SPOTTS: Hello, my name is Richard Spotts, the last name, S-P-O-T-T-S. I live at 1125 West Emerald Drive in St. George, Utah. These are my personal comments.

I did attend one of the scoping meetings for this Draft EIS a while back in St. George, Utah. And I did briefly look over the summary of the Draft Site-wide EIS. My comments are as follows:

Overall, I was disappointed with the Draft Site-wide EIS for several reasons as follows:

- 1) There were proposals that I support or oppose in each of the three alternatives and therefore I cannot recommend any of these alternatives for implementation.
- 2) The alternatives appear to include proposals that are either mandated, (such as nuclear testing and contamination removal), or prohibited, (such as excessive take of threatened Mojave Desert tortoises and their habitats), by law, regulation, or policies. This is inappropriate as beyond your discretion or decision space and it skews the comparison of analysis -- of alternatives.
- 3) The alternatives should have been framed in terms of different consistent levels of discretionary proposals under each subject heading such as Stockpile Stewardship, Environmental Restoration Program, Waste Management Program, and Conservation and Renewable Energy. This approach would be less confusing and a more efficient way to obtain public input.
- 4) The Expanded Operations Alternative improperly combines positive solar energy development with excessive take of tortoises and their habitat. With better planning, there should be enough space at the NNSS to achieve solar energy and tortoise conservation objectives without conflicts.
- 5) The alternative should better address the new federal budget reality of how agencies must be more efficient and effective with lower appropriations from Congress.
- 6) The Final Site-wide EIS should include a new realistic hybrid alternative that maximizes efficient environmental restoration, waste management, tortoise conservation, and solar energy development in non-tortoise areas. This is the alternative that I would endorse and recommend for approval and implementation as most beneficial and in the public interest.

- |             |  |
|-------------|--|
| <b>66-1</b> | Comment noted.   |
| <b>66-2</b> | All of the programs, projects, and activities included under each of the three alternatives are appropriate to consider in an EIS. It should be noted that although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this <i>NNSS SWEIS</i> . A clear statement to this effect has been added in Chapter 3, Section 3.0. Further, under the NNSS Biological Opinion (USFWS 2009), which was issued by the USFWS, DOE/NNSA is authorized to "take" a certain number of desert tortoises incidental to its activities. One of the criteria for considering severity of impact on desert tortoises, as discussed in Chapter 5 of this <i>NNSS SWEIS</i> , is whether a program, project, or activity would cause a "take" of desert tortoises that exceed the number authorized in the NNSS Biological Opinion.                             |
| <b>66-3</b> | The No Action Alternative reflects the current level of activity under each of DOE/NNSA's missions in the state of Nevada. The Expanded Operations and Reduced Operations Alternatives include increased or decreased levels of activity, respectively, compared to the No Action Alternative.   |
| <b>66-4</b> | Commercial solar generation projects are considered under each of the three alternatives addressed in this <i>NNSS SWEIS</i> . The "excessive take of tortoises and their habitat" identified by the commentor is an estimated potential impact of constructing a commercial solar power generation facility. The impact is a function of how much habitat would have to be permanently disturbed for construction of the facility. Because the feasible locations for commercial solar generation facility siting at the NNSS are all within desert tortoise habitat, it would not be possible to avoid "taking" desert tortoises if such a facility were built. It should be noted that all "takes" associated with desert tortoise impacts in this SWEIS would be by harassment, which would be due to relocation by qualified desert tortoise biologists. Chapter 5, Section 5.1.7, has been revised to clarify what is meant by "harassment" of desert tortoises. |
| <b>66-5</b> | Most Federal agencies have been faced with declining budgets for the past several years and have found ways to accomplish the missions assigned by Congress within the funding provided. Any activity proposed in this <i>NNSS SWEIS</i> would be subject to the constraints of budget appropriations from Congress.   |
| <b>66-6</b> | As stated in Chapter 3, Section 3.4, of this <i>NNSS SWEIS</i> , DOE/NNSA considered comments received on the draft as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this <i>Final NNSS SWEIS</i> .   |

2-310

**Commentor No. 66 (cont'd): Richard Spotts**

And please send me a notice when the Final Site-wide EIS is available for public review.

Thank you very much for your consideration. Bye.

-oOo-

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**Commentor No. 67: Christine S. Lehnertz, Regional Director, Pacific West Region, U.S. Department of the Interior, National Park Service**

**From:** Karen\_Washington@nps.gov [mailto:Karen\_Washington@nps.gov] On Behalf Of PWR\_Regional\_Director@nps.gov  
**Sent:** Thursday, December 08, 2011 4:37 PM  
**To:** Nepa Cc: Alan\_Schmierer@nps.gov; Jennifer\_Back@nps.gov; Martha\_Lee@nps.gov; DEVA\_Superintendent@nps.gov  
**Subject:** RE: ER11\0651 Draft Environmental Impact Statement for the Site-Wide Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (DOE/EIS-0426D)

OFFICIAL CORRESPONDENCE BY ELECTRONIC MAIL  
NO HARD COPY TO FOLLOW

US DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
Pacific West Regional Office  
333 Bush Street, Suite 500  
San Francisco, California, 94104-2828

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L7619 (PWR-P)  
December 8, 2011

Linda M. Cohn  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518 Las Vegas, NV 89193-8518  
nepa@nv.doe.gov

RE: ER11\0651 Draft Environmental Impact Statement for the Site-Wide Continued Operation of the Department of Energy/National Nuclear Security Administration

**Commentor No. 67 (cont'd): Christine S. Lehnertz, Regional Director, Pacific West Region, U.S. Department of the Interior, National Park Service**

Nevada National Security Site and Off-Site Locations in the State of Nevada  
(DOE/EIS-0426D)

Dear Ms. Cohn:

The National Park Service (NPS) has reviewed the Draft Environmental Impact Statement (DEIS) prepared by the Department of Energy (DOE) and the National Nuclear Security Administration (NNSA) for continued operation of the Nevada National Security Site (NNSS). The NPS is supportive of efforts to develop renewable energy resources. However, the proximity of Death Valley National Park to the area of proposed action, and the significant potential for cross-boundary impacts, raises a number of concerns that we wish to share in order to help inform this planning process.

**Groundwater Impacts and Devils Hole**

Under each alternative in the DEIS, including the No Action Alternative, one or more commercial solar power generation facilities would add additional water demands to groundwater resources. The DEIS identifies the source of this groundwater extraction as the Fortymile Canyon, Jackass Flats subdivision. President Hoover created Death Valley National Monument by Presidential Proclamation 2028 on February 11, 1933. The proclamation stated that the public interest would be promoted by creating the monument for the "...preservation of the unusual features of scenic, scientific, and educational interest therein contained."

Devils Hole was added to Death Valley in 1952 by Presidential Proclamation 2961, for the purpose of protecting the Devils Hole pupfish and the water resources connected to the unit, stating in part "...the pool is of such outstanding scientific importance that it should be given special protection." The National Park Service's reserved water right at Devils Hole established by this proclamation has been upheld by decision of the Supreme Court (*Cappaert v. United States*, 426 U.S. 128, 1976).

The proposed amount and source of water use identified under each alternative of the DEIS, including the No Action Alternative, is concerning for its potential to adversely impact and even impair resources at Devils Hole and springs in the Furnace Creek area of Death Valley. Seven hydrographic basins, including Jackass Flats, Buckboard Mesa, Crater Flat, Oasis Valley, Rock Valley, Mercury Valley, and the Amargosa Desert have a combined perennial yield of 24,000 acre-feet per year according to the Nevada State Engineer. In 2009, the Nevada

**67-1** In this *Final NNSS SWEIS*, DOE/NNSA has revised the list of groundwater basin yields to contain only single values consistent with those previously established by Nevada Division of Water Resources (NDWR) (e.g., the Nevada State Engineer). While there is uncertainty associated with previous NDWR estimates (as there are with any method of estimation), the previous NDWR estimates provide a reasonable basis for determining whether proposed withdrawals could possibly exceed the perennial yield of any particular basin, and possibly impact downgradient basins. While the UGTA Project model and the SNJV 2004 study, are still referred to as alternative sources of yield estimates in Section 4.1.6.2, the NDWR estimates are used as the primary source of calculating the percentage of demand versus yield for each basin. While DOE/NNSA has contributed to the development of the Death Valley Regional Flow Model and considered its application to this purpose as the commentor suggested, DOE/NNSA has determined that the Death Valley Regional Flow Model may not provide a significant improvement over using the previous NDWR estimates for purposes of analysis in this SWEIS.

As noted in Chapter 5, Section 5.1.6.2, of this final SWEIS, using long-term estimates of basin yield and withdrawals is only one element of avoiding and mitigating potential impacts on groundwater supply. Other elements would include site-specific modeling efforts as new projects or well configurations are further developed, continuous monitoring of well levels throughout the NNSS, and potential modification of well pumping rates and/or points of diversion in response to any data or observances that suggest an adverse impact on groundwater levels or other supply issues.

In regard to water usage conflicting with established water rights as suggested by the commentor, DOE/NNSA also holds Federal reserved water rights similar to those held by the NPS. When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right at the NNSS to use groundwater to support its mission requirements. The rights held by DOE/NNSA are, therefore, senior to other rights sought in basins underlying the NNSS.

In regard to the request to reduce water demand in this final SWEIS, DOE/NNSA wishes to clarify two issues regarding future demand. First, the estimates of water demand associated with DOE/NNSA activities under each alternative (excluding demand from any commercial solar power facility) are conservative in nature and likely overestimate the actual demand that would occur. For example, DOE/NNSA used the highest annual demand seen between 2005 and 2009 as the baseline for

**Commentor No. 67 (cont'd): Christine S. Lehnertz, Regional Director, Pacific West Region, U.S. Department of the Interior, National Park Service**

State Engineer issued a ruling stating that there was no additional water available for appropriation in the Amargosa Desert because committed resources exceeded the perennial yield. Since the Nevada State Engineer has determined that the Amargosa Desert is over-appropriated, there is no additional water available in the other six basins as well. Therefore, the use of groundwater in Jackass Flats, Buckboard Mesa, and Crater Flat as proposed in the DEIS would conflict with existing water rights and could adversely impact NPS water resources.

The NNSA suggests that revised estimates of recharge for Frenchman Flat should be used to determine water availability for this basin instead of the current method used by the Nevada State Engineer. The NNSA selected the UGTA recharge model described in a 2004 report (SNJV, 2004) as the best tool to be used for recharge estimates in Frenchman Flat for the DEIS. The SNJV 2004 report was reviewed to evaluate the recharge estimates presented in that report.

It is important to note that the SNJV 2004 report was prepared to assess contaminant transport and not water available for appropriation. The NNSA suggests that a recharge model known as the UGTA recharge model for Frenchman Flat was the most conservative of several new recharge models. Yet the SNJV 2004 report specifically states that other recharge models evaluated at that time were not chosen because they provided less recharge overall, and therefore were not conservative for an evaluation of contaminant transport. Therefore, it appears that the only recharge models considered by NNSA for the purposes of the DEIS were recharge models that generally increased recharge, and that other new recharge estimates that reduce recharge in some were not included. It is important to note that a recharge model that is suitable for the purposes of evaluation of contaminant transport may not be suitable for the purposes of the determination of water available for appropriation.

In addition, although the UGTA model does increase the estimate of recharge for Frenchman Flat, the UGTA model greatly reduced recharge in the Rock Valley, Mercury Valley and Jackass Flats hydrographic basins. Yet the NNSA did not use the lower estimates of recharge from the UGTA model in these three other basins and continued to use higher estimates of recharge provided by the Nevada State Engineer. The decision to revise the estimate of recharge in Frenchman Flat but not in other basins appears to be arbitrary. A consistent approach should be used, and if recharge is revised in any of the basins, a thorough discussion of the revised estimates of recharge for all of the basins needs to be included. In addition, if estimates of recharge are revised, the discussion needs to address how the hydrologic budget has been balanced and how other parts of the flow system are affected. A summary of all available credible evidence for new estimates of recharge and discharge needs to be provided. It is important to consider that even

estimating future demand (and scaled it higher or lower based on proposed activities in each alternative), despite the general downward trend of water use at the NNSS and the existence of water conservation efforts which should further decrease actual water use in the future.

Secondly, the potential groundwater demand associated with a commercial solar power facility is described and considered separately in this NNSS SWEIS. DOE/NNSA recognizes that such a facility would represent the single largest use of water at the NNSS. However, DOE/NNSA also recognizes that any private applicant who wished to construct a commercial solar facility would likely have to pursue its own water rights, even if the NNSS water supply system were used to supply the water. It is possible that constraints on acquisition of new water rights for an applicant (which might entail purchasing and retiring existing rights to offset demand) could limit the size of the solar facility, and thus its actual water demand. Therefore, the projected demand associated with a commercial solar power facility in the SWEIS is also conservative in nature and likely overestimates the actual demand.

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if there is evidence that recharge estimates should be revised upwards, it does not necessarily mean that additional water is available for appropriation or that impacts will not occur.

Finally, it is puzzling why the NNSA did not include or reference the recently completed Death Valley Regional Flow Model even though the Department of Energy contributed to the development of this model. The DEIS did not include a discussion of how the estimates of recharge and discharge used by NNSA compare to the final calibrated regional flow model, or how new uses of water or new locations of water withdrawals may affect down-gradient water dependent resources and water supplies. Application of the regional flow model by NPS staff suggests that existing groundwater uses within the regional flow system have already impacted NPS water dependent resources and will likely cause additional impacts in the future.

For these reasons, the NPS requests that the water demands in these basins be significantly reduced in the Final EIS for the continued operation of the Nevada National Security Site (NNSS).

#### Cumulative Impacts

The Bureau of Land Management (BLM) and DOE are currently evaluating lands for potential industrial-scale energy development in the agencies' Draft Programmatic EIS for Solar Energy Development in Six Southwestern States. This document identifies and proposes to designate multiple areas immediately adjacent to the NNSS in the Amargosa Desert as "Solar Energy Zones" and "Lands available for Application under a Solar Development Program." The cumulative impacts of this parallel planning process need to be incorporated in the analysis for the continued operation of the NNSS, in particular for the proposed solar development. The NPS requests that cumulative impact analysis incorporate the effects of all proposed solar development in the Amargosa Desert to Death Valley National Park for their potential for cross-boundary impacts to the park.

#### Visual Impacts

Death Valley National Park was recognized in its enabling legislation (California Desert Protection Act of 1994, 16 U.S.C. §§ 410aaa through 410aaa-83, October 31, 1994) as being nationally significant for a wide array of values, including "scenic values." The park contains many iconic desert and mountain observation points whose viewshed is a critical component of the park's legislated protection. The National Park Service requests that incorporation of the viewshed of Death Valley National Park into analysis of impacts to visual resources. In doing so, the Final EIS should identify and analyze cumulative viewshed impacts to Death Valley National Park, and consider strategies for reducing these cumulative impacts.

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- 67-2 In October 2011, DOE and BLM issued the *Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar PEIS Supplement)* (DES 11-49 DOE/EIS-040D-S). The purpose of the *Solar PEIS Supplement* is to allow both agencies to better meet their solar energy objectives. Chapter 6, Section 6.2.4.1, of this *Final NNSS SWEIS* provides an updated discussion of both the *Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar Energy PEIS)* (DES 10-59 DOE/EIS-0403) and the *Solar PEIS Supplement*. As noted in the updated *Final NNSS SWEIS*, Section 6.2.4.1, "Based on the information and analyses in the *Solar Energy PEIS*, DOE and BLM will develop and implement agency-specific programs that establish environmental policies and environmental impact mitigation strategies for solar energy development. The *Solar PEIS Supplement* includes modified and new components of the proposed BLM Solar Energy Program and DOE's proposed programmatic environmental guidance. The *Solar Energy PEIS* and *Solar PEIS Supplement* do not provide specific analysis to support any particular project." However, DOE/NNSA identified a large number of proposed renewable energy projects, primarily solar-energy-based, within the ROI for the cumulative impacts analysis in this *NNSS SWEIS*. All of the proposed renewable energy projects for which a reasonable level of project information is available were included in the cumulative impacts analysis in Section 6.3 of this *NNSS SWEIS*.
- DOE/NNSA reviewed the cumulative impacts analysis to determine what, if any, potentially cumulative impacts may exist that would impact Death Valley National Park (i.e., "cross-boundary impacts"). The primary resources for which there is a potential for cross-boundary impacts on the park include surface water, groundwater, air quality, and visual. The results of the analysis of potential cross-boundary impacts on Death Valley National Park are addressed in Chapter 6, Sections 6.3.6.1, 6.3.6.2, 6.3.8, and 6.3.9, of this *Final NNSS SWEIS*.
- 67-3 Chapter 5, Sections 5.1.9.1, 5.1.9.2, and 5.1.9.3, have been revised to include a statement that the project-specific National Environmental Policy Act (NEPA) review for construction and operation of the commercial solar power generation facility would include analysis of visual impacts resulting from the solar facility on NNSS lands to key observation points from Death Valley National Park. DOE/NNSA would require a potential commercial project proponent to coordinate with NPS to ascertain and mitigate, to the extent feasible, visual impacts on Death Valley National Park.

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To aid in this planning process, the NPS has prepared a map (attached as "Viewshed Impacts from Proposed Energy Development") analyzing viewshed impacts to Death Valley National Park's key observation points from the cumulative solar development in the maximum BLM/DOE proposal and the NNSA/DOE proposal. For the attached geospatial analysis, Death Valley National Park's GIS Specialist consulted with the park's Division of Interpretation and Visitor Services and the park's Wilderness Coordinator to select 30 key observation points for analysis of the visual impacts of proposed solar development to the 3.4 million protected acres of Death Valley National Park. The methodology for selection was to include sites that had a range of levels of established visitation and provided outstanding opportunities for enjoying the scenic values recognized and protected in the park's enabling legislation. It is clear from this analysis that there is a significant potential for adverse impacts to Death Valley National Park's viewshed and scenic values. We invite the NNSA and the DOE to engage directly with Death Valley National Park to reduce or eliminate adverse impacts to the park's protected visual resources.

**Air Quality**

Vegetation removal and mass grading activities on the scale of 36,900 acres, as proposed in the Expanded Operations Alternative, has the potential to impact the air quality of Death Valley National Park. Particulate matter and other emissions should be evaluated for their potential to adversely affect the air quality of the park, and all mitigations should be considered, including the reduction of the area proposed for vegetation removal and mass grading.

**No Action Alternative**

Under the No Action Alternative, the National Nuclear Security Administration (NNSA) is evaluating a hypothetical 240-megawatt parabolic trough commercial solar power generation facility in Area 25 of the Nevada National Security Site. In the analysis of impacts to groundwater resources, the DEIS discloses that this hypothetical 240-megawatt commercial facility would represent the largest water demand from any single activity or project on the NNSS. Operation of a 240-megawatt solar power generation facility in Area 25 would add an additional demand of approximately 250 acre-feet per year. During construction of the solar power generation facility, there would be a temporary demand of approximately 350 acre-feet per year for 35 months to support dust suppression, soil compaction, and other facility construction needs.

This is a new project with significant impacts to groundwater resources in an over-allocated hydrographic basin, and it does not represent past or present conditions. While the 1996 Nevada Test Site EIS Record of Decision outlined plans for the

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Chapter 6, Section 6.3.9, has also been modified to include an analysis of the potential cumulative impacts on views from the Death Valley National Park from construction of a commercial solar power generation facility in Area 25 of the NNSS.

**67-4** Under the Expanded Operations Alternative, up to 36,900 acres within Area 25 would be designated as a Renewable Energy Zone, a change that would increase the area available for solar power generation by 32,800 acres. DOE/NNSA considered up to 1,000 megawatts of commercially proposed, constructed, and operated solar power generation capacity within the Renewable Energy Zone under the Expanded Operations Alternative; however there are no proposals by any commercial entity for development of such a facility. If a total of up to 1,000 megawatts of commercial solar power generation facilities were to be developed within this area it could permanently disturb about 10,000 acres, as shown in Chapter 5, Table 5-1, of this *NNSS SWEIS*. For clarification purposes, Chapter 3, Section 3.2.3.2, of this *Final NNSS SWEIS* (where the facility is first discussed) has been edited to reflect that the 36,900 acres is the size of the Renewable Energy Zone, not the area of permanent disturbance.

The 10,000 acres would be developed over a number of years and would require a State of Nevada air quality permit for surface area disturbance. The air quality permit would require strong mitigation activities, including soil stabilization and the use of watering to minimize dust emissions. Once developed, this acreage would be graded and stabilized to minimize soil erosion and be maintained in an unvegetated condition. Emissions of particulate matter associated with the construction of a solar power generation facility are reported in Chapter 5, Table 5-38. The small increases in particulate matter emissions would not be expected to lead to any violations of air quality standards in Nye County or in Death Valley National Park.

Additionally, DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the Record of Decision (ROD) for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. Chapter 7, Section 7.0, has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.

**67-5** DOE/NNSA believes that inclusion of a 240-megawatt commercial solar power generation facility in Area 25 of the NNSS under the No Action Alternative is appropriate and consistent with Council on Environmental Quality (CEQ) NEPA regulations and guidance. In the 1996 *NTS EIS ROD* (61 FR 65551), DOE decided to "continue to support the Solar Enterprise Zone concept." Although the Solar

**Commentor No. 67 (cont'd): Christine S. Lehnertz, Regional Director, Pacific West Region, U.S. Department of the Interior, National Park Service**

construction and operation of a 100 megawatt or less solar power production facility in Area 22, and the reservation of land and infrastructure in Area 25 for potential future solar power development, it did not propose a site-specific project on the scale of a 240-megawatt commercial facility.

Including a new project as part of the No Action Alternative misrepresents current conditions and does not meet the mandate of the Council on Environmental Quality's (CEQ) regulations regarding EIS preparation to "include the alternative of no action" in the analysis (40 C.F.R. § 1502.14). CEQ's 40 Frequently Asked Questions (46 Fed. Reg. 18026, March 23, 1981; as amended, 51 Fed. Reg. 15618, April 25, 1986) provides further guidance regarding the value of including a No Action Alternative: "This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives... Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by the National Environmental Policy Act, Section 1500.1(a)."

The NPS requests that the agencies' No Action Alternative be revised in the Final EIS to meet the mandates of the law and accurately reflect past and current conditions, which do not include a hypothetical 240-megawatt parabolic trough commercial solar power generation facility.

The National Park Service appreciates the opportunity to comment on this DEIS, as all of the Alternatives under consideration have the potential to adversely impact the unique resources that Death Valley National Park was established to protect. Please contact Superintendent Sarah Craighead (760) 786-3227 for questions about our concerns or for further information as the effort to prepare the Final EIS commences. We look forward to collaborating with you to ensure that the National Nuclear Security Administration, the Department of Energy, and the National Park Service can meet the mandates of our missions.

Sincerely,

/s/ George J. Turnbull (signed original on file)

(for) Christine S. Lehnertz Regional Director, Pacific West Region

Attachment

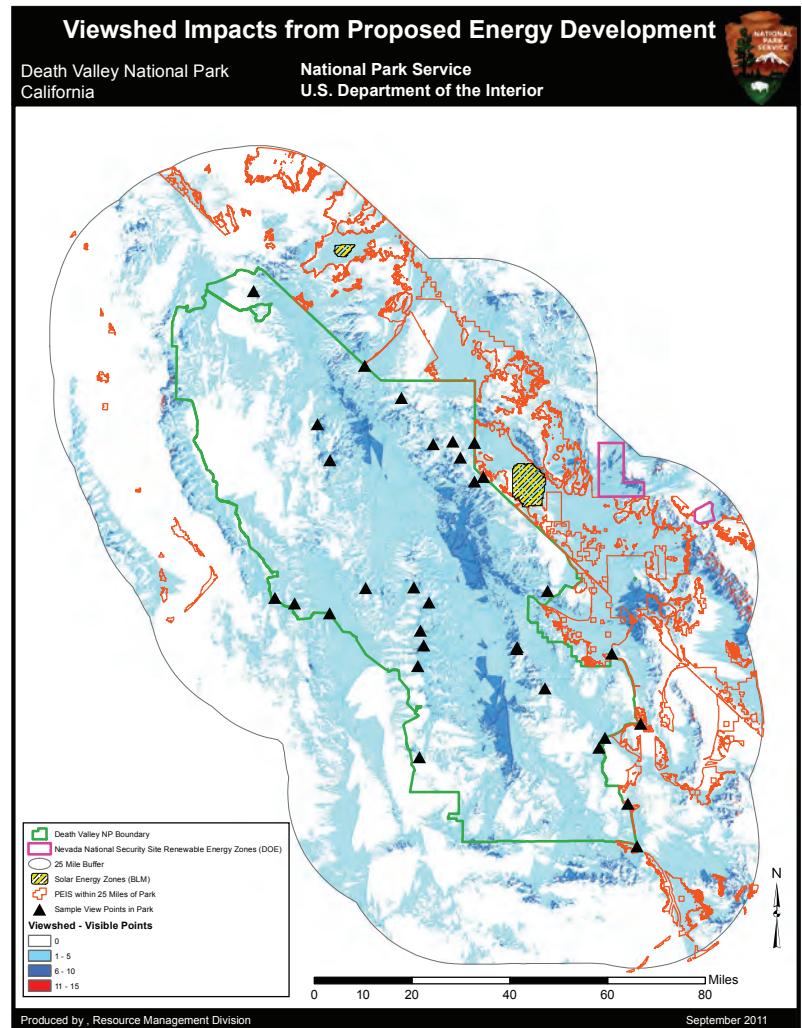
(See attached file: DEVA Viewshed Impacts from Proposed Energy Development Map.pdf)

cc: NPS-WRD, Jennifer Back DEVA Superintendent, Sarah Craighead

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Enterprise Zone is no longer a functioning entity, the concept of locating solar power generation facilities at the NNSS is still supported by DOE/NNSA. As noted in several locations in this SWEIS, DOE/NNSA is not evaluating a specific proposal for a commercial solar power generation facility, but is conducting the updated analysis to inform a potential future decision to continue to support such a concept. Inclusion of a solar power generation facility under the No Action Alternative in this NNSS SWEIS, therefore, represents a continuation of current site management at the NNSS and is consistent with CEQ NEPA regulations and guidance. If, in the future, a commercial solar power generation facility is proposed to be located at the NNSS, an appropriate level of NEPA review would be conducted.

*Commentor No. 67 (cont'd): Christine S. Lehnertz, Regional Director,  
Pacific West Region, U.S. Department of the Interior, National Park Service*



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### **Commentor No. 68: Dr. Bonnie Eberhardt Bobb**

**Submitted:** Saturday, December 03, 2011 12:44 AM

**Name:** Dr. Bonnie Eberhardt Bobb

**E-mail (optional):** drbonnie2002@yahoo.com

**Organization:** self

**Comment:**

NEPA requires meaningful alternatives. Your analyses shows only a "No Action Alternative," an "Expanded Operations Alternative," and a "Reduced Operations" Alternative. Yet many of the assessments say "Same as under the no action alternative." This analysis is insufficient to make a decision.

None of the alternatives show the budgetary cost. This is a critical part of the analysis of alternative choice and is omitted.

Under what authority did the NEPA consultation process change? In other words, how did the Consolidated Group of Tribes and Organizations come to replace meaningful consultation between the heads of Tribal governments and the heads of the federal agencies? Are you assuming that Tribal governments all agree and have one voice? How do you know that members of the CGTO communicate with other tribal members and traditional people with knowledge of the site? There are other indigenous organizations who have not been participating in the CGTO including the Corporation of Newe Sogobia which is only a few miles from the Test area at Cactus Springs. The Western Shoshone National Council should be consulted. Please show evidence that you have conducted meaningful discussion with all Tribes in the affected area, including Nevada and Utah and the Western Shoshone National Council.

The Reference Section of the EIS cites only Federal and State agencies as sources of information. This is a conflict of interest. There is lack of confidence in DOE operations and studies. Most radiation research is funded by U. S. governmental agencies, primarily DOE, that support, defend, and promote nuclear programs. These agencies have the option to classify documents in the "national interest" and declassify them at their whim. No independent studies were used. Thus, the EIS is not a scientific document which would lead to making good, safe, reasonable decisions.

No critique of conclusions of existing studies that differ from government studies are presented. Specifically, the Citizen's Monitoring and Technical Assistance Fund, or MTA Fund, was established as the result of a 1998 court settlement between DOE and 39 non-profit peace and environmental groups. The fund oversaw \$6.25 million which was set aside "to provide monies to eligible organizations to procure technical and scientific assistance to perform technical

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**68-1** DOE/NNSA believes the alternatives addressed in this *NNSS SWEIS* are both meaningful and address the full range of potential activities and operational ranges. DOE/NNSA also believes that both the alternatives themselves and the impact analyses in this SWEIS provide decisionmakers with a clear basis for choosing among the options considered.

The vast majority of activities conducted by DOE/NNSA in Nevada support national security and are not driven by a need for economic return. DOE/NNSA believes that budget considerations would not provide a meaningful addition to the analysis of potential environmental impacts and has not included budgetary information in this *Final NNSS SWEIS*.

**68-2** Since 1991, DOE/NNSA has worked directly with 16 culturally affiliated tribes, consisting of the Western Shoshone, Southern Paiute, and Owens Valley Paiute-Shoshone Tribes, that have demonstrated cultural and historic ties to the NNSS and offsite locations. These tribes have aligned themselves together to form CGTO, which interacts with DOE/NNSA on matters involving the NNSS. Each tribal government is responsible for designating their representatives, and DOE/NNSA does not interfere with the internal affairs of tribal governments or their respective reporting protocols.

**68-3** DOE/NNSA used the best relevant and credible references available in preparing this *NNSS SWEIS*. Reference sources included numerous Federal agencies, agencies of the State of Nevada, county governments, city governments, national laboratories, universities, and private consultants, among others.

In preparing this *Final NNSS SWEIS*, DOE/NNSA reviewed the list of studies on the Citizen's Monitoring and Technical Assistance Fund website ([www.mtafund.org](http://www.mtafund.org)) and identified a number of studies that may be relevant to the NNSS. The topics of those studies are: American Indian exposure to iodine-131 from nuclear weapons testing; an analysis of the NNSS groundwater monitoring system; a groundwater contaminant baseline for the Yucca Mountain Repository Project; and two papers dealing with soil contamination on Yomba and Timbisha Shoshone lands. DOE/NNSA used the two papers dealing with soil contamination on Yomba and Timbisha Shoshone lands (Bobb 2007a, 2007b) as valuable references in development of the Subsistence Consumer analysis found in Chapter 5, Sections 5.1.12 and Appendix G, Section G.2.4. The study of Native American exposure to iodine-131 (Russ et al. 2005) is addressed in Chapter 4, Section 4.1.12.4. The two groundwater-related studies (Citizen's Alert 2004 and HOME 2006) are discussed in Section 4.1.6.2. All of the studies cited in this *NNSS SWEIS* are listed in Chapter 11, References.

***Commentor No. 68 (cont'd): Dr. Bonnie Eberhardt Bobb***

and scientific review and analyses of environmental management activities at DOE sites" and disseminate the results of these studies. No reference to those studies related to "Test Site" activities are presented. For instance, these studies showed residual radiation in soils outside the boundaries of the Test Site. None of the underground water models were referenced.

No long-term evaluation of health has been made since the origination of the Test Site. A base-line study should have been made for a comparison to current conditions. Please provide details of how human health responses and effects are being measured.

Studies of radiation exposure fail to consider internal dose. Please discuss the methods you used to determine the internal dose from exposure from blowing soil, from wildfires or other fires within the test site on both humans and animals.

Please describe how wild animals, insects, and birds are kept from entering and leaving the test site area. Please describe the effects of the proposed activities on wild animals and the effect of the dose to humans who may consume these animals. Please differentiate between cultural effects of internal dose through such consumption. For example, specific animals, insects, and birds are preferred by indigenous people more than non-indigenous people, and, many indigenous people have preference for specific organs or muscles. Please describe the effects of consuming organs and other animal body parts that concentrate dose. Also, please describe the effect of radiation exposure to hides and other animal body parts used in implements, clothing, and crafts. Please address the bioaccumulative effects from consumption and exposure to the animals, birds, and insects. Please list the studies that DOE/NNSA has done on entrance of radiation into the food chain.

Separate environmental assessments or impact statements must be made for transportation of waste or for energy transmission lines. Proper assessment of this project cannot be made without all information. Please show the cumulative impact of these routes and transmission corridors on the pinyon-juniper forests, underground water quantity and quality, animals, insects, and birds of the impacted areas.

Please show where the proposed changes are included in the Resource Management Plan of the area?

Please describe the effect of earthquakes on the proposed activities.

Please describe the effect of flooding and non-point source pollution from the proposed activities on groundwater both on-site and off-site.

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**68-4** Chapter 4 of this *NNSS SWEIS* presents information on the existing human health environment. DOE/NNSA used information provided in the annual site environmental reports (available at [www.nv.doe.gov/library/publications/aser.aspx](http://www.nv.doe.gov/library/publications/aser.aspx)). The annual site environmental reports present a dose to a hypothetical MEI. The dose is based on exposure data collected at onsite locations and includes exposures that would result from direct exposure and radionuclides from past testing that could become airborne. These onsite locations were selected to ensure any estimated doses would exceed those that could be received by an offsite member of the public. As reported in Section 4.1.12, the dose ranges from about 2 to 2.9 millirem per year. For comparison, the dose from natural background radiation in the vicinity of the NNSS is about 355 millirem per year (see Table 4-51).

In this SWEIS, the impacts are estimated by adding the dose from projected air emissions to those mentioned above as the existing affected environment. As discussed in Appendix G, Section G.1.1.6, the effects of radiation exposure are estimated using a conversion factor of 0.0006 latent cancer fatalities per rem or person-rem.

**68-5** The analyses of radiological impacts from normal operations and facilities accidents in this *NNSS SWEIS* include consideration of internal doses from inhalation and ingestion of radioactive materials. The components included in the dose analyses are described in Appendix G, Section G.6.1, for the modeling performed using the GENII-2 computer code. Section G.6.2 describes the dose components for the modeling performed with the MACCS2 computer code. Section G.3 includes analysis of a number of facility accident scenarios that include fire as one of the mechanisms for releasing and transporting radioactive materials; the impacts of these accidents, calculated using the MACCS2 computer code, include internal doses from inhalation.

Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires. During some wildland fires that occur on the NNSS, DOE/NNSA deploys high-volume air samplers to supplement data from the routine sampling network. These supplemental samplers were deployed during fires in 2002, 2005, 2006, and 2011. None of these sampling activities has indicated substantially elevated levels of manmade radionuclides as a result of the fires. For example, results of sampling during a 2002 fire indicated the presence of cesium-137, plutonium-239 and -240, and americium-241, but in concentrations that were less than 4 percent of the concentration that would result in a dose of 10 millirem per year (DOE/NV 2003). In 2005, there was a series of 31 lightning-caused wildfires, none of which resulted in samples with activity higher than normally observed. None of the fires occurred in areas with the highest levels of legacy radioactivity in soil,

**Commentor No. 68 (cont'd): Dr. Bonnie Eberhardt Bobb**

Under what authority are you permitted to violate the Endangered Species Act?

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In general, there was insufficient time to read and critically analyze these documents and their source material. More time should be given for the public to assess such an expansive, expensive, long-term project. I am opposed to any expansion activities at the site. Increased activity leads to more nuclear and toxic waste and further disturbance and distribution of existing residual radiation. Stop building more weapons of mass destruction and invest our money in human needs like shelter, food, and education.

Sincerely,

Dr. Bonnie Eberhardt Bobb

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but DOE/NSSA conducted a special evaluation of the onsite and offsite radiation doses that may have occurred if a fire had spread into an area with high surface contamination, such as the SMOKY site in Area 8 of the NNSS. That evaluation found that the radiation dose 2.5 miles downwind of the SMOKY site would be 1 millirem and the highest offsite dose would be around 0.1 millirem at 24.8 miles from the SMOKY site (DOE/NV 2006). As noted in the cited report, "...[t]his finding helps confirm that radioactivity released from wild fires on the [NNSS] would not result in hazards offsite."

Doses to animals are not calculated in the impacts analysis. However, as with the potential doses to humans, the radiological impacts on animals would be small. Appendix F discusses the potential impacts on animals under the alternatives evaluated in this *NNSS SWEIS*.

**68-6** Wild animals, including insects and birds, are not prevented from entering or leaving the NNSS. Chapter 4, Sections 4.1.7.5, Effects of Past Radiological Tests and Project Activities, and 4.1.7.6, Plant and Animal Monitoring for Radioactivity, describe the effects past nuclear weapons testing and other activities at the NNSS had on wildlife and the results of DOE/NSSA's ongoing radiological monitoring program. An analysis of the potential exposure of humans practicing a subsistence lifestyle has been added in Chapter 5, Section 5.1.12.1 and Appendix G, Section G.2.4 of this *Final NNSS SWEIS*.

**68-7** Projects that are more conceptual in nature and for which DOE/NSSA does not have sufficient information to fully evaluate potential environmental impacts are identified in this *NNSS SWEIS* by indicating that further analysis under NEPA would be necessary if a specific project is proposed in the future. In this *NNSS SWEIS*, those conceptual projects were analyzed to the extent possible at a more programmatic level. The conceptual projects include development of commercial solar power generation facilities on the NNSS, including associated electrical transmission lines. Any NEPA reviews conducted for proposed actions at DOE/NSSA facilities in Nevada will consider all relevant resources that may be impacted. Conceptual proposed activities that would require further, project-specific NEPA review if they are proposed for implementation in the future are denoted by a footnote in Chapter 3, Table 3-1, and the Summary, Table S-1.

The impacts of transportation of wastes and materials associated with DOE/NSSA facilities in Nevada are fully addressed in Chapter 5, Sections 5.1.3, 5.2.3, 5.3.3, and 5.4.3, of this *NNSS SWEIS*, and a specific EA or EIS is not necessary. Further, the analysis of cumulative impacts in Chapter 6, Section 6.3, of this *NNSS SWEIS*

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includes consideration of the programmatic level of impacts associated with conceptual projects, as well as the more fully developed proposed projects.

- 68-8** DOE published a *Nevada Test Site Resource Management Plan* in 1998. The purpose of that plan was to integrate management and stewardship for the various natural and cultural resources of the NNSS with accomplishment of DOE/NNSA's National Security/Defense, Environmental Management, and Nondefense Missions. The plan included defined goals for 12 resource areas, based on the principles of ecosystem management. Over the intervening years, the *Nevada Test Site Resource Management Plan* was superseded by an Environmental Management System (see Chapter 7, Section 7.14, of this *NNSS SWEIS*), which ensures that environmental issues are systematically identified, controlled, and monitored and also provides mechanisms for responding to changing environmental conditions and requirements, reporting on environmental performance, and reinforcing continual improvement. Neither the *Nevada Test Site Resource Management Plan* nor the current Environmental Management System for the NNSS addressed specific activities, but both provide a framework within which DOE/NNSA conducts its activities in a manner that protects the environment to the extent practicable, while still accomplishing its missions.
- 68-9** Chapter 4, Section 4.1.5.2.3, describes the current earthquake design standards that DOE implements to ensure the safety of workers at its facilities in the NNSS and other locations. DOE would continue to implement the orders for the existing facilities and any new structures, which would minimize seismic hazards to workers at NNSS facilities. In addition to this discussion, Section 5.1.12.2.1 in the health and safety Section describes the risk assessment of a high-seismicity earthquake near the DAF. Chapter 9 of this *NNSS SWEIS*, "Laws, Regulations, and Permits," has been updated to include DOE Order G-420.1-2, *Guide for the Mitigation of Natural Phenomena Hazards for DOE Nuclear Facilities and Nonnuclear Facilities*; DOE-STD-1020-2002, "DOE Standard Natural Phenomena Hazards Design and Evaluation Criteria for Department of Energy Facilities;" and DOE-STD-1023-95, "DOE Standard Natural Hazards Assessment Criteria."
- 68-10** As noted in Chapter 5, Section 5.1.6.1, flooding events occasionally occur on the NNSS; however, runoff is typically of short duration and onsite surface flows normally do not migrate off site. Overall, there is little interaction between surface water and groundwater in the area of the NNSS due to the large depth to groundwater in the area, coupled with high evapotranspiration rates. Because of this and the nature of activities proposed to be conducted at the NNSS in the future, no impacts on groundwater quality were identified under any of the alternatives, as addressed in Chapter 5,

**Commentor No. 68 (cont'd): Dr. Bonnie Eberhardt Bobb**

Sections 5.1.6.2, 5.1.6.2.1, and 5.1.6.3, of this SWEIS. In addition, as described under the subheading titled “Groundwater Monitoring and Quality,” in Section 4.1.6.2, DOE/NNSA manages an extensive groundwater monitoring program both on and off site. No noticeable effects of non-point-source pollution resulting from flood events on groundwater quality have been recorded, nor would they be expected under any of the alternatives.

**68-11** DOE/NNSA activities at the NNSS are in full compliance with the Endangered Species Act. As discussed in Chapter 4, Section 4.1.7, activities within desert tortoise habitat at the NNSS have been conducted under the auspices of a series of Biological Opinions issued by the U.S. Fish and Wildlife Service (USFWS) pursuant to the requirements of Section 7 of the Endangered Species Act. The NNSS Biological Opinion (USFWS 2009) is a permit issued by USFWS that authorizes and sets forth the conditions for DOE/NNSA to incidentally “take” a limited number of desert tortoises and is based on the conclusion that the permitted “take” would not threaten the continued existence of the species. The NNSS Biological Opinion provides a framework to estimate potential environmental impacts on this species as discussed in Chapter 5, Section 5.1.7.1, and, more specifically, in Section 5.1.7.1.3. Sections 4.1.7 and 5.1.7 have been modified to clarify that DOE/NNSA conducts its activities at the NNSS in compliance with the Endangered Species Act.

**68-12** The commentor’s preference is noted.

**Commentor No. 69: Robert DeBirk,  
Healthy Environment Alliance of Utah****Submitted:** Friday, December 2, 2011 - 16:40**Name:** Robert DeBirk**E-mail (optional):** Rob@healutah.org**Organization:** Healthy Environment Alliance of Utah**Comment:**

Dear Ms. Cohn:

The Healthy Environment Alliance of Utah (HEAL Utah) is a non-profit organization located in Salt Lake City, Utah. HEAL Utah has monitored the activities of the Dept. of Energy and the Nevada Test Site (NTS) since the proposed Divine Strake test in 2006. Among HEAL's 4,000 members and supporters are a number of "downwinders" whose health was severely affected by past nuclear weapons testing at NTS.

The NTS has historically been used for the purposes of atmospheric and underground nuclear weapons testing which has resulted in significant adverse public health impacts to downwind communities. HEAL Utah's comments on the Site Wide Environmental Impact Statement (SWEIS) reflects our supporters experience with past nuclear weapons testing.

**NUCLEAR WEAPONS TESTING**

HEAL Utah opposes the resumption of any nuclear weapons detonations at the Test Site.

HEAL Utah opposes open air detonations at NTS.

The SWEIS states "The primary purpose of continuing operation of the [Test Site] is to provide support for NNSA's nuclear weapons stockpile and stewardship missions." Once based on the explosive testing of nuclear weapons at NTS, the stockpile and stewardship missions of the NNSA are now reliant on scientific stewardship in the absence of explosive testing of the nation's nuclear weapons arsenal. The Test Site should continue moving away from nuclear weapons testing and towards continuing to fulfill our commitments as signatories of the Comprehensive Test Ban Treaty.

HEAL Utah is opposed to the resumption of any nuclear or explosives testing at the Nevada Test Site. HEAL Utah believes that any expanded explosives testing poses the hazard of releasing dangerous contaminants and disturbing existing radionuclides. Furthermore, in the alternatives presented in the SWEIS the possibility of resuming underground nuclear weapons testing requires further analysis beyond the four paragraphs contained in the draft. Additional analysis should include mapping and analysis of previous radionuclide releases and impacts to soil and groundwater.

69-1

69-2

**69-1** Although it maintains the readiness to conduct a test if so directed by the President, DOE/NNSA does not propose to resume nuclear weapons detonations at the NNSS, and such detonations are not included under any of the alternatives in this *NNSS SWEIS*. A clear statement to this effect has been added to Chapter 3, Section 3.0. Tests and experiments involving open-air detonation of conventional explosives would occur at the NNSS under any of the three alternatives addressed in this *NNSS SWEIS*; however, DOE/NNSA would not conduct such an activity in a radiological contamination area.

**69-2** As noted in the response to comment 69-1 above, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this *NNSS SWEIS*. Because DOE/NNSA does not propose to conduct a nuclear weapons test under this *NNSS SWEIS*, an analysis of resuming underground nuclear weapons testing is not required. The paragraphs referenced by the commentator were not intended to be an analysis of nuclear weapons testing and were included in error in Chapter 8, Section 8.1.1.1, of the *Draft NNSS SWEIS* and have been deleted from this *Final NNSS SWEIS*.

DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and current knowledge of the extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added in Section 4.1.5.1.1.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed for the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

**Commentor No. 69 (cont'd): Robert DeBirk,  
Healthy Environment Alliance of Utah**

The SWEIS is unclear with regard to the contamination from underground explosions and does not show the extent to which contamination may have migrated due to groundwater movement. Additionally, other than tritium, the DOE lacks specificity as to the contaminants spread by past tests. The SWEIS should supply the most comprehensive analysis possible of existing contamination at the Test Site. When made available, this analysis should be as approachable - and easy for the public to access and understand - as it is comprehensive.

69-3

69-3 As noted in the response to comment 69-2, above, DOE/NNSA revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS.

**Commentor No. 70: Anabel Dwyer**

**Submitted:** Friday, December 2, 2011 - 15:45

**Name:** Anabel Dwyer

**E-mail (optional):** anabeldwyer@yahoo.com

**Organization:** Board LCNP (for identification)

**Comment:**

Dear Ms. Kohn Thank you for the extended deadline for comments on the DSWEIS for the future of the Nevada Test Site (NTS) now called the Nevada National Security Site (NNSS). This is to request that the DOE further extend the deadline for comments and expand the options considered to include the most realistic national security option for the NTS or NNSS:

1. Systematically eliminate all nuclear, DU and HE weapons activity;
2. Systematically eliminate transport of all nuclear materials and
3. Document, contain/clean up and compensate for toxic chemical and radioactive environmental and health contamination.

I am a lawyer concerned with and long involved in assuring that the US meets our obligation for nuclear disarmament in all its aspects. Complete good-faith nuclear disarmament is essential as a legal, moral and practical obligation because:

1. We know that nuclear weapons' are inherently indiscriminate and uncontrollable and thus ipso facto violate the peremptory and fundamental rules and principles of humanitarian law (the laws of war); and
2. Health and environmental damage and danger caused by the nuclear system, whether accidental or purposeful is extreme and long-lived.

The Draft SWEIS considers options within an outdated and unlawful context and thus is inadequate. Nuclear weapons are fundamentally unlawful. Indeed any weapon or energy system involving radioactive materials are both useless and highly dangerous.

The moratorium on nuclear testing exists because of now well understood catastrophic and cumulative effects of a wide range of radioactive materials released by nuclear explosions and by the nuclear system or fuel cycle as a whole.

The grave threat and mass destruction is not only to the Western Shoshone people but to us all because the radioactive materials produced and released by the nuclear system are not contained in space or time.

Yours sincerely,  
Anabel Dwyer

70-1

70-1

The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*. DOE/NNSA acknowledges the preference of the commentator that DOE/NNSA eliminate all nuclear, depleted uranium, and high explosives weapons activity; however, these tests and experiments are necessary to continue to ensure the safety and reliability of the remaining nuclear weapons in the Nation's stockpile and to support the current policies of the United States. Transportation of nuclear materials is a necessary ancillary activity associated with the above-noted tests and experiments. As described in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2.2, of this *NNSS SWEIS*, DOE/NNSA proposed under all three alternatives to continue the Environmental Restoration Program, which is taking active measures, in consultation with the State of Nevada, to characterize, contain and/or clean-up radiological and chemical contamination resulting from past nuclear weapons testing activities.

2-326

**Commentor No. 71: Marion Lewis, President,  
Indian Springs Civic Association**

**Submitted:** Friday, December 2, 2011 - 16:04

**Name:** Marion Lewis, President

**E-mail (optional):** ISCA.NV@gmail.com

**Organization:** Indian Springs Civic Association

**Comment:**

Indian Springs Civic Association

PO Box 1

Indian Springs, Nevada 89018-0001

email: ISCA.NV@gmail.com

December 2, 2011

ISCA Comments on NNSS dSWEIS,

Indian Springs Civic Association (ISCA), a Nevada non-profit community organization, appreciates this opportunity to comment on the Draft Site-Wide Environmental Impact Statement (SWEIS) for the Nevada National Security Site (NNSS) and Off-Site Locations in Nevada. dSWEIS

ISCA strongly supports maintaining the current "commitment" (dSWEIS, Ch. 4, p-28, see below) to avoid shipping of LLW and / or MLLW on US Hwy. 95 through Indian Springs, Nevada and past or through communities and facilities in Clark County adjacent to US Hwy 95, including, but not limited to: Cactus Springs, Creech AFB, High Desert Correctional Facility, Southern Desert Correctional Facility, Cold Creek community, Desert Game Range (USFWS) and Corn Creek community, Lee Canyon community and recreation area, Snow Mountain Paiute Reservation, Kyle Canyon community and recreation area, &c.

ISCA understands that proximity to and length of exposure time are two of the important factors in the health consequences of radiation, as is age of the individuals. Shipping through Indian Springs would place the trucks in close proximity of not only the public K-12 school that serves the communities mentioned above, but also on the highway daily with school busses that serve those communities, with the school employees and their children that commute from Las Vegas, with the UAV pilots and Creech employees that commute from Las Vegas, the US Postal workers adjacent to the highway, &c. This additional radiation exposure is not acceptable.

ISCA's greater concern is the potential for an accident or terrorist activity on US Hwy 95 that could involve spillage, explosion, fire, wind dispersal, &c. Depending on location, such an incident would prevent emergency support access to one or more of the communities or facilities, further increasing risks to life, health, security, and property. Even the possibility of such an incident would likely have a deleterious effect on the future of the communities, and on private property values,

71-1

71-1

The commentor's preference is noted. In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012). DOE/NNSA analyzed the potential impacts of a transportation accident in Chapter 5, Sections 5.1.3.1.1, 5.1.3.1.2, and 5.1.3.1.3, and of intentional destructive acts (i.e., terrorism) in Section 5.1.12.3.

**Commentor No. 71 (cont'd): Marion Lewis, President,  
Indian Springs Civic Association**

while increasing the cost to local entities to provide adequate standby emergency and long term services.

In summary, ISCA, on the segment dealing with the Transportation and storage of waste, in the strongest terms opposes any of the Options that would increase transport of hazards nuclear or toxic materials, waste, or non-waste, through Las Vegas and on any portion of US Hwy 95 in Clark County, Nevada. Presumably that would be the case with either the No Change Option or the Reduced Operations Option. In any case ISCA requires that the "verbal commitment from the DOE ... informal commitment" that "historically avoided shipping LLW and mixed low-level radioactive waste (MLLW) using the Interstate 15/U.S. Route 95 interchange" (NNSS SWdEIS – Ch. 4, p.28) be codified and continue to be enforced without exception.

ISCA does not know if the "Options" must be taken in whole, or if they can be split, some activities diminished, others increased, or if an entire option must be adopted. Further we would like to know how damages resulting from these operations can and will be compensated, now and into the future.

Contact information: Indian Springs Civic Association Attn: Mrs. Marion Lewis, President PO Box 1 Indian Springs, Nevada 89018-0001

email: ISCA.NV@gmail.com

NNSS dSWEIS CH. 4 – p.28 (partial) NNSA/NSO has historically avoided shipping LLW and mixed low-level radioactive waste (MLLW) using the Interstate 15/U.S. Route 95 interchange, based on a verbal commitment from DOE. This informal commitment was made at a time when the major highway infrastructure, specifically Interstate 15 and U.S. Route 95, was unable to safely handle the rapidly growing volume of traffic. Since the mid-2000s, U.S. Route 95 has been widened and expanded overpasses have been built to accommodate traffic much more safely. In addition, the Las Vegas Beltway, which extends around approximately three-quarters of the valley, was built at the far edges of Las Vegas to further reduce traffic loads on Interstate 15 and U.S. Route 95. In addition, a bypass bridge has been constructed adjacent to Hoover Dam. This bridge opened to all traffic in October 2010. Therefore, trucks transporting waste on Interstate 15 from the south avoid traveling through Las Vegas by taking Nevada State Route 160 to its intersection with U.S. Route 95. Radioactive waste being transported from points north of Las Vegas avoids Interstate 15 in Nevada by using U.S. Route 50, traveling west to U.S. Route 6 and then south on U.S. Route 95. As a result of DOE's informal commitment, more-circuitous routes are used for the transport of radioactive materials and wastes. The following combinations of routes are most commonly used to ship radioactive materials and wastes to and from the NNSS (NNSA/NSO 2009b):

71-1  
cont'd

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**Commentor No. 72: Johnnie L. Bobb, Chief  
Western Shoshone National Council**

**Submitted:** Friday, December 2, 2011 - 23:20

**Name:** Johnnie L. Bobb

**E-mail (optional):** newebuey2002@yahoo.com

**Organization:** Western Shoshone National Council

**Comment:**

Land described in Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (DOE/EIS-0426D is within the boundaries of land under the jurisdiction of Peace and Friendship as affirmed by the Treaty of Ruby Valley of 1863.

The Treaty of Ruby Valley (18 Statutes at Large 689), signed October 1, 1863, ratified June 26 1866, and proclaimed October 21, 1869, is still in full force and effect. The Treaty was one of peace and friendship between the people and government of the United States and the Western Shoshone people. The Western Shoshone National Council is the traditional government of the Western Shoshone, successors to the signers of this Treaty. No land was ceded in the treaty. The treaty provided safe passage to non-Indians passing through the Shoshone Nation. All other rights remain with the Western Shoshone.

Western Shoshone were in continuous use of this land for food, medicine, water, spirituality, burials, and cultural purposes until they were removed, against their will, from this place. Western Shoshone continue to come to the site and bear witness to the unlawful trespass and disturbing of peace against us and in violation of the peace and friendship treaty through United States acts of universal violence using the most deadly substances in existence.

The Western Shoshone National Council has not been consulted regarding either this project or any of the actions that were undertaken to obtain the use of the land for the "Nevada Test Site" or the "Nevada National Security Site." Our people continue to suffer from exposure to radiation and other toxins at this site. The Site should be cleaned and closed no matter how long that process takes.

Your suggestions of alternative energy projects will lead to more transmission and transportation routes that will continue to scar our land and destroy our plants, animals and our rights as human beings to safe air, water, and food. I am attaching the Decision of the United Nations Committee on the Elimination of Racial Discrimination 1(68). You may say that you do not have to listen to the recommendations of this body because it is outside the United States. Yet, the U.S. goes to the United Nations when other countries threaten development of nuclear arsenals. The U.S. uses their decisions to your advantage, but not when

72-1

The DOE/NNSA NSO appreciates the comments of the Western Shoshone National Council relating to important cultural perspectives. Since 1991, the DOE/NNSA has worked with the 16 culturally affiliated Western Shoshone, Southern Paiute and Owens Valley Paiute/Shoshone Tribes that are represented by CGTO. It is understood that some Western Shoshone tribes belonging to CGTO might have concurrent affiliation with the Western Shoshone National Council. Throughout the draft SWEIS, the DOE/NNSA NSO has included tribal perspectives developed by CGTO for consideration by DOE/NNSA in its analysis of this document. Additional information on tribal involvement is included in Chapter 1, Section 1.6, Cooperating Agencies/Tribal Involvement.

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

As described in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.3.2.2, DOE/NNSA, in coordination with NDEP, would continue to comply with the FFACO to characterize, monitor, and remediate contaminated areas, facilities, soils, and groundwater on the NNSS. In the 1996 NTS EIS, DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In its December 9, 1996, NTS EIS ROD (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities other than LLW/MLLW management, which was to continue under the Continue Current Operations Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Based on these previous decisions and the ongoing need to conduct a wide range of activities at the NNSS in support DOE/NNSA and other agencies' missions and programs, closing the NNSS and leaving is not considered a reasonable action.

**Commentor No. 72 (cont'd): Johnnie L. Bobb, Chief  
Western Shoshone National Council**

they regard the rights of indigenous peoples. What you are doing affects the populations and future generations of the entire world.

We invite you to come talk with us, the same as we have done for many years. We hope you will not continue to ignore us.

Sincerely,

Johnnie L. Bobb, Chief Western Shoshone National Council PO Box 252 Austin,  
NV 89310

COMMITTEE FOR THE ELIMINATION  
OF RACIAL DISCRIMINATION

Sixty- eighth session

Geneva, 20 February – 10 March 2006

EARLY WARNING AND URGENT ACTION PROCEDURE

DECISION 1 (68)

UNITED STATES OF AMERICA

A. Introduction 1. At its 67th session held from 2 to 19 August 2005, the Committee considered on a preliminary basis requests submitted by the Western Shoshone National Council, the Timbisha Shoshone Tribe, the Winnemucca Indian Colony and the Yomba Shoshone Tribe, asking the Committee to act under its early warning and urgent action procedure on the situation of the Western Shoshone indigenous peoples in the United States of America.

2. Considering that the opening of a dialogue with the State party would assist in clarifying the situation before the submission and examination of the fourth and fifth periodic reports of the United States of America, due on 20 November 2003, the Committee, in accordance with article 9 (1) of the Convention and article 65 of its rules of procedure, invited the State party, in a letter dated 19 August 2005, to respond to a list of questions, with a view to considering this issue at its 68th session.

3. Responding to the Committee's letter, the State party, in its letter dated 15 February 2006, stated that its overdue periodic reports are being prepared and that they will include responses to the list of issues. The Committee regrets that the State party has not undertaken to submit its periodic reports by a specific date, that it has not provided responses to the list of issues by 31 December 2005 as requested, and that it did not consider it necessary to appear before the Committee to discuss the matter.

72-1  
cont'd

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***Commentor No. 72 (cont'd): Johnnie L. Bobb, Chief  
Western Shoshone National Council***

4. The Committee has received credible information alleging that the Western Shoshone indigenous peoples are being denied their traditional rights to land, and that measures taken and even accelerated lately by the State party in relation to the status, use and occupation of these lands may cumulatively lead to irreparable harm to these communities. In light of such information, and in the absence of any response from the State party, the Committee decided at its 68th session to adopt the present decision under its early warning and urgent action procedure. This procedure is clearly distinct from the communication procedure under article 14 of the Convention. Furthermore, the nature and urgency of the issue examined in this decision go well beyond the limits of the communication procedure.

B. Concerns

5. The Committee expresses concern about the lack of action taken by the State party to follow up on its previous concluding observations, in relation to the situation of the Western Shoshone peoples (A/56/18, para. 400, adopted on 13 August 2001). Although these are indeed long-standing issues, as stressed by the State party in its letter, they warrant immediate and effective action from the State party. The Committee therefore considers that this issue should be dealt with as a matter of priority.

6. The Committee is concerned by the State party's position that Western Shoshone peoples' legal rights to ancestral lands have been extinguished through gradual encroachment, notwithstanding the fact that the Western Shoshone peoples have reportedly continued to use and occupy the lands and their natural resources in accordance with their traditional land tenure patterns. The Committee further notes with concern that the State party's position is made on the basis of processes before the Indian Claims Commission, "which did not comply with contemporary international human rights norms, principles and standards that govern determination of indigenous property interests", as stressed by the Inter-American Commission on Human Rights in the case Mary and Carrie Dann versus United States (Case 11.140, 27 December 2002).

7. The Committee is of the view that past and new actions taken by the State party on Western Shoshone ancestral lands lead to a situation where, today, the obligations of the State party under the Convention are not respected, in particular the obligation to guarantee the right of everyone to equality before the law in the enjoyment of civil, political, economic, social and cultural rights, without discrimination based on race, colour, or national or ethnic origin. The Committee recalls its General recommendation 23 (1997) on the rights of indigenous peoples, in particular their right to own, develop, control and use their communal lands, territories and resources, and expresses particular concern about:

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***Commentor No. 72 (cont'd): Johnnie L. Bobb, Chief  
Western Shoshone National Council***

- a) Reported legislative efforts to privatize Western Shoshone ancestral lands for transfer to multinational extractive industries and energy developers.
- b) Information according to which destructive activities are conducted and/or planned on areas of spiritual and cultural significance to the Western Shoshone peoples, who are denied access to, and use of, such areas. It notes in particular the reinvigorated federal efforts to open a nuclear waste repository at the Yucca Mountain; the alleged use of explosives and open pit gold mining activities on Mont Tenabo and Horse Canyon; and the alleged issuance of geothermal energy leases at, or near, hot springs, and the processing of further applications to that end.
- c) The reported resumption of underground nuclear testing on Western Shoshone ancestral lands;
- d) The conduct and / or planning of all such activities without consultation with and despite protests of the Western Shoshone peoples;
- e) The reported intimidation and harassment of Western Shoshone people by the State party's authorities, through the imposition of grazing fees, trespass and collection notices, impounding of horse and livestock, restrictions on hunting, fishing and gathering, as well as arrests, which gravely disturb the enjoyment of their ancestral lands.
- f) The difficulties encountered by Western Shoshone peoples in appropriately challenging all such actions before national courts and in obtaining adjudication on the merits of their claims, due in particular to domestic technicalities.

**C. Recommendations**

- 8. The Committee recommends to the State party that it respect and protect the human rights of the Western Shoshone peoples, without discrimination based on race, colour, or national or ethnic origin, in accordance with the Convention. The State party is urged to pay particular attention to the right to health and cultural rights of the Western Shoshone people, which may be infringed upon by activities threatening their environment and/or disregarding the spiritual and cultural significance they give to their ancestral lands.
- 9. The Committee urges the State party to take immediate action to initiate a dialogue with the representatives of the Western Shoshone peoples in order to find a solution acceptable to them, and which complies with their rights under, in particular, articles 5 and 6 of the Convention. In this regard also, the Committee draws the attention of the State party to its General recommendation 23 (1997) on the rights of indigenous peoples, in particular their right to own, develop, control and use their communal lands, territories and resources.

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***Commentor No. 72 (cont'd): Johnnie L. Bobb, Chief  
Western Shoshone National Council***

10. The Committee urges the State party to adopt the following measures until a final decision or settlement is reached on the status, use and occupation of Western Shoshone ancestral lands in accordance with due process of law and the State party's obligations under the Convention:

- a) Freeze any plan to privatize Western Shoshone ancestral lands for transfer to multinational extractive industries and energy developers;
- b) Desist from all activities planned and/or conducted on the ancestral lands of Western Shoshone or in relation to their natural resources, which are being carried out without consultation with and despite protests of the Western Shoshone peoples;
- c) Stop imposing grazing fees, trespass and collection notices, horse and livestock impoundments, restrictions on hunting, fishing and gathering, as well as arrests, and rescind all notices already made to that end, inflicted on Western Shoshone people while using their ancestral lands.

11. In accordance with article 9 (1) of the Convention, the Committee requests that the State party provide it with information on action taken to implement the present decision by 15 July 2006.

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***Commentor No. 73: Chris Giunchigliani, Commissioner***  
***Clark County Board of Commissioners***



November 21, 2011

Ms. Linda M. Cohn, SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Dear Ms. Cohn:

As a resident of Clark County for more than three decades, as a teacher and mentor in our public schools, as a member of the Nevada Assembly from 1990 to 2006, and now as the Clark County Commissioner for District E, I have had the honor of serving the people of Southern Nevada in various offices.

Like all long-time residents of Clark County, I am aware of our unique and sometimes complex relationship with the U.S. Department of Energy and Department of Defense and the administration of the Nevada Test Site, now formally called the Nevada National Security Site. Many of my constituents have worked at the Test Site, or provided goods and services to the federal agencies or private contractors working at the Test Site. I am also aware, of course, of those who were exposed to radioactive materials from weapons development or even radioactive byproducts of the testing of nuclear warheads. The legacy of the nuclear arms race is, as you undoubtedly know, very mixed.

With this perspective, I wanted to take the opportunity to comment upon the Draft Environmental Impact Statement being prepared by your offices for the Nevada National Security Site. Of particular concern for me and potentially for many of my constituents is the Enhanced Operation alternative. I know that there have been a number of accidents involved in trucking nuclear waste to the Test Site for disposal, and we are indeed fortunate that there has never been a spill of that material on our highways. Material that is now trucked to the Test Site for disposal travels only a short way through what we consider the urban area, in the southern Las Vegas Valley. However, scenarios now under consideration, radioactive or otherwise dangerous waste, could be shipped through the heart of our metropolitan area and indeed through my district on Interstate 15.

I strongly urge the Department of Energy to reject the Enhanced Operation alternative and any proposal to ship that material through the resort corridor. Any accident involving nuclear waste transportation would be an issue of concern and could lead to visitors cancelling their trips to Las Vegas, even if there were minimal risk to the public. An actual spill in our busy urban core

73-1

**73-1** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**Commentor No. 73 (cont'd): Chris Giunchigliani, Commissioner  
Clark County Board of Commissioners**

Ms. Cohn  
November 21, 2011  
Page 2

could have deep and lasting impacts on the ability of our region to successfully market itself as a tourist destination.

Furthermore, Senate Majority Leader Harry Reid, among many others, has noted the potential for the Nevada Test Site to develop a large renewable energy industrial site. I believe that such development would better suit Las Vegas' future as an exporter of clean renewable energy, and I hope the Department of Energy will seriously consider moving from weapons development to renewable energy in the future.

Thank you very much for considering my perspective on these issues affecting our community.

Sincerely,



Chris Giunchigliani  
Commissioner

cc: Clark County Commissioners  
Don Burnette, County Manager

|| 73-1  
*cont'd*

|| 73-2

- 73-2 The commentor's support of renewable energy projects is noted.

***Commentor No. 74: Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations***

Consolidated Group of Tribes and Organizations

November 10, 2011

Ms. Linda Cohn, SWEIS Document Manager  
NNSS Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

Subject: Draft SWEIS Comments

Dear Ms. Cohn:

The Consolidated Group of Tribes and Organizations (CGTO) met on October 6, 2011, to consider the information presented in the Draft Site-Wide Environmental Impact Statement (SWEIS), dated July 2011, and to issue formal comments. After meeting with the U.S. Department of Energy's (DOE) subject matter experts and through careful consideration, Mr. Richard Arnold issued a formal statement to DOE on behalf of the CGTO.

As stated in the public record on October 6, 2011, the CGTO, the tribes, and tribal members may formally submit additional comments including but not limited to transportation and human health impacts prior to conclusion of the public comment period. Accordingly, the CGTO submits the attached, additional comments for consideration in the Draft SWEIS.

We appreciate the opportunity to review and participate in the SWFIS special hearing for the CGTO and in the SWEIS review process. We look forward to future government-to-government interactions as caretakers of this land and her resources.

Regards,



Richard Arnold  
Spokesperson

Enclosures:  
Formal Comments for the Draft SWEIS

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**Commentor No. 74 (cont'd): Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations**

**Comments on the Draft Site-Wide Environmental Impact Statement**

Submitted by the Consolidated Group of Tribes and Organizations  
October 31, 2011

The Consolidated Group of Tribes and Organizations (CGTO) hereby submit the following additional comments for the Draft Site-Wide Environmental Impact Statement (SWEIS), dated July 2011. We must emphasize recommendations made by the CGTO do not imply our support of the proposed action or alternatives. Submission of our comments reaffirms our cultural responsibility to restore harmony and balance to the resources impacted or potentially impacted by DOE activities as afforded in the National Environmental Policy Act (NEPA) process.

**General Comments:**

1. With the exception of Appendix C, figures throughout the Draft SWEIS and in the public materials appear to omit tribal land. At a minimum, please add the information presented in Figure C-1 to the land ownership map (Figure 1-1) and to figures in the Summary.
2. Page 5-220 and Appendix C: "Paiute" is misspelled and commas (,) have been placed after the Owens Valley Paiute-Shoshone Tribes giving the appearance of 4 ethnic groups rather than the 3 ethnic groups consisting of "Western Shoshone", "Southern Paiute" and "Owens Valley Paiute and Shoshone". A global spell check should be done to correct this misspelling and the inappropriate use of commas throughout the SWEIS.
3. Although we appreciate DOE including the American Indian text prepared by the CGTO in the Draft SWEIS, it does not appear that any of the environmental impacts developed by the American Indian Writers Subgroup or our subsequent recommendations have been considered in the analyses or mitigation measures. Please address these impacts and recommendations in SWEIS Chapter 5 (Environmental Consequences) and Chapter 7 (Mitigation Measures), and in selecting the preferred alternative set forth in DOE's Record of Decision.
4. Funding for additional NEPA analyses and impact evaluations requested in our comments to the Draft SWEIS, and those relating to the NNSA Indian Program, should be strongly considered by DOE NNSA and DOE Environmental Management (EM). Currently DOE EM does not contribute funding for the NNSA American Indian Program, yet both DOE NNSA and DOE EM activities affect our land, its resources, and our people. DOE EM provides funding based on \$0.50 per cubic foot of Waste Disposed to the Division of Emergency Management while no consideration is given to the CGTO for assessing cultural

- 74-1 DOE/NNSA acknowledges the position of the Consolidated Group of Tribes and Organizations (CGTO) and appreciates their involvement and contributions to the SWEIS.
- 74-2 Figure 1-1 in Chapter 1 and Figure S-1 in the Summary show current land ownership including reservation lands. Figure C-1 in Appendix C illustrates the historic land areas used by various American Indian tribes and the locations of current tribal lands. Map figures throughout the SWEIS are used to primarily display current and potential future conditions; areas of historic use by American Indian Tribes are more appropriately addressed in Appendix C.
- 74-3 DOE/NNSA appreciates the comments and has corrected the spelling and punctuation, as suggested.
- 74-4 As part of the DOE/NNSA American Indian Consultation Program, tribal input has been included throughout this NNSA SWEIS. DOE/NNSA carefully reviews and considers CGTO recommendations to evaluate compatibility with DOE missions and proposed undertakings. The DOE/NNSA NSO responds and/or incorporates CGTO recommendations to the extent practicable as part of the long-standing American Indian Consultation Program. Additional information regarding tribal involvement is included in Chapter 1, Section 1.6, Cooperating Agencies/Tribal Involvement, in the final SWEIS. To preserve the unique cultural viewpoints of the CGTO, DOE/NNSA has maintained CGTO descriptions of environmental impacts separately from those developed using DOE methodologies. However, specific mitigation measures developed in consultation with the CGTO have been added to the final SWEIS throughout Chapter 7.
- 74-5 DOE/NNSA's Native American Interaction Program concentrates on the protection of cultural resources and promotes a government-to-government relationship with tribes and organizations (represented by CGTO). Its purpose is to help DOE/NNSA comply with various Federal laws and regulations, including for example, the American Indian Religious Freedom Act and the Archaeological Resources Protection Act. DOE/NNSA has provided funds for the conduct of, and members of CGTO have participated in, various cultural resources-related activities such as ethnographic interviews, as well as monitoring of cultural resource surveys. In addition, DOE/NNSA has provided funds to enable the AIWS to prepare summary assessments and recommendations, the most recent of which appear throughout the SWEIS.

DOE/NNSA, working jointly with the State of Nevada, established the EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA,

**Commentor No. 74 (cont'd): Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations**

impacts and conducting culturally-appropriate oversight activities. The CGTO must be included in the Emergency Preparedness Grant process and become an equal member of the Emergency Preparedness Work Group.

**Environmental Justice:**

Please address how and why DOE has determined that we, as culturally affiliated native people, no longer suffer from disproportionately high and adverse impacts from the activities described in the Draft SWEIS. In the Record of Decision for the 1996 *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada*, DOE recognized the need to address environmental justice concerns of the CGTO based on disproportionately high and adverse impacts to their member tribes from DOE activities. In the 2002 *Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada*, DOE concluded that the selection and implementation of the Preferred Alternative would impact its member tribes at a disproportionately high and adverse level, perpetuating environmental justice concerns. In the 2011 Draft SWETS Sections 5.1.13.1 (No Action Alternative), 5.1.13.2 (Expanded Operations Alternative), and Sections 5.1.13.3 (Reduced Operations Alternative), DOE now states there are "no disproportionately high and adverse impacts on minority and low-income populations are expected." This discrepancy is clearly an oversight in the analysis and disregards previous DOE determinations. This oversight must be corrected to accurately reflect accurate information.

The CGTO maintains that environmental justice concerns continue to exist and include (1) Holy Land violations, (2) cultural survival-access violations, and (3) disproportionately high and adverse human health and environmental impacts to the Indian population. These environmental justice issues are described further by the CGTO in Appendix C of the Draft SWEIS, acknowledged previously by DOE in their records of decisions, yet completely ignored in DOE's current analysis in the Draft SWEIS.

American Indian people who belong to the CGTO consider the NNSS lands to be as central to our lives today as they have been since the time of our creation. The NNSS lands are part of the holy lands of the Western Shoshone, Southern Paiute, and Owens Valley Paiute and Shoshone people and are considered as such. The CGTO knows the past, present, and future pollution of these holy lands constitute both Environmental Justice and equity violations. No other people have had their holy lands impacted by NNSS-related activities.

One of the most detrimental consequences to the survival of American Indian culture, religion, and society has been the denial of free access to our traditional homelands and resources. The inability to access traditional food sources and medicine has greatly contributed to undermining the cultural well-being of Indian people. We have experienced and will continue to suffer breakdowns in the process of perpetuating cultural transmission due to our lack of free access to government-controlled lands and

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the State of Nevada (Division of Emergency Management), and the six participating counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment for any locations, including American Indian Reservations, within their counties.

74-6 This draft SWEIS included text on the perception of environmental justice impacts identified by CGTO. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental impacts of Federal programs, policies, and activities on minority and low-income populations. Based on this definition of environmental justice impacts (human health and environmental impacts), no disproportionately high and adverse impacts would be expected to the culturally affiliated Indian people.

DOE/NNSA has reviewed past NEPA documents and continues to recognize CGTO's identification of Holy Land and cultural survival access violations. Although these points do not fall within the definition of environmental justice as defined in Executive Order 12898, DOE/NNSA remains committed to recognizing the American Indian's perception of disproportionately high and adverse impacts identified as Holy Land and cultural survival access violations, and has added statements to this effect in Section 7.13 of the final SWEIS. However, with regard to high and adverse human health impacts, DOE/NNSA disagrees with the commentator. Analysis within the SWEIS concludes there are no human health impacts identified for the general, minority, or low-income populations within the ROI. However, Section 5.1.12.1 (Human Health and Safety, Normal Operations) has been modified to evaluate a subsistence consumption scenario.

74-7 Through the American Indian Consultation Program, DOE/NNSA has a longstanding relationship with CGTO and attempts to respond to requests for access to culturally important areas and activities. DOE/NNSA shares the concern regarding site contamination and in accordance with applicable laws, DOE Orders, and the Federal Facility Agreement and Consent Order has implemented comprehensive characterization, remediation, and monitoring programs to evaluate contamination levels and take appropriate actions to contain or remove contamination at the NNSS.

**Commentor No. 74 (cont'd): Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations**

resources such as those in the NNSS area. No other people have experienced similar cultural survival impacts due to lack of free access to the NNSS area.

It is widely known that many of our people still collect and use plants and animals for foods and medicines that are found within the NNSS region. Many of these plants and animals cannot be gathered or found in other places. Consumption patterns of Indian people, who still use plants and animals for food, medicine, and other cultural or ceremonial purposes, force the CGTO to question if its member tribes are still being exposed to radiation or other hazardous waste located at the NNSS.

Please acknowledge and address these issues for all three alternatives.

**Human Health:**

We are aware that many deaths and illnesses among our tribal members appear to be disproportionate to the general public. We believe this condition is attributed to our close proximity to the NNSS and exposure from inhalation, direct exposure to a radioactive/chemical plume, radioactive materials/chemicals deposited on the ground, and/or ingestion of contaminated food products from animals, fruits and vegetables raised locally.

The maximally exposed individual (MEI) is described in Section 5.1.12, as someone "assumed to be at the offsite location that would result in the maximum radiological impact." Impacts on the MEI were reportedly evaluated for a scenario that includes the "same exposure pathways assumed for the general population, but assumes an increased amount of time spent outdoors and a higher rate of contaminated food consumption." The health impacts analyzed in this section do not take into account subsistence consumption by our people, which results in an even greater rate of exposure than currently analyzed and disproportionate from those levels experienced by the general public.

Please address the exposure impacts from subsistence consumption. If this information is unavailable, we ask DOE to commit to conducting a subsistence consumption study, as a condition of the Record of Decision. We encourage DOE to conduct this study in accordance with Executive Order (EO) 12898, which requires the DOE to collect, maintain, and analyze information on consumption patterns such as those of Indian populations who rely principally on fish and/or wildlife for existence. This EO mandates each federal agency to apply equally their environmental justice strategy to Native American programs and assume the financial costs necessary for compliance.

In addition to our traditional consumption of plants and animals, the CGTO knows there is a strong cultural bond and direct correlation between the health of the environment and the health of our people. The complexities associated with our deep-rooted understanding of the land and its resources require an in-depth ethnographic and marginalization study to identify and evaluate the perceived risks of native people who rely on traditional resources and are not ordinarily considered in statistical analyses.

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74-8 DOE/NNSA has added an analysis of a special receptor identified as a "subsistence consumer" in Appendix G, Section G.2.4, of this *Final NNSS SWEIS* of the "subsistence consumer" is a hypothetical individual who is potentially exposed to larger amounts of radioactivity than the typical maximally exposed individual (MEI) as a result of a subsistence lifestyle (see Appendix G, Section G.2.4). In this scenario, the receptor was assumed to acquire essentially all of their foodstuffs from the land around the NNSS. This includes the consumption of animal and plant products raised on a local farm and of wild game. Because there is an assumed higher level of consumption of local foodstuffs, the "subsistence consumer" receives a higher dose than the MEI member of the general public. It should be noted that, in both the case of the MEI and the "subsistence consumer," to ensure that the analyses did not underestimate impacts, their assumed location is at the NNSS boundary in an area currently controlled by the USAF and not accessible by the public. The analysis found that the subsistence consumer would receive an estimated annual dose of 10 millirem, which represents an increased risk of 1 in 170,000 of developing a latent fatal cancer for each year of exposure.

74-9 Through its American Indian Interaction Program, DOE/NNSA has provided funds for activities such as ethnographic interviews and studies, as well as monitoring of cultural resource surveys and updates on NNSS projects and activities. Funding has also been provided for CGTO participation in these projects and activities. In addition, DOE/NNSA has provided funds to enable the American Indian Writers Subgroup to prepare summary assessments and recommendations in a number of NEPA documents, the most recent of which is this SWEIS. Further, DOE/NNSA accepts, evaluates, and may fund unsolicited proposals for various activities such as the ethnographic human health study suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

**Commentor No. 74 (cont'd): Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations**

and/or data. To this end, DOE should commit the necessary resources to conduct a systematic human health study of our people to fully understand perceived risks to native people, who are faced with much greater exposure than the MEI analyzed in the Draft SWEIS.

**Transportation:**

Figures: Transportation route maps are missing the towns of Bishop, Big Pine, Fort Independence, Lone Pine, Bishop, Benton, and the highway to Death Valley. It is important that these small towns are depicted and their inhabitants included in transportation analyses.

At present, Tribes within the CGTO are not involved with the selection of routes for transporting low-level waste. These routes travel through rural communities and Indian land to avoid Las Vegas. The CGTO knows there is a disproportionate burden placed upon tribes who do not have adequate resources, limited funding and sufficient knowledge to fully understand the complexities associated with the transport of low-level waste. As a means of addressing our concerns, we ask DOE/EM to provide sufficient funding for the CGTO to participate in future NEPA actions relating to the transport of low-level waste, and to further provide financial support to conduct an ethnographic study to identify culturally important areas along existing and proposed routes that may be potentially impacted by DOE activities.

**Waste Management:**

The CGTO is concerned with the continued disposal of low-level waste on the NNSS. Disposal of this waste goes against our culture, and our obligation to care for this land. The CGTO is concerned with the lack of discussion and analysis in the SWEIS to potentially reprocess the waste and material or use other waste reduction methods.

Moreover, the CGTO knows that land and its resources are alive and can react to activities that are contrary or disrespectful to the environment. Before the land can be used or activities commence, native people know we must first talk to the land and prepare it for what is about to happen. Our cultural practices are done as a means of maintaining balance within the environment.

We recommend DOE analyze and implement waste reduction methods as a mitigation measure or ultimately eliminate low-level waste generation and disposal. We further believe DOE must make arrangements for us to conduct traditional prayers and activities in an effort to mitigate this inappropriate activity. It does not alter our cultural beliefs as they relate to the culturally inappropriate method of disposal on the NNSS, however. It is merely our attempt to minimize the destruction to our land from disposing this waste.

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**74-10** The towns listed by the commentor (i.e., Bishop, Big Pine, Fort Independence, Lone Pine, and Benton) are along U.S. Highway 395 in California, a highway that is not typically used for NNSS transportation activities. Similarly, the highway to Death Valley, California State Route 190, is not used for NNSS transportation. As such, these towns are not shown on the transportation maps in the SWEIS and their inhabitants would be unaffected by the transport to or from the site. Note that California State Route 190 is shown in Appendix E on Figure E-14.

**74-11** As noted in the response to comment 74-9 above, DOE/NNSA has provided funds for a variety of activities and accepts, evaluates, and may fund unsolicited proposals for various activities such as the ethnographic study to identify culturally important sites along transportation routes that may be impacted by DOE/NNSA activities suggested by the commentor.

**74-12** DOE appreciates the views of CGTO and acknowledges that those perspectives may be contrary to DOE's activities relating to disposal of LLW on the NNSS. All DOE disposal activities are done in accordance with the requirement of DOE Order 458.1, *Radioactive Waste Management*. Accordingly, site-specific performance assessments are prepared to evaluate the long-term safety of waste disposal sites. Waste management practices are described in Chapter 4, Section 4.1.11.

DOE/NNSA recognizes the concerns of the CGTO regarding respect for the environment. As part of the opening of the new mixed low-level radioactive waste cell at the Area 5 Radioactive Waste Management Complex, DOE/NNSA welcomed the participation of an American Indian elder to offer prayers and talk to the land. As new facilities are developed on the NNSS, DOE/NNSA would consider providing similar American Indian participation in the future.

As identified in Chapter 4, Section 4.1.11.3, there is an active pollution prevention and waste minimization program in place at DOE/NNSA sites in Nevada. Similar programs at other DOE sites help reduce the quantities of offsite waste that may require disposal at the NNSS.

**Commentor No. 74 (cont'd): Richard Arnold, Spokesperson  
Consolidated Group of Tribes and Organizations**

**Mitigation Measures--Transportation:**

We understand the State of Nevada has asked DOE not to transport waste through Las Vegas. Ultimately, this results in waste transport through rural communities, Indian reservations and traditional homelands of our people.

The majority of Indian reservations within the region of influence are located in remote areas with limited access by standard and substandard roads. Should an emergency situation resulting from NNSS-related activities occur, including the transportation of hazardous and radioactive waste, it could result in the closure of the main transportation artery to our land, having devastating effects to our people. If a major (only) road into a reservation closes or becomes congested, access to hospitals, medical facilities and other necessary resources could be impeded or cut off entirely. Significant delays could result for deliveries of necessary supplies, such as food and medicines. Accordingly, Indian people living in these areas will be directly, adversely, and potentially irrevocably impacted, if such an emergency occurs from shipments to the NNSS.

Mitigation measures described in Section 7.3, Transportation, include "scheduling transports of wastes during periods of lighter traffic volume and training local emergency response personnel." The CGTO recommends DOE expand these measures to include first responder training and provide adequate equipment to protect our people within our homelands. Efforts must be made to receive advance notification of low-level and hazardous waste shipments coming through our lands so we can be prepared. Potentially affected tribes on or near existing or proposed transportation corridors should receive the same advance notifications equal to those of municipalities, state agencies, and federal government agencies that may be impacted.

In preparation of shipments and in an attempt to maintain parity with other stakeholders, the CGTO must be included in the Emergency Preparedness Grant process supported from the low-level waste disposal fee established by DOE. The CGTO knows that grant applications are reviewed by the Emergency Preparedness Work Group, who in turn provides concurrence for funding awards distributed by the Division Emergency Management Division to municipalities in Elko, White Pine, Esmeralda, Nye, Lincoln and Clark Counties. For the safety of our people, we must become a member of equal standing within the Emergency Preparedness Work Group.

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- 74-13 As indicated in this comment, the State of Nevada, as well as others, has encouraged DOE/NNSA to maintain its commitment to the existing transportation agreement. In consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC process revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. Although many trucks carrying LLW/MLLW use these roads, the impacts have been and are projected to be very small because the waste transport companies implement the mitigation measures indicated in Chapter 7, Section 7.3, to reduce the potential impacts. DOE has established the Transportation Emergency Preparedness Program to address transportation concerns and help ensure Federal, state, tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to radiological transportation accidents. The Transportation Emergency Preparedness Program focuses on training and outreach along active or planned DOE transportation corridors and is coordinated with local and state officials in the affected jurisdictions. The program actively works with the corridor states and tribes to provide training, planning assistance and exercises. More information on the Transportation Emergency Preparedness Program can be found at [www.em.doe.gov/otem](http://www.em.doe.gov/otem). Many of the LLW/MLLW shipments have very low levels of radioactivity, such that transportation regulations do not require notification of the states and communities through which they pass. When the radioactive content is sufficiently high, the transportation companies do provide notifications to states and communities along the transportation routes in accordance with DOT regulations.
- 74-14 DOE/NNSA, working jointly with the State of Nevada, established the EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and the six participating counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment for any locations, including American Indian Reservations, within their counties.

**Commentor No. 75: Katherine Gensler and Emily J. Duncan,  
Solar Energy Industries Association**



November 9, 2011

Ms. Linda Cohn  
SWEIS Document Manager, NNSA Nevada Site Office  
Department of Energy  
P.O. Box 98518  
Las Vegas, NV 89193-8518

SUBMITTED VIA U.S. MAIL AND THE INTERNET

RE: SOLAR ENERGY INDUSTRIES ASSOCIATION'S DRAFT SWEIS COMMENTS

The Solar Energy Industries Association (SEIA) and its 1,100 members appreciate the National Nuclear Security Administration (NNSA) and the Department of Energy's (DOE) efforts to support the deployment of solar energy projects. The United States has some of the richest solar resources in the world and we should not miss an opportunity to create jobs and generate clean, reliable energy with this inexhaustible, domestic resource.

Thank you for this opportunity to submit comments on the Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Nevada National Security Site (NNSS) and Off-Site Locations in the State of Nevada. NNSA and DOE should select the Expanded Operations Alternative because it maximizes the solar energy resources available at the NNSS.

I. About SEIA

Established in 1974, SEIA is the national trade association of the U.S. solar energy industry. Through advocacy and education, SEIA is working to build a strong solar industry to power America. SEIA's 1,100 member companies represent the entire solar supply chain from utilities to developers to manufacturers and installers. More than 100,000 Americans are employed by the solar industry at over 5,000 businesses (many of them small businesses) in all 50 states.<sup>1</sup> In fact, the solar industry grew by 69% in the last year making it one of the fastest growing industries in the country.<sup>2</sup> Solar energy in the U.S. now exceeds 3,100 megawatts, enough to power more than 630,000 American homes.

<sup>1</sup> 2011 Jobs Census Topline at: <http://www.thesolarfoundation.org/sites/thesolarfoundation.org/files/2011%20Jobs%20Census%20Topline%20Report%20FINAL.pdf>.

<sup>2</sup> U.S. Solar Market Insight: 2<sup>nd</sup> Quarter 2011, available at [http://www.seia.org/galleries/pdf/SMI-Q2-2011\\_E5.pdf](http://www.seia.org/galleries/pdf/SMI-Q2-2011_E5.pdf).

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75-1

The commentor's preference for the Expanded Operations Alternative, especially in regard to solar power development, is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Commentor No. 75 (cont'd): Katherine Gensler and Emily J. Duncan,  
Solar Energy Industries Association**

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**II. Background**

SEIA greatly appreciates the National Nuclear Security Administration (NNSA) and the Department of Energy's (DOE) dedication to incorporating solar energy in all three of the alternatives the agencies analyzed in the Draft Site-Wide Environmental Impact Statement (SWEIS) for the Continued Operation of the DOE/NNSA Nevada National Security Site (NNSS) and Off-Site Locations in the State of Nevada.

Under the No Action Alternative, NNSA would continue to conduct activities related to energy conservation and supply, including renewable energy and other research and development projects. In particular, NNSA would support the development of a 240 MW commercial solar power facility and an associated transmission line in the southwest corner of the NNSS, if proposed by commercial entities.<sup>3</sup>

The Reduced Operations Alternative would have NNSA continue activities related to the supply and conservation of energy, including renewable energy, but at a reduced scale. For example, NNSA would support development of only a 100-MW commercial solar power facility.<sup>4</sup>

The Expanded Operations Alternative includes the level of projects and activities described in the No Action Alternative, plus additional proposed activities. One of these additional activities would be the designation of approximately 36,900 acres within another operational area in the southwest portion of the NNSS (an expansion of the 4,100-acre area under the No Action Alternative) as a Renewable Energy Zone. Additionally, NNSA would support development of several commercial solar power facilities with a maximum combined generating capacity of 1,000 MW. NNSA would also construct a 5-MW PV solar power facility at the main NNSS support area.<sup>5</sup>

**III. NNSA and DOE Should Select the Expanded Operations Alternative**

There are many opportunities for solar expansion on public lands and federal government buildings. The federal government is the largest utility customer in the U.S. with \$5.8 billion in annual electricity costs. More than 350 million square feet of federal buildings could generate approximately 2,000 MW, or enough power for 500,000 homes. Nevada, like most of the U.S.

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<sup>3</sup> 76 Fed. Reg. 45,550 (Jul. 29, 2011).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

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Solar Energy Industries Association**

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Southwest; provides a great environment for solar development due to the state's weather and its high solar insolation.

NNSA and DOE should select the Expanded Operations Alternative because it capitalizes the most on the solar energy resources available at the NNSS. An additional 1,000 MW of solar generating capacity could decrease the NNSA's electricity costs, create several thousand construction jobs, increase existing solar power capacity in the U.S., and provide clean, renewable energy to power NNSA and other on-site installations, helping the agency meet its renewable energy mandate.<sup>6</sup> Nearby Nellis Air Force Base is a good example of how solar can benefit the federal government. Its 14 MW solar facility provides 25% of the base's yearly electricity needs and saves the base over \$1 million annually in reduced electricity costs.<sup>7</sup>

**IV. Suggestions for Future Solar Development at the NNSS**

SEIA recognizes that this is just an initial study, but encourages the NNSA to eventually develop a process whereby land is designated for various solar developers' use. Moreover, given that some of the land included in the various proposed alternatives is already disturbed, it is less likely to have sensitive biological features. SEIA would support a streamlined EIS process for this previously disturbed land to expedite the development of clean, renewable solar energy.

SEIA also suggests that the NNSA not stipulate a limit to the amount of megawatts of solar energy that can be generated on a given plot of land. The solar industry continues to develop utility-scale solar power plants that maximize efficient land use. This efficiency will only increase in the future. By limiting the generation capacity of a piece of land now, NNSA could unintentionally decrease the efficient use of the land in the future.

Finally, as NNSA recognizes, transmission lines are necessary to deliver solar energy generated onsite to load located elsewhere. SEIA looks forward to working with the NNSA to ensure transmission lines are sited in the most appropriate places to capitalize on efficient electricity transmission.

In conclusion, SEIA supports the Expanded Operations Alternative, and NNSA should identify it as the preferred alternative in the Final SWEIS. SEIA is eager to work with the NNSA and DOE to develop solar power projects at the NNSS.

<sup>6</sup> In the *Energy Policy Act of 2005*, Congress passed a requirement that federal agencies meet a certain percentage of their electricity consumption with renewable power. Specifically, federal agencies must meet 5% of electricity demand through renewable resources in fiscal years 2010 through 2012 and 7.5% in fiscal year 2013 and each fiscal year thereafter. 42 USC § 18852. The Department of Energy has pledged to obtain 25% of its energy from renewable energy sources by 2025.

<sup>7</sup> Department of Defense Strategic Sustainability Performance Plan FY 2010, page i-5.

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- 75-2 The DOE Office of Energy Efficiency and Renewable Energy, and BLM on July 27, 2012, announced the availability of the *Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar Energy PEIS)* to evaluate utility-scale solar energy development, to develop and implement agency-specific programs or guidance that would establish environmental policies and mitigation strategies for solar energy projects, and to amend relevant BLM land use plans with the consideration of establishing a new BLM Solar Energy Program (see solareis.anl.gov for detailed information). DOE/NNSA will use the *Solar Energy PEIS* to guide its decisions on the development of commercial solar power at the NNSS. However, there is no specific proposal for such a project at the NNSS at this time. If a commercial solar power project were proposed at the NNSS in the future, additional project-specific NEPA review would be required.
- 75-3 DOE/NNSA used the estimates of land needed per megawatt of power as a way to calculate maximum impacts. The estimates were based on actual commercial solar projects in southern Nevada. These acreages were not intended to limit the generation capacity of land tracts. DOE/NNSA has added text in Chapter 3, Section 3.0, to recognize that more-efficient solar energy systems may result in increased generation capacity per acreage of land.
- 75-4 Comment noted. An evaluation of transmission line requirements and siting would be done as part of the NEPA review conducted for any commercial solar power generation facility proposed at the NNSS in the future.
- 75-5 The commentor's support for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Commentor No. 75 (cont'd): Katherine Gensler and Emily J. Duncan,  
Solar Energy Industries Association**

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Thank you for your consideration of these comments.

Respectfully submitted,

/s/ Katherine Gensler

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**Commentor No. 76: J. Morgan Blakeley**



**COMMENT FORM**

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CONTINUED OPERATION OF THE  
DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA NATIONAL SECURITY SITE AND OFF-SITE LOCATIONS IN THE STATE  
OF NEVADA**

*Please print clearly*

Glad date for this was upped—  
The presentation was surprisingly outstanding.  
They have been here only since Dec 2010—  
So don't know what you've presented before—  
Now: Can not comment on DVDs as  
they will NOT play — Got several for different  
friends who couldn't attend — They set-up to  
play — Then read-out on DVD player shows  
STOP — And no matter what I do will NOT  
advance / play — Tried all 6 of them  
Been busy (and gone) Sorry I didn't get to  
this sooner.  
Must say the are living areas with clean air and  
water — Sounds better than living in Tonopah.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Ms. J. Morgan Blakeley

Organization: Self

Mailing Address: P.O. Box 1148  
Tonopah, NV 89049

E-mail (optional): None

Comment forms can be submitted by mail to:  
NNSA Nevada Operations Office  
NNSS SWEIS Document Manager  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Comments can also be submitted by:  
Phone (toll-free number): 877-781-6105  
Fax: 702-295-5300

DOE/NNSA will accept comments until October 27, 2011.

76-1

- 76-1 DOE/NNSA distributed CDs (not DVDs) with the complete text of the draft SWEIS. The CDs are readable on a personal computer or at a publicly available computer in a library.

2-346

**Commentor No. 77: Mark R. Spencer, Field Manager, Pahrump Field Office, Southern Nevada District Office, U.S. Department of the Interior,**  
**Bureau of Land Management**



United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Southern Nevada District  
Pahrump Field Office  
4701 N. Torrey Pines Drive  
Las Vegas, NV 89130  
<http://www.blm.gov/nv/st/en/fo/vfo.l.html>

In Reply Refer To:  
1610 (NV S0300)

Stephen A. Mellington, Manager  
Nevada Site Office  
National Nuclear Security Administration  
Attn: NNSS SWEIS  
P.O. Box 98518  
Las Vegas, Nevada

Dear Mr. Mellington:

The Bureau of Land Management (BLM) appreciates the opportunity to provide comments to the National Nuclear Security Administration (NNSA) on their July 2011 Draft Site-Wide Environmental Impact Statement (Draft SWEIS) (DOE/EIS-0426D). We offer the following comments for your consideration in accordance and under the authority with provisions of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4347), the Council on Environmental Quality's (CEQ) NEPA regulations (40 CFR Parts 1500-1508), the Endangered Species Act of 1985, as amended (16 USC 1531), and the Migratory Bird Treaty Act of 1918, as amended (16 USC 703 et seq.). Our comments are provided to clarify the alternatives and strengthen the analysis based on our experiences with other recent projects in southern Nevada.

*Renewable Energy*

The Draft SWEIS is unclear in three areas within the Renewable Energy section. 1) Who will be the end users of the electrical energy supply generated by the "commercial solar power generation facility and an associated transmission line" in Zone 25? If the electricity is to go into the commercial public grid, subleasing modifications may be needed in the withdrawal documents. Because modifications require the NEPA process, the DOE may want to consider including the withdrawal modification into this SWEIS. 2) Does the "associated transmission line" go onto the adjacent lands managed by BLM? If so, this would be a connected action and to avoid fragmenting NEPA analysis, this should be analyzed in the SWEIS. 3) There are two conflicting acreages (36,900 and 39,600) in the Expanded Operations Alternative that should be clarified.

- 77-1 This SWEIS analyzes the potential environmental effects of a commercial solar power generation facility located in Area 25 of the NNSS that would route power into the commercial public grid. However, at this time, there are no active proposals from private-sector entities to construct such a facility, and DOE/NSA would not pursue or allow construction without such a proposal. If a private-sector proposal for a solar power generation facility were received in the future, it would be subject to future NEPA review to address issues such as water availability and compatibility with other existing land uses and activities. DOE/NSA believes that detailed consideration of withdrawal modifications is not ripe for analysis within this SWEIS.
- 77-2 Under the No Action and Expanded Operations Alternatives, the power production capacity of the facility would require the construction of a new transmission line that would extend into adjacent lands managed by BLM (see Chapter 3, Sections 3.1.3.2 and 3.2.3.2, respectively). This transmission line is included in the total land disturbance considered for the commercial solar power generation facility, and the resulting potential impacts (e.g., habitat loss, particulate emissions, takes of desert tortoise) are identified in Chapter 5. If a private-sector proposal for a solar power generation facility were received in the future, it would be subject to future NEPA review, which would include more-detailed consideration of issues such as specific transmission line routing.
- 77-3 The correct acreage is 39,600. The text has been corrected.

**Commentor No. 77 (cont'd): Mark R. Spencer, Field Manager, Pahrump Field Office, Southern Nevada District Office, U.S. Department of the Interior, Bureau of Land Management**

*Environmental Management*

The Draft SWEIS Expanded Operations Alternative proposed accelerated pace and amount in development, testing, and waste disposal while maintaining the No Action Alternative pace and amount for restoration. However, increasing monitoring and restoration efforts may be appropriate to match the accelerated pace and amount of use. To help the decision maker and reader better understand the potential effects of the Expanded Operations Alternative, we suggest the SWEIS analyze both environmental management alternatives: 1) Potential impacts to resources from expanded use and volume without increase in environmental monitoring and restoration; and 2) Potential impacts to resources from expanded use and volume and increased monitoring and restoration efforts. It could also benefit the reader to include in the appendix of this document the agreement under which restoration practices are described.

*Potential Biological Impacts*

Changes in current NNSS management and operations could pose potential biological impacts to wildlife habitat areas outside of the NNSS such as the BLM managed Ash Meadows Area of Critical Environmental Concern (ACEC) in the Amargosa Valley that are habitat for threatened and endangered (T&E) species including the Amargosa interworts (*Niropithella mojavensis*), and federally threatened species including the Ash Meadow gumplant (*Grindelia fraxino-pratensis*), Spring living centaury (*Centaurium namophilum*), Ash Meadows milkvetch (*Astragalus phoenix*), Ash Meadows sunray (*Enceliopsis nudicaulis var. corrugata*), and Ash Meadows ivesia (*Ivesia eremicola var. kingii*). Additionally, riparian habitat with bosques of mesquite (*Prosopis pubescens* and *P. glandulosa*) occurs on BLM managed land just north of the Ash Meadows ACEC. We suggest the SWEIS analyze the potential impacts to this Amargosa Valley area outside the NNSS.

*Potential Groundwater Impacts*

The Draft SWEIS does not adequately disclose direct and indirect effects to hydrologic conditions, water resources (both ground and surface, i.e. run-off,) and local soil resources (including desert pavement and cryptobiotic crusts) as it relates to the BLM ACEC and riparian habitat. We suggest disclosing the possible effects of increased groundwater pumping, alteration of run-off patterns and new soil disturbance and develop an appropriate mitigation plan that addresses these effects.

Our main concern is the vagueness of the Draft SWEIS document about allowing commercial solar power generation without analyzing how various types of technology may affect resources. While a PV development will not use water for power generation purposes, disrupting a large number of acres of desert pavement or cryptobiotic soils may result in massive wind and water erosion, which, in turn, can result in reduced air quality and reduced plant productivity etc. Even "dry cooled" solar power plants require amounts of ground water that are unsustainable in Amargosa Valley hydrographic basin (Basin 230). Some of these impacts, however, could be off-set by requiring a commercial power producer to purchase and retire senior water rights in Basin 230 at a scale of at least 1:1 or better. Such mitigation options should be addressed within

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As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS are subject to State of Nevada oversight through the Federal Facility Agreement and Consent Order (FFACO), which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. Current and potential new activities at DOE/NNSA facilities in Nevada are managed in compliance with numerous statutes, regulations, orders, and policies that prevent environmental restoration sites from being developed. For this reason the proposed pace of operations and new facilities proposed under the Expanded Operations Alternative would not affect environmental restoration sites at the NNSS, Tonopah Test Range, or Nevada Test and Training Range.

Specific activities associated with DOE/NNSA's Environmental Restoration Program, including the Soils, Industrial Sites, and UGTA Projects, are driven by the FFACO. Because of this, the range of activities for the Environmental Restoration Program is the same under all alternatives. Under the Expanded Operations Alternative, DOE/NNSA considered the option of remediation to near-background levels for several large soil contamination sites on USAF lands to analyze the maximum potential amount of LLW that could be generated by the Soils Project. While the range of activities under the FFACO is set, the pace at which those activities are accomplished is affected by annual appropriations from Congress.

The full FFACO may be accessed on the Nevada Division of Environmental Protection website at [ndep.nv.gov/boff/ffco.htm](http://ndep.nv.gov/boff/ffco.htm).

77-5 In the southern Nevada area, in the vicinity of the NNSS, there are a number of sensitive locations for plants and animals. These areas include Bureau of Land Management's Ash Meadows and Amargosa Mesquite Areas of Critical Environmental Concern and U.S. Fish and Wildlife Service's Desert National Wildlife Range and Devils Hole National Wildlife Refuge. An analysis of potential impacts on threatened and endangered species at these locations has been added to Chapter 5, Sections 5.1.7.1.4, 5.1.7.2.4, and 5.1.7.3.4.

77-6 A discussion of potential impacts on BLM Areas of Environmental Concern located near the NNSS has been added to Chapter 5, Section 5.1.7, of this *Final NNSS SWEIS*. Potential mitigation measures for impacts identified in this *NNSS SWEIS* may be found in Chapter 7. In addition, DOE/NNSA will develop a detailed mitigation action plan, as required by DOE NEPA Implementing Procedures in 10 CFR 1021.331.

**Commentor No. 77 (cont'd): Mark R. Spencer, Field Manager, Pahrump Field Office, Southern Nevada District Office, U.S. Department of the Interior, Bureau of Land Management**

the SWEIS to demonstrate how negative impacts (groundwater withdrawal and related adverse effects on listed species) would be avoided.

Further, it should be disclosed how much water the NNSS is appropriated by the Nevada State Engineer's Office (SEO) and how much of this appropriation is currently actually pumped. This would allow the SEO and other federal agencies to better assess the potential impacts from proposed groundwater pumping.

In closing, we thank you for this opportunity to provide comments on the Draft SWEIS. If you have any questions, please contact our Planning and Environmental Coordinator Susan Farkas at (702) 515-5223 or Susan\_Farkas@blm.gov.

Sincerely,

Mark R. Spencer  
Field Manager, Pahrump Field Office  
Southern Nevada District Office

|| 77-7  
*cont'd*  
|| 77-8

- 77-7 This NNSS SWEIS analyzes the potential environmental effects of a commercial solar power generation facility located in Area 25 of the NNSS. DOE/NNSA selected a facility model for this SWEIS that provides a conservative estimate of impacts on environmental resources such as groundwater use. The model proposed by any future applicant could employ technologies that would result in markedly lower water use or other impact types. However, this concept is evaluated in terms of general land use on the NNSS. At this time, there are no active proposals from private-sector entities to construct a solar power generation facility at the NNSS, and DOE/NNSA would not pursue or allow construction of a facility without such a proposal. If a private-sector proposal for a solar power generation facility were received in the future, it would be subject to future NEPA review to address issues such as water availability and compatibility with other existing land uses and activities.

Under the Expanded Operations Alternative, if a solar power generation facility is proposed and constructed in Area 25 of the NNSS, it would permanently disturb about 10,000 acres, as shown in Chapter 5, Table 5-1. The site would be developed over a number of years and would require a State of Nevada air quality permit for surface area disturbance. The air quality permit would require strong mitigation activities, including soil stabilization and the use of watering to minimize dust emissions. Once developed, this acreage would be graded and stabilized to minimize soil erosion and be maintained in an unvegetated condition. Emissions of particulate matter associated with the construction of a solar power generation facility are reported in Table 5-38. The small increases in particulate matter emissions would not be expected to lead to any violations of air quality standards in Nye County or in Death Valley National Park.

- 77-8 DOE/NNSA holds and exerts Federal reserved water rights to groundwater resources located in hydrographic basins underlying the NNSS. These rights are associated with the establishment of the NNSS (formerly the Nevada Test Site) and its associated withdrawal of lands from public use. Chapter 4, Section 4.1.6.2, and Chapter 5, Section 5.1.6.2, Hydrology – Groundwater, of this SWEIS provide estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic and projected future demands on this groundwater to support mission needs.

**Commentor No. 78: James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

STATE OF CALIFORNIA - NATURAL RESOURCES AGENCY  
CALIFORNIA ENERGY COMMISSION  
JAMES D. BOYD  
COMMISSIONER AND VICE CHAIR  
2015 KINNEY STREET, MS-34  
SACRAMENTO, CA 95814-8512  
(916) 324-3787

Edmund G. Brown, Jr., Gov.



December 1, 2011

Ms. Linda Cohn  
SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, Nevada 89193-8518

RE: Comments on the *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada DOE/EIS-0428D* (July 2011)

Dear Ms. Cohn:

Attached are the State of California's comments on DOE's draft *Site-Wide Environmental Impact Statement (DEIS) for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site (NNSS)*. We appreciate the opportunity to provide comments on this draft. As a general policy, we request that DOE consult with the State of California on any decisions regarding routes and emergency response preparation for DOE's planned shipments of radioactive waste and radioactive materials to the NNSS that impact California.

Our comments focus on the implications for California of the large number of planned shipments of low-level radioactive waste (LLW) and mixed hazardous and low-level radioactive waste (MLLW) for disposal at NNSS. We are particularly concerned about the large increase in the number of shipments, some of the routes in California that DOE is planning to use, the lack of emergency response preparation along major portions of these routes, and the need for DOE to include California in consultations regarding these planned shipments, especially routing decisions. If you have any questions, please contact Barbara Byron at 916-654-4976.

Sincerely,

JAMES D. BOYD  
Vice Chair  
State Liason Officer to the Nuclear Regulatory Commission

Attachments: 2

- 78-1      The Senior Executive Transportation Forum was established by the Secretary of Energy in January 1998 to coordinate the efforts of DOE elements involved in the transportation of radioactive materials and waste. In response to recommendations from various DOE programs and external stakeholders, the forum agreed to evaluate the shipping practices being used or planned for use throughout the Department, document them, and, where appropriate, standardize them. The results of that effort are reflected in DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A* (DOE M 460.2-1A). This manual establishes a set of standard transportation practices for DOE organizations to use in planning and executing offsite shipments of radioactive materials, including radioactive waste. These practices establish a standardized process and framework for interacting with state, tribal, and local authorities, as well as transportation contractors and carriers, regarding DOE radioactive material shipments. The manual was developed in a collaborative effort with the State Regional Groups (Western Governors Association, Southern States Energy Board, Midwest and Northeast Councils of State Governments) and tribal representatives. DOE maintains a working relationship with the State Regional Groups to address transportation planning issues as they arise. As California is a member of the Western Governors Association, any issues on routing and emergency response would be addressed through that venue. Use of the State Regional Groups ensures that DOE/NNSA addresses concerns from one region to another when planning routing. It should be noted that, for LLW, the carrier is responsible for the routing of the shipment in accordance with DOT 49 CFR requirements. DOE does, however, provide specific requirements in some cases, such as when the shipment enters Nevada and is headed for the NNSS.
- 78-2      DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A* (DOE M 460.2-1A) discusses the need for preplanning shipping campaigns and stresses the need to provide information on planned shipments to impacted states and tribes. The preferred method is the use of the Prospective Shipment Report, which provides information regarding origin/destination, potential routes (for LLW/MLLW; because the carrier is responsible for the routing, DOE can only provide potential routes), shipment type, number of shipments, and package type. DOE has established the Transportation Emergency Preparedness Program to address these concerns and help ensure Federal, state, tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to radiological transportation accidents. The Transportation Emergency Preparedness Program focuses training and outreach along active or planned DOE transportation corridors and is coordinated with local

**Commentor No. 78 (cont'd): James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

Attachment 1

**California's Comments on the Draft Site-Wide Environmental Impact Statement  
for the Continued Operation of the Department of Energy/National Nuclear  
Security Administration Nevada National Security Site and Off-Site Locations In  
the State of Nevada (DOE/EIS-0428D (July 2011)**

**Background**

The Draft Environmental Impact Statement (DEIS) analyzes the potential environmental impacts of continued management and operation at the Nevada Test Site (NTS) now called the Nevada National Security Site (NNSS), which is located about 65 miles northwest of Las Vegas.<sup>1</sup> DOE's National Environmental Policy Act (NEPA) implementing procedures require preparation of a site-wide environmental impact statement. Missions at the NNSN include national security and defense programs (e.g., weapons stockpile stewardship and management, nuclear emergency response, nonproliferation and counterterrorism), environmental management programs (e.g., nuclear waste management and environmental restoration), and non-defense programs (e.g., renewable energy and other R & D programs). The DEIS examines the potential impacts of three alternatives: (1) No Action – current level of activities and operations, (2) Expanded Operations – new programs, projects, activities, Increased level of operations, new facility construction, and (3) Reduced Operations—lower levels of activity and operations, area closures, decommission facilities.

Each of these alternatives includes projects and activities covering a 10-year period that have major nuclear waste transportation implications for California. The No Action and Reduced Operations Alternatives reflect recent trends in low-level radioactive waste (LLW) receipt at the NNSS and the mixed low-level radioactive waste (MLLW) disposal permit limits. The Expanded Operations Alternative reflects long-term nuclear waste disposal forecasts at NNSS and allows for flexibility for DOE to dispose of LLW at NNSS.

**Waste Characteristics:** The low-level and mixed low-level wastes transported to NNSS contain a variety of radionuclides including radioisotopes of plutonium (Pu-238, Pu-239, Pu-241, Pu-242), strontium-90 and cesium-137. Typical LLW/MLLW shipments include radioactive metal, debris, soils, clothing, tools, etc. According to DOE, these shipments occasionally include shipments in Type B containers (more hazardous shipments) as well as a few highway route-controlled quantity shipments that require specially designated routes (primarily interstates).

**Waste Volumes:** The DEIS estimates that under the No Action Alternative and Reduced Operations Alternative approximately 15 million cubic feet of LLW and

and state officials in the affected jurisdictions. The program actively works with the corridor states and tribes to provide training, planning assistance and exercises. More information on the Transportation Emergency Preparedness Program can be found at [www.em.doe.gov/otem](http://www.em.doe.gov/otem).

<sup>1</sup> *Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada, July 2011, DOE/EIS-0428D.*

**Commentor No. 78 (cont'd): James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

800,000 cubic feet of MLLW will be disposed at NNSS over a ten-year period (total of 15.9 million cubic feet of waste). Under the Expanded Operations Alternative an estimated 48 million cubic feet of LLW and 4 million cubic feet of MLLW (total 52 million cubic feet of nuclear waste) would be disposed at NNSS over this period.

**Number of Shipments:** Under the Expanded Operations Alternative, as many as approximately 10,000 shipments would be made to NNSS each year. The No Action Alternative and the Reduced Operations Alternative each estimates a total of 24,700 radioactive waste shipments over ten years to NNSS. The Expanded Operations Alternative estimates a total of 79,000 shipments over ten years. In contrast, 2867 low-level waste shipments were made in 2010 to NNSS. Lawrence Livermore National Laboratory transports about 20 LLW shipments annually to NNSS or about 100,000 cubic feet annually.

**Shipment Routes:** Under agreements reached by former DOE Secretary Bill Richardson, carriers are advised to avoid shipments through the Las Vegas I-15 and US-95 Interchange (Spaghetti Bowl). In addition, carriers are advised to use a northern route into the Nevada Test Site during summer months and two southern routes, both of which enter California, during winter months.<sup>2</sup>

The EIS' transportation analyses evaluated the "Constrained Case" which is maintaining the status quo of avoiding truck shipments through the I-15/US 95 interchange in Las Vegas and avoiding travel near the Hoover Dam and the O'Calieghan-Tillman Memorial Bridge (Hoover Dam bypass bridge). In avoiding shipments through Las Vegas, shipments from DOE sites in eastern States generally use one northern route and two southern routes (both southern routes impact California).<sup>3</sup> By far, most shipments of low-level wastes entering NNSS from DOE sites travel through California through Needles, California. The Draft EIS also evaluates the "Unconstrained Case" involving (a) all shipments by truck or (b) a combination of rail-to-truck and analyzes several routes for truck transport through southern Nevada and several rail-to-truck transfer stations. The Unconstrained Case examines five representative locations for rail-to-truck transfer stations at: Apex, Arden and West Wendover, NV; and Kingman and Parker, AZ.

DOE sites in California transporting low-level wastes to NNSS are: Lawrence Livermore National Laboratory and Lawrence Berkeley Laboratory in northern California, Santa

<sup>2</sup> DOE uses the following routes for LLW shipments to NNSS: from LLNL and LBL westbound I-80 to Reno from LLNL and LBL and a southern route from LLNL including I-80 from LLNL and LBL to I-5, south on I-5 to State Route 58 near Bakersfield, to Barstow, from Barstow I-15 to Baker and north on State Route 127 near Death Valley to the Nevada border. For shipments to NNSS from eastern states, DOE uses a northern route and two southern routes. The northern route to NNSS is generally from Salt Lake City west on I-80 to U.S. 93, south on U.S. 93 to Ely (NV), south on U.S. 8 to Tonopah (NV), and south on U.S. 95 to the Nevada Test Site. One southern route is from Kingman (AZ) west on I-40 to U.S. 95 (near Needles CA), north on U.S. 95 to SR 164, west on SR 164 to I-15, south on I-15 to SR 127 to SR 160 (through Pahrump (NV) to U.S. 95, and south on U.S. 95 to NNSS. The other southern route is from Kingman (AZ) west on I-40 to U.S. 95 through Needles CA, north on U.S. 95 to SR 164, west on SR 164 to I-15, north on I-15 to SR 160, north on SR 160 (through Pahrump NV) to U.S. 95, and south on U.S. 95 to NNSS. All shipments using southern routes via SR 160 or SR 127 to NNSS impact California.

<sup>3</sup> See note above.

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**Commentor No. 78 (cont'd): James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

Susana in southern California, General Atomics in San Diego, and Sandia National Laboratory (co-located with LLNL).

**Implications for California**

Under the Expanded Operations Scenario, DOE could transport greatly increased numbers of shipments to the Nevada Test Site/NNSS. DOE estimates that there may be as many as 78,000 low-level radioactive waste shipments over the next 10 years to the Nevada National Security Site – about 8,000 shipments per year – including about 100-130 shipments annually from DOE generator sites in California.<sup>4</sup> A significant portion of these shipments are routed through California. The EIS must fully evaluate the potential impacts to communities affected by these increased number of shipments in California. Furthermore, it is essential that California be involved in consultations regarding the plans for these shipments, particularly the routes and any intermodal transfer facilities that may affect truck and/or rail shipments in California. In addition, state and local jurisdictions along shipment routes in California must have the appropriate emergency response training and crucial information on these shipments so that they are prepared in the event of an emergency.

**Comments and Recommendations**

1. All routing decisions regarding nuclear waste shipments to and from NTS/NNSS must be made in consultation with the States of California and Nevada.

The Draft EIS states that, "Although an analysis of low-level/mixed low-level radioactive waste shipping routes is included in this site-wide environmental impact statement, individual decisions on routing will not be made as part of this National Environmental Policy Act process; such decisions are developed in accordance with NNSA's standard practices, which include consultation with the State of Nevada, and when finalized become publicly available through publication on the NNSS website." These routing decisions must include consultation with the State of California, particularly the California Energy Commission, the California Highway Patrol, and the California Public Utilities Commission's Rail Safety Branch, since these routing decisions may have significant impacts on truck and/or rail routes and facilities in California.

California has longstanding concerns about the increased use of SR 127 for DOE's shipments to and from NTS. SR 127 is a rural two-lane highway with extremely limited emergency response capability. It originally was a wagon road to Death Valley that was eventually paved. It is not well-maintained, has limited safe parking areas for a truck to pull over (lacks shoulders), and minimal California Highway Patrol staffing. This inferior road has heavy seasonal tourist traffic to the Death Valley National Park, since this road is a major corridor for visitors to the Park, which has over a million visitors annually.

In California's Inyo County the SR-127 lanes are each generally 3.6 m wide and about half of the total existing paved shoulders measure less than 0.6 m in width. Many of the

<sup>4</sup> Presentation by Frank Di Sanza and Noherri Brewer, DOE, to the California Nuclear Transport Working Group, November 10, 2011, California Energy Commission in Sacramento California.

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cont'd

- 78-3 Impacts along the analyzed routes, including routes that pass through California, are analyzed and presented in Chapter 5, Section 5.1.3.1, and in more detail in Appendix E.

The commentor is correct that the Expanded Operations Alternative reflects long-term nuclear waste disposal forecasts at NNSS. These forecasts are typically conservative estimates that provide DOE/NNSA flexibility to manage disposal operations. The waste forecasts are provided by potential waste generators from across the DOE Complex. DOE/NNSA performs transportation analyses to determine comparative risks among alternatives using risks calculated for entire routes. The potential risks associated with the Expanded Operations Alternative can therefore be compared with the risks for maintaining the current level of waste shipments as analyzed in the No Action Alternative. If DOE/NNSA determines that a major increase in the number of shipments is indeed imminent, then this increase can be addressed through consultations with the State Regional Groups as described in the response to comment 78-1.

As described in Appendix E, Sections E.4 and E.4.1, route characteristics that are important to the radiological risk assessment, and therefore are discriminating factors when comparing the alternatives, include the total shipment distance and population distribution along the route. The population distribution incorporates rural, suburban and urban areas, thereby incorporating population centers along the route. The population density along each analyzed route was projected to 2016, assuming state-level population growth rates between 2000 and 2010. The risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor necessary for the purposes of this NNSS SWEIS. The transportation of LLW/MLLW and other radioactive materials would use existing highways and railroads, and, as such, would represent a small fraction of the existing national and local highway and railway traffic. Because no new land acquisition and construction would be required to accommodate these shipments, this SWEIS focuses on potential impacts on human health and safety and the potential for accidents along shipment routes. This approach is consistent with CEQ's guidance to agencies that EISs "focus on significant environmental issues and alternatives" (40 CFR 1502.1) and discuss impacts "in proportion to their significance" (40 CFR 1502.2(b)). Appendix E, Section E.6, was revised to include additional discussion of this point.

In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local

**Commentor No. 78 (cont'd): James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

trucks currently traveling SR 127 are hauling hazardous waste to the NNSS. The use of SR 127 for a haul route for DOE truck shipments of radioactive waste with projected significant increases in the daily truck traffic on this route are of major concern.

The combined effect of narrow paved and soft dirt shoulders causes operational and safety concerns regarding vehicles that are slow moving or are forced to perform emergency maneuvers. The narrow paved shoulders and the relatively high percentage of trucks and recreational vehicles reduce roadway capacity and operational characteristics. Flash floods present recurring problems at numerous locations where the roadway crosses the normally dry Amargosa River. On average such flooding occurs about twice a year causing considerable damage to the pavement surface and supporting roadbed and results in road closures for sustained periods once about every two years.

California would like to emphasize that the use of SR 127, or any other non-designated highway in California, for the transportation of highway route-controlled quantity (HRCQ) shipments of radioactive materials is prohibited by statute (31304 California Vehicle Code). It is our understanding that occasionally DOE transports HRCQ shipments to NTS. These shipments are prohibited from transport on SR 127 or any other non-designated highway in California.

Since 1999, routing decisions regarding DOE's planned LLW, LLMW and transuranic waste shipments to and from the Nevada Test Site have been controversial. Senator Feinstein on June 25, 2003 in a public statement to DOE asked DOE to postpone shipments of plutonium-contaminated transuranic waste from the Nevada Test Site over California roadways to the Waste Isolation Pilot Plant (WIPP) in New Mexico. At issue was DOE's plan to divert shipments into California over longer, less direct routes than alternative routes through Nevada. In response to requests by the States of California and Nevada, then-Secretary of Energy Bill Richardson banned waste shipments through the heavily populated Las Vegas metropolitan area and over Hoover Dam and developed routing agreements among DOE, California and Nevada. Through negotiations involving DOE, the Western Governors' Association, Nevada and California a routing agreement was reached for shipments from the Nevada Test Site to WIPP, whereby about half of the total shipments from the Nevada Test Site used California SR 127 and the other half used a northern route from the Nevada Test Site connecting to I-80 to the Idaho National Laboratory. Carriers were instructed to avoid transport through Las Vegas metropolitan area and over Hoover Dam. A similar agreement was reached for LLW shipments from DOE sites in eastern states whereby DOE advised carriers to use a northern route to the Nevada Test Site during summer months that avoids Las Vegas and Hoover Dam and two southern routes during winter months— one primarily using Nevada SR 160 and a second route primarily using California SR 127.<sup>5</sup> In 2010, 880 truck shipments used State Route 127 to NNSS or about 2-4 shipments per day.<sup>6</sup>

<sup>5</sup> See routing descriptions on page 3.

<sup>6</sup> NNSA Annual Transportation Report for Radioactive Waste Shipments to and from the Nevada National Security Site, Fiscal Year 2010, June 2011, DOE/NV-1453. Also, Frank di Sanza, DOE, presentation to the California Nuclear Transport Working Group, November 10, 2011.

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and county participants from California. Please refer to the response to comment 78-1 regarding the State Regional Group's role as the venue for addressing transportation planning issues as they arise.

**78-4** For decisions impacting the western states, DOE will use the established process of coordinating discussions and decisions through the Western Governors Association and the other State Regional Groups and affected tribes, as needed. As stated in the response to comment 78-1, use of the State Regional Groups ensures that DOE/NNSA addresses concerns from one region to another when planning routing. It should be noted that, for LLW, the carrier is responsible for the routing of the shipment in accordance with DOT 49 CFR requirements. DOE does, however, provide specific requirements in some cases, such as when the shipment enters Nevada and is headed for the NNSS.

**78-5** Appendix E, Section E.3.3, was updated to include a discussion of the standards that carriers should use in determining transport routes, as described in DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A*. It is the carrier's responsibility to make a determination of the suitability of CA-127 for transporting materials and wastes to and from the NNSS. Specific concerns that the State of California may have regarding this route can be addressed through the State Regional Groups. Occasionally, highway route controlled quantity shipments are made to the NNSS. DOE/NNSA recognizes that highway route controlled quantity shipments must follow designated routes in compliance with DOT and state laws and regulations, including state permitting. All DOE generators and their shipping contractors are expected to comply with applicable requirements.

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CHP met in 1997 with Nevada and the DOE-Carlsbad Area Office regarding the use of SR 127 for WIPP shipments from the Nevada Test Site. DOE indicated they would be willing to make time-of-day, time-of-year, and number of trucks restrictions to accommodate local concerns regarding road and weather conditions on SR 127. DOE has agreed to avoid low-level waste shipments on SR 127 to the Nevada Test Site on certain dates ("Blackout Dates") provided by California, e.g., special events along this route and in the Death Valley National Park involving heavy tourist or recreational traffic.

The CEC, CHP, Caltrans, and Inyo County have driven SR 127 to assess its condition. Caltrans issued a report on SR 127 in 1997 identifying road improvements that are needed. DOE released a draft Environmental Assessment regarding LLW shipments to NNSS (average 700 truck shipments per year). The Energy Commission provided comments on DOE's Draft Environmental Assessment regarding low-level waste shipments to NTS (March 4 and March 17, 1999 letters to Carl Gertz).

2. DOE must provide funding for emergency response preparation along routes in California planned for DOE nuclear waste and radioactive material shipments to NTS/NNSS. This includes providing funds for emergency response training and maintaining and/or calibrating radiological detection instruments for responders along the proposed routes. Also DOE should provide important information on the shipments to state and local officials.

DOE's Low-Level and Mixed Low-Level Waste Transportation Routes to and from the NNSS are shown in Attachment 2. DOE has indicated they prefer using a southern route for LLW shipments from LNL to NNSS which includes I-80 to I-5 south to SR 58 near Bakersfield to Barstow, then SR-15 to Baker and SR-127 near Death Valley to the Nevada border. Although this route received emergency response training and equipment as part of the WIPP Transportation Safety Program, DOE has informed California agencies that DOE will no longer fund California state and local emergency response preparation along this route, since it is no longer being used for WIPP shipments. However, emergency responders along this route continue to need training and their radiation detection equipment needs to be maintained and calibrated.

DOE responded to Senator Feinstein's concerns about DOE diverting more shipments of low-level waste into California by affirming that a "primary component of this effort is the support of trained and equipped emergency response units across all identified transportation corridors."<sup>7</sup> The State of California expects DOE to fulfill this commitment and restore emergency response preparation funding to state and local jurisdictions in California that are affected by shipments to NNSS. For example, DOE provides funding for emergency response preparation to the affected Nevada counties using a nuclear waste "tipping fee". DOE charges a waste disposal fee of \$.50 per cubic foot; Nevada counties use these funds for emergency response preparation (approximately \$11 million over 11 years). In contrast, California counties affected by LLW shipments, particularly Inyo County and San Bernardino County, no longer receive DOE funds for emergency response training and calibration of radiation detection instruments.

<sup>7</sup> Letter to Dianne Feinstein from Energy Secretary Bill Richardson, October 7, 1999.

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78-6

The State of California's concerns regarding the funding of emergency response preparation are noted. These concerns should be addressed through the State Regional Groups (Western Governors Association, Southern States Energy Board, Midwest and Northeast Councils of State Governments) and are not germane to the analyses performed in this NNSS SWEIS. Note that DOE has established the Transportation Emergency Preparedness Program to address concerns related to emergency preparedness and help ensure Federal, state, tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to radiological transportation accidents. The Transportation Emergency Preparedness Program focuses training and outreach along active or planned DOE transportation corridors and is coordinated with local and state officials in the affected jurisdictions. The program actively works with the corridor states and tribes to provide training, planning assistance and exercises. More information on the Transportation Emergency Preparedness Program can be found at [www.em.doe.gov/otem](http://www.em.doe.gov/otem).

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3. The EIS must identify the routes that will be used for the LLW, MLLW and other radiological material shipments in order to evaluate potential impacts from these shipments.

California does not agree with the DEIS' statement that, "Decisions on routing [LLW, MLLW and other radiological materials shipments] would not be made as part of this NEPA process." (Section S.2.5) The routes selected in the EIS will determine the impacts associated with the proposed NNSS activities, since different routing alternatives will have vastly different magnitudes of impact. The final EIS must identify the planned routes for these shipments and evaluate the site-specific impacts to communities along these routes. Local conditions, for example, the heavily populated areas in San Diego or the Bay Area in California, would likely increase the potential radiological human health and socioeconomic impacts from these shipments. The analyses contained in the final EIS must be directly related to these routing decisions.

4. The EIS' analysis of radiological human health impacts should evaluate the impacts on the maximally exposed individual for transporting LLW in areas where local conditions may result in higher exposures, e.g., areas of high population density and/or traffic congestion.

In general, the DEIS' analysis of transportation impacts is deficient in that it relies on an overly general evaluation of radiological health effects associated with such shipments and fails to consider route-specific conditions and factors. Since the draft EIS does not propose to formally decide on allowable shipping routes, no attempt was made to analyze the impacts in cities or communities, e.g., the Bay Area, San Diego where local conditions along the routes may result in higher exposures.

5. The EIS should analyze the potential radiological human health and other impacts in California from intermodal transfer sites (rail to truck) and shipment by rail.

The draft EIS transportation impact analysis is deficient in that it fails to consider unique local conditions and impacts regarding the potential use of rail-to-truck transfer facilities and intermodal shipments of LLW and MLLW to NNSS. No specific intermodal transfer facilities were identified for California in the draft EIS. However, the draft EIS acknowledges that the selection of actual intermodal transfer location would be left to the carrier (i.e., the railroad), and it is possible that facilities in California could be used. Furthermore, use of intermodal facilities along the Union Pacific Rail Line in Nevada (i.e., Apex or Arden) could mean that a large percentage of rail shipment of LLW and MLLW would go through portions of California to Barstow to the UP line into Nevada. The potential radiological human health and other impacts resulting from any routing decisions that affect rail transport or rail-to-truck facilities in California must be fully evaluated in the final EIS.

The analysis of transportation impacts in the draft EIS is deficient because it fails to assess the transportation risks from shipping LLW and MLLW in Type A containers by rail. Type A packages could be subjected to far greater accident conditions when shipped by rail than truck shipments—e.g., longer fire duration and higher temperatures.

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DOE/NSSA reiterates that no decisions on routing of LLW/MLLW and other radiological materials will be made as part of this NEPA process. As discussed in Appendix E, Section E.6.7 of the Final NNSS SWEIS, the risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards on many possible routes is neither practical nor necessary for the purposes of the NNSS SWEIS. Because of the uncertainties associated with performing a transportation analysis (as presented in Appendix E, Section E.11), the results obtained should only be used to make order-of-magnitude comparisons among the alternatives. The alternatives were not intended or developed to provide a comparative analysis of the potential impacts of using different transportation routes from the various DOE sites that may send waste to the NNSS for disposal. Furthermore, as discussed in the response to comment 78-1, the routes actually used are selected by the carrier. Route selection can be influenced by a number of factors such as weather and road conditions, and these factors change over time.

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The routes analyzed in this *NNSS SWEIS* represent the most commonly used routes for LLW/MLLW shipments from various regions of the country. Appendix E, Section E.4, describes the use of the TRAGIS computer code to identify routes to be analyzed and determine the population along the analyzed routes based on census data. Population densities were projected to 2016 based on population growth rates between 2000 and 2010. Any urban areas along the analyzed routes were included in the analysis. Section E.4.1 explains that, for different regions of the country, a single location was assumed as the origin for all waste shipments from that region in the analysis; those locations were selected to provide a conservative (higher-result) estimate of impacts. For example, all waste originating at sites in California was modeled as being transported from Lawrence Livermore National Laboratory, although some of this waste would travel much shorter distances (e.g., from General Atomics in San Diego). The transportation analysis in this *NNSS SWEIS* provides a reasonable, conservative analysis that is representative of the potential impacts that could occur.

78-9

The analysis approach to transportation of radioactive waste is appropriate for an EIS and is consistent with standard practice for such analyses. Transportation analyses performed in support of DOE NEPA activities consider the potential impacts on the population along the transportation routes, incorporating any urban areas along those routes. The analyzed route for LLW/MLLW shipments from DOE facilities in California was assumed to originate from Lawrence Livermore National Laboratory, which is in the San Francisco Bay Area. The population along the routes was projected to the year 2016. Incident-free and accident risks were calculated using the

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crush forces and impacts. Rail shipments would typically travel through urban areas often on routes co-located with petroleum and natural gas pipelines. The potential impacts of shipping LLW and MLLW by rail must be evaluated including human health, economic and environmental impacts.

6. The final EIS should provide additional information on radionuclide inventories for LLW and MLLW shipments and evaluate the impacts from a severe accident or terrorist attack. The EIS should include Greater-Than-Class-C waste in its analysis of potential impacts.

DOE has indicated to California agencies that the LLW and LLMW for disposal at NNSS contain some long-lived transuranics, e.g., plutonium-239 as well as Strontium-90. However, the draft EIS fails to provide sufficient information on radionuclide inventories for LLW and MLLW shipments. For example, the draft EIS should have included information on the amount of Greater-Than-Class-C (GTCC) waste that could be disposed of at NNSS under the Yucca Mountain alternative considered in the Draft EIS for Disposal of GTCC Waste. The draft GTCC EIS specifically identifies NNSS as an alternative for GTCC disposal. The draft EIS for NNSS should include GTCC waste in its analysis of impacts resulting from future NNSS activities.

According to the values in Table E-5, Strontium-90, with a concentration of 1.8 curies per cubic foot, is the predominant radionuclide to be shipped to NNSS over the 10-year period covered by the draft EIS, representing a cumulative inventory of 28.6 to 93.6 million curies of Strontium-90 shipped to NNSS for disposal. However, data provided by DOE at a meeting with California agencies on November 10, 2011 indicated that the maximum nuclide activity for plutonium-239 was similar to that of strontium-90. The final EIS should provide the radionuclide inventories and maximum allowable concentration for these radionuclides shipped in Type A and Type B packages, the origination, number and routes to NNSS for these shipments, the maximum release in a severe accident or successful terrorist attack, and the health effects and economic impacts of a large-scale release of these materials in an urban area, such as San Diego, the Bay Area. These analyses should include LLW, MLLW and radioactive material shipments to NNSS and the potential radiological human health impacts from transporting these materials – including incident-free shipments, severe accidents, and acts of terrorism and sabotage over the 10-year period.

7. The EIS should evaluate potential ground water impacts in California, particularly Inyo County, from the potential leakage of radionuclides from NTS/NNSS activities and provide a full and complete analysis of potential impacts.

The EIS should evaluate the potential for any groundwater contamination in California from leakage over time at the NTS/NNSS disposal site. The affected environment for NNSS analyzed in the EIS should include the areas down gradient from the site in terms of groundwater flows and direction and should include Inyo County, California and Death Valley where groundwater underlying NNSS is known to discharge. Therefore, the potential impacts of NNSS waste disposal operations on Inyo County and Death Valley must be evaluated in the final EIS even if those impacts are long-term and far distant in time. In addition, the draft EIS should note that the NNSS area is located in a

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RADTRAN computer code and accounted for this population; the results are shown in Appendix E, Table E-13.

In this NNSS SWEIS, analyses were performed to show the incident-free impacts on different types of MEIs that could be encountered along a route, as described in Appendix E, Section E.5.3. These analyses were performed taking into consideration all cargo types (e.g., shipments of LLW, TRU waste, different types of special nuclear materials). Based on the data shown in Table E-15, a person within 98 feet of a truck route, which would be an individual residing along the edge of an interconnecting highway, would receive a maximum dose of  $2.4 \times 10^{-7}$  rem per shipment for the highest-dose cargo at the regulatory dose limit set by DOT, assuming the individual were outside and directly exposed to the emanating radiation from the cargo. If that individual were exposed to all 80,000 shipments analyzed under the Expanded Operations Alternative, then the total dose would be about 20 millirem over a 10-year period. Another MEI that was considered was someone in vehicle adjacent to a radioactive waste shipment in a traffic jam for a half-hour. As shown in Table E-15, this individual would receive a dose of 0.0097 rem per half-hour. These results for MEIs are indicative of individual exposures along the routes, regardless of where they would occur.

The consequences of potential accidents with the greatest impacts (maximum foreseeable accident) were calculated, and the results are shown in Appendix E, Table E-16, of this Final NNSS SWEIS. This analysis used census data projected to the year 2016, as well as generic atmospheric conditions as described in Section E.6.4, because an accident could occur at any location along a route. To estimate the most conservative (greatest) impacts, neutral atmospheric conditions were assumed when calculating impacts on the population within a 50-mile radius of the accident, and stable atmospheric conditions were assumed when considering impacts on a maximally exposed individual.

78-9 Rail transport was analyzed for routes that traverse California, as depicted in Appendix E, Figure E-3. As stated in Section E.4.1, Barstow, California, was used as a proxy site for Parker, Arizona, to account for a rail-to-truck transfer point in Parker in effect analyzing a site in California. As addressed in the response to comment 78-3, risk over the entire transportation route is generally not dominated by one specific local area; therefore, analysis of specific local hazards is neither practical nor necessary for the purposes of this NNSS SWEIS.

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major seismically active area as designated by the U.S. Geologic Service. This should be taken into consideration when evaluating the types of activities planned for NNSS and potential impacts. The cumulative impacts from disposal of LLW and MLLW at NNSS are directly related to the greatly increased waste volumes envisioned under the Expanded Operations Alternative (i.e., 52 million cu. ft.) from off-site waste generators. Such impacts would be reduced considerably if other waste disposal alternatives were considered, e.g., disposal at other DOE sites or at private facilities throughout the U.S. The final EIS should evaluate the feasibility and impacts from DOE's using other disposal options.

In conclusion, the final EIS should address the deficiencies identified above. The State of California requests that DOE invite the affected California counties, including Inyo and San Bernardino Counties, to participate on the Transportation Working Group and share important information with California agencies and local governments affected by these shipments including shipment plans, routes, shipment characteristics, transportation protocols, and logistics for ensuring adequate emergency response preparation along shipment corridors in California.

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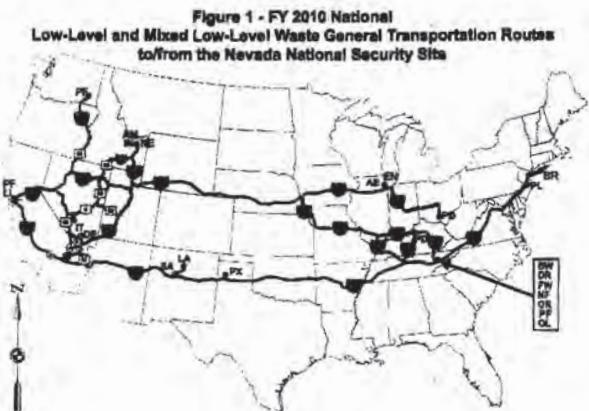
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While operations at a rail-to-truck transfer station were not specifically analyzed in this NNSS SWEIS, DOE did publish two reports regarding operations at this type of facility. In the first report, *Life-Cycle Cost and Risk Analysis of Alternative Configurations for Shipping Low-Level Radioactive Waste to the Nevada Test Site* (DOE 1999a), and as shown in Appendix E, Table E-15, of this NNSS SWEIS, the dose to a transloading facility worker would be up to  $3.4 \times 10^4$  person-rem per container transferred. In a second report, *Intermodal and Highway Transportation of Low-level Radioactive Waste to the Nevada Test Site* (DOE 1999b), accident consequences associated with a large fire near the LLW shipping containers were provided. The consequences to a population within 50 miles would be no (up to  $1.7 \times 10^4$ ) fatalities for a population of about 195,000 people. DOE has added this information to Appendix E of the *Final NNSS SWEIS*.

- 78-10 The transportation analysis analyzes rail shipment of LLW/MLLW in Type A packages. As discussed in Appendix E, Section E.3.1, requirements for Type A packages are detailed in 49 CFR Part 173, Subpart I. Commonly used Type A packages include 55-gallon drums and steel boxes. The regulations and limits on the radioactive contents of Type A packages apply to transport of material by either truck or rail. Similar to the accident analysis for truck transport, the analysis of rail transport is based on a range of accidents of various frequencies and severities. Consequently, the human health impacts presented in Chapter 5, Table 5-11, do reflect consideration of statistics specific to rail transport of the waste. As implied in the response to comment 78-3, if waste were transported by rail, the rail companies would use existing railroads and these shipments would represent a small fraction of the existing national and local railway traffic.
- 78-11 Information on the radionuclide inventories used in the analysis is provided in Appendix E, Section E.4.2, while Section E.6.6 addresses acts of sabotage or terrorism. DOE used conservative assumptions in determining the radionuclide inventory for LLW/MLLW. As stated in Section E.4.2, many different radioactive waste streams, each with a unique radionuclide inventory, would be transported to the NNSS for disposal. To provide conservatism, the largest concentration of each radionuclide across all contact-handled LLW streams received in 2009 was assumed to be present in a shipment. The radionuclide concentration of each radioisotope was proportionally adjusted for each type of container based on container volume. The purpose of this assumption was to maximize the potential accident consequences. The actual inventory for each shipment would likely be less than the assumed inventory listed in Appendix E, Table E-5. Therefore, one should not consider the inventory in Table E-5 for anything other than its intended purpose.

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**ATTACHMENT 2**



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This NNSS SWEIS does not list limits on radionuclides to be transported to and disposed at the NNSS; instead, limits are incorporated by reference to existing controlling documents. As stated in Appendix E, Section E.3.1, radioactive materials shipped in Type A packages are subject to specific radioactivity quantity limits identified as A1 and A2 values in 49 CFR 173.435 (e.g., 8.1 curies of strontium-90 per Type A package). Wastes containing radionuclides in quantities exceeding Type A limits are shipped in Type B packages. There is no regulatory limit in 49 CFR Part 173 on the total curies of strontium-90 in a Type B package, but the certificate of compliance for a given Type B package may limit the curie content. Type B packages are designed and tested to withstand the conditions of both normal transport and accident conditions. Additionally, as stated in Section E.4.2, waste shipped for disposal would have to meet the NNSS WAC. As indicated above, the analysis assumes a single conservative concentration value for all contact-handled LLW and MLLW that is intended to encompass the characteristics of future shipments; specific origins, numbers, and routes of shipments with high concentrations of strontium-90 over the next 10 years are not known.

The accident risks shown in Appendix E, Table E-13, include the range of all possible accidents, regardless of their likelihood. It was assumed that all Type A packages containing LLW/MLLW in a shipment release their contents during an accident. Table E-16 summarizes the consequences associated with the most severe accident conditions. In both types of accident analysis, the results show that there would be no latent cancer fatalities.

The health effects in terms of consequences of a maximum reasonably foreseeable accident are presented in Chapter 5, Table 5-13. The strontium-90 inventory used in this accident, assuming the inventory concentration in Table E-5, would be about 1,750 curies. In this accident, all radioactive materials in the cargo were assumed to be at risk of being released. As stated in Section E.6.5, radiological consequences were calculated by assigning radionuclide release fractions on the basis of the type of waste, the type of shipping container, and the accident severity category; the quantity of strontium-90 released in the maximum reasonably foreseeable accident reasonably foreseeable accident, with a likelihood of about 1.2 in a million years in a suburban area within the state of Nevada, was estimated to be 27 person-rem, as shown in Table 5-13. Table 5-13 also shows the consequence of this accident in an urban area anywhere along the transportation route to be a dose of 180 person-rem (the probability of this accident occurring along an urban route in Nevada is less than 1 chance in 10 million and was not evaluated separately). The accident consequences are based

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on no evacuations or relocation of the exposed population. If such activities were performed, the results presented in Table 5–13 would be less.

Economic impacts of an accident include direct costs associated with radiation surveys, cleanup, and continued monitoring, as well as indirect costs such as temporary or longer-term relocation of residents, temporary or longer-term loss of employment, destruction or quarantine of agricultural products, land use restrictions, and public health and medical care. The extent of contamination and the related costs would depend on many factors, including the quantity and type of radioactive material involved, type of release (spill, fire), location of the accident, meteorological conditions, and surrounding land uses. Because of the myriad of factors associated with a specific accident, a full quantitative, site-specific, accident analysis that incorporates emergency response and cleanup activities was not performed for this *NNSS SWEIS*. Appendix E, Section E.6, was revised to include additional discussion of this point.

The NNSS currently does not accept GTCC waste for disposal. Different potential disposal sites for GTCC waste, including the NNSS, are evaluated in the *Draft GTCC EIS* (DOE/EIS-0375). DOE has not yet made a decision regarding GTCC waste disposition; therefore, rather than evaluating GTCC waste management at the NNSS as a mission assigned to the NSO, it is included as a reasonably foreseeable future action and addressed in Chapter 6, “Cumulative Impacts.” Section 6.2.1.2 includes a description of the facility, and Section 6.3 presents the cumulative impacts of the activities evaluated in this *NNSS SWEIS*, as well as other activities, including construction and operation of a GTCC disposal facility. The *Draft GTCC EIS* (DOE/EIS-0375) evaluates a GTCC LLW disposal site at the NNSS, but it does not include an alternative for development of such a disposal site at Yucca Mountain.

- 78-12 DOE/NNSA does not believe that the effects on groundwater of proposed activities at the NNSS would extend to the areas identified by the commentator, and that the description of the affected environment should therefore extend to that range. As discussed in Chapter 5, Sections 5.1.6.2.1, 5.1.6.2.2, and 5.1.6.2.3, of this *NNSS SWEIS*, no direct or indirect impacts on groundwater were identified for activities proposed under any of the three alternatives.

The ROI for cumulative effects, as shown in Chapter 6, Figure 6–1, includes portions of Inyo County, California, and Death Valley National Park. Although no direct or indirect impacts on groundwater were identified for any of the actions proposed in this *NNSS SWEIS*, DOE/NNSA did analyze the impacts of past underground nuclear weapons tests in Chapter 6, Section 6.3.6.2, of this *NNSS SWEIS*.

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DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4–20 and 4–21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

DOE/NNSA is addressing the issue of groundwater contamination through the FFACO. Under the FFACO, DOE/NNSA, in consultation with NDEP, developed a UGTA Corrective Action Strategy to address the contamination created by the testing of nuclear devices in shafts and tunnels at the NNSS. The objective of the UGTA Corrective Action Strategy is to analyze and evaluate each UGTA CAU through a combination of data and information collection and evaluation, as well as modeling of groundwater flow and contaminant transport. As noted in Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, of this *NNSS SWEIS*, DOE/NNSA's UGTA Project, in compliance with the FFACO and in coordination with NDEP, is conducting a long-term effort to characterize the levels and flow directions and rates of groundwater that was contaminated by underground nuclear weapons testing at the NNSS. Pursuant to the terms, conditions, and goals of the FFACO, DOE/NNSA will characterize and monitor the groundwater, both on and off of the NNSS, with the goal of first establishing a “contaminant boundary” and, based on that boundary, establishing a “regulatory boundary” for groundwater contamination. The contaminant boundary is defined as a probabilistic model-forecast perimeter and a lower hydrostratigraphic unit boundary that delineates the extent of radionuclide-contaminated groundwater (i.e., water exceeding the SDWA radiological standards) from underground testing over the next 1,000 years (FFACO 2011). Ultimately, DOE/NNSA and NDEP will develop a regulatory boundary for each CAU, which would provide protection for the public and the environment from the effects of migration of radioactive contaminants. If radionuclides were to reach this boundary, NNSA/NSO would submit to NDEP for approval a plan to meet specific CAU regulatory boundary objectives (FFACO 2011). As noted in Section 4.1.6.2, a long-term closure monitoring well network will be designed in consultation with NDEP, installed, and used for monitoring groundwater

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to ensure public health and safety. Additional information has been added in Section 6.3.6.2 to address the potential extent of radiological contamination that would exceed the contaminant boundary levels over the next 1,000 years in the Frenchman Flat and Pahute Mesa areas of the NNSS. Based on these modeled estimates, it is unlikely that radiologically contaminated groundwater exceeding Safe Drinking Water Standards would reach areas where it would be used by the public, based on the current boundaries of the NNSS and Nevada Test and Training Range.

The commentor mentions specific concerns for potential groundwater contamination from DOE/NNSA radioactive waste disposal activities at the NNSS. As noted in Chapter 5, Section 5.1.12.1.4, and Chapter 6, Section 6.3.6.2, of this *NNSS SWEIS*, due to the high evapotranspiration rate in the area of the NNSS radioactive waste disposal facilities, water does not percolate beyond the root zone (i.e., about the first 6 feet from the surface), and there is no pathway to groundwater for contaminants.

- 78-13 DOE/NNSA does take into account the potential impacts of seismic events on its activities at all of its facilities in the state of Nevada. Chapter 4, Section 4.1.5.2.3, Faulting and Seismic Activity, in this *NNSS SWEIS* addresses seismicity at the NNSS and discusses relevant policies, orders, standards, and guidelines that are followed when planning activities at the NNSS. Sections 4.2.5.2.2, 4.3.5.2.2, and 4.4.5.2.2 address seismic activity at the Remote Sensing Laboratory, North Las Vegas Facility, and TTR, respectively.
- 78-14 To provide a conservative estimate (one that would ensure that potential impacts would not be underestimated) of the potential volume of radioactive waste that could be disposed at the NNSS, DOE/NNSA based its Expanded Operations Alternative for these wastes as described in Appendix A, Section A.2.2.1: "...(1) projections of the respective waste types that are designated for disposal at the NNSS, as well as those without a designated disposal location, as projected in DOE's Waste Information Management System Database as of April 2010, and (2) input from prospective waste generators regarding potential waste streams and/or volumes that are not currently included in the database." DOE/NNSA recognizes that many of the waste streams that are currently without a designated disposal location will be disposed in onsite facilities or at permitted commercial radioactive waste disposal facilities. Only a small percentage of the LLW/MLLW generated by DOE is disposed at the NNSS. Approximately 90 percent of DOE's annual generation of such waste is disposed at the site where it is generated. Of the remaining 10 percent, approximately one-half is disposed at a commercial disposal facility in Clive, Utah, and the balance is disposed

**Commentor No. 78 (cont'd): James D. Boyd, Vice Chair,  
State Liason to the Nuclear Regulatory Commission,  
State of California – Natural Resources Agency**

2-362

at the NNSS. Potential disposal decisions for DOE/NNSA radioactive wastes and their potential impacts are addressed in NEPA analyses prepared by the generators. The cumulative impacts of the volumes of radioactive waste disposed under the Expanded Operations Alternative are addressed in Chapter 6, Section 6.3, of this NNSS SWEIS.

- 78-15** DOE/NNSA will contact the California counties most affected by waste transport to the NNSS and invite them to participate in the Transportation Working Group. As members, they would receive routine updates of information provided to the group.

**Commentor No. 79: Dave Taylor, Senior Vice President,  
Navarro Research and Engineering, Inc.**



NAVARRO  
Research and Engineering, Inc.

December 1, 2011

Linda Cohn, Document Manager  
NNSS Site Wide Environmental  
Impact Statement  
National Nuclear Security Administration  
Nevada Site Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518

NEVADA NATIONAL SECURITY SITE (NNSS) SITE-WIDE ENVIRONMENTAL IMPACT  
STATEMENT (SWEIS) COMMENTS

Dear Ms. Cohn:

Navarro Research and Engineering, Inc., (NRE) and its subsidiaries appreciate the opportunity to comment on the NNSS SWEIS. Our comments are as follow:

1. NRE has a great appreciation and support for the critical national and global security roles that are being served daily at the NNSS. The transformation from the Nevada Test Site to the NNSS is a visionary step forward establishing a foothold in meeting our current and future national and global security. The ability of the NNSA to be flexible in accepting of a wide range of activities that may occur on the NNSS is critical to the nation's security in the short term as well as the long term.
2. We support the admirable job that the Nevada Support Office has placed in the analysis and evaluation of proposed alternatives. The NNSS has done an outstanding job in meeting missions over the past couple of decades with little capital investment. However, today facilities are old and changes in the missions and in the health, safety, and environmental regulations are the norm. To maintain a state of readiness and ensure technical crispness, we prefer the expanded operations alternative.
3. We support the environmental management mission under the expanded operations alternative. It is unclear if intentional acts of destruction were considered during the probabilistic risk analysis of transportation accidents. Please clarify.
4. It is unclear whether the Yucca Mountain Geological Repository post closure environmental management activities have been considered in the expanded operations alternative. Please clarify.

If you have any questions or need further clarification, please contact me at (865) 220-9650.

Sincerely,

Dave Taylor  
Senior Vice President

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865-220-9650 • www.navarro-inc.com • 865-220-9651 Fax

- |      |  |
|------|--|
| 79-1 | 79-1 Comment noted.  |
| 79-2 | 79-2 The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this <i>NNSS SWEIS</i> , DOE/NNSA considered comments received on the <i>Draft NNSS SWEIS</i> as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this <i>Final NNSS SWEIS</i> . |
| 79-3 | 79-3 DOE/NNSA acknowledges the commentor's support for the Environmental Management Mission under the Expanded Operations Alternative. Intentional destructive acts are addressed in this <i>NNSS SWEIS</i> . Appendix E, Section E.6.6, discusses acts of sabotage or terrorism as part of the transportation analysis.   |
| 79-4 | 79-4 As discussed in Chapter 3, Section 3.2.3.1, General Site Support and Infrastructure Program under the Expanded Operations Alternative, DOE/NNSA would maintain the existing infrastructure, provide site security, and manage all applicable existing permits and agreements for the former Yucca Mountain site.  |

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**Commentor No. 80: David Culp, Legislative Representative,  
Friends Committee on National Legislation**



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**FRIENDS COMMITTEE ON NATIONAL LEGISLATION**  
... a Quaker lobby in the public interest

December 2, 2011

Attention: NNSS SWEIS Document Manager  
U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518

Re: Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada

To whom it may concern:

The Friends Committee on National Legislation (FCNL) is commenting on the site-wide environmental impact statement (SWEIS) for the Nevada National Security Site (NNSS).

FCNL is a religious lobby in the public interest based on the values of the Quaker faith. FCNL has tens of thousands of constituents across the United States, including Nevada. One of FCNL's chief policy concerns is nuclear disarmament and nonproliferation. We are providing comment for the SWEIS on this basis.

**FCNL rejects all three alternatives outlined in the SWEIS.** All three policy alternatives outlined for the Nevada National Security Site (NNSS) in the SWEIS will "[m]aintain readiness to conduct nuclear tests." Instead of strictly adhering to any one of the three proposed alternatives, FCNL supports the dismantling of facilities meant for use in testing nuclear weapons at NNSS.

**I. Nuclear Stockpile is Reliable Without Explosive Testing**

The nuclear bomb testing facilities do not need to be maintained because further tests of the country's nuclear stockpile are not required to ensure reliability. Current and past administration officials agree that there is no need for further tests. During a speech in June of this year, Rose Gottemoeller, Assistant Secretary of State for Verification, Compliance and Implementation, stated that technological advances ensure reliability without testing:

"Today, through the extensive surveillance methods and computational modeling developed under the Stockpile Stewardship Program over the past 15 years, our nuclear experts understand how these weapons work and the effects of aging better than when explosive nuclear testing was conducted."<sup>1</sup>

80-1

**80-1** DOE/NNSA acknowledges the commentator's preferences for dismantlement of facilities meant for use in testing nuclear weapons at the NNSS. Maintaining a capability to test a nuclear weapon is a matter of national policy and outside the scope of this NNSS SWEIS.

80-2

**80-2** Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this NNSS SWEIS. A clear statement to this effect has been added to Chapter 3, Section 3.0. However, DOE/NNSA does propose to continue to support the Stockpile Stewardship and Management Program under all of the alternatives addressed in this NNSS SWEIS, as described in Sections 3.1.1.1, 3.2.1.1, and 3.3.1.1.

***Commentor No. 80 (cont'd): David Culp, Legislative Representative,  
Friends Committee on National Legislation***

Former administrator of the National Nuclear Security Administration (NNSA), Linton Brooks also recently expressed confidence that the nuclear stockpile remains safe and reliable without the need for nuclear testing. In a November 2011 interview, Brooks stated that:

"There is no plausible situation in which current stockpile stewardship and the deep scientific understanding ... will not be enough to ensure the safety, security and reliability of our nuclear weapons for the indefinite future."<sup>2</sup>

In 2010, the directors of the three U.S. nuclear weapons laboratories also expressed confidence that the nuclear stockpile will remain reliable into the future without explosive testing. The Nuclear Posture Review (NPR) by the Obama administration in 2010 calls for the continuation of the nuclear testing moratorium. Lab directors said that the proposed policies in the NPR "provide the necessary technical flexibility to manage the nuclear stockpile into the future with an acceptable level of risk."<sup>3</sup> Furthermore, the NPR reports that since the United States stopped explosive nuclear testing in 1992, U.S. "nuclear warheads have been maintained and certified as safe and reliable through a Stockpile Stewardship Program."<sup>4</sup>

**II. U.S. Policy Excludes Further Testing: Moratorium and CTBT Ratification**

The United States has not explosively tested a nuclear weapon since 1992. The most recent NPR also makes clear the administration's guiding principle that, "the United States will not conduct nuclear testing."<sup>5</sup> Furthermore, the NPR sets out the ratification and entry into force of the Comprehensive Test Ban Treaty (CTBT) as an explicit policy goal. President Obama announced plans to seek the ratification of the CTBT in his April 5, 2009 speech in Prague.<sup>6</sup>

Since President Obama's speech in Prague, administration officials have repeatedly made public statements in support of the CTBT and reaffirmed the administration's intentions to move toward that goal. Such statements include those made by Assistant Secretary of State for Verification, Compliance and Implementation Rose Gottemoeller in July 2011<sup>7</sup> and by Under Secretary of State for Arms Control and International Security Ellen Tauscher in September 2011.<sup>8</sup> It is uncertain when the CTBT will be brought before the Senate for ratification. However, it is clear that the current administration does not intend to conduct another nuclear test but will continue the moratorium established in 1992.

Many administration officials and experts agree that nuclear testing is not necessary, and it is clear that the administration does not intend to conduct nuclear tests. If there are not going to be future tests of nuclear weapons, it makes little sense to continue to operate a nuclear testing facility.

**III. Wasted Resources**

Maintaining NNSS for resumption of nuclear testing is a waste of federal resources at a time of flat budgets. Test site readiness does not have a separate line item in the NNSA budget request for FY 2012, but instead is included in the larger "Readiness in Technical Base and Facilities" account at NNSA. That request was \$119.6 million for FY 2012.<sup>9</sup> The funds being used to prepare for the resumption of nuclear testing should be used for the more urgent nuclear nonproliferation goals at NNSA.

**III. History of Success in Dismantlement of Nuclear Test Sites**

Two other countries have successfully dismantled nuclear test sites. Kazakhstan closed the former Soviet nuclear testing site at Semipalatinsk in 1991.<sup>10</sup> France also completed the dismantling of its

**80-2  
cont'd**

**80-3**

**80-3** The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. The missions, programs, projects, and activities that are proposed under all three alternatives would support national security, emergency preparedness, public safety, environmental remediation, other research and development, and other purposes.

**80-4**

**80-4** As discussed in Chapter 1, Section 1.2, DOE/NNSA at the NNSS is required to fulfill core missions established by Congress and the President. One of those missions is to maintain readiness and the capability to conduct underground nuclear weapons tests if so directed by the President.

**80-5**

**80-5** Comment noted.

**80-5**

**Commentor No. 80 (cont'd): David Culp, Legislative Representative,  
Friends Committee on National Legislation**

nuclear testing facility on the atolls of Mururoa and Fangataufa in the South Pacific in 1998.<sup>11</sup> Both Kazakhstan and France are now considered leaders in the field of nuclear nonproliferation, and are strong participants in the Comprehensive Test Ban Treaty Organization (CTBTO).

#### **IV. Former Nuclear Testing Site Usage Possible**

NNSA should not maintain the readiness of the Nevada Nuclear Security Site for explosive nuclear testing. This does not mean that the site needs to be abandoned. The SWEIS proposes many uses for the Nevada Site not involving nuclear tests. NNSA should also should work with the CTBTO to use the former nuclear test site for nuclear test verification simulations. Kazakhstan has led the way in this field by working with the CTBTO on four occasions to use the Semipalatinsk site for this purpose.<sup>13</sup> By conducting such simulations at the nuclear test site, the United States could help strengthen the nuclear test verification abilities of the international community. In turn, the administration's argument for ratification of the CTBT would be bolstered. By failing to follow Kazakhstan's example by dismantling the nuclear test site and working with the CTBTO, the United States sacrifices an opportunity to be a leader on nuclear nonproliferation.

### **Conclusion**

The Nevada National Security Site SWEIS should include an alternative under which readiness to conduct nuclear tests is not maintained. The United States has not tested a nuclear weapon in nearly 20 years. It is evident that the current administration does not intend to change that. In fact, the administration is moving toward further barriers to nuclear testing by pushing for the ratification of the CTBT. Experts in the field, from State Department officials to the directors of the three national nuclear labs, have expressed confidence that further testing is not necessary to ensure the safety and reliability of the nuclear stockpile. There is no sense in maintaining a site for nuclear testing when there are no plans to test again. Resources are wasted on maintaining the nuclear testing facilities at the NNSS. The examples that France and Kazakhstan have set by dismantling their nuclear test sites should be followed by the United States. There are other uses for the site that would position the United States as a leader on nuclear nonproliferation.

Thank you for your consideration.

Sincerely,

David Culp

David Culp  
Legislative Representative

<sup>4</sup> Rose Gottemoeller, "Leadership and the Future of Nuclear Energy," University of Chicago, Chicago, June 9, 2011. <http://www.state.gov/javc/dr/165435.htm>.

Diana Barnes, "Further U.S. Nuclear Tests Highly Unlikely: Former NNSA Chief," *Global Security Newswire*, November 29, 2011, [http://www.globalsecuritynewswire.org/geo/nw\\_20111129\\_7394.php](http://www.globalsecuritynewswire.org/geo/nw_20111129_7394.php).

<sup>17</sup> Sandia National Laboratories, "Tri-Lab Directors' Statement on the Nuclear Posture Review," April 9, 2010, [https://share.sandia.gov/news/resources/ncws\\_releases/tri-lab-directors-12718099-statement-on-the-nuclear-posture-review/](https://share.sandia.gov/news/resources/ncws_releases/tri-lab-directors-12718099-statement-on-the-nuclear-posture-review/).

**80-5**  
*cont'd*

80-6

80-7

80-7

80-2  
*cont'd*

- 80-6** DOE/NNSA has for many years used the capabilities of the NNSSS for purposes related to treaty verification, arms control, and nonproliferation of nuclear and other weapons of mass destruction and terrorism. Under the No Action Alternative, as noted in Chapter 3, Section 3.1.1.2, DOE/NNSA would continue these activities: “A key component of nonproliferation activities would be the use of existing facilities as part of an Arms Control Treaty Verification Test Bed dedicated to supporting U.S. arms control initiatives and commitments. This component would support design and certification of treaty verification technology, training of inspectors, and development of arms control confidence-building measures.” Under the Expanded Operations Alternative, DOE/NNSA would increase its support for these treaty verification, arms control, and nonproliferation activities (see Section 3.2.1.2). Because of the importance of these activities to national and global security, DOE/NNSA does not propose any reduction for them under the Reduced Operations Alternative (see Section 3.3.1.2).

**80-7** As noted in the response to comment 80-2, above, DOE/NNSA acknowledges the commentator’s preferences for dismantlement of facilities meant for use in testing nuclear weapons at the NNSSS. Maintaining a capability to test a nuclear weapon is a matter of national policy and is outside the scope of this *NNSSS SWEIS*.

***Commentor No. 80 (cont'd): David Culp, Legislative Representative,  
Friends Committee on National Legislation***

<sup>4</sup> U.S. Department of Defense, *Nuclear Posture Review Report*, April, 2010.  
<http://www.defense.gov/npr/final/2010%20Nuclear%20Policy%20Review%20Report.pdf>.

<sup>5</sup> U.S. Department of Defense, *Nuclear Posture Review Report*.

<sup>6</sup> Barack Obama, "Remarks by President Barack Obama," Prague, April 5, 2009.  
[http://www.whitehouse.gov/the\\_press\\_office/Remarks\\_By\\_President\\_Barrack\\_Obama\\_In\\_Prague\\_As\\_Delivered/](http://www.whitehouse.gov/the_press_office/Remarks_By_President_Barrack_Obama_In_Prague_As_Delivered/).

Rose Gottemoeller, "The Status Quo is Unacceptable," United Nations, New York, July 27, 2011.  
[http://enrva.usmission.gov/2011/07/28/rose\\_gottemoeller-the-status-quo-is-unacceptable/](http://enrva.usmission.gov/2011/07/28/rose_gottemoeller-the-status-quo-is-unacceptable/).

<sup>7</sup> Ellen Tauscher, "The New START Treaty and the CTBT: Two Essential Steps Toward Fulfilling the Prague Agenda," Women's Action for New Directions, Washington, September 19, 2011, <http://www.state.gov/u/173967.htm>.

<sup>8</sup> U.S. Department of Energy, *FY 2012 Congressional Budget Request*, February 2011.

<sup>9</sup> Tigran Kassanova, "Sempalaantsak: From Nuclear Testing to Test Ban Treaty Support," Carnegie Endowment for International Peace, August 29, 2011, <http://carnegieendowment.org/2011/08/29/sempalaantsak-from-nuclear-testing-to-test-ban-treaty-support/4865>.

<sup>10</sup> "Fifteenth Anniversary of France's Last Nuclear Test," CTBTO Preparatory Commission, Vienna, January 27, 2011.  
<http://www.ctbto.org/news-reports/highlights/2011/fifteenth-anniversary-of-frances-last-nuclear-test/>

<sup>11</sup> Tigran Kassanova, "Sempalaantsak: From Nuclear Testing to Test Ban Treaty Support."

**80-2**  
*cont'd*

**80-3**  
*cont'd*

**80-4**  
*cont'd*

**80-5**  
*cont'd*

**80-6**  
*cont'd*

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**Commentor No. 81: Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,  
Fish and Wildlife Service**



**United States Department of the Interior**



**FISH AND WILDLIFE SERVICE**  
Desert National Wildlife Refuge Complex and  
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December 1, 2011  
File No. 84320-2009-FA-0145

Mr. Stephen A. Mellington, Manager  
Nevada Site Office  
National Nuclear Security Administration  
Attn: NNSS SWEIS  
Post Office Box 98518  
Las Vegas, Nevada

Subject: Comments on the Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada

Dear Mr. Mellington,

Thank you for the opportunity to comment on the July 2011 Draft Site-Wide Environmental Impact Statement (SWEIS). We prepared this letter under the authority of and in accordance with provisions of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4347) (NEPA), the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*, as amended), the National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge Improvement Act of 1997 (16 U.S.C. 668dd *et seq.*), and other authorities mandating the Fish and Wildlife Service's (Service) concern for natural resources. Based on these authorities, we offer the following comments for your consideration.

*Possible Impacts to Desert National Wildlife Refuge*

Desert National Wildlife Refuge (NWR) is located less than 2 miles east of the Nevada National Security Site (NNSS) of the National Nuclear Security Administration (NNSA). The Fish and Wildlife Service (Service) has primary jurisdiction over the portion of the Desert NWR that is within the Nevada Test and Training Range outside of specific bombing impact areas. This jurisdiction is provided by the Military Lands Withdrawal Act of 1999, the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge Improvement Act of 1997, and Public Land Order 4079.

81-1

81-1 Many animals, particularly larger mammals and birds are able to and do move freely between the NNSS and adjacent and nearby offsite areas, including the Nevada Test and Training Range and Desert National Wildlife Range (Desert NWR). In addition, seeds from plants on the NNSS may be transported by wind, animals, or other mechanisms to these same offsite areas. Some of those animals and seeds may be exposed to areas of radioactive soils and/or contain radionuclides from past nuclear weapons testing activities at the NNSS. Chapter 4, Section 4.1.7.5, describes the effects of past radiological tests and project activities at the NNSS on plants and animals, and Section 4.1.7.6 addresses DOE/NNSA's ongoing program for monitoring plants and animals for effects from radioactivity.

The results of this ongoing monitoring program have consistently demonstrated that, while plants and animals that inhabit radiological sites or radioactive waste containment covers may have elevated concentrations of radionuclides in their bodies, the concentrations are below levels considered harmful to the health of the plants or animals. Based on the results of many years of monitoring plants and animals within and outside of areas of radioactive contamination, it is not likely that any animals that migrate or seeds that are transported between NNSS and Desert NWR would pose any threat to other wildlife and/or plants at that location. Additional information has been included in Chapter 4, Section 4.1.7.6, of this *Final NNSS SWEIS* to support this conclusion. Further, appropriate portions of Chapter 5, Sections 5.1.7.1.4, 5.1.7.2.4, and 5.1.7.3.4, have been revised to include an assessment of radiological impacts on biota under each of the alternatives.

**Commentor No. 81 (cont'd): Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,**

**Fish and Wildlife Service**

Mr. Stephen A. Melington

File No. 84320-2009-FA-0145

We are concerned that past, current, and future activities on the NNSS may affect wildlife, plants, and other natural resources that occur on or move onto the Desert NWR, including desert bighorn sheep (*Ovis canadensis*) and golden eagles (*Aquila chrysaetos*). Several of the areas where disturbance is occurring are adjacent to the Desert NWR, and thus may have impacts on natural resources of the Desert NWR. Figure S-2 indicates that several areas less than 2 miles from the Desert NWR are designated for radioactive waste management, nuclear testing, high explosive testing, and other research, testing, and experiments. It is not clear from the descriptions of these activities whether they result in harm to natural resources. In addition, activities under the Reduced Operations Alternative would continue to impact natural resources, although to a lesser degree than current impacts. As required by NEPA, impacts to natural resources from these activities, including radioactive waste containment operations, should be disclosed in the Final SWEIS. We also ask that you disclose and provide an analysis of possible effects to golden eagles, including impacts to nest sites, desert tortoise (*Gopherus agassizii*), and desert bighorn sheep, including impacts to lambing areas, as a result of selection of the alternatives in the Final SWEIS.

Additionally, we are concerned that the Expanded Operations Alternative would allow new research, testing, and experimentation in Area 15. Area 15 is currently a 'reserve zone' and has not previously been used. We are concerned that expanded operations in Area 15 may impact our resources on Desert NWR. The Draft SWEIS is unclear what research, testing, and experimentation would occur within this Area and their potential impacts to Desert NWR.

Figure S-7 shows that underground nuclear testing was conducted in the past within a few miles of the Desert NWR boundary and that there is groundwater contamination in some of these areas. For example, the Frenchman Flat Corrective Action Unit #98 may have contaminated groundwater flowing in the direction of the Desert NWR. We are concerned that this contamination may affect natural resources on Desert NWR, and we find that the Draft SWEIS does not adequately analyze this possibility.

In summary, the Draft SWEIS does not adequately disclose direct and indirect effects to wildlife, plants, and other natural resources that occur or move onto the Desert NWR as a result of the proposed activities. We request that you disclose the possibility of these effects and develop an appropriate mitigation plan that addresses these effects. To assist you, we have enclosed a copy of the Fish and Wildlife Service Mitigation Policy (46 FR 7656).

*Groundwater Impacts to 12 Federally Listed Species at Ash Meadows National Wildlife Refuge*

We are concerned that groundwater usage by potential projects in the proposed 36,900-acre solar energy zone may affect 12 federally listed species at Devils Hole and Ash Meadows NWR. The solar zone would be located in Area 25 approximately 15 miles north of Ash Meadows NWR and

- 81-2 Impacts on biological resources from all activities considered in this SWEIS, including radioactive waste management activities, are addressed in Chapter 5, Sections 5.1.7.1, 5.1.7.2, and 5.1.7.3, of this NNSS SWEIS. Potential impacts on desert tortoises and other sensitive and/or protected species under the No Action, Expanded Operations, and Reduced Operations Alternatives are addressed in Sections 5.1.7.1.3, 5.1.7.2.3, and 5.1.7.3.3. Information related to the impact assessment methodology for desert tortoises is provided in Section 5.1.7.
- Chapter 4, Section 4.1.7.2, has been revised to include additional information specific to golden eagles and desert bighorn sheep at the NNSS.
- 81-3 The definitions for "Reserved Zone" and "Research, Test, and Experiment Zone," which is the proposed new designation for Area 15 under the Expanded Operations Alternative, are defined in Chapter 4, Table 4-1. Currently, tests and experiments related to verification of various nuclear weapons-related treaties are being conducted in Area 15. It is anticipated that these activities would continue for the foreseeable future. For this reason, DOE/NNSA has proposed to change the land use zone designation for Area 15 from Reserved to Research, Test, and Experiment.
- The primary pathways whereby activities at the NNSS could potentially cause impacts at the Desert NWR are surface-water runoff, groundwater, air emissions, and movement of contaminated biota between the sites. There are no activities planned in Area 15 that would result in discharges to surface waters. Further, surface-water flows from Area 15 are predominantly to the south-southwest toward Yucca Flat or to the east-northeast toward Groom Lake, so runoff from Area 15 would not affect the Desert NWR. Groundwater contaminated by underground nuclear testing at the NNSS is not likely to affect plants or animals at the NNSS or Desert NWR based on modeling conducted for the Frenchman Flat corrective action unit, which is addressed specifically in the response to comment 81-4, below and discussed in Sections 4.1.6.2 and 6.3.6.2 of this SWEIS. In addition, as noted in the response to comment 81-1, above, although animals may migrate between the NNSS and Desert NWR, ongoing monitoring of animals that inhabit radioactive sites or radioactive waste containment covers at the NNSS may show that they have elevated concentrations of radionuclides in their bodies, but the concentrations are below levels considered harmful to the health of the animals. The primary impacts from NNSS activities that could affect Desert NWR resources would be via emissions to the air. As noted in Chapter 5, Sections 5.1.8.1, 5.1.8.2, and 5.1.8.3, under all of the alternatives addressed in this NNSS SWEIS, air emissions at the boundary of the NNSS would be well within applicable regulatory limits and would be unlikely to impact plants, animals, or other resources at the Desert NWR.

**Commentor No. 81 (cont'd): Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,  
Fish and Wildlife Service**

Mr. Stephen A. Mellington

File No. 84320-2009-FA-0145

19 miles from Devils Hole, within the Amargosa Valley hydrographic basin (Basin 230). These listed species at Ash Meadows NWR depend on shallow groundwater:

- Devils Hole pupfish (*Cyprinodon diabolis*), endangered
- Ash Meadows Amargosa pupfish (*Cyprinodon nevadensis mionectes*), endangered
- Warm Springs pupfish (*Cyprinodon nevadensis pectoralis*), endangered
- Ash Meadows speckled dace (*Rhinichthys osculus nevadensis*), endangered
- Amargosa niterwort (*Nitrophila mohavensis*), endangered
- Ash Meadows naufragiid (*Ambrysus amargosus*), threatened
- Spring-loving centaury (*Centaurium nanophilum*), threatened
- Ash Meadows gumplant (*Grindelia fraxinopratensis*), threatened
- Ash Meadows ivesia (*Ivesia eremica [=I. kingii var. eremica]*), threatened
- Ash Meadows milk-vetch (*Astragalus phoenix*), threatened
- Ash Meadows blazingstar (*Mentzelia leucophylla*), threatened
- Ash Meadows sunray (*Enceliopsis nudicaulis var. corrugata*), threatened

Slight decreases in groundwater levels or spring discharge and changes in water quality from reduced groundwater levels may render large areas of habitat at Ash Meadows NWR unsuitable for these animal species that inhabit spring pools and spring brooks or plant species that depend on groundwater at Ash Meadows NWR. The Final SWEIS must evaluate and disclose direct and indirect impacts, as well as the cumulative impacts of this and other foreseeable solar energy production projects in the Amargosa Desert, on water resources and water-dependent biological resources at Ash Meadows NWR and Devils Hole. We ask that you disclose the volume of water (acre-feet per year) that would be used on these solar and other ongoing operations.

*Desert Tortoise*

We are concerned about impacts to the Mojave desert tortoise. The Mojave desert tortoise was federally listed as threatened on April 2, 1990. Habitat loss and degradation are major threats to the recovery of this species and further development of occupied and suitable habitat on the NNSS would negatively affect desert tortoise populations in that area.

The proposed 36,900-acre solar energy zone in Area 25 would remove almost 60 square miles of habitat for the Mojave desert tortoise. Additionally, roads and utility infrastructure act as barriers to movement and serve as corridors for dispersal of invasive species. To date, Area 25 has been considered a 'reserve zone' by NNSA and provides protection to desert tortoises. The Service recognizes the importance of these undisturbed areas for conservation and recovery of the desert tortoise. We recommend NNSA continue to protect large contiguous blocks of occupied and suitable desert tortoise habitat, which contain the primary constituent elements (i.e., food, shelter, space). We recommend NNSA avoid establishment of new roads within occupied and suitable habitat for the desert tortoise; identify and close roads that impact listed species; and close non-essential and redundant routes. We recommend NNSA eradicate or suppress invasive weeds and

- 81-6  
*cont'd*
- 81-4 In this final SWEIS, DOE/NNSA has included new graphics (Figure 4-20 in Chapter 4, Section 4.1.6.2, and Figure 6-3 in Chapter 6, Section 6.3.6.2) to show the projected extent of the radioactive contaminant plume from the Frenchman Flat CAU in 1,000 years. As may be seen in both figures, groundwater containing contamination from underground nuclear testing is not expected to reach the western boundary of the Desert National Wildlife Range within the next 1,000 years.
- 81-5 The analysis in this SWEIS has convinced DOE/NNSA that there would be no impacts on plants or animals that could affect Desert NWR; therefore, DOE/NNSA believes it is not necessary to develop the requested mitigation action plan. However, DOE/NNSA will be conducting characterization of the Small Boy site during 2012 and will determine whether there is elevated soil radioactivity on DNWR. If such contamination is found and determined to be of sufficient magnitude to potentially impact wildlife, DOE/NNSA will work with the USFWS to develop specific mitigation measures. A statement to this effect has been included in Chapter 7, Section 7.7, of this *Final NNSS SWEIS*. In addition, DOE/NNSA will review the USFWS Mitigation Policy and incorporate applicable principles into the overall mitigation action plan for the NNSS, which will be prepared in accordance with DOE's requirements at 10 CFR 1021.331. Section 7.0 of this *Final NNSS SWEIS* has been modified to reflect DOE/NNSA's intentions to prepare a mitigation action plan.
- 81-6 It is important to understand that as noted in Chapter 3, Section 3.0, of this *NNSS SWEIS* there is no specific proposal for a commercial solar power generation project at the NNSS at this time. Further, any commercial solar power generation project at the NNSS would be required to obtain its own appropriation for groundwater withdrawal from the Nevada State Engineer and would be subject to a project-specific NEPA review. The purpose of the analyses of commercial solar power generation facility development in this SWEIS is to ensure consideration of potential environmental impacts in any decision by DOE/NNSA to support or not support a proposal by a commercial entity for one or more solar power generation facilities at the NNSS during the next 10 years. Potential groundwater withdrawal volumes from ongoing and potential future activities, including potential commercial solar power generation facilities on the NNSS, are addressed in Chapter 5, Sections 5.1.6.2.1, 5.1.6.2.2, and 5.1.6.2.3, of this *NNSS SWEIS*. The potential cumulative impact of groundwater withdrawals resulting from continuation of current and potential new activities at the NNSS and other reasonably foreseeable future actions by others are addressed in Chapter 6, Section 6.3.6.2. As noted by the commentor, in the southern Nevada area, in the vicinity of the NNSS, there are a number of sensitive locations for plants and animals. These areas include Bureau of Land Management's Ash Meadows
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**Commentor No. 81 (cont'd): Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,**

**Fish and Wildlife Service**

Mr. Stephen A. Mellington

File No. 84320-2009-FA-0145

revegetate degraded areas with native plants. We also recommend NNSA restore and enhance habitat to allow natural function of ecological systems. On May 6, 2011, the Service published a revised recovery plan for the desert tortoise. We recommend reviewing the executive summary and recovery actions section of the plan to help guide implementation of our recommendations. The plan is available at [http://www.fws.gov/nevada/desert\\_tortoise/dt\\_recovery\\_plan.html](http://www.fws.gov/nevada/desert_tortoise/dt_recovery_plan.html). The Final SWEIS should disclose direct and indirect effects to the desert tortoise and its habitat. In addition, the Final SWEIS should address cumulative effects to the desert tortoise and its habitat from other reasonable and foreseeable projects in the region.

If this area is approved for solar development, translocation of desert tortoises may be necessary to minimize mortality from construction and operations of potential projects. While loss of individuals would be reduced, translocation of desert tortoises could still result in considerable effects to both translocated individuals and individuals that are residents to any identified translocation site. The proposed solar zone and Final SWEIS should identify translocation and other measures to minimize mortality and injury to desert tortoises from project activities; commit resources and funding for such measures; and include a thorough analysis of the potential effects of translocation as it relates specifically to this project.

***Renewable Energy***

The Service supports efforts to develop renewable energy. This year, Secretary of Interior Ken Salazar announced the "Smart from the Start" initiative, which recommends renewable energy projects be sited on lands already developed or disturbed, lands with low value for wildlife, are constructed with minimal impacts to cultural or archaeological resources, and use appropriate technology (e.g., least water-consumptive). We issued two biological opinions to the NNSA for solar development areas on the NNSS: a 300-acre site in Area 25 (File No. 84320-2011-F-0080; January 13, 2011) and a 1,400-acre site in Area 22 (File No. 84320-2008-F-0416; February 12, 2009). If the NNSS mission requires NNSA to identify additional utility-scale energy project areas, we recommend NNSA consider previously-disturbed lands away from occupied and suitable desert tortoise habitat. Additionally, we recommend NNSA identify exclusion areas and implement specific measures to minimize and mitigate habitat loss, such as those included in the BLM-Department of Energy Solar Energy Development Programmatic EIS available at: <http://solareis.anl.gov>.

In closing, we appreciate the invitation to provide input in this process and encourage the NNSA to select the alternative least damaging to fish and wildlife resources as the preferred alternative. Please reference the above file number in future correspondence concerning this project. If you

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and Amargosa Mesquite Areas of Critical Environmental Concern and U.S. Fish and Wildlife Service's Desert National Wildlife Range and Devils Hole National Wildlife Refuge. An analysis of potential impacts on threatened and endangered species at these offsite areas has been added in Sections 5.1.7.1.4, 5.1.7.2.4, and 5.1.7.3.4.

Potential impacts on desert tortoises are addressed in Chapter 5, Sections 5.1.7, 5.1.7.1.3, 5.1.7.2.3, and 5.1.7.3.3, of this *NNSS SWEIS*. As noted in the response to comment 80-3 above, designation as a "Reserved Zone" does not preclude activities in an area. Although, under the Expanded Operations Alternative, DOE/NNSA would redesignate an area of about 36,900 acres as a "Renewable Energy Zone," there would be no land disturbance associated with that redesignation unless a specific project was proposed. This *NNSS SWEIS* addresses, at a programmatic level, the development of a commercial solar power generation facility in Area 25 of the NNSS; the potential impacts on desert tortoises from such a project are addressed in the above-noted sections of this *Final NNSS SWEIS*. As it has done since the desert tortoise was initially listed as a threatened species, DOE/NNSA will take positive steps to ensure its activities do not threaten the continued existence of the species by implementation of its Desert Tortoise Compliance Program and adherence to the NNSS Biological Opinion (USFWS 2009). Additional information has been provided in Section 5.1.7 of this *Final NNSS SWEIS* to better describe historical impacts on desert tortoises at the NNSS and DOE/NNSA's Desert Tortoise Compliance Program.

**81-8**

DOE/NNSA will continue to implement its Desert Tortoise Compliance Program, as described in Chapter 4, Section 4.1.7, of this *NNSS SWEIS*, and will comply with the terms and conditions of the NNSS Biological Opinion (USFWS 2009) to ensure protection of the desert tortoise on the NNSS.

**81-9**

A mitigation measure has been added to Chapter 7, Section 7.7, Mitigation, to capture the recommendation of the USFWS.

**81-10**

As noted in Chapter 4, Section 4.1.7, and Chapter 5, Section 5.1.7, DOE/NNSA annually conducts surveys of the NNSS to assess the hazards of wildland fires. Those surveys are conducted by qualified plant ecologists who additionally survey for noxious or invasive plant species populations. In addition, invasion of disturbed areas by invasive species is acknowledged in Section 5.1.7. When such populations are identified during the survey, NNSS Maintenance is notified and may undertake appropriate steps (i.e., application of herbicides or mechanical removal) to selectively eradicate the target plants. Additional information has been included in Sections 4.1.7 and 5.1.7 to describe the noxious/invasive weed control process at the

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**Commentor No. 81 (cont'd): Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,  
Fish and Wildlife Service**

Mr. Stephen A. Mellington

File No. 84320-2009-FA-0145

have any questions, please contact Shaun Sanchez (702) 515-5450 or Leilani Takano at (702) 515-5230 in the Desert National Wildlife Refuge Complex Office and Nevada Fish and Wildlife Office, respectively.

Sincerely,



Shaun Sanchez  
Complex Manager



Edward D. Koch  
State Supervisor

Enclosure

cc:

Assistant Director, Nevada Water Science Center, U.S. Geological Survey, Henderson, Nevada  
Chief, Water Resources Branch, Fish and Wildlife Service, Portland, Oregon  
Coordinator, Desert Tortoise Recovery Office, Nevada Fish and Wildlife Office, Reno, Nevada  
District Manager, Southern Nevada District Office, Bureau of Land Management,  
Las Vegas, Nevada  
Reptile Biologist, Nevada Department of Wildlife, Las Vegas, Nevada

NNSS. DOE/NNSA does take positive steps to restore disturbed habitat on the NNSS using native species appropriate to the area being revegetated. Revegetated areas are monitored to determine their success and to gain data to inform future revegetation efforts and improve their success. The annual Ecological Monitoring and Compliance Program Report includes information regarding restoration of newly disturbed lands and monitoring of previously revegetated areas.

- 81-11 DOE/NNSA does take positive steps to restore disturbed desert tortoise and other habitat on the NNSS. The annual Ecological Monitoring and Compliance Program Report includes information regarding restoration of newly disturbed lands and monitoring of previously revegetated areas, as well as mitigation for loss of desert tortoise habitat. The NNSS Biological Opinion (USFWS 2009) requires mitigation for loss of tortoise habitat resulting from DOE/NNSA activities at the NNSS; to meet this requirement, DOE/NNSA may perform either of two mitigation options: (1) prepay funds into the Desert Tortoise Mitigation Fund administered by Clark County (the 2011 rate was \$786.00 per acre disturbed), or (2) prepay mitigation funds at the current rate, then revegetate disturbed habitat following specified criteria; once the revegetation is successful, the money prepaid for mitigation will be refunded. DOE/NNSA is aware of the new desert tortoise recovery plan and has been coordinating with USFWS and others involved in the recovery of the species. A description of DOE/NNSA's activities related to habitat restoration activities has been added to Chapter 5, Section 5.1.7, and Chapter 7, Section 7.7, of this *Final NNSS SWEIS*.
- 81-12 Potential impacts on the desert tortoise are addressed in Chapter 5, Sections 5.1.7, 5.1.7.1.3, 5.1.7.2.3, and 5.1.7.3.3, of this *NNSS SWEIS*.
- 81-13 Chapter 6, Section 6.3.7, of this *NNSS SWEIS* addresses cumulative impacts on the desert tortoise from actions proposed in this SWEIS and other reasonably foreseeable future actions.
- 81-14 As stated in the response to comment 81-6, above, Chapter 3, Section 3.0, of this *NNSS SWEIS* explains that there is no specific proposal for a commercial solar power generation project at the NNSS at this time. The purpose of the analyses of commercial solar power generation facility development in this SWEIS is to ensure consideration of potential environmental impacts in any decision by DOE/NNSA to support or not support a proposal by a commercial entity for one or more commercial solar power generation facilities at the NNSS, if such a proposal were to be forthcoming during the next 10 years. Each alternative in this *NNSS SWEIS* addresses commercial-scale projects (the size of the potential facility varies with each

*Commentor No. 81 (cont'd): Shaun Sanchez, Complex Manager  
and Edward D. Koch, State Supervisor, U.S. Department of the Interior,*

Fish and Wildlife Service

alternative). Chapter 5, Sections 5.1.7.1.3, 5.1.7.2.3, and 5.1.7.3.3, address potential impacts on desert tortoises from a commercial solar power generation facility at a programmatic level. As stated in Section 5.1.7 and the cited sections, based on continued implementation of DOE/NNSA's Desert Tortoise Compliance Program, impacts on desert tortoises would be due to harassment from being relocated by trained tortoise biologists. If a commercial solar power generation facility were proposed at any time in the future, it would be subject to a project-specific analysis under NEPA, which would address the specific potential impacts of the proposed project. Further, the proponent of a commercial solar power generation facility would be required to consult with USFWS to obtain a project-specific Biological Opinion. DOE/NNSA believes the level of analysis in this NNSS SWEIS is appropriate, given the level of uncertainty associated with potential development of a commercial solar power generation facility at the NNSS. Text has been added in the above noted Sections to clarify that "harassment" means "relocation" or "translocation" of desert tortoises, and that there may be impacts associated with that action.

- 81-15 The two proposed solar power development areas for which USFWS earlier issued biological opinions were either terminated or indefinitely postponed. There are no plans at this time to identify additional utility-scale energy project areas beyond those identified in this SWEIS. While DOE/NNSA does not specifically identify exclusion areas, DOE/NNSA does identify areas where solar projects could be allowed. If a commercial entity expresses interest in developing a commercial solar power generation facility, DOE/NNSA would fully coordinate with BLM before such a decision would be made. Should DOE/NNSA and BLM decide to go forward with a commercial solar power generation facility, a project-specific NEPA review would be required. Specific measures to minimize and mitigate habitat loss would be incorporated into any future project-specific NEPA reviews. DOE/NNSA has added a statement to Chapter 7, "Mitigation Measures," that for any future solar power development, mitigation measures provided in the BLM-DOE Solar Energy PEIS would be incorporated, as applicable.

**Commentor No. 82: Abigail C. Johnson, Nuclear Waste Advisor  
Eureka County, Nevada, Yucca Mountain Information Office**

Eureka County  
Yucca Mountain Information Office  
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EPT:111202.0007

December 1, 2011

Linda Cohn  
NNSS/NSO SWEIS Documents Manager  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, NV 89518  
Transmitted via FAX: 702/295-5300

RE: Eureka County, Nevada Comments on the Department of Energy Site-wide Environmental Impact Statement and Process for NNSS/NTS

Dear Ms. Cohn:

Thank you for extending the comment period on the Draft EIS for the future of the Nevada Test Site (now known as the Nevada National Security Site.) We also appreciate that DOE held a public hearing in northern Nevada, which facilitated our participation and involvement.

We have the following comments based on our participation in the DEIS hearing and our existing concerns. Our comments are provided both as an affected unit of local government under the Nuclear Waste Policy Act, and as a County downstream of the Nevada Test Site whose residents have experienced health effects from above and underground nuclear weapons testing. It is our understanding that future uses of the Yucca Mountain site were not directly addressed in the DEIS.

1. The Draft Site-wide Environmental Impact Statement (SWEIS) does not provide adequate information about current environmental impacts. In order to consider the future level of activity at NTS that is appropriate, it is essential to understand the enormous impacts of past and current Test Site activities to the soil, water, and air quality.
2. The DEIS should be supplemented to provide data and maps to show the current levels of Test Site contamination from past activities. DOE should provide a visual representation of contamination. It is our understanding that the previous EIS contained mapping of the contamination. It is important for the public and interested parties to have that information in order to consider future levels of activity at the facility.

**82-1** DOE has not been directed by Congress or the President to consider alternative uses of the Yucca Mountain site and only retains an obligation to reclaim lands disturbed by its past activities and remediate the infrastructure and buildings associated with the former Yucca Mountain Repository Project. Once funds have been appropriated by Congress, DOE would prepare its detailed approach to reclaiming the lands and remediating the infrastructure and buildings, and then undertake a NEPA review, as appropriate. Chapter 1, Table 1-2, and Chapter 2, Section 2.5.2, have been clarified in this regard. Remediation of the former Yucca Mountain site, as addressed in the *Final 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-250-F), is described in Chapter 6, Section 6.2.1.3 and included in the assessment of cumulative impacts in Section 6.3.

Although future uses of the Yucca Mountain site are not evaluated in this SWEIS, under the General Site Support and Infrastructure Program for each alternative (Chapter 3, Sections 3.1.3.1, 3.2.3.1, and 3.3.3.1), DOE/NSA would maintain the existing infrastructure, provide site security, and manage all applicable existing permits and agreements for the former Yucca Mountain site.

**82-2** Chapter 4 of this *NNSS SWEIS* describes the current environmental conditions at the NNSS, which includes residual impacts related to past nuclear weapons testing activities as well as impacts from ongoing activities. The No Action Alternative reflects the use of existing facilities and ongoing projects to maintain operations consistent with those experienced in recent years at the NNSS and offsite locations in Nevada; therefore, the impacts discussed in Chapter 5, of this *NNSS SWEIS* for the No Action Alternative under each resource area are those that result from current operations projected over the next 10 years. The cumulative impacts assessment in Chapter 6, Section 6.3, addresses the incremental impacts of the proposed actions when added to other past, present, and reasonably foreseeable future actions within the ROI. The cumulative impacts analysis addresses the full range of potentially affected resources, including soil, surface waters, groundwater, and air quality.

**82-3** DOE/NSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and current knowledge of the extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination on the NNSS, TTR and Nevada Test and Training Range have been added in Section 4.1.5.4.1.

**Commentor No. 82 (cont'd): Abigail C. Johnson, Nuclear Waste Advisor  
Eureka County, Nevada, Yucca Mountain Information Office**

3. The DEIS should be supplemented to provide visual representation of radioactive contamination of groundwater and surface water. DEIS should provide analysis of the cumulative loss of the resource and a value for the loss of groundwater due the contamination of the aquifers in the vicinity of the Test Site.
4. It is essential that one of the primary, ongoing, and fully funded activities at the Test Site should be to characterize and endeavor to clean up the contamination.
5. Future uses of the Test Site should avoid unreasonable transportation impacts on community health as well as small rural roads leading to the Test Site from over 15 million cubic feet of projected Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste. Decisions made about the future of NTS affect small communities on transportation routes to NTS. Those communities should be fully engaged and informed, should be shown on your maps, involved and informed of shipping campaigns, and impacts to budget and resources should be considered as part of the decision making process.
6. Future uses of NTS should avoid polluting uncontaminated lands and should use previously disturbing areas as much as possible, without endangering the workforce or the public.
7. Return NTS lands to public use if not contaminated.

Eureka County's experience with oversight of the Yucca Mountain project is connected to its previous experience as a downwind County for atomic testing. This has emerged as a theme of Eureka County's Yucca Mountain Lessons Learned video project. The link is provided here to help inform the DEIS process and the consideration of future activities at NTS: <http://www.yuccamountain.org/lesson.htm>.

To conclude, activities at the Nevada Test Site should enhance the well-being of Nevada and Nevadans. Any activity that is a threat to public health and safety should be avoided.

Thank you for considering our comments.

Sincerely,

Abigail C. Johnson  
Nuclear Waste Advisor  
Eureka County, Nevada

cc: Ron Damele, Eureka Public Works

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Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

- 82-4 As noted in the response to comment 82-4, above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. In addition, Chapter 4, Section 4.1.6.1, describes surface hydrology at the NNSS. As noted in that section, there are no perennial streams or lakes on or near the NNSS. The only perennial surface-water features at the NNSS are springs, which on the NNSS are associated with locally derived, or "perched," groundwater that is not associated with any of the aquifers affected by nuclear weapons testing.
- 82-5 The analysis in this SWEIS is sufficient for differentiating among the alternatives considered for continued operation of the NNSS. Chapter 6, Section 6.3.6.2, provides DOE/NNSA's estimation of potential cumulative environmental impacts on groundwater resources resulting from past nuclear weapons testing on the NNSS.

Groundwater resources at the NNSS, including groundwater use, depth to groundwater, recharge and discharge, water supply systems, and groundwater monitoring and quality, are described in Chapter 4, Section 4.1.6.2, of the SWEIS. Chapter 5, Section 5.1.6.2, provides estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic and projected future demands on this groundwater to support ongoing and proposed projects and activities under each alternative. Chapter 6, Section 6.3.6.2, analyzes the potential cumulative impacts of past nuclear weapons testing on groundwater.

As noted in the response to comment 82-4 above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS.

**Commentor No. 82 (cont'd): Abigail C. Johnson, Nuclear Waste Advisor  
Eureka County, Nevada, Yucca Mountain Information Office**

- 82-6 DOE/NNSA believes that Environmental Restoration is an important program at the NNSS. Continuation of that program is included in each of the alternatives considered in this *NNSS SWEIS*. In consultation with the Nevada Division of Environmental Protection under the Federal Facility Agreement and Consent Order (FFACO), DOE/NNSA will continue to characterize, remediate, and monitor sites and media that were contaminated by past nuclear weapons testing activities, in compliance with the FFACO. Additional information on the Environmental Restoration Program at NNSS can be found at [www.nv.energy.gov/envmgt](http://www.nv.energy.gov/envmgt).
- 82-7 The transportation of waste typically would occur only on Federal or state highways while avoiding small rural roads to the extent practical. DOE's *Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A* (DOE M 460.2-1A) provides guidelines regarding how shipments should occur. The analysis in Chapter 5, Section 5.1.3.1, of this *NNSS SWEIS* shows that the impacts on the public from transportation under any of the alternatives would be small. These results are based on a conservative assumption regarding the concentration of each radionuclide, based on past receipts.
- The DOE/NNSA NSO has established a number of means of communicating with and involving local communities. The Nevada Site Specific Advisory Board, which consists of public representatives and stakeholders from Nevada communities around the NNSS, works together with the DOE/NNSA NSO on many aspects of NNSS environmental management, including waste transportation. Nevada Site Specific Advisory Board meetings are open to the public and provide a forum for providing community input to the DOE/NNSA NSO (see [www.nv.energy.gov/nssab](http://www.nv.energy.gov/nssab) for more information). The DOE/NNSA NSO has also established a Transportation Working Group. This group was established for the specific purpose of interacting with Nevada stakeholders on NNSS waste transportation topics and includes representatives from local counties and municipalities.
- To assist the public in staying informed about waste shipments, the DOE/NNSA NSO publishes an annual transportation report and quarterly routing reports that identify shipment quantities, routes, origins, transporters, and incidents for all LLW/MLLW shipments to the NNSS. For more information on NSO environmental management and transportation, please visit [www.nv.doe.gov/emprograms/default.aspx](http://www.nv.doe.gov/emprograms/default.aspx). For regular updates regarding environmental management activities, the DOE/NNSA NSO publishes an electronic newsletter that can be received automatically via email. Visit the website and click the link to subscribe to the "NNSS News."

***Commentor No. 82 (cont'd): Abigail C. Johnson, Nuclear Waste Advisor  
Eureka County, Nevada, Yucca Mountain Information Office***

DOE/NNSA recognizes the increased burden placed on local community emergency responders by its transportation of radioactive wastes and materials and has established a mechanism to mitigate those burdens. DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada. Additional information has been provided in Chapter 6, Section 6.3.3, to address the cumulative impacts on local governments.

- 82-8 To ensure a conservative analysis, the impact assessment in this *NNSS/SWEIS* assumes that all new facilities would be located in undisturbed areas, which would maximize the potential impacts. However, the DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.
- 82-9 Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure sufficient land was reserved for national security activities and to maintain adequate buffers

***Commentor No. 82 (cont'd): Abigail C. Johnson, Nuclear Waste Advisor  
Eureka County, Nevada, Yucca Mountain Information Office***

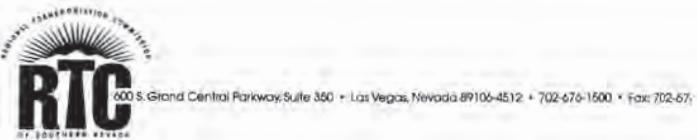
between publicly accessible locations off site and high-hazard and otherwise sensitive testing, experimental, and training activities on site.

Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.

**82-10** Comment noted.

**82-11** Comment noted.

**Commentor No. 83: Jacob L. Snow, General Manager**  
**Regional Transportation Commission of Southern Nevada**



Jacobs L. Snow  
General Manager  
November 30, 2011

Ms. Linda Cohn  
NNSS SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
P.O. Box 98518  
Las Vegas, NV 89193-8518

**DRAFT SWEIS COMMENTS**

Dear Ms. Cohn:

The Regional Transportation Commission of Southern Nevada (RTC), as the Metropolitan Planning Organization and Transit Authority for Southern Nevada, has prepared the following comments with input from the RTC Executive Advisory Committee (EAC). The EAC consists of representatives from Clark County as well as the cities of Boulder City, Henderson, Las Vegas, Mesquite, and North Las Vegas. The RTC has developed the following key comments on the Draft Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (SWEIS):

**1. RTC supports the Constrained Case (current routing).**

The RTC continues to support the Constrained Case. The Constrained Case retains the current routing of shipments of radioactive materials such as Plutonium, Uranium-233, or special nuclear material waste. This current routing avoids crossing the Colorado River near Hoover Dam and minimizes use of the interstate system through the urban areas of Las Vegas, Nevada. The current route for truck shipments approaching the Nevada National Security Site (NNSS) from the south (via I-40) would use US Route 95 to Nevada State Route (SR) 164, to I-15, to SR 160, and then to US 95. Truck shipments approaching the NNSN from the north (via I-80) would use US Routes 50, 6, and 95.

Although transportation infrastructure in the metropolitan Las Vegas area, including I-15 and US 95, has been expanded and improved in recent years, these facilities remain intensively utilized routes through densely populated areas. Major construction work on

- 83-1** In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

**83-1**

- 83-2** Comment noted; please refer to the response to comment 83-1.

**83-2**

**Commentor No. 83 (cont'd): Jacob L. Snow, General Manager  
Regional Transportation Commission of Southern Nevada**

2-380

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I-15 as part of "Project Neon" will likely affect the I-15/I-515 interchange for much of the next 10-15 years. Major lane closures on I-15 will create an added hazard on an already fully used facility; adding the transport of low-level radioactive materials in specialized heavy duty trucks would only compound these problems. In the event of an accident, closures to I-15 for radioactive waste cleanup would have a negative impact economically to the Las Vegas Valley and the tourist industry.

While RTC acknowledges that the NNSA will take all reasonable precautions to prevent the possibility of leakage of radioactive materials, there is concern about the consequences should such a leakage occur in the Las Vegas urban area. The terms "low-level" and "mixed low-level" nuclear waste refer to all materials that are not classified as "high-level". This less than precise definition generates concern regarding the health, safety, and economic stability of our region in the event of an accidental release of these materials during transport through the Las Vegas Valley. The proposed "unconstrained case" routing option would allow vehicles transporting dangerous nuclear waste materials to travel through densely populated and heavily commercialized areas of urban Las Vegas, resulting in a high potential for severe community impact with even a minor incident. In addition, I-15 traverses in close proximity to the Las Vegas "Resort Corridor", which includes an extraordinarily high concentration of hotels and tourist attractions which form the backbone of the regional economy. Even the most minor incident could result in catastrophic impact on the tourism industry. It is also quite reasonable to conclude that just the presence and popular awareness of nuclear waste transport in such close proximity to the regional economic center, which is so highly affected by the subjective perceptions of tourists, would be detrimental to the regional economy.

The routes through the urban Las Vegas Valley proposed in the "unconstrained case" carry very high volumes of traffic. For example, I-15 through the Resort Corridor carries in excess of 250,000 vehicles on a typical day. I-515 between downtown Las Vegas and the City of Henderson is a heavily used commuter corridor, carrying over 150,000 vehicles daily on some segments. US Route 95 is another congested urban corridor linking the downtown area to the northwest area of the Las Vegas Valley. Segments along this route can carry more than 200,000 vehicles each day. All three of these routes also periodically suffer from incident-related congestion, further constraining their capacity to provide mobility for Las Vegas commuters. The delay, cost, and inconvenience that would result from any type of incident involving a truck carrying radioactive waste would be significantly magnified by the enhanced requirements for thorough clean-up and evacuation of the area affected.

83-2  
(cont'd)

83-3

83-4

83-5

- 83-3 DOE/NNSA and its contractors appreciate the commentor's acknowledgement of the precautions taken when transporting radioactive materials and waste. Note that the definition of LLW presented in Chapter 12 of this *NNSS SWEIS* is radioactive waste that is not classified as HLW, TRU waste, SNF, or byproduct material as defined by Section 11e(2) of the Atomic Energy Act of 1954, as amended. Some LLW can be highly radioactive, but much of the waste transported to NNSS for disposal is lightly contaminated material such as waste from cleanup activities (building debris, contaminated soil) and materials that are incidentally contaminated (anti-contamination clothing, plastic, paper, shoe covers). DOE/NNSA is aware of public perceptions related to radioactive materials and works hard to ensure that accidents do not occur.
- 83-4 As noted in the response to comment 83-1 above, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. DOE/NNSA does not believe that even a minor accident would have a severe impact. Of the range of accidents possible, most, especially those that would be characterized as minor, would not result in any release of radioactive materials and, therefore, would have no human health impact on the community. DOE/NNSA conducted a detailed analysis of the potential human health effects associated with transportation of radioactive wastes and materials under both normal operations and accident scenarios. These analyses are presented in Chapter 5, Section 5.1.3.1, of this SWEIS. However, DOE/NNSA did not attempt to quantify any adverse socioeconomic impacts associated with waste transportation under normal operations or accident scenarios. In the 2002 *Yucca Mountain FEIS* (DOE/EIS-0250) and 2008 *Yucca Mountain SEIS* (DOE/EIS-0250-S1), DOE evaluated "perceived risk" and "stigma" associated with the transportation of SNF and HLW. In those EISs, DOE concluded that there is no valid method to translate public perceptions regarding waste transportation into quantifiable economic impacts. DOE has not been presented with any new information since the 2008 *Yucca Mountain SEIS* that changes this conclusion. While stigmatization can be envisioned under some scenarios, it is not inevitable or numerically predictable. As a consequence, DOE/NNSA did not attempt to quantify any potential for impacts from risk perceptions or stigma in this SWEIS.
- 83-5 Comment noted. Please refer to the responses to comments 83-1 and 83-4, which address transportation routing and risks associated with LLW transport.

**Commentor No. 83 (cont'd): Jacob L. Snow, General Manager  
Regional Transportation Commission of Southern Nevada**

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**2. RTC supports the Constrained Case for transfer stations.**

The Constrained Case supports the continued use of transfer stations (rail-to-truck shipments) in Parker, Arizona, and West Wendover, Nevada. These transfer stations are located outside of the Las Vegas metropolitan region.

The development of a new rail-to-truck transfer point at the Arden location would conflict with the nearby residential development at Mountain's Edge. The proposed entry point at I-15 and US Route 93 would be very detrimental for regional congestion, as this location is already a bottleneck for truck traffic and will be affected by construction-related congestion for several years to come. The proposed Boulder City bypass is currently unfunded with no timeframe for development, and the existing roadway through the center of Boulder City is unsuited for additional truck traffic. The Apex entry would also be problematic since it involves use of Clark County Route 215 (CC-215) Northern Beltway. The CC-215 interchanges are not yet complete and the timeline for improvements is uncertain. In the interim, RTC is opposed to adding additional nuclear waste truck traffic on this route. It should also be noted that use of the rail freight facility in North Las Vegas near Donovan Way and Tropical Parkway for purposes of nuclear waste transfer would be a matter of significant concern due to the proximity of adjacent residential development.

**3. RTC is concerned about setting a precedent.**

RTC and its member entities remain strongly opposed to the movement of both low level and high level nuclear material through the urbanized areas of the Las Vegas Valley. Even low level nuclear waste poses some significant risks to the health and safety of residents. In addition, RTC is concerned that the SWEIS proposal to increase low level nuclear waste transport to the NNSS through the Las Vegas metropolitan area may act as precedent for the future acceptance of higher level nuclear waste transport through the urban Las Vegas Valley.

**4. RTC is opposed to the movement of heavy duty trucks carrying nuclear waste through three specific problem areas.**

The proposed Unconstrained Case would add significantly to the number of trucks carrying hazardous materials through the Las Vegas Valley.

Three locations are of particular concern:

- a) **Project Neon:** Major construction work on I-15 at the I-15/US 95 interchange is planned over the next 10-15 years as part of "Project Neon". Lane closures associated with this project will create additional constraints on an already fully used facility. Risk of incidents increase in construction zones.

- |      |  |
|------|--|
| 83-6 | DOE/NNSA acknowledges the commentor's support for the use of transfer stations outside of the Las Vegas, Nevada, metropolitan region, but notes that DOE is not proposing development or promoting use of any rail-to-truck transfer stations. Chapter 3, Section 3.2.2.1, was revised to more clearly state that NNSS is not proposing the development of any new rail-to-truck transfer stations. This NNSS SWEIS presents comparative analyses of different modes and routes for transportation, including the use of existing rail yards in the vicinity of southern Nevada (e.g., Arden and Apex) that a commercial entity might consider using for rail-to-truck transfers. Regardless of the modes of transportation that may be used in the future, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW. |
| 83-7 | Comment noted. Please refer to the responses to comments 83-1 and 83-4, which address transportation routing and risks associated with LLW transport.  |
| 83-8 | As noted in the response to comment 83-1, in consideration of the environmental analyses and stakeholder comments and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW.   |

**Commentor No. 83 (cont'd): Jacob L. Snow, General Manager  
Regional Transportation Commission of Southern Nevada**

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and the presence of shipments of radioactive waste would only compound these problems.

- b) **Northern Beltway Interchanges:** The intersections of the CC-215 Northern Beltway with US 95 and I-15 are not suited to an increase in heavy duty truck movements. Both are planned to eventually be converted to fully grade separated interchanges, but the timeline for these improvements is uncertain. Extensive road work and closures during construction would only add to the hazard of nuclear waste transport through these locations.
- c) **Boulder City:** The western approach to the Colorado River crossing on US 93 passes through both commercial and residential areas of Boulder City, and is unsuited to any increase in truck traffic. A bypass is planned but not funded at this time. In the interim, any use of this route for the transport of nuclear waste is strongly opposed by the RTC on behalf of the City of Boulder City.

If you have any questions regarding the comments submitted above, please contact Martyn James, Director of Planning, at (702) 676-1715 or by email at [jamesm@rtcsnv.com](mailto:jamesm@rtcsnv.com).

Sincerely,

  
JACOB L. SNOW  
GENERAL MANAGER

JLS: mg

cc: Fred Ohene, RTC of Southern Nevada,  
Martyn James, RTC of Southern Nevada.

83-8  
cont'd

*Response side of this page intentionally left blank.*

**Commentor No. 84: Virgil Moose, Tribal Chairperson**  
**Big Pine Paiute Tribe of the Owens Valley**



**BIG PINE PAIUTE TRIBE OF THE OWENS VALLEY**  
*Big Pine Paiute Indian Reservation*

December 2, 2011

Linda Cohn, SWEIS Document Manager  
NNSA Nevada Site Office  
U.S. Department of Energy  
PO Box 98518  
Las Vegas, NV 89193

RE: Comments on the *Site-Wide Environmental Impact Statement for the Continued Operation of the Department of Energy/National Nuclear Security Administration Nevada National Security Site and Off-Site Locations in the State of Nevada (NNSS SWEIS)*.

Dear Ms. Cohn:

The Big Pine Paiute Tribe of the Owens Valley (Tribe) welcomes the opportunity to comment on the future direction of the Nevada National Security Site (NNSS), formerly known as the Nevada Test Site. The Tribe endorses all the comments in the Site-Wide EIS (SWEIS) contributed by the American Indian Writers Subgroup of the Consolidated Group of Tribes and Organizations (CGTO). Danielle Gutierrez, Big Pine Tribal Council Secretary, is a member of the American Indian Writers Subgroup and contributed to their document within the SWEIS. The following comments are meant to supplement the American Indian Writers Subgroup document.

**Alternatives for the Nevada National Security Site (NNSS) needs to be expanded.**

The three alternatives described in the SWEIS are too narrow and do not provide a true alternative vision for the NNSS. The "No Action" Alternative is actually an Action Alternative which provides for current operations of the NNSS. A true "No Action" Alternative needs to be included which calls for the discontinuance of current operations with a focus on restoration and the co-management of the NNSS lands with the CGTO. Such an alternative would be the most environmentally preferable since it would not continue the practice of storing low level radioactive waste at this already contaminated area. Current Congressional and Presidential mandates change frequently and should not be used as an excuse to limit real, environmentally sound alternatives.

**Big Pine Tribal Office**  
P.O. Box 700 #25 South Main Street Big Pine, CA 93513  
Phone 760-938-2913 Fax 760-938-2942

- 84-1** DOE/NNSA appreciates and considers all comments and acknowledges the commentator's endorsement of the AIWS text.
- 84-2** CEQ "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR Parts 1500-1508) do require consideration of a no action alternative in an environmental impact statement (40 CFR 1502.14). However, the basis for the "no action" alternative is not provided in those regulations. In guidance subsequent to publication of 40 CFR Parts 1500-1508, CEQ recognizes two distinct interpretations of no action: (1) situations, such as the ongoing operation of the NNSS, where an agency activity is already being conducted and (2) situations where an agency is proposing a project that may or may not be initiated (51 FR 15618). In the case of the first interpretation of no action, CEQ indicated that: "...[N]o action' is 'no change' from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the 'no action' alternative may be thought of in terms of continuing with the present course of action until that action is changed." For this reason, the definition of "no action" in this NNSS SWEIS is compliant with all applicable regulations and guidance.

Discontinuing operations at the NNSS is an alternative that DOE/NNSA considered, but eliminated from further consideration, as discussed in Chapter 3, Section 3.6.1, of this NNSS SWEIS.

The three alternatives in this NNSS SWEIS describe the range of ongoing and potential activities and operational levels at the NNSS over the next 10 years.

**Commentor No. 84 (cont'd): Virgil Moose, Tribal Chairperson**  
**Big Pine Paiute Tribe of the Owens Valley**

The "Expanded Operations Alternative" and the "Reduced Operations Alternative" are too similar to be distinct Alternatives. The "Reduced Operations Alternative" should include the phasing out of storing low-level radioactive waste and not include large scale solar developments as part of its alternative.

**The "Environmental Consequences" and "Cumulative Impacts" sections need to be revised so that environmental impacts are clearly shown.**

The SWEIS is a large, disjointed document which doesn't clearly disclose the contaminated state of many areas of the NNSS and how continued operations will add to its environmental degradation. The Council on Environmental Quality's NEPA regulations state:

**Sec. 1502.8 Writing.**

Environmental impact statements shall be written in plain language and may use appropriate graphics so that decision makers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts.

The above regulation was not followed, and the SWEIS needs to be rewritten and reorganized in order to meet this requirement of the law.

Sincerely,

Virgil Moose  
Tribal Chairperson

**84-2**  
*cont'd*

**84-3**

While recognizing that this SWEIS must address a wide range of technical activities conducted across a large geographic area, DOE/NNSA has sought to describe proposed activities and their environmental effects in plain language and made use of graphics and tables to replace lengthy text descriptions.

DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

**Campaign A**

We need the time to understand the EIS document, the contamination already present at the Site, the kinds of activities proposed for the site, and the biological resources that are impacted there.

As you know, the draft EIS is over 1500 pages long and took 3 years to write. It is a complicated document with many proposed activities, on-site contamination already present and incompletely characterized, and a multitude of referenced documents to find and understand.

It's exciting to think that the site could host commercial solar development and technology research. But we need to understand much better the contamination threat and the biological resources there. Please give us the time to carefully consider this package.

**A-1**

- A-1** In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

**Campaign A (cont'd)**

**Individuals submitting this campaign:**

Patricia McRae	Linda Gregg	Anthony Parent
Baley	Chance Hannon	Gary A. Patton
William Belknap	Margery Hanson	Thereick Pearis
Bob	Juanita Heffington	L. Pelmeri
Howard Booth	Brendan Hughes	Kay Peters
Ann Brauer	Mary Humann	Larry Pringle
Garth Brown	Eleanor Clinton Issa	TC Reinertson
Michele Burkett	MJ Kammerer	Justice B.
Tom Burntte	KN	Rwechungura
L. Busch	Steve Kossack	Robert M. Samboy
John S. Cheney	Constance Kosuda	Marrjorie Sill
Warren Clark	Joshua Kruger	Malcolm Simpson
Chris Clarke	William Kuehl	Noel Smith
Brian and Rita	Ron Lew	Eugene Souza
Cohen	Megan Little	Ron Stauffer
Clarence Collins	Kim MacQuarrie	Jason Steadmon
Alison Conley	Elaine Manio	Mary Stoll
Tim Cooper	Peter Marozik	Rose Strickland
Laura Cunningham	Bruce Mason	Rosemary Swartz
Jennifer Edwards	Joan Maurer	Bob Tregilus
Brian Fadie	Curt McCormick	Judy Treichel
Jane Feldman	Leona Merrin	Vera Vann-Wilson
Alfredo Fernandez	Marija Minic	Rainer Vogel
Faith Franck	Thomas R.	Zach
Tina Frisch	Mirkovich	Julie Zimmerman
Robert Furtek	Keith Morrison	Carl Zimmerman
Evelyn Gajowski	Mayra Moya	Adrian Zupp
Presley Garrett	Robert Mulle	
Sally Greensill	Stephanie Myers	

## Campaign B

Comment:

I support the Expanded Operations Alternative including construction of new facilities and greater numbers of activities at NNSA.

B-1

**B-1** As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518  
Phone: 702-295-3521  
[USA.gov: The U.S. government's official web portal](http://USA.gov)

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**Campaign B (cont'd)**

**Individuals submitting this campaign:**

Paul Benigno  
Robert A. Conway  
James Cooksey  
Richard Crawford  
Wayne Dey  
Darren Enns  
Greg Esposito  
Donny Grayman  
James Halsey  
Byron K. Harvey  
Matt Lydon  
Jack Mallory  
Mark Mizzoni  
Jeremy Newmanw  
Frank O'Brien  
Anthony Rogers  
Eric Rubeck  
Cordell Sanders  
Warren Stender

## Campaign C

Thank you for the opportunity to participate in decision-making about the future of the Nevada Test Site, (called the Nevada National Security Site). Please note that the online form is confusing since it seemed to indicate that the deadline for comments was October 27 instead of the extended deadline of December 2, 2011. Also, not accepting e-mail comments will decrease submissions. The document is immense and organized in a complex way. I have relied on experts to inform my comments, and even they had difficulty with the Draft SWEIS. If others share some or all of the same language as me, it is vital that our comments not be treated as "spam."

Although there are many issues of importance, the following matter most to me.

1. The Department of Energy (DOE) should follow the positions of the Consolidated Group of Tribes and Organizations throughout the SWEIS document. Also, the DOE should clearly identify their Preferred Alternative in each instance.
2. The Draft SWEIS should be supplemented to provide necessary information that is missing:
  - Show current levels of Test Site contamination from past activities and map its distribution, in order to evaluate what "more" or "less" activity as defined in the SWEIS would really mean.
  - Provide Test Site budget figures to understand resource allocation, program impacts and priorities, both within the Test Site mission, and relative to our national budget as a whole.
  - Provide information on plans to address range fires and flash flooding to prevent off-site contamination.
3. Whenever possible, new lands or contaminated areas should not be disturbed. Where not toxic to employees and others, all activities, trainings and installations should be conducted on previously disturbed lands. Undamaged land and endangered species habitat should be protected. Existing contamination should not be exposed.
4. The Test Site should focus primarily on:
  - Restoring "safe" lands to public or tribal use once contaminant levels are thoroughly defined and mapped.
  - Restoring Native American access to sacred, cultural and resource sites. Tribal entities must be included in land and resource management, including historic and cultural resources.

C-1

C-2

C-3

C-4

**C-1** The DOE/NNSA NSO has a long-standing relationship with CGTO and reviews all recommendations submitted to the DOE/NNSA NSO for consideration and implementation whenever possible. The DOE/NNSA values the recommendations of CGTO and has incorporated CGTO comments that fall within the scope of the SWEIS and were evaluated during the NEPA analysis. The DOE/NNSA NSO generally tries to accommodate the recommendations of CGTO, with the exception of those that would require more budget than is available or those that might violate other policies or laws. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the draft SWEIS as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**C-2** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections. Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater. In addition, Chapter 5, Sections 5.1.6.1.1, 5.1.6.1.2, and 5.1.6.3, have been revised to more clearly describe the potential for offsite impacts on surface waters from ongoing and proposed DOE/NNSA activities at the NNSS.

DOE/NNSA believes that cost and budget data are not necessary or useful in understanding and evaluating the environmental impacts of the proposed actions addressed in this SWEIS. Future budgets for the NNSS and its various programs are uncertain, and the costs of some future activities have not been defined yet. Therefore, budget and cost data do not provide a meaningful method for defining and distinguishing between alternatives in this SWEIS. DOE/NNSA has presented a detailed description of the activities included under each alternative, as well as the potential environmental consequences associated with implementing those activities.

### Campaign C (cont'd)

<ul style="list-style-type: none"> <li>Increasing programs for small-scale energy research projects not possible elsewhere, solar power that minimizes water usage, and development of new de-centralized power sources that reduce the need for transmission lines.</li> </ul>	<b>C-5</b>	<p>Additional information has been added in Chapter 5, Section 5.1.12.2.4, to address the potential impacts from wildland fires.</p>
<ul style="list-style-type: none"> <li>* On-site energy and resource conservation and small scale solar installations on rooftops, over parking areas, and previously disturbed ground surfaces wherever possible.</li> </ul>	<b>C-6</b>	<p>To ensure a conservative analysis, the impact assessment in this <i>NNSS/SWEIS</i> assumes that all new facilities would be located in undisturbed areas, which would maximize the potential impacts. However, the DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.</p>
<ul style="list-style-type: none"> <li>* On-site environmental restoration of soils, groundwater, surface waterways, habitat and erosion control.</li> </ul>	<b>C-7</b>	
<ul style="list-style-type: none"> <li>* Low-level wastes from cleanup activities, not waste generated by new waste-producing projects. The Expanded Operations Alternative proposes new projects that will create more waste, and also increases the current waste production from on-going projects. The Test Site should not be seen as an unlimited waste dumping area.</li> </ul>	<b>C-8</b>	<p>DOE/NNSA works closely with those culturally affiliated tribes that participate with the CGTO to maintain effective interactions. As such, arrangements are made to address tribal requests for accessing sacred, cultural, and resource sites in accordance with Federal mandates. DOE ensures that access to contaminated areas on the NNSS have limited access or are restricted for the safety of all individuals.</p>
<p>5. The Test Site should avoid:</p> <ul style="list-style-type: none"> <li>Nuclear weapons programs - scale back until eliminated completely. The U.S. should adopt the long-term national security goal of a nuclear weapons-free future. Further environmental damage and federal expenditure on nuclear programs is inconsistent with that goal.</li> </ul>	<b>C-9</b>	<p>The commentor's preference for renewable energy research and development is noted. DOE/NNSA has included renewable energy-related activities as part of each alternative in this SWEIS.</p>
<ul style="list-style-type: none"> <li>Expanded weapons and explosives testing, the use of Depleted Uranium (DU) munitions, and release of dangerous contaminants from biological warfare experiments.</li> </ul>	<b>C-10</b>	<p>Environmental restoration of soils, groundwater, surface waterways, habitat, and erosion control is an important activity at the NNSS and is a primary component of each alternative analyzed in this <i>NNSS SWEIS</i>.</p>
<ul style="list-style-type: none"> <li>Geothermal energy production, a source of major water pollution as well as degradation of Native sacred sites.</li> </ul>	<b>C-11</b>	<p>Unreasonable transportation impacts on community health as well as small rural roads leading to the Test Site from over 15 million cubic feet of projected Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste.</p>
<p>6. The scope of the Draft SWEIS was too narrow. The range of options being considered (reduced operations, no action, and expanded operations) excluded the option of eliminating most activity there, unlike the 1996 EIS process which at least had closing the Nevada Test Site as an option.</p>	<b>C-7</b>	<p>DOE/NNSA does not consider the NNSS an "unlimited waste dumping area" and does not intend that it will be the sole recipient of offsite-generated DOE waste. Disposal of LLW and MLLW at NNSS is in accordance with programmatic decisions reached pursuant <i>WM PEIS</i> (DOE/EIS-0200). In accordance with the <i>WM PEIS</i> ROD (65 FR 10061) issued on February 25, 2000, DOE decided to continue onsite disposal of LLW at NNSS and certain other DOE sites and to establish regional disposal capacity at the NNSS and the Hanford Site. Specifically, in addition to disposing their own LLW, the NNSS and the Hanford Site would dispose LLW generated at other DOE sites, provided the waste met their respective WAC. DOE decided to treat MLLW at a number of DOE sites, with disposal at either the NNSS or the Hanford</p>

### Campaign C (cont'd)

Site. Neither decision precludes DOE's use of commercial disposal facilities consistent with DOE Orders and policy. Only a small percentage of the LLW and MLLW generated by DOE is disposed of at the NNSS. Approximately 90 percent of DOE's LLW and MLLW is disposed of at the sites where they are generated. About half of the remaining quantities are disposed at commercial facilities.

The increase in the volume of LLW/MLLW between the No Action and Expanded Operations Alternatives is largely due to sources other than new NNSS projects or increased levels of operation at the NNSS. As shown in Chapter 5, Table 5-49, the volume of LLW/MLLW generated at NNSS increases from about 1 million cubic feet under the No Action Alternative to 1.3 million cubic feet under the Expanded Operations Alternative. The large difference in waste disposal volumes between the two alternatives is from an assumed extensive removal of contaminated soil from cleanup activities at Nevada locations outside NNSS, with shipment to the NNSS for disposal, and to increased projections of wastes that may be shipped to NNSS from authorized out-of-state generators. The text in Chapter 3, Section 3.2.2.1, was revised to more clearly indicate the sources of the larger quantity of waste that would be disposed under the Expanded Operations Alternative.

As addressed in Chapter 5, Section 5.1.11.2.1, of this *NNSS SWEIS*, there may be other options for addressing the soil contamination other than removing it and shipping it to the NNSS for disposal. In accordance with agreements between DOE and other Federal and state agencies, these options may include stabilization in place or use of environmental restoration disposal sites established nearer the points of contamination. The projections of wastes from out-of-state sources are considered upper-bound estimates, and their generation would depend on programmatic and regulatory decisions, funding, and other considerations that are outside the scope of this *NNSS SWEIS*. DOE Order 435.1, *Radioactive Waste Management*, requires that all DOE radioactive waste generators implement a Waste Minimization and Pollution Prevention Program to minimize the generation of waste. Although, for purposes of conservative NEPA analysis, it was assumed that the out-of-state wastes would all be disposed at NNSS, waste managers at DOE sites proactively seek to use commercial disposal facilities if the facilities are compliant, cost-effective, and have WAC under which they are able to accept the DOE waste.

- C-8** DOE/NNSA acknowledges the preference of the commentor that DOE/NNSA scale back and eliminate all nuclear weapons programs; however, tests and experiments, including many using conventional explosives, are necessary to continue to ensure the safety and reliability of the remaining nuclear weapons in the Nation's stockpile and

### Campaign C (cont'd)

to support the current policies of the United States. The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this *NNSS SWEIS*. Biological warfare agents are not used or released at the NNSS.

- C-9** DOE/NNSA notes the commentor's preference for avoidance of the geothermal energy production.
- C-10** DOE/NNSA is committed to reducing impacts associated with LLW/MLLW transportation to the NNSS. The transportation of radioactive waste typically would occur on Federal and state highways when required. To mitigate impacts on affected Nevada counties, a grant program was established. This program is funded by DOE and administrated by the State of Nevada. The program aids the affected counties in preparing for all kinds of emergencies.
- C-11** In its *1996 NTS EIS* (DOE EIS-0243, August 1996), DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In the *1996 NTS EIS*, DOE also considered discontinuing all defense-related and most Work for Others Program activities at the NNSS (Alternate Use of Withdrawn Lands Alternative). In its December 9, 1996, *NTS EIS ROD* (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities other than LLW/MLLW management, which was to continue under the Continue Current Operations Alternative. In addition, in this same ROD, DOE decided to implement the public education elements of the Alternative Use of Withdrawn Lands Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Because discontinuing operations at the NNSS was previously considered and DOE decided in 1996 to continue to operate the NNSS at an expanded level, in addition to the continuing need for the NNSS for National Security/Defense Mission programs, both closing the NNSS and discontinuing National Security/Defense Mission programs, projects, and activities are considered unreasonable alternatives at this time.

**Campaign C (cont'd)**

**Individuals submitting this campaign:**

Joni Arends  
Jo Ann Bingham  
Richard Calabro  
Rev. James Conn  
Adrienne Fong  
Liliias Gorden  
Lorraine Henry  
Carole Kartunen  
Shelley Lynn  
Raymond Medlin  
C. E. Pretzer  
Mark Pringle  
Kennon B. Raines  
Rosalie G. Riegler  
Cynthia Shiroky  
Joanne Skirving  
Rita Sloan  
Phoebe Anne  
Thomas Sorgen  
Midgene Spatz  
April Tatro-Medlin  
Kathleen Thomas  
Natasha Tonres  
Don Timmerman  
Anne Welsh

**Campaign C (cont'd)****Individuals submitting "Campaign C" with additional comments**

- Explosions and exposure to depleted Uranium (DU), and release of dangerous contaminants from biological warfare experiments.
- Geothermal energy production, a source of major water pollution as well as degradation of Native sacred sites.
- Unreasonable transportation impacts on community health as well as small rural roads leading to the Test Site from over 15 million cubic feet of projected Low-Level Waste and 900,000 cubic feet of Mixed Low-Level Waste.

Sincerely,

Name: Kenner Ba Raines

Address: 1795 7th Orange Dr #402 Hollywood CA 90028

I have visited the Nevada Test Site twice with members of my church. Cancer rates are high in all areas downwind of the site. Remember Fukushima!! Respect Tribal Wisdom

C1-1

C1-2

C1-1 Comment noted. Chapter 4, Section 4.1.12.4, includes a description of studies regarding high doses and the incidence of latent cancers as a result of past exposures from aboveground nuclear testing. It should be noted that aboveground nuclear testing at NNSS ended in 1962 and all nuclear weapons testing ended in 1992.

C1-2 Comment noted.

### Campaign C (cont'd)

#### Individuals submitting "Campaign C" with additional comments

**NEVADA**

Please print clearly

I concur with the comments on the reverse side which were prepared by someone with greater knowledge of these issues than I. Of special concern is the upholding of the Western Shoshone Treaty of Ruby Valley (1863) and more thorough groundwater assessment. Safe groundwater standards must include the needs of all living species at the test site. Nuclear weapons programs must be scaled back until eliminated completely. I oppose the transportation and storage of nuclear waste from other sites.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Midgene Spatz  
 Organization:  
 Mailing Address: 513 Red Canvas Place  
 Las Vegas NV 89144-1334

**C2-1**  
**C2-2**  
**C2-3**  
**C2-4**

- C2-1** The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.
- C2-2** As discussed in the Summary, Section S.4.3, DOE/NNSA continues to develop a regional three-dimensional groundwater computer model to improve the understanding of where radiological contamination exists in the groundwater, predict where contamination is moving, and define how far it will migrate. The model also would form the basis for developing individualized models for each major area where underground testing was conducted.
- DOE/NNSA abides by all applicable groundwater regulations and standards.
- C2-3** The United States' possession of nuclear weapons, the number of weapons in the stockpile, and the budget necessary to support the stockpile is a matter of national policy set by the President and Congress. Decisions on these matters are outside the scope of this NNSS SWEIS.
- C2-4** DOE/NNSA notes the commentator's opposition to the transportation of offsite-generated radioactive waste to the NNSS.

**Campaign C (cont'd)****Individuals submitting "Campaign C" with additional comments**

THE STATE  
OF NEVADA

Please print clearly

I AM A 50 YEAR RESIDENT OF LAS VEGAS. Raised 3 children here And as Long ago as I can remember I have been protesting the programs at the test site. The test site issues ARE Complex. The points made on the front of this document are well studied & documented. To choose one point over another is difficult. To get the process started The DOE should follow the positions of SWEIS as well as to provide necessary information that is missing. As issues are resolved then problems @ the test site should be addressed.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.  
Name: Jo Ann Bingham  
Organization:  
Mailing Address: 8028 Maddingley Ave  
Las Vegas, NV 89117

C3-1

C3-1 Comment noted.

### **Campaign C (cont'd)**

#### **Individuals submitting "Campaign C" with additional comments**

<b>NEVADA NATIONAL SECURITY TEST SITE AND OFF-SITE LOCATIONS IN THE STATE OF NEVADA</b>	
Please print clearly	
<p>I have read the SWEIS document and the aspects of it that most concern me are the ones that refer to the Native Americans and the reference to test site contamination. I feel that we have never considered the treaties and sacred sites of the Paiute and Shoshone people.</p> <p>I also deeply feel that any program that involves further contamination of the test site should not be permitted. We should also map the current status of contamination and not continue "more" or "less" levels of activity until the extent of contamination is revealed.</p> <p>As a citizen and a voter and have made my views known as a protester at the test site in earlier years. Please do no more harm to our beautiful desert.</p>	
<p>All commenters will receive a Summary and CD of the Final NNSS SWEIS.</p> <p>Name: <u>Lillian Golden</u></p> <p>Organization:</p> <p>Mailing Address: <u>10404 Skypine Dr.</u></p>	

**C4-1**

- C4-1** DOE/NNSA appreciates the comments related to American Indians and test site contamination. This *N NSS SWEIS* contains tribal perspectives throughout the document that were developed by CGTO through the DOE/NNSA NSO's American Indian Consultation Program. This program has a long-standing relationship with 16 culturally affiliated tribes and is committed to monitoring and protecting the important cultural sites identified by CGTO that are located on the N NSS.

**C4-2**

- C4-2** DOE/NNSA acknowledges the commentator's concern. DOE/NNSA must continue the National Security/Defense Mission at the N NSS as directed by Congress and the President. However, DOE/NNSA complies with all statutes, regulations, and other requirements applicable to its activities, which reduces, if not eliminates further contamination. As stated in Chapter 7, Section 7.14, of this *N NSS SWEIS*, the DOE/NNSA operations are evaluated to determine whether they have an environmental aspect and to implement measures to minimize or eliminate any potential impacts. Operations are evaluated by performing Hazard Assessments, preparing Health and Safety Plans and Execution Plans, and preparing and reviewing NEPA documents. These documents require that mitigation actions be identified to minimize the risk of adverse impacts.

**C4-3**

- C4-3** DOE/NNSA has revised this *Final N NSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the N NSS and TTR. Chapter 4, Sections 4.1.5.4.1 (N NSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

**C4-4**

- Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the N NSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the N NSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

**C4-4**

- C4-4** Activities at the N NSS are designed to minimize disturbance to the environment. When disturbance to the environment cannot be avoided, mitigation measures are implemented to minimize that disturbance. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

**Campaign C (cont'd)****Individuals submitting "Campaign C" with additional comments**

of NEVADA

Please print clearly

I have been a resident of Nevada since 1961. I am very concerned about the contents of the SWEIS. The test site should focus primarily on onsite environmental restoration of soils, ground-water, surface waterways, habitat and erosion control, in my opinion. The test site ought to increase programs for small-scale research projects such as solar power that minimizes water usage. Whenever possible, new lands or contaminated areas should not be disturbed. The test site should not be known as an unlimited waste dumping area.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Cynthia Shiroky

Organization:

Mailing Address: 5025 W. Agate AV  
L.V. NV 89139

C5-1

- C5-1 As stated in Chapter 3, Section 3.4, of this NNSS SWEIS, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

C5-2

- One of DOE/NNSA's primary missions in the state of Nevada is to characterize, remediate, and/or monitor areas contaminated by nuclear weapons testing and other activities that have occurred at the NNSS and TTR. As addressed in Chapter 3, Sections 3.1.2.2, 3.2.2.2, and 3.2.3.2, DOE/NNSA would continue environmental restoration activities under all alternatives considered in this NNSS SWEIS in accordance with the FFACO and in consultation with NDEP.

C5-3

- C5-2 Under each of the alternatives in this NNSS SWEIS, DOE/NNSA considers potential renewable energy projects of varying types and sizes. All of the alternatives include potential development of a commercial solar power generation project, although there is not yet a specific proposal for such a facility. The Expanded Operations Alternative includes consideration for a potential enhanced geothermal energy demonstration, as well as a 5-megawatt photovoltaic solar energy facility at the NNSS. In addition, under all of the alternatives, DOE/NNSA would continue to pursue energy efficiency and conservation.

C5-3

- C5-3 The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

C5-4

- C5-4 The commentator's opposition to waste management activities is noted. While waste management activities are an important mission activity at the NNSS, waste disposal is confined to a relatively small area of the NNSS and is sited in previously disturbed areas.

**Campaign C (cont'd)**

**Individuals submitting "Campaign C" with additional comments**

OFFICE OF THE STATE  
OF NEVADA

Please print clearly

a lifelong resident of Las Vegas, NV.  
I am dismayed that such activity  
continues. Reading through the  
numbered items on reverse side of  
sheet - # 2 section stands out to me.  
Addressing THOSE issues are vital to  
disclosure and for an informed citizenry  
to know what is being done to their  
environment. The 3 stems / offerings  
are VERY important to be addressed  
and brought out into the open.

All commenters will receive a Summary and CD of the Final NNSS SWEIS.

Name: Anne Welsh

Organization:

Mailing Address: 4405 S. Sandhill Rd  
Las Vegas, NV 89121

C6-1

C6-1 Comment noted.

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1  
2  
3       THIS VERBATIM TRANSCRIPT CONSTITUTES  
4       THE OFFICIAL RECORD OF THE

5  
6  
7  
8       SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
9       PUBLIC HEARING

10  
11                   Held at the

12  
13                   CASHMAN CENTER  
14                   850 Las Vegas Boulevard North  
15                   Las Vegas, Nevada 89101

16                   *Response side of this page intentionally left blank.*

17  
18                   On  
19                   Tuesday, September 20, 2011

20                   Beginning at  
21                   6:30 p.m.

22  
23  
24       Reported by: JILL JACOBY  
25                   Scopeproof

## Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

1                   TUESDAY, SEPTEMBER 20, 2011, 6:30 P.M.

2                   CASHMAN CENTER, LAS VEGAS, NEVADA

3  
4                 MS. LOWE: Good evening. I'd like to welcome you to this formal public hearing of  
5                 the Draft Site-wide Environmental Impact Statement for the continued operation of the  
6                 Department of Energy, National Nuclear Security Administration, Nevada National Security  
7                 Site, an offsite location in the state of Nevada.

8                 Today is Tuesday, September 20, 2011, and this hearing is being convened at  
9                 Cashman Center, located at 850 Las Vegas Boulevard North in Las Vegas, Nevada. And it  
10               is now 6:30.

11               My name is a Wendy Lowe, and I have been asked by the Nevada Site Office of the  
12               National Nuclear Security Administration to serve as the moderator for tonight's public  
13               hearing. The purpose of this hearing is to provide you, the interested members of the public,  
14               with an opportunity to comment on the Draft Site-wide Environmental Impact Statement.

15               Because this is a formal public hearing, I would like to request that you silence your  
16               mobile telephones and help me in keeping this room as quiet as possible so that everyone can  
17               hear those people that are here to comment.

18               There are restrooms and water fountains right out the door here. And if we have to  
19               leave the building for an emergency for some reason, we want to go downstairs and then out  
20               the southwest corner to the parking lot.

21               Before we get too far along, I'd like to introduce Linda Cohn, who is here on my left,  
22               she's the hearing officer for tonight's hearing, and she is here to officially receive your  
23               comments on behalf of the federal government.

24               Tonight's public hearing is one of five that are scheduled over a two-week period in  
25               Las Vegas, Pahrump, Tonopah, and Carson City, Nevada, and St. George, Utah. All of these

*Response side of this page intentionally left blank.*

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1 public hearings are being conducted in the same manner. If you just arrived, I would like to  
2 point out that there's an open house in Room 205. You go out the door and down the  
3 hallway where there are a number of informational posters and subject matter experts that are  
4 available if you have questions that you'd like to ask about the Site-wide Environmental  
5 Impact Statement. There's also some informational material handouts. The open house will  
6 be available until the hearing ends this evening.

7 In a few minutes I'll be going over the procedures that we'll follow when we're ready  
8 to take your comments in this hearing room. But before we do that, I would like to show a  
9 short video about the Draft Site-wide Environmental Impact Statement.

10 [Video shown.]

11 MS. LOWE: The front row is still open if some of you in the back would like to  
12 come up.

13 As explained in the video, your comments in this hearing will be considered by the  
14 National Nuclear Site Security Administration as it finalizes the Site-wide Environmental  
15 Impact Statement to support decisions about future operations at the Nevada National  
16 Security site and the related offsite locations. In particular, you're invited to make comments  
17 and suggestions about what you would like the agency to consider as it prepares the final  
18 environmental analysis.

19 As the moderator of this meeting, it's my job to make sure that the hearing is  
20 conducted in a respectful manner and that everyone that's interested in providing comments  
21 has a fair opportunity to do so.

22 To allow as much time as possible for public comments, Linda Cohn and the other  
23 federal staff and the contractors who are here tonight will not be responding to comments  
24 and they will not be answering questions during the hearing. If you do have questions, I'd  
25 like to urge you to go across the hall to the open house room where the subject matter experts

*Response side of this page intentionally left blank.*

### Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

1 are standing by. But please be aware that if you have conversations in the open house room,  
2 they will not be recorded and they will not be included in the formal record of this public  
3 hearing. So if you have something important you want to say, say it in here.

4 Now I would like to review the procedures I'll be following for taking oral comments.  
5 If you want to make oral comments for the record tonight, please sign up to do so at the  
6 registration table in the lobby. I will call people who have registered to speak on a first-  
7 come, first-served basis. We will continue to accept speaker registration cards until 8 p.m.,  
8 as was advertised in the announcement for this hearing. I wanted to show you, this is what  
9 the speaker card looks like, so if you've signed one of these, you've signed up to speak.

10 Please be aware that providing oral comments from the podium is only one of the  
11 ways that you can provide comments on the Draft Environmental Impact Statement. Some  
12 of you may have prepared written comments and others of you may want to fill out a public  
13 comment form. I understand two of you already decided not to provide comments and you  
14 filled out a comment form, and that's fine. This is what the comment form looks like. And  
15 you're welcome to leave any written comments that you've already written down or comment  
16 forms here tonight. There's a comment box on the registration table and you're welcome to  
17 do that.

18 Let's see, you can also submit comments by mail or by fax, through telephone calls  
19 through a toll-free telephone line, or via the Internet. And the information on all the different  
20 ways to submit comments is available on a handout that looks like this. It's got all the  
21 information you need for submitting comments later if you want to think about things and  
22 then send them in later.

23 All written and oral comments received during the public comment period, which will  
24 end on Thursday, October 27, 2011, will be given equal consideration. So you don't have to  
25 comment tonight for it to be on the record.

*Response side of this page intentionally left blank.*

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1        In order to allow as many of you as possible to make comments, I will be asking each  
2 commenter to conclude his or her remarks within five minutes. No one will be allowed to  
3 yield their time to or share their time with another person. Carrie Stewart, who is here in  
4 front of the room, will be assisting by serving as a timekeeper tonight. And she has cards to  
5 hold up to let you know how you're doing on your time. And I'd like to urge you if you have  
6 a lot to say, keep your eye on Carrie because we want to make sure that you have the  
7 opportunity to get to your most important points before your time runs out.

8        If you have not concluded your remarks by the end of your time, I will ask you to stop  
9 and then I will invite the next person to come up to the podium. Just remember that the  
10 reason I'm doing that is to try to be fair to everyone else in the room that has registered to  
11 speak.

12        When I call on you to provide your comment, please come forward to the podium and  
13 begin by stating and spelling your name. Please tell us the name of any agency or  
14 organization that you're representing tonight. Please speak clearly and into the microphone.  
15 Jill Jacoby, who is at the other end of the table here, is serving as our court reporter this  
16 evening and it is her job to provide a complete transcription of everything that's said. We  
17 want to make sure that she's able to capture your comments accurately and that's why we're  
18 asking you to use the microphone. I have asked her to let me know if at any point she's  
19 having trouble hearing or understanding you. So we might ask you to slow down or  
20 something like that. The transcription of this hearing will be included as an appendix to the  
21 final Environmental Impact Statement.

22        If you have signed up for the mailing list, then you will be notified that the final  
23 Site-wide Environmental Impact Statement has been completed and is available. If you  
24 haven't signed up for the mailing list, it's not too late. You can do that at the registration  
25 table tonight.

*Response side of this page intentionally left blank.*

## Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

1        So one final thought that I'd like to share with you. I know a lot of you in the room  
2 have strong opinions about the program. Some of you oppose it and some of you may  
3 support it. And the point of a public comment hearing is to give each of you an opportunity  
4 to make your comments and suggestions to the agency about what you would like for them  
5 to consider when they're preparing the final Site-wide Environmental Impact Statement. So  
6 regardless of your position on the program, I would appreciate your help in making sure that  
7 everyone who speaks tonight is treated respectfully.

8        So with that, I will now begin calling names. What I'm going to try to remember to  
9 do is call three at a time so you know when your turn is almost coming up.

10      So the first person I have is Gary Hollis. And Gary will be followed by Matt Lydon,  
11 who will be followed by Eric Vanderleest. And I apologize in advance if I pronounced  
12 something wrong.

13      MR. HOLLIS: Gary Hollis, H-O-L-L-I-S.

14      I'm a commissioner, Nye County Board of Commissioners, I'm a chairman. We  
15 appreciate the opportunity to work with you as a cooperating agency. We have some  
16 different views, but you may have included those views in the draft. However, presenting  
17 our views without action to recognize and mitigate past and present impacts is not enough.

18      Like many citizens of Nye County, I worked at Nevada Test Site and supported the  
19 United States through the Cold War years. My family and friends believe the support we  
20 gave to the federal government was worthwhile and we have no regrets. However, it is time  
21 now for the DOE and the rest of the federal government to recognize the impact they have  
22 caused and provide mitigation to Nye County.

23      Resources have been taken from us and DOE should do everything in its power to  
24 return those resources to Nye County. Not allowing Nye County access to water on the  
25 Nevada National Security Site is a big deal to us. Our water rights permit request for water

-6-

2-405

201-1

201-1     When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right to use groundwater at the NNSS to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation.

As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and NPS, have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

DOE/NNSA involves Nye County (the commentor) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For example, Nye County, through its liaison with the Nevada Site Specific Advisory Board, regularly interacts with DOE/NSSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

Nonetheless, DOE/NNSA accepts and evaluates unsolicited proposals to determine whether to fund various activities such as the hydrogeological investigations suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential

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1 on the site have all been denied because of protests by the federal agencies, including DOE  
2 and DOE's refusal to allow access to water. DOE should closely coordinate all groundwater  
3 studies with our scientists and provide funding for Nye County to conduct our own  
4 groundwater science studies at the Nevada National Security Site.

5 The ongoing impact of denying access to the County is a huge -- it's huge. And no  
6 compensation has been made for our loss of access of that water. This is a desert and access  
7 to water is a major issue for our residents. We understand some water on the Nevada  
8 National Security Site is contaminated. However, we believe and DOE has indicated that the  
9 vast majority of the water is perfectly safe for public use. The Nevada Assembly Joint  
10 Resolution No. 5, dated June 16, 2011, documents our concerns. The joint resolution urges  
11 the federal government to engage in discussions with Nye County regarding the mitigation  
12 and containment of water contamination in Nevada which resulted from nuclear testing and  
13 storage activities that were conducted by the federal government at the Nevada National  
14 Security Site and to reestablishment of any water contaminated because of those activities.

15 Our bottom line, DOE should take steps to mitigate this specific impact. One  
16 practical solution would be to provide the County reasonable access to sustainable clean  
17 water resources that exists at the Nevada National Security Site.

18 Stop protesting our water rights requests. We appreciate the work you have done and  
19 look forward to working with you to resolve our issues. And we'll provide to you a formal --  
20 more formal detailed comments in the future.

21 Thank you very much.

22 MS. COHN: Thank you.

23 MS. LOWE: Thank you, Mr. Hollis.

24 Matt Lydon will be next, followed by Eric Vanderleest, and then Ian Zabarte.

25 Is Matt Lydon in the room? Okay.

*201-1  
cont'd*

historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NSSA, under the NSSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing and monitoring locations and resources that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

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1 How about Eric Vanderleest?

2 MR. VANDERLEEST: Yes.

3 MS. LOWE: Okay. Mr. Vanderleest.

4 MR. VANDERLEEST: Good evening. I'm Eric Vanderleest and I'm representing  
5 myself as a private citizen who fortunately has been involved in the renewable energy  
6 industry strongly in the last five years as a photovoltaic power plant operator, commissioning  
7 manager, and startup director. I've been fortunate enough to maintain the photovoltaic power  
8 plant at Nellis Air Force Base for the last four years. I was also dispatched to Florida to  
9 develop a 40-megawatt, 135 KV grid-tied photovoltaic plant for power and light. I wanted  
10 to commend the report for including renewable energy projects in all the alternative options  
11 present there. I've been associated with the renewable energy industry for almost 30 years  
12 and feel fortunate to find myself in this position right now to be able to speak from  
13 experience long-term and both recently.

14 I believe in the photovoltaic power plant as being a strong alternative for renewable  
15 energy projects to be considered going forward for a number of reasons. One would be solar  
16 PV that has a very low if not non water consumption factor to it. Really have any needs for  
17 water to run a solar photovoltaic plant to generate electricity except for the standard domestic  
18 features, bathrooms and water, drinking water, washing hands.

19 We found that in this climate, photovoltaic modules have very, very little retention to  
20 any soil or dust because there are no climatic conditions being stirred to adhere that dust to  
21 the photovoltaic modules so there's no cleaning required on a photovoltaic plant.

22 Second, the PV is extremely safe for any employees, visitors, anybody associated  
23 with a photovoltaic power plant. It's a very benign technology. There's no pressure, there's  
24 no heat, there's no steam, it's a very benign operation out there.

25 At this point, we're finding that the most densely loaded photovoltaic power plant can

202-1

202-1

The commentor's preference for the establishment of photovoltaic power systems at the NNSS is noted. For the purposes of analysis, DOE/NNSA selected a plant model based on a BLM EIS for a project proposed near the NNSS: the *Final Environmental Impact Statement for the Amargosa Farm Road Solar Energy Project* (BLM 2010). This model uses CSP technology. While other types of power generation technologies could result in lower levels of impacts on some environmental resources, DOE/NNSA chose to use a conservative model for purposes of analysis that provided an upper-end level of resource impacts. It is possible that a private applicant would propose photovoltaic or another plant technology, rather than CSP.

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1 deliver 1 megawatt per every four acres of land. And that's about the cutting edge of  
2 industry technology right now, 1 megawatt per 4 acres of land.

3 Photovoltaic power plants right now, the power plant at Nellis was installed in eight  
4 months, over 130 acres, and was up and running within 13 months from the first day the  
5 material hit the ground. So it's a very low-impact installation. But it's already on the  
6 surface, these systems are ballasted, they actually float on the surface of the earth, there's no  
7 trenching involved, no deep foundations. They do a wonderful job at dispersing wind across  
8 the surface of the earth. They displace that wind in multiple eddies and currents that actual  
9 reduce the amount of dust that can be carried off the surface of the earth. I've seen that in  
10 live conditions. I was fortunate I was out in southern Colorado and this massive dust front  
11 came across a megawatt plant I was maintaining out there and the dust plume completely  
12 dissipated over the power plant. And I've seen this time and again at Nellis as well and I  
13 believe that's a very strong ploy for a PV plant.

14 Excuse me just for a second, I was just putting my notes together, not quite ready to  
15 come up.

16 I'd like to also maybe comment for a minute on the quality of the power delivered by  
17 a PV plant. It's been my experience up to this point that our power plant at Nellis Air Force  
18 Base that in four years of operation, two very critical electrical user, U.S. military and  
19 Veteran's Administration Hospital, they already did that. Not a single incident of power  
20 quality issue from what comes out of our power plant. No disruptions of power, no  
21 harmonics, no power frequencies, nothing like that to a very critical user being the U.S.  
22 military.

23 For those reasons I believe the photovoltaic renewable energy projects deserves a  
24 really strong consideration and perhaps even additional modeling in any projects going  
25 forward.

202-1  
*cont'd*

*Response side of this page intentionally left blank.*

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1 And I thank you all for your time.

2 MS. COHN: Thank you.

3 MS. LOWE: Thank you. If you did not get through all your prepared remarks, you  
4 are welcome to submit them.

5 MR. VANDERLEEST: Yeah, I understand.

6 MS. LOWE: Okay. Great. Okay. Thank you.

7 Okay. Ian Zabarte is next. He'll be followed Peter Ediger, hope I'm saying that right,  
8 and then Jim Haber. Thank you.

9 MR. ZABARTE: Good evening, my name is Ian Zabarte, that's I-A-N; last name's  
10 Zabarte, Z, as in zebra; A; B, as in boy; A-R-T-E.

11 On behalf of my chief, Raymond Gallo, I want to thank you for this opportunity to  
12 present these comments on behalf of the government of the Newe Sogobia.

13 I am the principal man for foreign affairs of the government of Newe Sogobia, the  
14 land of people that has existed in the Great Basin for thousands of years. Newe Sogobia is  
15 Shoshone language which refers to Newe, the people, and Sogobia, our land of Mother  
16 Earth. And it's the embodiment of the Western Shoshone people with the land.

17 The purpose of these comments by the government of Newe Sogobia is to provide the  
18 United States Department of Energy National Nuclear Security Administration direction in  
19 interpretation of the law relative to the mission established by the United States Congress for  
20 continued management and operation of the Nevada National Security Site formerly known  
21 as the Nevada Test Site and other United States Department of Energy National Nuclear  
22 Security Administration-managed sites in Nevada, including the Tonopah Test Range and  
23 environmental restoration areas on the United States Air Force -- United States Air Force  
24 Nevada Testing and Training Range.

25 In 1863, the United States government was engaged in a civil war. The government

203-1

203-1

The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

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1 of Newe Sogobia allied itself with the United States government to allow rites of passage  
2 across Newe Sogobia to facilitate the transportation of gold east. The Treaty of Ruby  
3 Valley, 18 Statute 689, was an instrument of international law employed as a purchase  
4 agreement for the rights sought by the United States government that were owned by Newe  
5 Sogobia. In Article 7 of the Treaty of Ruby Valley, the United States acknowledged and  
6 agreed to pay for the interests owned by the government of Newe Sogobia. No other rights,  
7 title, or interests were sold or acknowledged to be transferred to the United States  
8 government. Only one payment was received that we are aware of and that was the one  
9 which was stated in the Treaty of Ruby Valley itself.

10       Newe Sogobia does not consent to the inclusion of any part of Newe Sogobia into the  
11 boundaries or jurisdiction of any state or territory. Attached to these comments are a map  
12 and 28 pages listing of Western Shoshone lands by state, meridian, township, and range for  
13 reference purposes only and do not imply that the lands are actually a part of any state or  
14 territory that conforms to the boundaries of Article 5 of the Treaty of Ruby Valley. Any  
15 claim or right, title, or interest that does not conform to the supreme law of the land vis-a-vis  
16 the treaty, are not legitimate and are a violation of the organic law of the states involved.

17       The Western Shoshone people have a long history of experience to adverse  
18 consequences as a result of the United States aboveground and underground nuclear testing  
19 and other nuclear and nonnuclear activities conducted in support of United States national  
20 security objectives. It is the unfortunate experience of the Western Shoshone people that the  
21 very measures put into place to safeguard America subsequently mistreat Western Shoshone  
22 land and people. No single overt act or collective acts encompasses the impact to Newe  
23 Sogobia. The cumulative effect can best be characterized as negligence. The United States  
24 has engaged in a systematic process intended to dismantle the living culture of the people of  
25 Newe Sogobia. The use of such methods in policy and practice with a disproportionate

**203-1  
cont'd**

**203-2**

**203-2** Please see the response to comment 203-1 above.

**203-3**

**203-3** DOE/NNSA disagrees that the U.S. Government is engaged in a systematic process to dismantle the culture of the Western Shoshone. Furthermore, through the DOE/NNSA NSO's American Indian Consultation Program, the government promotes continued efforts to study and document Indian traditions and cultures. Requests to access the NNSS for these studies and to conduct traditional ceremonies are accommodated whenever possible while maintaining the safety of the Indians while on site.

**203-3**

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1 burden borne by the Western Shoshone people is a serious violation of international  
2 humanitarian law and the Proxmire Act of 1987. The government of Newe Sogobia seeks to  
3 end, correct, and prevent the continued maltreatment of Newe Sogobia and the Western  
4 Shoshone people with the United States in a dialog on the current Draft Site-wide  
5 Environmental Impact Statement for the continued operation of the Department of Energy,  
6 National Nuclear Security Administration Nevada Nuclear Security Site proposal to that end.

7 We will also provide additional written comments. Copies of my comments will be  
8 available in the back of the room.

9 Thank you.

10 MS. COHN: Thank you.

11 MS. LOWE: Thank you very much. Peter Ediger will be followed by Jim Haber,  
12 who will be followed by Molly Johnson.

13 MR. EDIGER: Good evening, my name is Peter Ediger; P-E-T-E-R, E-D-I-G-E-R.

14 Environmental Impact Review fails to address one very important question and that is  
15 the question of the reality of the erosion of public trust. The activity and the operation at the  
16 Nevada Test Site, as it's formerly known and now named Nevada Nuclear Security Site, has  
17 been eroding public trust through the years. Nothing is said about that reality in this report.  
18 Public trust is a foundational cornerstone of the democracy. Without public trust, democracy  
19 fails. Public trust and having full disclosure of all that has been done and is being done at  
20 this site has been eroding beginning with the violation of the Treaty of Ruby Valley which  
21 our brother just alluded. From that tragic erosion of trust and confidence to the continuing  
22 minimization and denial of responsibility for the negative health impact on many people  
23 through the years, public trust keeps being eroded. That record is dismal at best and tragic at  
24 worst.

25 The latest review not only omits any reference to or evaluation of this reality but adds

203-3  
cont'd

204-1

204-1 Although the erosion of public trust in its government is a matter of very serious concern, it is not an area that is appropriate for consideration in this *NNSS SWEIS*. DOE/NNSA is aware that mistrust could arise regarding its mission activities and has taken numerous steps to improve the transparency of its activities; however, the fact remains that some activities must be considered classified for reasons of national security. In this *NNSS SWEIS*, DOE/NNSA has addressed impacts that would occur as the result of all activities at the NNSS, including those for which specific details may not be disclosed. DOE/NNSA also recognizes that there are many questions and concerns among some members of the public regarding various issues. To the extent reasonable within the context of a NEPA document, DOE/NNSA has provided a comprehensive and detailed description of the NNSS and other DOE/NNSA sites in Nevada, the activities that are or proposed to be conducted at those sites, and the potential environmental impacts that may be expected. In response to requests for additional information on specific topics, DOE/NNSA has provided revised text and new figures in this *Final NNSS SWEIS*, particularly as it applies to existing radiological contamination of soil and groundwater (see Chapter 4, Sections 4.1.5.4.1 and 4.1.6.2, respectively). In addition, to give reviewers more time to review and provide comments on the *Draft NNSS SWEIS*, DOE/NNSA extended the comment period from 90 to 126 days.

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1 further to the concern giving very brief time, not nearly enough time for preparation and  
2 expression of public comments and lacking in specifics and cloaked in the garb of national  
3 security, this document leaves me with many questions and more concern about plans for  
4 future activities at this site.

5 I'm 85 years old, I've seen what goes on in the world through many decades. I saw  
6 what was going on in the Soviet Union with secrecy. I saw what was going on in Nazi  
7 Germany with secrecy. I'm concerned what's going on now in the U.S. of A. with secrecy in  
8 the name of national security. I suggest a cessation of all this nuclear activity and I'm  
9 proposing an alternative and that is we invest a small percentage of that budget of billions of  
10 dollars into developing an institute for the study of nonviolence, learning from Dr. Martin  
11 Luther King, learning from Mahatma Gandhi, learning from Jesus, learning from spiritual  
12 leaders through the centuries, and learning more about what it means to be human instead of  
13 this insanity of spending trillions to plan to kill each other and then spending more trillions to  
14 clean up the mess we created by spending those trillions and bombing the Earth to Hell.

15 MS. COHN: Thank you.

16 MS. LOWE: Thank you, Mr. Ediger.

17 Jim Haber will be next, followed by Molly Johnson, followed by Judy Treichel.

18 MR. HABER: Thank you. I'm Jim Haber. That's H-A-B, as in boy, E-R. And I will  
19 also submit written comments further down the road in this process.

20 But for tonight -- and I represent an anti-nuclear organization called Nevada Desert  
21 Experience. We organize interfaith resistance to nuclear weapons and war. So it shouldn't  
22 be a surprise that I'm not in favor of much of activity out at the Nevada National Security  
23 Site.

24 But for tonight, just a couple of technical things. One is that, I mean, this document  
25 is very long and complex and I've been involved in antinuclear work for a while and looked

**204-1  
*cont'd***

**204-2**

**204-2**

DOE/NNSA acknowledges the commentor's concerns. The mission and purpose  
of NNSA activities in the state of Nevada are determined by Congress and the  
President.

**205-1**

**205-1**

In response to numerous requests from the public and other stakeholders, DOE/  
NNSA extended the public comment period on this SWEIS from 90 to 126 days.

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1 at documents and it's a lot. And there's not that much time, really, for people to get through  
2 for myself or other people so I don't see how this process even with the friendly, you know,  
3 conversations out there and the posters and the good graphics, I don't see actually serving the  
4 public interest for transparency just by some people's best efforts. So I would ask that the  
5 comment period be extended. I do think that as a minimal step that would have some ability  
6 to increase people's ability to comprehend and comment which we need for a informed  
7 legitimate democracy.

8 I want to second some of the other comments that were made by Peter Ediger and also  
9 Ian Zabarte.

10 Another point I want to make is the 1996 document, the current Site-Wide EIS needs  
11 to be easier to find. I've looked, it's not, as far as I can tell, anywhere that the public can get  
12 at on the NNSS site and it seems like since it's the baseline that we're looking to either  
13 extend or retract -- retreat from needs to be viewable and so I would ask that the NNSA  
14 make that available as well as extend the public comment period.

15 Finally, for now I would just want to comment that international law and treaties need  
16 to be respected, whether it's from 1863, the Treaty of Ruby Valley, or if it's the Nuclear  
17 Nonproliferation Treaty or other conventions that various programs in my mind are violated  
18 by activities at the Test Site. Perhaps worse at some other nuclear facilities we have like the  
19 Y-12 plant or Kansas City or Los Alamos where the nuclear weapons infrastructure is being  
20 quadrupled to quadruple output of nuclear weapons components.

21 In relation to the Nevada National Security Site, I would ask that -- or suggest that its  
22 ongoing operations further undermine the credibility of our commitment to nuclear  
23 disarmament that we are obligated to that under treaties that we have signed and are law of  
24 the land. And so even if I'm something of an anarchist, I feel like in this day unfortunately  
25 it's the anarchists who appeal to international law and its people who have more ostensible

205-1  
*cont'd*

205-2  
205-3

205-3

DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available  
to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/  
publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

DOE/NNSA abides by applicable laws and treaties as they pertain to their operations  
at NNSS and offsite locations in Nevada.

The Western Shoshone have long claimed aboriginal title to approximately  
24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based  
on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S.  
Government has not proven title to Western Shoshone lands occupied by others  
within their aboriginal territory, including the NNSS. This issue has come before  
numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme  
Court that the monetary award constituted final settlement for Western Shoshone  
land claims. The DOE/NNSA NSO continues to maintain responsibility and  
authority for mission-related activities on the NNSS.

Regarding the NPT, the U.S. Senate ratified the NPT on March 5, 1970. The  
basic provisions of the NPT are to (1) prevent the spread of nuclear weapons,  
(2) provide assurance, through international safeguards, that the peaceful nuclear  
activities of states that have not already developed nuclear weapons will not be  
diverted to making such weapons, (3) promote the peaceful uses of nuclear energy,  
and (4) express the determination that the treaty should lead to further progress in  
comprehensive arms control and nuclear disarmament measures. Although not  
directly germane to the scope of this SWEIS, many of the projects and activities  
described in Chapter 3 support U.S. efforts to address these provisions.

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1 belief in the rule of law that seem to feel like it doesn't matter and we can't trust the other  
 2 side. Well, we need to abide by the laws that we've agreed to and take it on faith that we will  
 3 be able to stand strong and secure and not be hypocritical when it comes to issues of nuclear  
 4 security and national defense as well in the word defense because a lot of it is really  
 5 offensive to me, so I don't like to using the word defense in relation to our military.

6 Thank you.

7 MS. COHN: Thank you.

8 MS. LOWE: Thank you, Mr. Haber.

9 Molly Johnson will be followed by Judy Treichel, followed by Launce Rake. Hope I  
 10 said that right.

11 MS. COHN: Yes.

12 MS. JOHNSON: Good evening, my name is Molly, M-O-L-L-Y; Johnson,  
 13 J-O-H-N-S-O-N. I'm here representing Healing Ourselves and Mother Earth, otherwise  
 14 known as HOME.

15 The first thing, we will be submitting full comments, written comments, at a later  
 16 date. We do hereby, along with everyone else, ask for an extension of the comment period to  
 17 at least 120 days to allow the public to fully explore the issues as well as to locate some of  
 18 the information that's only available on certain other records documents within the EIS.

19 Also, we do not believe that the SWEIS provides accurate information about current  
 20 environmental impacts exactly what kinds of radionuclides are moving though our land out  
 21 there, what kind of radionuclides are maybe contaminating groundwater, we are very  
 22 concerned about that. And I as a California resident believe that this is not just a Nevada  
 23 issue, this is also a California issue. Amargosa Valley is partially in California and this  
 24 being this corporate harmony always told us there is only one water, so if you contaminate it  
 25 here, you contaminate it everywhere.

205-3  
cont'd

206-1

**206-1** In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

206-2

**206-2** DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

206-1

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

206-2

In addition, the ROI for the cumulative impacts assessment in this *NNSS SWEIS* incorporated portions of Inyo County, California, that are within 50 miles of the boundary of the NNSS. All impacts that could reasonably be expected to affect the state of California are addressed in Chapter 6, Section 6.3, of this *NNSS SWEIS*.

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1        We will also continue to insist that the U.S. follow federal and international laws in  
 2 upholding Western Shoshone Treaty of Ruby Valley ratified by Congress in 1863.  
 3 Additionally, the Shoshone oppose any further ground disturbance on their treaty lands, we  
 4 agree with that. Whatever safe access to sacred cultural and resource sites must be provided  
 5 for. The tribal entities must be included in land and resource management inputting historic  
 6 and cultural resources and we fully support the tribes being fully involved in this process.

7        We do not believe that there should be any resumption of any nuclear or other  
 8 explosive testing at all until complete studies have been done as to the contamination already  
 9 done to that area out there by the nuclear testing throughout the years both above ground,  
 10 below ground, as well as subcritical. And we definitely oppose completely using 120 acres  
 11 to be testing depleted uranium weaponry. We all know that depleted uranium weaponry is  
 12 dangerous, it causes cancer, it should be banned and therefore there's no reason to be testing  
 13 that stuff.

14       The Nevada desert and its inhabitants are slowly the healing of over 60 years of  
 15 nuclear toxic and destructive human activities and we believe that whenever it's not toxic to  
 16 employees or others, that all activities, training, and installation should be conducted on  
 17 previously disturbed land. Undamaged land and endangered species' habitats should be  
 18 protected and all care must be taken to minimize disturbance where below surface  
 19 contamination could be exposed.

20       We also believe strongly that safe groundwater standards must include all living  
 21 species. This document actually states that contaminated groundwater is acceptable because  
 22 we humans could go out and buy bottles of water and we believe that it is all living creatures  
 23 that need to be protected, not just humans.

24       We do believe that research projects as well as installations of systems that conserve  
 25 energy will have long-term economic employment and academic level. We support using

-16-

- |       |   |
|-------|---|
| 206-3 | DOE/NNSA abides by applicable laws and treaties as they pertain to their operations at NNSS and offsite locations in Nevada. Regarding the Ruby Valley Treaty of 1863, the U.S. Supreme Court in 1985 held that aboriginal title to the land was extinguished, and an Indian Claims Commission award to the Western Shoshone pursuant to the Ruby Valley Treaty was made in accordance with statutory authority and constituted full and final settlement for Western Shoshone land claims.   |
| 206-4 | DOE/NNSA's American Indian Consultation Program concentrates on the protection of cultural resources, and promotes government-to-government relationships with culturally affiliated tribes and organizations (represented by CGTO). Its purpose is to help DOE/NNSA comply with various Federal laws and regulations, including, for example, the American Indian Religious Freedom Act and the Archaeological Resources Protection Act. DOE/NNSA has provided funds for activities such as ethnographic interviews and studies, as well as monitoring of cultural resource surveys and updates on NNSS projects and activities. In addition, DOE/NNSA permits American Indians to access cultural resource sites on the NNSS as part of the American Indian Consultation Program. |
| 206-4 | Although DOE/NNSA maintains the readiness to conduct a test if so directed by the President, conducting a nuclear weapon test is not included under any of the alternatives analyzed in this <i>NNSS SWEIS</i> . A clear statement to this effect has been added to Chapter 3, Section 3.0.   |
| 206-5 | As noted in the response to comment 206-2, above, DOE/NNSA has revised this <i>Final NNSS SWEIS</i> to enable the public to better understand the extent of surface soils and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR.   |
| 206-6 | The commentator's opposition to testing depleted uranium weaponry is noted.   |
| 206-7 | The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. The DOE/NNSA NSO agrees that undamaged land and endangered species habitat                                    |

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1 disturbed land for solar, wind, any other type of renewable energy development. And while  
 2 we fully support renewable energy development, we do believe that large-scale facilities  
 3 with major transition lines are really not the best approach. Solar panels should be installed  
 4 on NTS/NNSF rooftops of the parking areas and previously disturbed ground and we believe  
 5 that any land not disturbed and not part of the Nevada Security site should be returned to the  
 6 Western Shoshone.

7 Thank you.

8 MS. COHN: Thank you.

9 MS. LOWE: Thank you, Ms. Johnson.

10 Judy Treichel, followed by Launce Rake, followed by Brian Felske.

11 MS. TREICHEL: My name is Judy, J-U-D-Y; Treichel, T-R-E-I-C-H-E-L. I'm with  
 12 the Nevada Nuclear Waste Task Force.

13 I first would like to request there be more time given for the review of this Draft EIS.  
 14 We are currently here in Nevada dealing with two other drafts and we had no idea when this  
 15 one was coming, we've been expecting it for over a year. And if it took DOE years to get it  
 16 done, it should be understood that we would need more time than 90 days in order to do a  
 17 good review of it. So we ask that you do that.

18 It takes a lot of time to go through this document because it's site-wide rather than  
 19 programmatic so you have to keep going back and forth and going over things that you've  
 20 already read. There's also no preferred option. I'm not sure that I disagree with that but it  
 21 does make it more difficult when you're not looking at a preferred option and evaluating that.  
 22 So it may be better to have the smorgasbord approach but the fact is that it takes longer to do  
 23 that and so we request more time.

24 We also would like to have available the 1996 Final EIS that this is going from  
 25 because as you're going back and forth, you're also trying to look up references as what was

1	<b>206-7</b> <i>cont'd</i>	should be protected, and exposure of below-surface contamination should be avoided where practical, with the exception of characterization and cleanup activities.
2	<b>206-6</b>	DOE/NNSA abides by all applicable groundwater regulations and standards.
3	<b>206-8</b>	The commentator is incorrect. DOE/NNSA did not state or suggest that contaminated groundwater is acceptable and using bottled water is a recommended practice for the public.
4	<b>206-7</b>	The commentator's preference for alternative energy development on previously disturbed lands, with an emphasis on smaller systems, is noted.
5	<b>206-8</b>	There are no plans in the foreseeable future to relinquish land at the NNSS. The DOE/NNSA NSO appreciates the comments related to the Western Shoshone land claims. As an agency of the U.S. Government, the DOE/NNSA NSO must adhere to Federal directives, including U.S. Supreme Court decisions that apply to NNSS/NSO operations.
6	<b>207-1</b>	<b>207-1</b> In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days. DOE/NNSA had not identified a preferred alternative prior to issuance of the <i>Draft NNSS SWEIS</i> ; therefore, none was identified in that document. DOE/NNSA's Preferred Alternative is now described in Chapter 3, Section 3.4, of this <i>Final NNSS SWEIS</i> . As required by CEQ regulations in 40 CFR 1506.10, DOE/NNSA will not make a decision on the actions proposed in this <i>NNSS SWEIS</i> until at least 30 days following publication in the <i>Federal Register</i> of the EPA notice of filing. CEQ refers to the period of time between the notice of filing of a final EIS and issuance of a decision by an agency as a "review period." Comments received on the <i>Final NNSS SWEIS</i> during the review period will be evaluated and addressed in the ROD.
7	<b>207-2</b>	<b>207-2</b> DOE/NNSA has made the <i>1996 NTS EIS</i> (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ( <a href="http://www.nv.doe.gov/library/publications/historical.aspx">www.nv.doe.gov/library/publications/historical.aspx</a> ).

Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

1 stated earlier, this one's very difficult to find and it's hard to do the comparisons with what  
2 has already been okayed and what has not.

3 We favor also the renewable energy issues that are in here, we'd like those expanded  
4 and are in favor of doing those. However, we do oppose additional ground disturbance.  
5 First on safety measures, we were one of the people that more strongly opposed the test  
6 Divine Strike that was proposed for the Nevada Test Site because it would have disturbed a  
7 lot of additional ground and could have resuspended radiation. So in making further  
8 disturbance as a safety implication and that you can get radiation moving again in the air.  
9 But it's also a matter that's very important to the Native Americans and there's a lot of solar  
10 and other source of renewables that can be done where you're covering buildings, you're  
11 covering parking areas, you're covering other things that have already been disturbed. So we  
12 would be in favor of that.

13 Thank you very much,

14 MS. COHN: Thank you.

15 MS. LOWE: Thank you, Ms. Treichel.

16 Launce Rake, followed by Brian Fadic, followed by Don Felske.

17 MR. RAKE: Thank you very much for the opportunity to speak today. My name is  
18 Launce Rake, L-A-U-N-C-E, R-A-K-E. I am representing the Nevada Conservation League  
19 this evening. For identification purposes, I'm also a member of the executive committee of  
20 the Toiyabe Chapter of the Sierra Club which represents Nevada and some of California.

21 Just really briefly, I wanted to say again thank you for the DOE for this opportunity.  
22 We have a couple of concerns. One is that I really wish there was easier access to the '96  
23 Environmental Impact Statement which I think would give us a better idea of the evolution  
24 of activities of the Test Site over the years. I think we may be able to find it if we dig deep  
25 enough, but if the Department of Energy could make that more accessible, we would really

207-2  
*cont'd*

207-3

207-3

DOE/NNSA acknowledges the commentor's support of renewable energy. The  
DOE/NNSA NSO's policy is to place new projects in previously disturbed areas  
if the land area meets the project requirements. When there are projects that have  
specific requirements that cannot be met by locating them in previously disturbed  
areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements  
mitigation measures specific to the land area to be disturbed. Information regarding  
the types of mitigation measures that may be implemented can be found throughout  
Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and  
Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

208-1

208-1

DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available  
to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/  
publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1 appreciate it. Thank you.

2 One of issues that I would like to speak to briefly is the issue of the transportation and  
3 disposal of nuclear waste materials at the Nevada Test Site today. Low-level radioactive  
4 waste and sometimes we're talking about gloves, and instruments, tools, and things like that  
5 that have been contaminated are being disposed with at the Test Site. So first of all, people  
6 need to know that that's happening. It's not just Yucca Mountain, it's other kinds of materials  
7 that are happening there right now.

8 Also people need to know that that material is being transported through Las Vegas.  
9 So this is a real issue for us, particularly if, God forbid, there was an accident involving this  
10 material, our first responders are police and firefighters would in fact be the first responders.  
11 They need the training, the equipment, and the funding to respond adequately. So we would  
12 ask the federal government and the Department of Energy, and where appropriate other  
13 federal agencies, to respond to those concerns in detail and again provide the training, the  
14 funding, and the equipment to respond.

15 And with that, I thank you very much.

16 MS. COHN: Thank you.

17 MS. LOWE: Thank you.

18 Brian Fadie, followed by Don Felske.

19 MR. FADIE: Thank you. I'm Brian Fadie; B-R-I-A-N, F-A-D-I-E. I'm just  
20 representing myself today.

21 I'm here to ask that the public time period be extended by at least 90 days to give the  
22 public adequate time to analyze the DEIS. This document is 1500 pages long, it took three  
23 years to compose. It includes over 300 footnote references, each of which is its own  
24 individual document to be understood, to fully understand the DEIS as a whole. Three  
25 months is just simply not enough time to fully understand, read, and analyze this entire

|| **208-1**  
*cont'd*

**208-2**

**208-2** DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA NSO has provided training to over 124,000 first responders across the country, including local, county, and state participants from Nevada.

|| **209-1**

**209-1**

In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

1 document and to provide a cogent comment of what this entire document means.  
2 You know, myself and most members of the public are not lawyers, are not engineers,  
3 we're not in colleges, and we don't have -- you know, this is not the kind of document that  
4 we're used to reading, that we're used to dealing with on an everyday basis. But  
5 nevertheless, we are residents of this community and we deserve a chance to understand and  
6 provide competent feedback on what is being proposed.

7 So, again, I'd ask that the comment period be extended at least 90 days, preferably  
8 more.

9 Thank you.

10 MS. LOWE: Thank you, Mr. Fadie. Don Felske.

11 MR. FELSKE: Good evening, my name is Don Felske, I'm representing myself. The  
12 last name is spelled, F-E-L-S-K-E.

13 I reviewed the three alternatives, No Action, Expanded Operations, and Reduced  
14 Operations. Currently, each alternative provides current and reasonable foreseeable  
15 missions, programs, capabilities, and projects at the NNSS. With the -- within the  
16 socioeconomic section, this is the summary statement for the site-wide, it's Section S.3.1.3,  
17 the site-wide EIS estimates that implementation of No Action Alternative would result in the  
18 creation of about 150 permanent jobs in addition to the current baseline workforce of about  
19 1700 employees. Implementing the Expanded Operations Alternative would result in the  
20 creation of 625 permanent jobs in addition to the current workforce baseline of 1700.

21 Job creation at this time is needed in Southern Nevada. It's not just job creation that  
22 Southern Nevada requires but a diversified employment base and the Expanded Alternative  
23 operations should be supported because of its projection to create 625 meaningful  
24 employment opportunities for Southern Nevada. 625 new jobs should be the starting point  
25 as we collectively rebuild the economic engine of Nevada. I therefore support the Expanded

209-1  
*cont'd*

210-1    210-1

The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

In addition, the error noted regarding employment under the Reduced Operations Alternative (reduction of 45 individuals versus 45 percent) has been corrected in this final SWEIS.

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1 Operations Alternative and the new jobs that come along with it.  
2 I had a note also in the handout that I put across the table that I'd like you to go back  
3 and review. The summary statement on Reduced Operation Alternative, I think you may  
4 have some misstated numbers in there. You talk about a 45 percent reduction in the 1700  
5 and yet you state, I believe it's 1,655 individuals. It looks like you're doing addition as  
6 opposed to applying a percentage factor which potentially would take employment down to  
7 935. And so based on the fact that at best we'd probably hope that politicians read the  
8 summary, make sure you get the numbers right.

9 Thank you.

10 MS.COHN: Thank you.

11 MS. LOWE: Thank you, Mr. Felske.

12 That is the end of registered speakers that I have.

13 Oh, thank you for reminding me. Is Matt Lydon in the room? Okay. So he is not.

14 I will double check with the front desk to see if any additional people have registered  
15 to speak. No? Okay. We're good. Okay. Did anyone conclude before they were really  
16 ready? Okay.

17 Well, we will adjourn until such time as another person signs up to speak. We'll go  
18 back into session -- have you registered?

19 MR. FRAGOSA: No.

20 MS. LOWE: You'd like to speak?

21 MR. FRAGOSA: Yes.

22 MS. LOWE: Could you run out and fill out a card? Okay.

23 Thank you. Okay. Oh-oh, Fragosa -- you're going to have to tell us your name.

24 MR. FRAGOSA: Yes. My name's Fragosa, F-R-A-G-O-S-A.

25 I just want to make a comment that we need more time to review this. And as the

210-1  
*cont'd*

|| 211-1

211-1

In response to numerous requests from the public and other stakeholders, DOE/NSSA extended the public comment period on this SWEIS from 90 to 126 days. DOE/NSSA has also made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

**Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)**

1 other speakers have indicated that, you know, we don't have access to prior documents.

2 Thank you.

3 MS. COHN: Thank you.

4 MS. LOWE: Thank you very much. I was reading the date for your name. That's  
5 terrible. So.

6 Anyone else interested in speaking? Okay. We will adjourn until such time as  
7 someone indicates that they would like to comment. We have advertised that we'll be here  
8 until 8:00. So we won't go anywhere. If you change your mind, then let us know and we'll  
9 go ahead and take your comments tonight.

10 [Meeting temporarily adjourned]

11 MS. LOWE: Okay. Let the record reflect that it is now 8:00 p.m. All registered  
12 speakers have been called upon to speak. We will now adjourn this public comment hearing.  
13 Thank you so much for coming tonight.

14 [Meeting adjourned at 8:00 p.m.]

15 -oOo-

|| 211-1  
*cont'd*

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### Comments from the Las Vegas, Nevada Public Hearing (September 20, 2011)

REPORTER'S CERTIFICATE

STATE OF NEVADA      )  
COUNTY OF CLARK      )      SS

I, JILL JACOBY, do hereby attest that I took down in shorthand all of the proceedings had in the before-entitled matter at the time and place indicated; and thereafter said shorthand notes were transcribed into computer-aided transcription; and that the foregoing transcript constitutes a full, true, and accurate record of the proceedings had to the best of my skill and ability.

Executed this 2nd day of December 2011, at Las Vegas, Nevada.

Jill Jacoby  
Jill Jacoby  
Scopeproof

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**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1  
2  
3 THIS VERBATIM TRANSCRIPT CONSTITUTES  
4 THE OFFICIAL RECORD OF THE  
5  
6  
7  
8 SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
9 PUBLIC HEARING  
10  
11  
12 Held at the  
13  
14 PAHRUMP NUGGET  
15 681 South Highway 160  
16 Pahrump, Nevada  
17  
18 On  
19 Wednesday, September 21, 2011  
20 Beginning at  
21 6:30 p.m.  
22  
23  
24  
25 Reported by: JILL JACOBY  
Scopeproof

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**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1                           **WEDNESDAY, SEPTEMBER 21, 2011**  
2                           **PAHRUMP NUGGET, PAHRUMP, NEVADA**  
3  
4

[Comment given before public hearing began]

5                           MICHAEL KELLY: I'm a minister in this valley, an ordained minister. But I'm also  
6 a Local 88 member. So I'm in favor of the expansion of any and all work that we can get.  
7 Most of us who have worked out here, it's been a year and a half, two years since we've had  
8 work. And my comment would be we are in favor of all expansion, all resources, as far as  
9 solar renewable energy. As far as stopping the production, that's not us. We want, you  
10 know, we want to see things progress forward, not stand still.

11                          That's the only comment I really have. I just was asked to come and speak. I don't  
12 have to speak in front of a bunch of people, I can tell you or you and say yes, we are in favor.  
13 I have, you know, six kids, and I like to feed them and I like to eat.

14                          I actually live off the grid.

15                          [Public Hearing begins at 6:30 p.m.]

16                          MS. MARSHALL: Good evening, this is Wednesday, September 21, 2011, and this  
17 hearing is being convened at the Pahrump Nugget, located at 681 South Highway 160 in  
18 Pahrump, Nevada. It is now 6:30 p.m.  
19 My name is Ann Marshall, and I've been asked by the Nevada Site Office of the National  
20 Nuclear Security Administration to serve as the moderator for tonight's meeting. The  
21 purpose of this public hearing is to provide you, interested members of the public, with an  
22 opportunity to comment on the Draft Site-Wide Environmental Impact Statement.

23                          Because this is a formal public hearing, we would like to request that you silence your  
24 cell phones. We request your help, also, in keeping the room as quiet as possible so that

301-1

**301-1** The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1 everyone can hear all the comments. Pay special attention, please, to the noisy snack  
2 wrappers.

3 The restrooms are located straight through the open house area and down the hall  
4 almost down to the casino. And if we have to leave the room in an emergency, we will want  
5 to use the exits on the west side of the building, this one right here and then there's one in the  
6 open house area as well. Ice water is located in the open house area.

7 Before we get too far along, I would like to introduce Linda Cohn, she sits here in the  
8 center. She is the hearing officer for tonight's hearing. She is here to officially receive your  
9 comments on behalf of the federal government.

10 Tonight's public hearing is one of five that were scheduled over a two-week period in  
11 Las Vegas, Pahrump, Tonopah, and Carson City, Nevada, and in St. George, Utah. All of  
12 these public hearings are being conducted in the same way. When you arrived, you probably  
13 noticed that there is an open house right next door where the Nevada Site Office has  
14 informative posters and handouts and experts are available to talk about various subjects  
15 addressed in the Site-wide Environmental Impact Statement. That open house will be  
16 available until the hearing ends.

17 In a few minutes I will go over the procedures we will follow when we are ready to  
18 take your comments in this hearing room. But before I do that, we would like to show a  
19 short video about the Draft Site-wide Environmental Impact Statement.

20 [Video shown.]

21 MS. MARSHALL: As explained in the video, your comments at this hearing will be  
22 considered by the National Nuclear Security Administration as it finalizes the Environmental  
23 Impact Statement to support decisions about future operations at the Nevada National  
24 Security Site and the related offsite locations. In particular, you're invited to make  
25 comments and suggestions about what you want the agency to consider as it prepares the

*Response side of this page intentionally left blank.*

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1 final environmental analysis.

2 As the moderator for this meeting, it is my job to make sure that the hearing is  
3 conducted in a respectful manner and that everyone who is interested in providing comments  
4 has a fair opportunity to do so.

5 To allow as much time as possible for public comments, Linda Cohn and the other  
6 federal staff and contractors who are here tonight will not be responding to comments or  
7 answering questions during the hearing. If you do have questions, I urge you to go to the  
8 open house where subject matter experts are standing by. You do need to be aware that any  
9 discussions that you have in the open house will not be recorded and will not be included in  
10 the formal record of this hearing. So if you have something important you want to say for  
11 the record, please sign up at the registration table and make your statements here.

12 Now I'd like to review the procedures I will be following for taking your oral  
13 comments. If you want to make oral comments for the record tonight, please sign up at the  
14 registration table in the lobby. I will call people who have registered to speak on a first-  
15 come, first-served basis. We will continue to accept speaker registration cards until 8 p.m. as  
16 was advertised in the announcement for this hearing. This is what the speaker card looks  
17 like so if you've signed this, you are registered to speak.

18 Please be aware that providing oral comments from the podium is just one of several  
19 ways that you can comment on the Draft Environmental Impact Statement. Some of you  
20 may have prepared written comments, others may wish to fill out a public comment form.  
21 Those are available at the registration table and also around the room in the open house.  
22 They look like this. You are welcome to leave them with us before you go home.

23 You may also submit comments by mail or fax, through telephone calls through a  
24 toll-free telephone line, or via the Internet. The information on all the ways available that  
25 you can submit comments is available at the registration table and in the open house. It

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1 looks like this. All comments received during the public comment period whether it's  
2 tonight or at any time until the end of the comment period on Thursday, October 27, 2011,  
3 will be given equal consideration.

4 To allow as many of you as possible to make comments, I will be asking each  
5 commenter to conclude his or her remarks within five minutes. No one will be allowed to  
6 yield their time to or share their time with other people. Carrie Stewart will be assisting by  
7 serving as our timekeeper tonight. She's here in the front row. So if you have a lot to say,  
8 you may want to keep your eye on her to make sure you are able to conclude your most  
9 important points before your time runs out. If you have not concluded your remarks by the  
10 end of your time, I will ask you to stop and then I will invite the next person to come to the  
11 podium so that everyone wanting to comment will have a fair opportunity to speak.

12 When I call on you to provide your comment, please come to the podium and begin by  
13 stating and spelling your name. Please tell us the name of any agency or organization that  
14 you are representing tonight. Please speak clearly and into the microphone. Jill Jacoby is  
15 serving as our court reporter this evening and it is her job to provide a complete and accurate  
16 transcription of everything that is said at this hearing. These guidelines will help ensure that  
17 she captures your comments correctly. I've asked her to let me know if she's having trouble  
18 hearing or understanding. The transcription of this hearing will be included as an appendix  
19 to the final Environmental Impact Statement.

20 If you've signed up for the mailing list, you will be notified when the final Site-wide  
21 Environmental Impact Statement is completed and is available. It is not too late to sign up  
22 for the mail list, you may do so at the registration table tonight.

23 One final request that I would make of you. I am aware that a lot of you have strong  
24 opinions about this program. Some of you may oppose it while others may support it. The  
25 point of a public comment hearing is to give each of you an opportunity to make comments

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### Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 and suggestions to the agency about what you would want them to include in the final Site-  
2 wide Environmental Impact Statement. Regardless of your position, I would appreciate your  
3 help in making sure that everyone who speaks tonight is treated respectfully.

4 All right. With that said, I'll begin by calling the names of the first three speakers  
5 tonight. I plan to call speaker names by three throughout the evening so that you will have a  
6 little warning when your time is coming up. And I apologize if I mispronounce your name.

7 Okay. The first three speakers coming up. First is Gary Hollis; second, John Pawlak;  
8 and third, Launce Rake.

9 MR. HOLLIS: Good evening. I'm Commissioner Gary Hollis, H-O-L-L-I-S,  
10 representing Nye County.

11 We appreciate the opportunity to work with you as a cooperative agency. We have  
12 some different views, but you've included those views in your draft. However, presenting  
13 our views without action to recognize and mitigate past and present impacts is not enough.

14 Like many citizens of Nye County, I worked at the Nevada Test Site and supported  
15 the United States through the Cold War years. My family and friends believe the support we  
16 gave our federal government was worthwhile and we have no regrets. However, it is now  
17 time for the DOE and the rest of the federal government to recognize the impacts they have  
18 caused and provide mitigation to Nye County.

19 Resources have been taken from us and DOE should do everything in its power to  
20 return those resources to the County. Not allowing Nye County access to water on the  
21 Nevada National Security Site is a big deal to us. And our water rights permits request for  
22 water on site have all been denied because of our protests by the federal agencies, including  
23 DOE and DOE's refusal to allow access to the water. DOE should closely coordinate all  
24 groundwater studies with our scientists and provide funding for Nye County to conduct our  
25 own scientific groundwater studies at the Nevada Test Site.

302-1

**302-1** When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right to use groundwater at the NNSS to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation.

As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and NPS, have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

DOE/NNSA involves Nye County (the commentor) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For example, Nye County, through its liaison with the Nevada Site Specific Advisory Board, regularly interacts with DOE/NSSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

## Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1       The ongoing impact of denying access to the County is huge. And no compensation  
 2 has been made for our loss of access to that water. This is a desert and access to water is a  
 3 major issue to our residents. We understand some water on the Nevada National Security  
 4 Site is contaminated. However, we believe and DOE has indicated the vast majority of the  
 5 water is perfectly safe for public use. The Nevada Assembly Joint Resolution No. 5, dated  
 6 June 16, 2011, documented our concerns. The joint resolution urged the federal government  
 7 to engage in discussion with Nye County regarding the mitigation and containment of water  
 8 contamination in Nevada which resulted from nuclear testing and storage activities that were  
 9 conducted by the federal government at the Nevada National Security Site and  
 10 reestablishment of any water contamination because of those activities.

11      Our bottom line, DOE should take steps to mitigate this specific impact. One  
 12 practical solution would be to provide the County reasonable access to sustainable clean  
 13 water resources that exists on the Nevada National Security Site.

14      Stop protesting our water rights requests. And we appreciate the work you have done  
 15 and look forward to working with you to resolve our issues.

16      We will provide you with formal more detailed comments in the future.

17      Thank you.

18      MS. COHN: Thank you.

19      MS. MARSHALL: Thank you, Commissioner Hollis.

20      Our next speaker is John Pawlak who will be followed by Launce Rake and George  
 21 Maper [sic].

22      MR. PAWLAK: Good evening. My name is John Pawlak, P-A-W-L-A-K. I'm a  
 23 former member of the CAB, Community Advisory Board, for Nevada Test Site programs.  
 24 Currently, I'm the acting chair of the Pahrump Nuclear Waste and Environmental Advisory  
 25 Board and chair of the Southern Nye County Conservation District.

302-1  
*cont'd*

Nonetheless, DOE/NNSA accepts, evaluates, and funds unsolicited proposals for various activities such as the hydrogeological investigations suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NNSA, under the NNSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing and monitoring locations and resources that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

303-1

303-1     The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1        As a local environmentalist, I favor the Expanded Operations Alternative. Under it,  
2 the NNSA would continue to identify and implement energy conservation measures and  
3 renewable energy projects. Also, the NNSA would purposely build a 5 megawatt  
4 photovoltaic solar power system near Area 61 construction facilities. The NNSA would  
5 allow the development of full-scale commercial solar power generation plants in Area 25 of  
6 the NNSS. I want to call it the NTS but it's so hard, it's the NNSS now.

7        Development of the solar power generating plants near Area 51 would require  
8 construction of additional transmission infrastructure in the region thus creating jobs and  
9 revenue in Nye County through Valley Electric, our citizen-owned cooperative here. The  
10 NNSS will be evaluated to determine the feasibility of demonstrating an enhanced  
11 geothermal system for generating electricity also.

12       Finally, the NNSA would continue to host existing environmental research projects at  
13 the NNSS and would actively promote and expand the National Environmental Research  
14 Program.

15       I have been a resident for 11, 12 years in the area and before I came out here, I lived  
16 in Illinois. And I did a lot of my homework before I came out here to understand what the  
17 area was like, whether it was Yucca Mountain, whether it was the Nevada Test Site. In  
18 doing so, I found out that this area was a safe area to live in no matter if it was the Nevada  
19 Test Site or if it was the interim storage of Yucca Mountain that was supposed to be built.  
20 So I have faith in the Nevada Test Site with what may happen in the future with the  
21 Expanded Alternative. So I am for that alternative.

22       Thank you.

23       MS. COHN: Thank you.

24       MS. MARSHALL: Thank you, Mr. Pawlak.

25       The next speaker is Launce Rake followed by George Maper [sic] and Ming.

**303-1  
cont'd**

**303-2**

**303-3**

**303-2** The commentor's interest in renewable energy activities is noted.

**303-3** As noted above in the response to comment 303-1, DOE/NNSA will consider comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Chapter 3, Section 3.4, of this *Final NNSS SWEIS*.

Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 Go ahead, Mr. Rake.

2 MR. RAKE: Good evening, thank you very much for the opportunity to speak. I  
3 appreciate the Department of Energy presenting this venue in Pahrump. I am from Las Vegas  
4 but I have many friends from Pahrump and I appreciate this community very much.

5 I actually made a couple of comments yesterday and I would like to clarify and  
6 amplify those. I spoke about our concerns from the community. And for the record, I'm  
7 representing the Nevada Conservation League about the transport and disposal of nuclear  
8 waste at the Test Site. As you will see from the display in the other room, an Expanded  
9 Operations Alternative would amount to as much as 52 million cubic feet of radioactive  
10 waste being disposed of at the Test Site. So we're concerned about that. We don't want to  
11 see that, but we're also concerned about the transport.

12 The urban area of Las Vegas would only have a small part affected by transport  
13 through on the existing routes. We do not want to see those routes expanded to include  
14 downtown Las Vegas just because the concentration of population is so much greater. But  
15 we're also concerned about our friends in Pahrump and we believe that first responders  
16 should be well-trained, they should be-- they should have the equipment to respond to an  
17 accident, God forbid. They should have the funding to do that. And I'm not sure that 50  
18 cents per cubic foot, which is the formula right now, is enough. We would like to see that  
19 increased.

20 Turning to another tough subject, I'd like to amplify on the gentleman that just spoke.  
21 We would, in fact, like to see renewable energy developed at the Nevada Test Site. I think  
22 that would be a great transition that would allow for industrial redevelopment of Southern  
23 Nevada generally. And we believe that photovoltaic systems installed there provide real  
24 opportunity for Pahrump, for Nye County, and all of Southern Nevada to develop a  
25 technology which we believe are only going to be more important in the coming years.

-9-

304-1

304-1 In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

304-2

DOE/NNSA, working jointly with the State of Nevada, established EPWG to provide a forum for coordination of the LLW grant program between DOE/NNSA, the State of Nevada (Division of Emergency Management), and six counties (Clark, Elko, Esmeralda, Lincoln, Nye, White Pine). Since 2000, EPWG has distributed annual grants among the counties through which LLW/MLLW shipments travel en route to the NNSS. The grants, now totaling about \$10 million, have allowed the counties to undertake emergency preparedness planning and response capability assessments; acquire emergency response resources such as ambulances, fire trucks, and communication equipment; and construct training facilities and emergency services buildings. In addition, the DOE/NNSA NSO offers training to first responders for emergency situations involving radioactive waste and materials. The DOE/NNSA

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1        However, we want to make sure that it's done right. We have concerns that areas that  
 2 have radionuclides in the soils, we need to make sure that we don't disturb those up. And we  
 3 don't want to expose, God forbid, workers to those materials. So we have to choose a site  
 4 carefully. Also, we'd like to protect areas that are in existence now and our wildlife habitat.  
 5 So let's keep it on soils that are already disturbed.

6        Thank you. Those are my points this evening. And, again, I appreciate the  
 7 opportunity to speak.

8        MS. MARSHALL: Thank you, Mr. Rake. For the record, remind me, did you spell  
 9 your name?

10      MR. RAKE: L-A-U-N-C-E. Rake, R-A-K-E.

11      MS. MARSHALL: Thank you. The next speaker is George Maper [sic], followed by  
 12 Ming, followed by Mary Lovas Peterson [sic].

13      Mr. Maper.

14      MR. MAPES: Thank you, Ann. I'm George Mapes.

15      MS. MARSHALL: Mapes.

16      MR. MAPES: M-A-P-E-S. I'm a resident of Nevada for 49 years, 23 years of those  
 17 were at the Atomic Energy Commission and former organizations. I would certainly like to  
 18 promote additional work at the Test Site. The history of this Test Site was tremendous. It  
 19 had tremendous advances that affected not only Nye County, Clark County, the state, the  
 20 country and the world. Many of these are known publically and many of them are not  
 21 public.

22      With the advancing technology that we've had in the past ten years alone, that  
 23 technology can advance also as the previous speaker said with the various opportunities that  
 24 are provided at the Test Site.

25      The infrastruct -- excuse me, the infrastructure of the Test Site is already there that is

304-2  
cont'd

NSO has provided training to over 124,000 first responders across the country,  
 including local, county, and state participants from Nevada.

DOE/NNSA acquires grant funding every year by charging its national network of  
 waste generators a \$0.50 fee for every cubic foot of waste disposed at the NNSS. If  
 waste volumes were to increase under the Expanded Operations Alternative, funding  
 of the LLW grant program would increase. DOE/NNSA provides a minimum of  
 \$250,000 (total) for each year the grant program is in effect. This funding is provided  
 to ensure maintenance of emergency management programs during temporary  
 reductions in waste volumes.

**304-2** DOE/NNSA acknowledges the commentor's support for renewable energy projects  
 at the NNSS and concern that they be developed in previously developed areas  
 where radionuclides would not be disturbed. None of the proposed locations for  
 renewable energy projects are in areas where radionuclides may be disturbed. The  
 DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the  
 land area meets the project requirements. When there are projects that have specific  
 requirements that cannot be met by locating them in previously disturbed areas, the  
 DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation  
 measures specific to the land area to be disturbed. Information regarding the types  
 of mitigation measures that may be implemented can be found throughout Chapter 7,  
 "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6,  
 Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. The DOE/NNSA  
 NSO agrees that undamaged land and wildlife habitat should be protected.

305-1

**305-1** The commentor's support for additional work at the NNSS is noted. As stated in  
 Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments  
 received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred  
 alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this  
*Final NNSS SWEIS*.

Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 adaptable to practically any industrial operation, research, engineering. And it has provided  
2 there at the Test Site in the past from 5,000 to 7,000 employees located in Las Vegas, up  
3 here, any extending environment. We'd like to see that come back. I would. Particularly  
4 with the economic status which this country and Nevada is. First and foremost, Nevada's  
5 first and foremost in the area if we'd like to see change.

6 And I just think that it would be tragic to throw this away. Sure there's been  
7 problems, there've been radionuclide migration of some manner, but these can be mitigated  
8 in the future and provide tremendous opportunity for you people as residents, for new people  
9 that come in here.

10 Thank you very much.

11 MS. COHN: Thank you.

12 MS. MARSHALL: Thank you, Mr. Mapes.

13 Our next speaker is Ming, followed by Mary Lovas Peterson [sic].

14 MR. LAI: Do you want me to spell my name?

15 MS. MARSHALL: Yes, please.

16 MR. LAI: It's R-I-C-H-A-R-D; L-A-I. I'll be brief. I'm with the Nevada Desert  
17 Experience.

18 Please extend the public comment period by three months as the Draft SWEIS is  
19 complex during duration.

20 Please do not disturb previously undisturbed lands and ecological systems.

21 Please provide easier direct access to the previous SWEIS, both physically and online.

22 Please choose Reduced Activity Option or combination of options towards the  
23 reduced activities.

24 And ultimately, abide by the Treaty of Ruby Valley.

25 Where do I submit this?

305-1  
cont'd

306-1 In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

306-2 The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

306-3 DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

306-4 The commentor's preference for the Reduced Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

### Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 MS. COHN: Right here. Thank you. Thank you.

2 MS. MARSHALL: The final speaker we have registered so far this evening is  
3 Mary -- please help me with your name.

4 MS. ANDERSON: It's Mary Lou Anderson, I have bad writing.

5 MS. MARSHALL: Oh, Mary Lou Anderson.

6 MS. COHN: That was her next guess.

7 MS. ANDERSON: Sorry.

8 MS. MARSHALL: Okay. Go ahead. Please spell your last name, please.

9 MS. ANDERSON: Okay. Good evening, thanks for the opportunity to comment.

10 I'm with the Nevada Desert Experience, I'm an antiwar, antinuclear activist, and a lover of  
11 Mother Earth, peace, and all that's good.

12 A few quick responses. I've been an employer for 25, almost 30 years, I've hired  
13 thousands of people and realize the economy is in the tank and jobs are necessary and  
14 important and we have a high unemployment rate in Nevada and the Test Site and Yucca  
15 Mountain. An enormous amount of income to people who are able to raise their families and  
16 children and hopefully retire healthy and happy and leave a legacy behind them.

17 Having said all that, we've contaminated the land, we've contaminated the earth. We  
18 have friends and acquaintances who are downwinders who are very ill. We've just spent two  
19 weeks in Japan and spent time with the people who had been recently affected by Fukushima  
20 nuclear energy fallout radiation. None of this is okay. It's one thing to support your family,  
21 it's another thing to kill your family and kill your friends.

22 As long as we keep the Test Site open and continue to dedicate a dollar towards  
23 increased testing or a dollar towards maintaining weaponry, which is not safe out there. It's  
24 not safe. We have porous land. We have water -- we've got surface water out there, we  
25 have sand. As long as we maintain that or dedicate money to increase it, we're putting our

307-1

**306-5** The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863. The Western Shoshone assert that the U.S. Government has not proven title to Western Shoshone lands occupied by others within their aboriginal territory, including the NNSS. This issue has come before numerous courts for adjudication, resulting in a final ruling from the U.S. Supreme Court that the monetary award constituted final settlement for Western Shoshone land claims. The DOE/NNSA NSO continues to maintain responsibility and authority for mission-related activities on the NNSS.

**307-1** DOE/NNSA acknowledge the concerns expressed by the commentator, including a desire for operations to cease at the NNSS, contaminated areas to be remediated, and the land to be given the Shoshone. As noted in Chapter 3, Section 3.6.1, of this NNSS SWEIS, DOE/NNSA is not considering discontinuing operations at the NNSS as part of any of the alternatives addressed in this NNSS SWEIS. In its 1996 NTS EIS (DOE EIS-0243, August 1996), DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In its December 9, 1996, NTS EIS ROD (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities other than LLW/MLLW management, which was to continue under the Continue Current Operations Alternative. In addition, in this same ROD, DOE decided to implement the public education elements of the Alternative Use of Withdrawn Lands Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Because discontinuing operations at the NNSS was previously considered and DOE decided in 1996 to continue to operate the NNSS at an expanded level, in addition to the continuing need for the NNSS for National Security/Defense Mission programs, both closing the NNSS and discontinuing National Security/Defense Mission programs, projects, and activities are considered unreasonable alternatives at this time.

Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 families and we're putting ourselves at risk. And, you know, at the expense of a paycheck,  
2 God bless all of us, I'm personally out of work I know what is to not make good money, I  
3 know what it is to make incredibly good money.

4 The DOE has given us glorious presentations that cost a ton of money out there. I  
5 want to give thanks to the Test Site has done, is doing, and wants to do. In my opinion,  
6 anything less than shutting it down, cleaning it up, reclaiming the land, giving it back to the  
7 Shoshone. And hopefully our president, current and future, God help us, whoever that may  
8 be, they have the fortitude to take those monies and reinvest them in the economy.

9 So I wrote a bunch of notes and I'm actually not going through too many of the notes.  
10 That's my best, my heartfelt opinion on all of them.

11 And, you know, I hope we have some conversation with the DOE folks and the Test  
12 Site folks, and I hope the public commentary is worth something. Because if you take a look  
13 around the world, we've spent a lot of time traveling the world this year, things aren't getting  
14 better and I'm not a doom and gloom person, actually, I'm a very upbeat person. But the  
15 reality is spending millions and millions and millions on war and you're living in a state  
16 that's maintaining nuclear weapons and a nuclear arsenal. And it's out there. And granted  
17 it's probably helped people raise their families and put their children through college. And  
18 there has to be an alternative.

19 I'm getting the two-minute thing.

20 I think we need to extend the time period on a 1700 pages of data which is very  
21 typical of governmental data, I'm not saying it's bad, but it's 1700 pages worth of data, it's  
22 very difficult to read. I think we need more time to be able to go through everything, the  
23 public needs to understand what the financial impact is and I think we need to have full  
24 disclosure and transparency and we don't have it. And I think we're putting ourselves at  
25 risk. So I'm hoping that the public commentary is truly used as a vehicle to make this

307-1  
cont'd

307-2

307-2 In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on the *Draft NNSS SWEIS* from 90 to 126 days. DOE/NNSA is committed to providing stakeholders with a transparent presentation of all key issues, as well as the means to provide informed comments on the proposed action and alternatives. Potential socioeconomic impacts (including subtopics such as public finance and employment) are presented for all proposed activities as part of the interdisciplinary approach to impact assessment used in this SWEIS.

**Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)**

1 happen.  
2 Thank you.  
3 MS. COHN: Thank you.  
4 MS. MARSHALL: Thank you, Ms. Anderson. For the record, would you spell your  
5 name, please.  
6 MS. ANDERSON: A-N-D-E-R-S-O-N.  
7 MS. MARSHALL: S-O-N. And Mary Lou is spelled?  
8 MS. ANDERSON: Two words, M-A-R-Y; L-O-U.  
9 MS. MARSHALL: Thank you, Ms. Anderson. Did you want to submit those  
10 comments? You mentioned that you had notes.  
11 MS. ANDERSON: This is on the record, right?  
12 MS. MARSHALL: It's up to you.  
13 MS. ANDERSON: Okay.  
14 MS. MARSHALL: And you can certainly submit them later if you wish.  
15 MS. ANDERSON: Okay. Thank you.  
16 MS. MARSHALL: At this time I have gone through all the cards of people who  
17 signed up. If any of you would like to give other comments you want to expand on, you may  
18 do that at this time. If we have other people who would like to sign up.  
19 MS. COHN: Got some public cards here.  
20 MS. MARSHALL: We've got some cards right here. If you want to sign up to  
21 speak, please do so.  
22 If we don't have anybody sign up at this moment, what we'll do is we'll adjourn the  
23 hearing for this for now. But we will remain ready to reconvene at any time that anybody  
24 does sign up and take further comments up until 8:00 this evening.  
25 Thank you all for coming and for listening respectfully. We'll adjourn for the

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### Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

1 moment.

2 [Meeting temporarily adjourned]

3 [Comment given after temporary adjournment]

4 MR. WAITE: My name is Mark Waite, M-A-R-K, W-A-I-T-E. And I'm a resident of  
5 Pahrump. I've been a resident since 2000.

6 I read an article that if we had a hundred square miles of solar panels, we could have  
7 enough electricity for the whole U.S. And I'm looking at the 13,000 square miles, whatever,  
8 on the Nevada Nuclear Security Site and just thinking that it might be a prime location to  
9 have just a large solar power complex. And I think the federal government could get  
10 involved in constructing one because a lot of the proposed solar projects here in Nye County  
11 and Southern Nevada are encountering problems of one sort with endangered species or  
12 water or other problems. I think the federal government could just take the reins and  
13 construct a large project on the NNSS with all the land that's available there, it would be a  
14 good venture.

15 I might point to the solar project out at Nellis Air Force Base which is, of course, is a  
16 much smaller scale than I would be advocating but I think if the Expanded Operations option  
17 is chosen, I think a large solar plant would be a good amenity to add to that.

18 That's all I've got to say.

19 I think also that this could tie in with the mission of national defense since it would  
20 reduce our reliance on foreign oil and energy is a security issue in the United States.

21 [Public Hearing reconvened]

22 MS. MARSHALL: Let the record reflect that it is now 8 p.m. All registered speakers  
23 have been called upon to speak. We will now adjourn this public comment hearing. Thank  
24 you so much for coming tonight all of you.

25 [Meeting adjourned at 8:00 p.m.]  
-oOo-

308-1

308-1 The commentor's preference for large-scale solar power development on the NNSS is noted. As a point of clarification, DOE/NNSA is not proposing to directly construct and operate such a facility. Although there are no proposals for a commercial solar power generation facility at the NNSS, DOE/NNSA is considering whether it would support a private applicant to construct and operate such a facility. Regardless of the party who would construct such a facility, environmental concerns such as impacts on endangered species must still be addressed. However, DOE/NNSA agrees that Area 25 of the NNSS is a reasonable location to site a large facility.

## Comments from the Pahrump, Nevada Public Hearing (September 21, 2011)

**REPORTER'S CERTIFICATE**

STATE OF NEVADA      )  
COUNTY OF CLARK      )      ss

I, JILL JACOBY, do hereby attest that I took down in shorthand all of the proceedings had in the before-entitled matter at the time and place indicated; and thereafter said shorthand notes were transcribed into computer-aided transcription; and that the foregoing transcript constitutes a full, true, and accurate record of the proceedings had to the best of my skill and ability.

Executed this 3rd day of December 2011, at Las Vegas, Nevada.

Jill Jacoby  
Jill Jacoby  
Scopeproof

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**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1  
2  
3 THIS VERBATIM TRANSCRIPT CONSTITUTES  
4 THE OFFICIAL RECORD OF THE  
5  
6  
7  
8 SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
9 PUBLIC HEARING  
10  
11  
12 Held at the  
13  
14 COURTYARD BY MARRIOT  
15 185 South 1470 East  
16 St. George, Utah  
17  
18 On  
19 Thursday, September 22, 2011  
20 Beginning at  
21 6:35 p.m.  
22  
23  
24  
25 Reported by: JILL JACOBY  
Scopeproof

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**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1                   **THURSDAY, SEPTEMBER 22, 2011, 6:35 P.M.**  
2                   **COURTYARD BY MARRIOT, ST. GEORGE, UTAH**  
3

4                 MS. MARSHALL: Good evening. I'd like to welcome you to this formal public  
5 hearing for the Draft Site-wide Environmental Impact Statement for the continued operation  
6 of the Department of Energy National Nuclear Security Administration, Nevada National  
7 Security Site, an offsite locations in the state of Nevada.

8                 Today is Thursday, September 22, 2011, and this hearing is being convened at the  
9 Courtyard by Marriot, located at 185 South 1470 East, St. George, Utah. It is now 6:35 p.m.

10                My name is Ann Marshall, and I've been asked to be the -- asked by the Nevada Site  
11 Office of the National Nuclear Security Administration to serve as the moderator for this  
12 public hearing. The purpose of this public hearing is to provide you, members of the  
13 interested public, with an opportunity to comment on the Draft Site-wide Environmental  
14 Impact Statement.

15                Because this is a formal public hearing, we would like to request that you silence your  
16 mobile telephones. We request your help in keeping this room as quiet as possible as well so  
17 that everyone can hear all the comments. And that's why I also encourage you to move  
18 forward if you would like so you don't have the competition next door.

19                The restrooms are located through the open house and to the right at the end of the  
20 hallway. If we should have to leave this room in an emergency, we are to use the exit doors  
21 that are clearly marked on the east side of the building, east side of the room. Ice water is  
22 available in the open house room.

23                Before we get too far along, I would like to introduce Linda Cohn, seated at the center  
24 of the table, who is the hearing officer for tonight's hearing. She is here to officially receive  
25 your comments on behalf of the federal government.

*Response side of this page intentionally left blank.*

### Comments from the St. George, Utah Public Hearing (September 22, 2011)

1        Tonight's public hearing is one of five that are scheduled over a two-week period in  
2 Las Vegas, Pahrump, Tonopah, and Carson City, Nevada, and St. George, Utah. All of these  
3 public hearings are being conducted in the same way. When you arrived, you no doubt  
4 noticed that there's an open house next door that the Nevada Site Office staff have  
5 informative posters and handouts and experts are available to talk about the various subjects  
6 addressed in the Site-wide Environmental Impact Statement. That open house will be  
7 available until the hearing ends.

8        In a few minutes I will go over the procedures we will follow when we are ready to  
9 take your comments in this hearing room. But before I do that, we would like to show a  
10 short video about the Draft Site-wide Environmental Impact Statement.

11                  [Video shown.]

12        MS. MARSHALL: As explained in the video, your comments at this hearing will be  
13 considered by the National Nuclear Security Administration as it finalizes the Site-wide  
14 Environmental Impact Statement to support decisions about future operations at the Nevada  
15 National Security Site and the related offsite locations. In particular, you're invited to make  
16 comments and suggestions about what you want the agency to consider as it prepares the  
17 final environmental analysis.

18        As the moderator of this meeting, it's my job to make sure that the hearing is conducted  
19 in a respectful manner and that everyone who is interested in providing comments has a fair  
20 opportunity to do so.

21        To allow as much time as possible for public comments, Linda Cohn and the other  
22 federal staff and contractors who are here tonight will not be responding to your comments  
23 here during the hearing. If you do have questions, I urge you to go into the open house next  
24 door where subject matter experts are standing by. You do need to be aware that any  
25 discussions you have in the open house will not be recorded and will not be included in the

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**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1 formal record of this hearing. So if you have something important you want to say for the  
2 record, please sign up at the registration table and make your statement in here.

3 Now I'd like to review the procedures I will be following for taking your oral  
4 comments. If you want to make oral comments for the record tonight, please sign up at the  
5 registration table on one of these little cards. I will call people who have registered to speak  
6 on a first-come first-served basis. We will continue to accept speaker registration cards until  
7 8 p.m. as was advertised in the announcement for this hearing. This is what a speaker card  
8 looks like so if you've signed this, it means you've registered to speak. It's also not too late  
9 to sign up.

10 Be aware that providing oral comments from the podium is just one of several ways  
11 that you can comment on the Draft Environmental Impact Statement. Some of you may have  
12 prepared written comments, others may wish to fill out a public comment form available also  
13 at the registration table and in the open house. It looks like this. You're welcome to leave  
14 either of those with us before you go home.

15 You may also submit comments by mail or fax, through telephone calls through a  
16 toll-free line, or via the Internet. The information on all the ways that you can submit  
17 comments is available at the registration table throughout the open house. All comments  
18 received during the public comment period whether it's tonight or anytime until the end of  
19 the comment period on Thursday, October 27, 2011, will be given equal consideration.

20 As we have done at other locations, I will be asking each commenter to conclude his or  
21 her remarks within five minutes. No one will be allowed to yield their time to or share their  
22 time with other people. Carrie Stewart, who is in the front row here, will be assisting by  
23 serving as our timekeeper tonight. If you have a lot to say, you may want to keep your eye  
24 on her to make sure you are able to conclude your most important points before your time  
25 runs out. If you've not concluded your remarks by the end of that time, I will ask you to stop

*Response side of this page intentionally left blank.*

**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1 and then we'll invite the next person to come to the podium so everyone wanting to comment  
2 will have a fair opportunity to speak.

3 When I call on you to provide your comment, please come to the podium and begin by  
4 stating and spelling your name. Please tell us the name of any agency or organization that  
5 you are representing tonight. Please speak clearly and into the microphone. Jill Jacoby is  
6 serving as our court reporter this evening and it is her job to provide a complete and accurate  
7 transcription of everything that is said at this hearing. These guidelines will help ensure she  
8 captures your comments correctly. I have asked her to let me know if she's having trouble  
9 hearing or understanding you. The transcription of this hearing will be included as an  
10 appendix to the final Environmental Impact Statement.

11 If you've signed up for the mailing list, you will be notified when the final Site-wide  
12 Environmental Impact Statement is complete and available. It is not too late to sign up for  
13 the mail list, you may do that also at the registration table tonight.

14 One final request that I would make of you tonight. I'm aware that many people have  
15 strong opinions about this program. Some oppose it while others support it. The point of a  
16 public comment hearing is to give each of you an opportunity to make comments and  
17 suggestions to the agency about what you would like them to include in the final Site-wide  
18 Environmental Impact Statement. Regardless of your position, I would appreciate your help  
19 in making sure that everyone who speaks tonight is treated respectfully.

20 All right. With that said, I'll begin by calling the names of the first three speakers  
21 tonight. I plan to call speaker names by three throughout the evening so that you'll have a  
22 little warning when your time is coming up. And I apologize if I mispronounce any names.

23 The first three names are Gary Hollis, Claudia Peterson, and Richard Lai.  
24 Commissioner Hollis.  
25

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### Comments from the St. George, Utah Public Hearing (September 22, 2011)

1           MR. HOLLIS: Good evening. My name's Gary Hollis, H-O-L-L-I-S, Nye County  
2 commissioner, Nye County, Nevada.

3           We appreciate the opportunity to work with you as a cooperating agency. We have  
4 different views, but you've included those views in the draft. However, presenting our views  
5 without action to recognize and to mitigate past and present impacts is not enough.

6           Like many citizens of Nye County, I worked at the Nevada Test Site and supported  
7 the United States through the Cold War years. My family and friends believe and support --  
8 believe the support we gave the federal government was worthwhile and we have no regrets.  
9 However, it is time -- now time for the DOE and the rest of the federal government to  
10 recognize the impacts they have caused and provide mitigation to Nye County.

11          Resources have been taken from us and DOE should do everything in its power to  
12 return those resources to Nye County. Not allowing Nye County access to water on the Test  
13 Site, Nevada Test Site is a big deal to us. Our water rights permits request for water on the  
14 site have all been denied because of protests by federal agencies, including the DOE and  
15 DOE's refusal to allow access to the water. DOE should closely coordinate all groundwater  
16 studies with our scientists and provide funding for Nye County to conduct our own  
17 groundwater science studies of the Nevada Test Site.

18          The ongoing impact of denying access to the County is huge. And no compensation  
19 has been made for our loss of access to that water. This is a desert and access to water is a  
20 major issue to our residents. We understand some water on the Nevada Test Site is  
21 contaminated. However, we believe and DOE has indicated the vast majority of the water is  
22 perfectly safe for public use. The Nevada Assembly Joint Resolution No. 5, dated June 16,  
23 2011, documents our concern. The joint resolution urges the federal government to engage  
24 discussions with Nye County regarding the mitigation and containment of water  
25 contaminated in Nevada which resulted from nuclear testing and storage activities that were

-6-

401-1       When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right to use groundwater at the NNSS to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation.

As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and NPS, have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

DOE/NNSA involves Nye County (the commentor) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For example, Nye County, through its liaison with the Nevada Site Specific Advisory Board, regularly interacts with DOE/NSSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

Nonetheless, DOE/NNSA accepts, evaluates, and funds unsolicited proposals for various activities such as the hydrogeological investigations suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NNSA, under the NSSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing

Comments from the St. George, Utah Public Hearing (September 22, 2011)

1 conducted by the federal government at the Nevada Test Site and reestablishment of any  
2 water contaminated because of those activities.

3 Our bottom line, DOE should take steps to mitigate this specific impact. One practical  
4 solution would be to provide the County reasonable access to sustainable clean water  
5 resources and -- that exists on the Nevada Test Site.

6 Stop protesting our water rights requests. We appreciate working with you -- having  
7 worked with you.

8 And we'll be providing you with formal more detailed comments in the future.

9 Thank you.

10 MS. COHN: Thank you.

11 MS. MARSHALL: Thank you, Commissioner Hollis.

12 The next person is Claudia Peterson followed by Richard Lai.

13 MS. PETERSON: Okay. I'm not really prepared because I found out about this late  
14 last night. But that's very disconcerting because I don't know where it was advertised.

15 And I'm concerned about the amount of time the community has to offer comments  
16 and write in letters. If we could expand that time, it would be great for our community, if  
17 you could please let me know.

18 I didn't spell my name. Sorry. Claudia Peterson, P-E-T-E-R-S-O-N.

19 I'm a downwinder, lived in St. George and Cedar City my whole life. My biggest  
20 concern here is the health effects of what may be coming. I understand that if the solar  
21 power is implemented, they will have to prepare a large portion of the land and that will be  
22 stirring up dust and whatever. I'm concerned about the whole thing. I don't -- we --

23 Last time you had an environmental impact, we fought really hard to get our message  
24 heard for what we were experiencing as downwinders. My family has been devastated by  
25 what happened with the testing back in the '50s and '60s and up till 1992. My father died of

401-1  
cont'd

and monitoring locations and resources that have sustained adverse environmental  
impacts from past DOE activities, including groundwater contaminated by past  
nuclear weapons testing.

402-1

DOE/NNSA has a sincere interest in public participation in the NEPA process and  
provided notices of the public hearings in local newspapers, on its website, and  
through a *Federal Register* notice. In response to numerous requests from the public  
and other stakeholders, DOE/NNSA also extended the public comment period on this  
SWEIS from 90 to 126 days.

402-2

DOE/NNSA acknowledges the commentator's concerns. As stated in Chapter 4,  
Section 4.1.12.1.1, of this *NNSS SWEIS*: "No members of the public receive direct  
gamma radiation exposure that is above background levels as a result of past or  
present NNSS operations. Radioactively contaminated areas on the NNSS are  
isolated from members of the general public, given the considerable distances  
between these areas and the site boundary, so members of the public are not  
exposed to any measurably contaminated soil, either directly or through resuspension  
(DOE/NV/25946-790)."

Although there are not current proposed commercial solar power generation projects  
at the NNSS, if one or more were proposed they would be sited in areas that are not  
contaminated by nuclear testing. A project-specific NEPA review would be required  
for any commercial solar power generation project at the NNSS. As a result,  
impacts specific to such a project would be evaluated in detail in the project-specific  
NEPA review. The public and other stakeholders would have the opportunity to  
express their concerns during the public scoping and draft document review periods  
associated with the NEPA review process.

### Comments from the St. George, Utah Public Hearing (September 22, 2011)

1 a brain tumor. I had a sister die at 36 of melanoma. Lost a child to leukemia. Lost a  
 2 nephew to colon cancer. A few years ago, his 33-year-old sister had a colostomy this year.  
 3 29-year-old's just had her colon removed. And a 24-year-old niece has just found out that  
 4 her colon is clear full of cancer because of a mutation that happened to my sister when she  
 5 was a child. She passed that on to her children. It's been genetically -- we believe  
 6 genetically proven, but we believe that happened from being downwinders.

7 So the most important thing for us is that we can trust what you're saying because we  
 8 have never been able to trust what was happening. It seems like we -- every time we have a  
 9 fight, two years later, I mean, we feel like we can relax things are going to be safe and okay,  
 10 something else comes up. Divine Strake, we get to the point where okay, we can relax,  
 11 something else happens. Yucca Mountain, subcritical tests, never get a chance to relax on  
 12 this. We need -- we would like you to clean it up and preserve it and make it back to the way  
 13 it was before it was so damaged.

14 I'm concerned about the indigenous Indian. Shoshones that are concerned about and  
 15 their fight for the land. Not only the air, the water, the ground, the people in the  
 16 communities that live around there.

17 And I will be writing a statement later that's better prepared.

18 Thank you.

19 MS. COHN: Thank you.

20 MS. MARSHALL: Thank you, Ms. Peterson.

21 The next person is Richard Lai.

22 MR. LAI: So, I'll make my comments brief.

23 Sorry, my name is Richard, R-I-C-H-A-R-D; L-A-I.

402-3 DOE/NNSA acknowledges the commentor's concerns. As noted in Chapter 3, Section 3.1.1.1, and Appendix A, Section A.1.1.1, of this *NNSS SWEIS*, "As part of its National Security/Defense Mission, NNSA is tasked with strengthening national security through the military application of nuclear energy and reducing the global threat from terrorism and weapons of mass destruction." Conducting tests and experiments involving nuclear materials, depleted uranium, and explosives is necessary to support DOE/NNSA's National Security/Defense Mission.

The DOE/NNSA Environmental Restoration Program is addressed under all alternatives in this *NNSS SWEIS*. In consultation with NDEP and pursuant to the FFACO, DOE/NNSA has and continues to conduct characterization of potentially contaminated areas on the NNSS, TTR, and Nevada Test and Training Range. Based on the results of the characterization, DOE/NNSA and NDEP develop appropriate strategies to contain and/or clean up contaminated areas. The Environmental Restoration Program addresses contaminated soils sites, industrial sites, and groundwater. Further detail regarding the Environmental Restoration Program may be found at [www.nv.energy.gov/envmgt](http://www.nv.energy.gov/envmgt).

402-4 Since 1991, DOE/NNSA has worked with 16 culturally affiliated Western Shoshone, Southern Paiute and Owens Valley Paiute and Shoshone Tribes that are represented by CGTO. Throughout this *NNSS SWEIS*, the DOE/NNSA NSO has included tribal perspectives developed by CGTO for consideration by DOE/NNSA in its analysis of this document. DOE/NNSA is further aware of and values the cultural perspectives related to natural resources and communities that have ties to the NNSS. The Western Shoshone have long claimed aboriginal title to approximately 24 million acres of land in Nevada, Idaho, California, and Utah. This claim is based on the Ruby Valley Treaty of 1863, from which the Western Shoshone assert that the U.S. Government has not proven title to these lands.

In response to lawsuits by the Western Shoshone asserting title to the lands, the U.S. Supreme Court in 1985 held that an Indian Claims Commission award was made in accordance with statutory authority and constituted full and final settlement for Western Shoshone land claims. Later, the Western Shoshone challenged aboriginal title in the U.S. Court of Appeals for the Ninth Circuit; the Ninth Circuit followed the Supreme Court's decision and ruled against the Western Shoshone. In a final appeal, the Supreme Court refused to hear the Western Shoshone Case, letting the appellate court decision stand. As an agency of the U.S. Government, the DOE/NNSA NSO must adhere to Federal directives, including Supreme Court decisions that apply to NNSS/NSO operations.

**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1        Thank you for your work and opportunity for public comments. Please extend the  
 2        public comment period by at least three months as the Draft EIS is a large document needing  
 3        optimal duration.

4        Please do not disturb previously undisturbed areas. Please make the previous EIS  
 5        widely known, go online or physically. And please adopt the Reduced Use option or some  
 6        combination that transports reduced use.

7        That's it.

8        MS. MARSHALL: Thank you, Mr. Lai.

9        MS. COHN: Thank you.

10      MS. MARSHALL: With that, we have gone through the list of people who have  
 11     registered to comment. If there are other people who would like to register to comment, we  
 12     have cards here, you don't even have to go back to the registration table. Or perhaps any of  
 13     the people who have already spoken, if you have something else you would like to add, you  
 14     may do so at this time.

15      Our next speaker is Georgia Barker.

16      MS. BARKER: Thank you. And I appreciate the opportunity of seeing all the  
 17     displays, they were really great. And the people that were here were wonderful, they've  
 18     explained a lot things with all my questions.

19      I have looked at all of that and the number one thing I have is that I do not support  
 20     expanding what you're proposing. I think if you stay at the current level or reducing it. I've  
 21     got a great concern on transportation. I understand that the trucks are enclosed and that  
 22     things are sealed and all, but we live right here by the freeway and have all the trucks coming  
 23     through and the vehicles is a great concern.

24      I still think that there may be environmental impacts and I'm going to have to study  
 25     those information that you handed out. But I just feel that with everything that I've looked at

-9-

**403-1** In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

**403-2** The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources.

**403-3** DOE/NNSA has made the *1996 NTS EIS* (DOE EIS-0243, August 1996) available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

**403-4** The commentator's support for the Reduced Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**404-1** **404-1** The commentator's opposition to the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**404-2**

**404-3**

**404-2** Appendix E, Table E-15, shows the maximum impacts that could occur to an MEI residing along a route. This MEI would incur no more than  $2.4 \times 10^{-7}$  rem of exposure per shipment during incident-free conditions. In other words, the MEI would have to be present outdoors next to the route and exposed to over 4,000 shipments of LLW to obtain a dose of 1 millirem, which is about the same dose a person would receive from a dental x-ray.

**404-3** Please see the response to comment 404-1, above.

### Comments from the St. George, Utah Public Hearing (September 22, 2011)

1 and the background with the military and defense department that I just feel that what you're  
2 doing at this point is the maximum that should be done and that I would really prefer the  
3 reduced, at least no more than what you're doing now.

4 Thank you very much.

5 MS. MARSHALL: Thank you, Ms. Barker. For the record, would you spell your  
6 name, please?

7 MS. BARKER: Oh, I'm sorry.

8 MS. MARSHALL: That's okay.

9 MS. BARKER: It's Georgia, like in -- G-E-O-R-G-I-A; and then Barker,  
10 B-A-R-K-E-R.

11 MS. MARSHALL: Our next speaker is Judy --

12 MS. JAEGER: Jaeger.

13 MS. MARSHALL: Jaeger.

14 MS. JAEGER: My name is Judy Jaeger, J-A-E-G-E-R.

15 And I've lived in St. George for the last 16 years. I'm not a downwinder, but I did see  
16 the last atomic bomb testing program when I was a kid.

17 Anyhow, the reason I'm concerned is -- or the reason I'm here tonight is that I saw  
18 your advertisement in the paper yesterday and that was it, nothing prior to that. And again it  
19 didn't say in the announcement exactly who was putting on this assembly or whatever,  
20 however you want to call it. And so I came here blind tonight, not knowing what I was  
21 coming to.

22 As far as transportation, having been in the transportation industry for almost 25  
23 years, I never had anything that was nuclear or waste but several people that I know have.  
24 And precautions are taken above and beyond what is normally put on any type of  
25 transportation trucks, per se. So I'm not about concerned about that.

404-3  
*cont'd*

405-1

405-2

405-1 DOE/NNSA has a sincere interest in public participation in the NEPA process and provided notices of the public hearings in local newspapers (including legal notice in the *St. George Spectrum* on September 1, 2011, announcing the date, time, and purpose of the meeting); on its website; and through a *Federal Register* notice. In each case, DOE/NNSA specified that it was the agency that was hosting the public hearing and that the purpose of the hearing was to discuss the draft SWEIS and seek comments on it from the public.

405-2 DOE/NNSA understands that the commentor is concerned about air quality in St. George, Utah, both from radioactive waste management activities at the NNSS and from pollution associated with all vehicles. This *NNSS SWEIS* evaluates the potential impacts of operations at the NNSS from current and projected operations. A conservative estimate of the radiological impacts from current operations is presented annually in the site environmental report (available at [www.nv.doe.gov/library/publications/aser.aspx](http://www.nv.doe.gov/library/publications/aser.aspx)). In this *NNSS SWEIS*, the potential impacts were estimated by assuming that a hypothetical person would receive the dose as reported in the annual reports in addition to doses from various facilities that may have radioactive emissions. The hypothetical person who would receive this dose was assumed to live at the boundary of the NNSS, about 100 miles away from St. George. The highest annual dose to that hypothetical individual is calculated to be 4.8 millirem (equivalent to approximately five dental x-rays); the risk of a cancer from this dose is about 1 chance in 333,000. The dose and risk to anybody further away would be much lower.

Comments from the St. George, Utah Public Hearing (September 22, 2011)

1        What I am concerned about is air quality. I have a family, four grandchildren and  
2 they all live here in St. George. And from all of my family, I'm the only one that has had  
3 cancer of all my parents, grandparents backwards. So the first thing I did when I found out that  
4 I had cancer was look up how prominent it was in the area. Came to find out that  
5 Connecticut has a higher rate of breast cancer than we do in St. George. So that made me feel good.  
6 At the same time, I still wasn't happy about it because don't believe everything  
7 that you read. But I'm concerned for my children, my grandchildren, not my children, but --  
8 well, I have a daughter who lives here, that this place will not remain, you know, as pristine  
9 as it is. And I don't mean, you know, housing, that's long gone, that left here in '94 with the  
10 California rush -- or I should say '98.

11        Anyhow, I worry about the air quality. We're talking -- you see more and more about  
12 the quality, the air pollution from vehicles from whatever and then we have to add to that the  
13 fear of the air quality from a growing and can grow even larger than what we are even  
14 talking about now area for nuclear waste management. And that can be changed at any time,  
15 it can get bigger. And they're going to have another one of these get-togethers and how  
16 many people will not know about that then any more than the ones that don't know about this  
17 one tonight. So that is a concern.

18        I have two minutes. I talk, like, forever.

19        And the other thing is water. Where is the water coming from to go to the waste  
20 treatment facility now? You know, I mean, Nevada's already complaining that they're not  
21 getting enough water from Utah. And we're not going to give them any more. You know, I  
22 mean, everybody's deserving of their state's rights and Utah has state's rights over Nevada.  
23 And a lot of people in Nevada don't know that, but we do. So where are they getting the  
24 water from that they need to use in this facility? Question, answer.

25        Thank you. Have a good evening.

405-2  
*cont'd*

405-3

405-3

In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. Use of certain routes in Las Vegas would have made Interstate 15 a logical route for transporting waste from some of the DOE generator sites in the East. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Therefore, Interstate 15 through St. George, Utah, would not likely be used for such shipments.

All water uses described in the SWEIS are supplied by onsite groundwater wells, not any sources in or bordering Utah, such as the Colorado River.

**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

MS. COHN: Thank you.

MS. MARSHALL: Thank you, Ms. Jaeger.

MS. JAEGER: Thank you.

MS. MARSHALL: Is there anyone else who would like to comment this evening?

Sign up to comment? Would any of the previous commenters like to add to their comments?

If not, we will have a temporary adjournment and we'll remain open for comments up until 8:00 this evening. So if anyone else comes in, we will reconvene and you're invited to return or if you decide later you want to make an additional comment, please -- I suppose you need to do another card so that we've got the record for that and we'll reconvene.

But for now, we are temporarily adjourned. Thank you for coming. Thank you for commenting.

[Meeting temporarily adjourned]

MS. MARSHALL: Let the record reflect that it is now 8 p.m. All registered speakers have been called upon to speak. We will now adjourn this public comment hearing. Thank you so much for coming tonight all of you.

[Meeting adjourned at 8:00 p.m.]

-00-

*Response side of this page intentionally left blank.*

**Comments from the St. George, Utah Public Hearing (September 22, 2011)**

1                   **REPORTER'S CERTIFICATE**

2  
3                   STATE OF NEVADA      }

4                   COUNTY OF CLARK      } ss

5

6  
7                   I, JILL JACOBY, do hereby attest that I took down in shorthand all of the  
8 proceedings had in the before-entitled matter at the time and place indicated; and  
9 thereafter said shorthand notes were transcribed into computer-aided transcription; and  
10 that the foregoing transcript constitutes a full, true, and accurate record of the proceedings  
11 had to the best of my skill and ability.

12                  Executed this 30th day of November 2011, at Las Vegas, Nevada.

13  
14                    
15                  Jill Jacoby  
16                  Scopeproof

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Response side of this page intentionally left blank.

**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

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3       THIS VERBATIM TRANSCRIPT CONSTITUTES  
4       THE OFFICIAL RECORD OF THE

5  
6  
7  
8       SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
9       PUBLIC HEARING

10  
11  
12                   Held at the  
13  
14                   TONOPAH CONVENTION CENTER  
15                   301 Brougher Avenue  
16                   Tonopah, Nevada 89049

17  
18                   On  
19                   Tuesday, September 27, 2011

20                   Beginning at  
21                   6:30 p.m.

22  
23  
24  
25       Reported by: JILL JACOBY  
                 Scopeproof

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## Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)

1                   TUESDAY, SEPTEMBER 27, 2011, 6:30 P.M.  
2                   CONVENTION CENTER, TONOPAH, NEVADA  
3

4 MS. LOWE: Good evening. I would like to welcome you to this formal public hearing of  
5 the *Draft Site-wide Environmental Impact Statement* for the continued operation of the  
6 Department of Energy, National Nuclear Security Administration, Nevada National Security  
7 Site, an offsite location in the state of Nevada.

8         Today is Tuesday, September 27, 2011, and this hearing is being convened at the  
9 Convention Center, located at 301 Brougher, Avenue in Tonopah, Nevada. And it is now  
10 6:30 p.m.

11         My name is a Wendy Lowe, and I've been asked by the Nevada Site Office of the  
12 National Nuclear Security Administration to serve as the moderator for tonight's public  
13 hearing. The purpose of this public hearing is to provide you, the interested members of the  
14 public, with an opportunity to comment on the Draft Site-wide Environmental Impact  
15 Statement. Because this is a formal public hearing, we would like to request that you silence  
16 your mobile telephones and make every effort to be as quiet as possible in the room so  
17 everyone can hear when someone's commenting.

18         There are two restrooms located right up here; one for each gender, and then two in the  
19 lobby area. If we all need to leave the room because of an emergency, there's an exit back  
20 this direction, one through the kitchen, and then one the way most of us came in through the  
21 building. And we do have ice water and snacks up here on the level above.

22         Before we get too far along, I'd like to introduce Linda Cohn, who is sitting here in  
23 the middle of the table. She is the hearing officer for tonight's hearing and she is here to  
24 officially receive your comments on behalf of the federal government.

25         Tonight's public hearing is one of five that were scheduled over a two-week period in

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**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

1 Las Vegas, Pahrump, Tonopah, and Carson City, Nevada, and St. George, Utah. All of the  
2 public hearings are being conducted in the same way. If you just arrived, we have an open  
3 house that's located around the perimeter of the hearing room, and if we don't have enough  
4 people to comment between now and 8, we will recess and you'll have the opportunity to go  
5 through the information and displays and talk with the subject matter experts about the  
6 various subject matters that are addressed in the Site-wide Environmental Impact Statement.  
7 We advertised that we would be here until 8:00 this evening and we will stay that long.

8 In a few minutes, I'll go over the procedures that we'll follow when we're ready to take  
9 your comments at this hearing. Before we do that, we have a short video that we'd like to  
10 show you about the Draft Site-wide Environmental Impact Statement.

11 [Video shown.]

12 MS. LOWE: As explained in the video, your comments at this hearing will be  
13 considered by the National Nuclear Security Administration as it finalizes the Environmental  
14 Impact Statement to support decisions about future operations for the Nevada National  
15 Security Site and the related offsite locations. In particular, you're invited to make  
16 comments and suggestions about what you want the agency to consider as it prepares the  
17 final environmental analysis.

18 As the moderator for this meeting, it's my job to make sure that the hearing is  
19 conducted in a respectful manner and that everyone who is interested in providing comments  
20 has a fair opportunity to do so.

21 To allow as much time as possible for public comments, Linda Cohn and the other  
22 federal staff and contractors who are here tonight will not be responding to comments or  
23 answering questions during the hearing. If you do have questions, then I'd invite you to wait  
24 'til we're not in session and talk to the folks in the open house, the subject matter experts,  
25 because that's what they're here to do is help you understand what the document says. But

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**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

1 please be aware that if you have a conversation with anyone during the open house portion of  
2 the meeting, it will not be recorded and it will not be in the formal record for this meeting.  
3 So if you have something important to say, make sure that you sign up at the registration  
4 table and come forward to make comments.

5 Now I would like to review the procedures that I'll be following for taking oral  
6 comments. If you want to make oral comments for the record tonight, you'll need to sign up  
7 at the registration table in the lobby. And I will be calling on people to speak on a first-  
8 come, first- served basis. We will continue to accept speaker registration cards until 8 p.m.  
9 as was advertised in the announcement for this hearing.

10 Let's see. Please be aware that providing oral comments from the podium is only one  
11 of several ways to provide comments on the Draft Environmental Impact Statement. Some  
12 of you may have prepared written comments, others may want to fill out the public comment  
13 form. And copies of the public comment form are located throughout the open house as well  
14 as at the registration table. You're welcome to leave any written comments, whether they're  
15 something that you prepared before you came tonight or on the comment form at the  
16 registration table before you go home tonight. You can also submit comments by mail or  
17 fax, through telephone calls through a toll-free telephone line, or via the Internet. And the  
18 various ways that you can submit your comments are on this handout that we have available  
19 at the registration table so you don't have to memorize the address or the phone number.

20 All written and oral comments received during the public comment period which will  
21 end on Thursday, October 27, will be given equal consideration. So it doesn't matter if you  
22 provide your comments later, that's fine.

23 In order to have a fair -- provide a fair opportunity to everyone who is interested in  
24 providing comments, I will be asking each commenter to conclude his or her remarks within  
25 five minutes. No one will be allowed to share this time or yield their time to another person.

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**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

1 Carrie Stewart, who is sitting in front of the room here, is serving as our timekeeper. And  
2 she will let you know how you're doing on your time. If you have important points that you  
3 want to make sure you get to, make sure you keep your eye on her and she'll let you know  
4 the right amount. If you have not concluded your remarks by the end of your time, I will ask  
5 you to stop and then I will call the next person who is registered to speak.

6 When I do call on you to provide your comments, please come forward to the podium  
7 and begin by stating and spelling your name. And then if you're representing an agency or  
8 organization tonight, we'd like to know that so we can have that in the record. Please speak  
9 clearly and into the microphone. Jill Jacoby, who is sitting at the end of the table with me is  
10 a court reporter and it's her job to provide a complete and accurate transcription of this  
11 hearing and we want to make sure she captures all of your comments. I have asked her to let  
12 me know if she has any trouble hearing or understanding you. The transcription for this  
13 hearing will be included as an appendix of the final Environmental Impact Statement.

14 If you've signed up for -- on the mailing list, you'll be notified when that final  
15 Environmental Impact Statement is available. If you haven't signed up yet for the mailing  
16 list, you can also do that at the registration table.

17 One final request I'd like to make of you tonight. I know a lot of you have strong  
18 opinions about this program. Some of you may oppose the program, while others support it.  
19 The point of a public comment hearing is to give each of you an opportunity to make your  
20 comments and suggestions to the agency about what you would like for them to consider in  
21 the final Environmental Impact Statement. Regardless of your position, I would appreciate  
22 your help in making sure that everyone who speaks tonight is treated respectfully.

23 So I have two people registered at this time. And Gary Hollis is first and he will be  
24 followed by Launce Rake.

25 MR. HOLLIS: This audience looks familiar for some reason.

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Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)

1        Anyway, my name is Gary Hollis, H-O-L-L-I-S, and I'm chairman of the Nye County  
2 Board of Commissioners.

3        We appreciate the opportunity to work with you as a cooperating agency. We have  
4 some different views, but you have included those views in the draft. However, presenting  
5 our views without action to recognize and mitigate past and present impacts is not enough.

6        Like many citizens of Nye County, I worked at the Nevada Test Site and supported  
7 the United States through the Cold War years. My family and my friends believe the support  
8 we gave our federal government was worthwhile and we have no regrets. However, it is now  
9 time for DOE and the rest of the federal government to recognize the impact that they have  
10 caused and provide mitigation to Nye County.

11      Resources have been taken from us and DOE should do everything in its power to  
12 return those resources to the County. Not allowing Nye County access to water on the  
13 Nevada National Security Site is a big deal. Our water rights permit request for water on the  
14 Site have all been denied because of protests by federal agencies, including DOE and DOE's  
15 refusal to allow access to water. DOE should closely coordinate all groundwater studies  
16 with our scientists and provide funding for Nye County to conduct our own groundwater  
17 science studies of the Nevada National Security Site.

18      The ongoing impact of denied access to the County is a huge -- it's huge. And no  
19 compensation has been made for our loss of access to water. This is a desert and access to  
20 water is a major issue for our residents. We understand some water on the Nevada National  
21 Security Site is contaminated. However, we believe and DOE has indicated that the vast  
22 majority of that water is perfectly safe for public use. Nevada Assembly Joint Resolution  
23 No. 5, dated June 16, 2011, documents our concerns. The joint resolution urges the federal  
24 government to engage in discussions with Nye County regarding the mitigation and  
25 containment of water contamination in Nevada which resulted from nuclear testing and

501-1

501-1     When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right to use groundwater at the NNSS to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation.

As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and NPS, have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

DOE/NNSA involves Nye County (the commentor) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For example, Nye County, through its liaison with the Nevada Site Specific Advisory Board, regularly interacts with DOE/NNSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

Nonetheless, DOE/NNSA accepts, evaluates, and funds unsolicited proposals for various activities such as the hydrogeological investigations suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and instituting closure actions. DOE/NNSA, under the NSSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing

### Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)

1 storage activities that were conducted by the federal government at the Nevada National  
2 Security Site and the reestablishment of any contamination because of those activities.

3 Our bottom line, DOE should take steps to mitigate this specific impact. One  
4 practical solution would be to provide the County reasonable access to sustainable clean  
5 water resources that exists at the Nevada National Security Site.

6 Stop protesting our water rights requests. We appreciate the work you have done and  
7 look forward to working with you to resolve our issues. And we'll provide you formal, more  
8 detailed comments in the future.

9 Thank you.

10 MS. COHN: Thank you.

11 MS. LOWE: Thank you, Mr. Hollis.

12 Launce Rake.

13 MR. RAKE: Thank you very much for the opportunity to speak today -- tonight. My  
14 name is Launce Rake; L-A-U-N-C-E, R-A-K-E.

15 Tonight I'm representing a national group called Healing Ourselves, which has only  
16 had its presence in Nevada and other parts of the country where there have been nuclear  
17 weapons facilities or work with nuclear weapons development in other ways involving  
18 nuclear waste, radioactive materials, and so on.

19 First of all, I really want to thank the Department of Energy for their hospitality over  
20 the last four days. Although our policy points are probably not going to be adopted  
21 wholesale, I hope that they will be considered carefully. And if anybody wants to see our  
22 policy points, by the way, you can grab a copy of those on the desk to your right as you're  
23 walking out the front door.

24 I wanted to say that we support Commissioner Hollis's point that mitigation and  
25 containment of contamination at the Test Site, particularly water contamination, needs to be

501-1  
*cont'd*

and monitoring locations and resources that have sustained adverse environmental  
impacts from past DOE activities, including groundwater contaminated by past  
nuclear weapons testing.

502-1    502-1

DOE/NNSA acknowledges the commentor's preferences related to selection of the Preferred Alternative, specifically environmental restoration and solar energy development. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

Additionally, DOE/NNSA intends to prepare a mitigation action plan, consistent with DOE's requirements at 10 CFR 1021.331, following the ROD for this SWEIS. Within this mitigation action plan, DOE/NNSA will include both project-specific mitigation measures (tailored to the selected alternative) and broader strategies, including the use of adaptive management techniques. DOE/NNSA's intention to prepare a mitigation action plan is stated in Chapter 7, Section 7.0.

**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

1 carefully considered and undertaken. We also want to say that we support a reduced level of  
2 activity particularly as it pertains to weapons development which we have particular  
3 concerns about because of the danger of contamination, further work issues of contamination  
4 at the Test Site.

5 The other thing that we want to do is to say that instead of weapons development, we  
6 do support the idea of renewable energy research and development at the Test Site.

7 Wouldn't it be something if instead of saying that Tonopah and Nye County, wonderful  
8 places to live and work, but instead of saying these are the gateway to the Test Site where it  
9 used to develop nuclear weapons, exploded nuclear weapons, instead it's the gateway to a  
10 clean alternative energy, a new industry that's picking up America.

11 So that would really, really be great but we want to make sure that if that happens,  
12 that it's done carefully in a way that prevents the kind of exposure to workers that has  
13 happened in the past tragically.

14 Years ago as a newspaper reporter, I met some folks who were from Nye County, at  
15 least one from Tonopah, who had worked at the Test Site, had been exposed and some of  
16 them were sick. We never want to see that happen again. So as we develop renewable  
17 energy at the Test Site, let's make sure that that's done in places that are safe and that we  
18 don't kick up materials that might be dangerous either for the workers or for anybody else  
19 who might be exposed to the dust.

20 Thank you again. And, again, I appreciate the DOE's hospitality.

21 MS. COHN: Thank you.

22 MS. LOWE: Thank you, Mr. Rake.

23 I have no more speaker registration cards. Is anyone on the verge of thinking about  
24 doing it?

25 Okay. We will go into recess, and we will all be here. If you decide that you'd like to

**502-1  
cont'd**

**502-2**

**502-2** DOE/NNSA acknowledges the commentor's support for renewable energy projects at the NNSS and concern that they be developed in previously developed areas where radionuclides would not be disturbed. None of the proposed locations for renewable energy projects are in areas where radionuclides may be disturbed. The DOE/NNSA NSO's policy is to place new projects in previously disturbed areas if the land area meets the project requirements. When there are projects that have specific requirements that cannot be met by locating them in previously disturbed areas, the DOE/NNSA NSO tries to minimize the area disturbed and implements mitigation measures specific to the land area to be disturbed. Information regarding the types of mitigation measures that may be implemented can be found throughout Chapter 7, "Mitigation Measures," in Sections 7.1, Land Use; 7.5, Geology and Soils; 7.6, Hydrology; 7.7, Biological Resources; and 7.10, Cultural Resources. The DOE/NNSA NSO agrees that undamaged land and wildlife habitat should be protected.

**Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)**

1 provide comments, please do so at the registration table and we'll immediately go back into  
2 session. We will be here until 8:00 this evening.

3 Just as a reminder, if you have a conversation with somebody at the informational  
4 displays and you think of something you want to make sure gets on the record, you need to  
5 do it from the podium tonight.

6 So thanks for coming.

7 [Meeting temporarily adjourned]

8 MS. LOWE: I would like to reconvene the public hearing of the *Draft* Site-wide  
9 Environmental Impact Statement for the continued operation of the Department of Energy,  
10 National Nuclear Security Administration, Nevada National Security Site, an offsite location  
11 in the state of Nevada.

12 Today is Tuesday, September 27, 2011, and this hearing has been convened at the  
13 Convention Center located at 301 Brougher Avenue in Tonopah, Nevada.

14 Let the record reflect that it is now 8 p.m. All registered speakers have been called  
15 upon to speak. We will now adjourn the public comment meeting. Thank you so much for  
16 coming tonight.

17 [Meeting adjourned at 8:00 p.m.]

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Comments from the Tonopah, Nevada Public Hearing (September 27, 2011)

1                   REPORTER'S CERTIFICATE

2

3                   STATE OF NEVADA      }     ss  
4                   COUNTY OF CLARK    }

5

6

7                   I, JILL JACOBY, do hereby attest that I took down in shorthand all of the  
8 proceedings had in the before-entitled matter at the time and place indicated; and  
9 thereafter said shorthand notes were transcribed into computer-aided transcription; and  
10 that the foregoing transcript constitutes a full, true, and accurate record of the proceedings  
11 had to the best of my skill and ability.

12                  Executed this 30th day of November 2011, at Las Vegas, Nevada.

13

14                    
15                  Jill Jacoby  
16                  Scopeproof

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1  
2 THIS VERBATIM TRANSCRIPT CONSTITUTES  
3 THE OFFICIAL RECORD OF THE  
4

5  
6  
7 SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
8 PUBLIC HEARING  
9

10  
11 Held at the

12  
13 CARSON NUGGET  
14 507 North Carson Street  
15 Carson City, Nevada

16  
17 On  
18 Wednesday, September 28, 2011

19 Beginning at  
20 6:30 p.m.

21  
22  
23  
24 Reported by: JILL JACOBY  
25 Scopeproof

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## Comments from the Carson City, Nevada Public Hearing (September 28, 2011)

1                   WEDNESDAY, SEPTEMBER 28, 2011, 6:30 P.M.

2                   CARSON NUGGET, CARSON CITY, NEVADA

3

4       MS. LOWE: Good evening. I would like to welcome you to this formal public

5 hearing for the Draft Site-wide Environmental Impact Statement for the continued operation

6 of the Department of Energy, National Nuclear Security Administration, Nevada National

7 Security Site, an offsite location in the state of Nevada.

8       Today is Wednesday, September 28, 2011, and this hearing is being convened at the

9 Carson Nugget, located at 507 North Carson Street, Carson City, Nevada. And it is now

10 6:30 p.m.

11      My name is a Wendy Lowe, and I've been asked by the Nevada Site Office of the

12 National Nuclear Security Administration to serve as the moderator for tonight's public

13 hearing. The purpose of this public hearing is to provide you, interested members of the

14 public, with an opportunity to comment on the Draft Site-wide Environmental Impact

15 Statement. Because this is a formal public hearing, we would like to ask you to silence your

16 mobile telephones and we would like your help in keeping the room as quiet as possible so

17 that everyone can hear all the comments.

18      The restrooms are located down the hall to the lobby area here on this floor of the

19 casino. And if we all have to leave the room in an emergency, out of these exit doors down

20 to the left to the staircase, down the stairs and then as you go to your left, you'll see exits out

21 of the building.

22      Before we get too far along, I'd like to introduce Linda Cohn, who is to my left. She

23 is the hearing officer for tonight's hearing. And she's here to officially receive your

24 comments on behalf of the federal government.

25      Tonight's public hearing is the fifth in a series of five that were scheduled over a

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 two-week period in Las Vegas, Pahrump, Tonopah, and Carson City, Nevada, and St.  
2 George, Utah. All of these public hearings are being conducted in the same way. If you just  
3 arrived, I'd like to point out there's an open house in the next room over where Nevada Site  
4 Office has informational posters, informational handouts, and a number of subject matter  
5 experts related to the various subject matters that are addressed in the Site-wide  
6 Environmental Impact Statement. And the open house will be available until the hearing  
7 ends this evening.

8 In a few minutes, I'll go over the procedures that we'll be following when we're ready  
9 to take your comments in this hearing room. Before we do that, we're going to watch a short  
10 video about the Draft Site-wide Environmental Impact Statement.

11 [Video shown.]

12 MS. LOWE: As explained in the video, your comments at this hearing will be  
13 considered by the National Nuclear Security Administration as it finalizes the Environmental  
14 Impact Statement to support decisions about future operations at the Nevada National  
15 Security Site and offsite locations. In particular, you're invited to make comments and  
16 suggestions about what you want the agency to consider as it prepares the final  
17 environmental analysis.

18 As the moderator for this hearing, it is my job to make sure that the hearing is  
19 conducted in a respectful manner and that everyone who is interested in providing comments  
20 has a fair opportunity to do so.

21 To allow as much time as possible for the public comments, Linda Cohn and the other  
22 federal staff and contractors who are here tonight will not be responding to comments or  
23 answering questions during the hearing. If you do have questions, I advise you to go to the  
24 open house area where subject matter experts are standing by. You do need to be aware that  
25 any conversations that you have during the open house will not be recorded and will not be

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 included in the formal record for this meeting. So if you have something important that you  
2 want to say, make sure that you say it in this room from the podium.

3 Now I'd like to go over the procedures that I'll be following for taking oral comments.  
4 If you want to make oral comments for the record tonight, please sign up at the registration  
5 table that is located just outside of the lobby. I'll be calling the people who have registered  
6 to speak on a first-come, first-served basis. Linda's holding up the card. This is the card, if  
7 you signed up on this card, then you have signed up to speak. So we will -- I will be calling  
8 people on a first-come, first-served basis and we will continue to accept speaker registration  
9 cards 'til 8 p.m. as was advertised in the announcement for this hearing.

10 Please be aware that providing oral comments from the podium is only one of several  
11 ways that you can provide comments on the Draft Environmental Impact Statement. Some  
12 of you may have prepared written comments and some of you may wish to fill out a public  
13 comment form. Linda's holding that up now. Copies of the public comment forms are  
14 available throughout the open house as well as at the registration table. You're welcome to  
15 leave any written comments at the registration table before you go home tonight. You're  
16 also welcome to submit comments by mail or fax, through telephone calls through a toll-free  
17 telephone line, or via the Internet. And there is other information flyers available that has all  
18 the ways that you can submit comments during the comment period. All written and oral  
19 comments that are received during the public comment period which will end on Thursday,  
20 October 27, 2011, will be given equal consideration.

21 In order to allow as many of you as possible to make comments, I will be asking each  
22 commenter to conclude his or her comments or remarks within five minutes. No one will be  
23 allowed to yield their time to or share their time with other people. Carrie Stewart, who is  
24 sitting in the front row, is assisting as our timekeeper tonight. And if you have a lot to say,  
25 keep your eye on Carrie, she'll let you know how you're doing on time. If you do have

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 important points, make sure you get them covered before I ask you to conclude. If you do  
2 run out of time, I'll ask you to stop and then I'll invite the next person to come up to the  
3 podium. Again, please know that my goal is to make sure everyone has a fair opportunity to  
4 speak.

5 When I call on you to provide your comments, please come forward to the podium  
6 and begin by stating and spelling your name. Please tell us if you're representing an agency  
7 or an organization tonight, and please speak clearly into the microphone. Jill Jacoby, who is  
8 at the end of the table, is serving as our court reporter tonight and it's her job to make sure  
9 that we have a complete and accurate transcription of this hearing, so we want to make sure  
10 that she's able to capture what you're telling us. I have asked her to let me know if she is  
11 having trouble hearing or understanding you. The transcription of this hearing will be  
12 included as an appendix of the final Environmental Impact Statement.

13 If you have signed up for the mailing list, you'll be notified when the final EIS is  
14 completed. And if you haven't signed up for the mailing list, you can do that tonight at the  
15 registration table as well.

16 One final request that I'd like to make of you tonight. I know a lot of you have strong  
17 opinions about the program. Some of you may oppose the program, while others of you may  
18 support it. The point of a public comment hearing is to give each of you an opportunity to  
19 make comments and suggestions to the agency about what you would like for them to  
20 consider in the final Environmental Impact Statement. Regardless of your position, I would  
21 appreciate your help in making sure that everyone who speaks tonight is treated respectfully.

22 I will call -- I'll try to remember, anyway, to call three names in advance so you'll  
23 know you're coming up.

24 Gary Hollis is up first tonight. He'll be followed by Marta Adams who will be  
25 followed by Bob Halstead.

*Response side of this page intentionally left blank.*

**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1           MR. HOLLIS: I'm Gary Hollis, H-O-L-L-I-S.

2           We appreciate the opportunity to work with you as a cooperating agency. We have  
3 some different views, but you included those views in your draft. However, presenting our  
4 views without action to recognize and mitigate past and present impacts is not enough.

5           Like many citizens of Nye County, I worked at the Nevada Test Site and supported  
6 the United States through the Cold War years. My family, my friends believe the support  
7 that we gave the federal government was worthwhile and we have no regrets. However, it is  
8 now time for DOE and the rest of the federal government to recognize the impact they have  
9 caused and provide mitigation to Nye County.

10          Resources have been taken from us and DOE should do everything in its power to  
11 return those resources to the County. Not allowing Nye County access to water on the  
12 Nevada National Security Site is a big deal to us. Our water rights permit request for water  
13 on the Site have all been denied because of protests by federal agencies, including DOE and  
14 DOE's refusal to allow access to that water. DOE should work closely -- closely coordinate  
15 all groundwater studies with our scientists and provide funding for Nye County to conduct  
16 our own groundwater science studies at the Nevada National Security Site.

17          The ongoing impact of denied access to the County is huge. And no compensation  
18 has been made for our loss of access to that water. This is a desert and access to water is a  
19 major issue for our residents. We understand some of the water on the Nevada National  
20 Security Site is contaminated. However, we believe and DOE has indicated the vast majority  
21 of the water is perfectly safe for public use. Nevada Assembly Joint Resolution No. 5, dated  
22 June 16, 2011, documents our concerns. The joint resolution urges the federal government  
23 to engage in discussions with Nye County regarding the mitigation and containment of water  
24 contamination in Nevada which resulted from nuclear testing and storage activities that were  
25 conducted by the federal government at the Nevada National Security Site and the

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601-1

**601-1** When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right to use groundwater at the NNSS to support its mission requirements. The means by which the land was withdrawn did not provide for any form of compensation.

As discussed in Chapter 6, Section 6.3.6, DOE/NNSA and other Federal agencies, such as BLM and NPS, have for various reasons protested applications for water withdrawals by others. In DOE/NNSA's case, the protests were based on the need to protect its Federal reserved water rights where the requested withdrawals could affect those rights. DOE/NNSA, pursuant to its safeguard and security protocols, may permit access to the NNSS and the conduct of certain commercial activities, although DOE/NNSA would continue to retain and exercise its Federal reserved water rights as appropriate; thus, the commercial entity would be responsible for obtaining its own water appropriation from the State Engineer.

DOE/NNSA involves Nye County (the commentor) in its groundwater characterization, modeling, and monitoring activities in a variety of ways. For example, Nye County, through its liaison with the Nevada Site Specific Advisory Board, regularly interacts with DOE/NSSA regarding groundwater studies and other environmental management activities and has participated in annual groundwater-related public meetings.

Nonetheless, DOE/NNSA accepts, evaluates, and funds unsolicited proposals for various activities such as the hydrogeological investigations suggested by the commentor. When unsolicited proposals are received, they are evaluated pursuant to relevant procurement and contracting regulations and policies, as well as in consideration of other factors such as the extent to which the proposals would assist DOE/NNSA in achieving its mission objectives and the availability of funding.

As discussed in Chapter 1, Section 1.3.1, DOE/NNSA environmental restoration activities at the NNSS, including those associated with groundwater contaminated by past nuclear weapons testing, are subject to State of Nevada oversight through the FFACO, which was entered into in 1996 by DOE, DoD, and the State of Nevada. The FFACO provides a process for identifying sites that have potential historic (legacy) contamination, implementing state-approved corrective actions, and

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1 reestablishment of any water contaminant because of those activities.

2 Our bottom line, DOE should take steps to mitigate specific impacts. One practical  
3 solution would be to provide the County reasonable access to sustainable clean water  
4 resources that exists on the Nevada National Security Site.

5 Stop protesting our water rights requests. We appreciate the work you have done and  
6 look forward to working with you to resolve our issues. We'll provide you with formal,  
7 more detailed comments in the future.

8 Thank you.

9 MS. COHN: Thank you.

10 MS. LOWE: Thank you, Mr. Hollis.

11 Marta Adams is next. She will be followed by Bob Halstead and then John Hadder.

12 MS. ADAMS: Thank you. My name is Marta Adams, M-A-R-T-A; last name  
13 Adams; A-D-A-M-S. I am a chief deputy attorney general for the State of Nevada.

14 I appreciate the opportunity to provide the U.S. Department of Energy with comments  
15 on the Draft Side-wide Environmental Impact Statement for the Nevada National Security  
16 Site. My comments this evening will be brief, however we will be submitting more detailed  
17 comments in writing.

18 We work quite closely with the office of the Nevada -- the Nevada attorney general  
19 works quite closely with the governor's office Agency for Nuclear Projects and other  
20 involved state agencies. And, again, we will be coordinating those for submission before the  
21 end of the comment period.

22 First, I would like to thank DOE for holding this hearing in Carson City where it's  
23 more accessible to us and really the public here in northern Nevada. So thank you very  
24 much for that. Because the Draft Side-wide EIS is so complex and so important in terms of  
25 charting future directions both for the Test Site and for the future of state-DOE relationships,

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*cont'd*

instituting closure actions. DOE/NNSA, under the NSSS Environmental Restoration Program, will continue to ensure compliance with the FFACO by characterizing and monitoring locations and resources that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

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602-1

This SWEIS addresses issues that are of importance to stakeholders throughout Nevada, and DOE/NNSA sought to make both the document and the public hearings accessible to stakeholders in northern Nevada. In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on this SWEIS from 90 to 126 days.

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1 we ask that the deadline for submitting comments be extended. And we do understand that  
2 they are in fact going to be, so thank you for that as well.

3 It seems to us that given the importance of the issues addressed in the Draft EIS and  
4 the breadth and range of activities and issues covered by the various alternatives allows  
5 sufficient time for public comments is certainly in the interests of both DOE and the citizens  
6 of Nevada.

7 Second, a cursory review of the draft EIS indicates that critically important  
8 information may be missing from the analyses. Specifically, the discussion of groundwater  
9 contamination from past NTS/NNSS activities does not appear to be sufficient to assess the  
10 cumulative loss of this resource as a result of those activities. Nor does the information  
11 provide an adequate basis for evaluating the value of the groundwater resource which is and  
12 will be lost to present and future generations as a result of past, present, and future  
13 contamination.

14 Notably, the 2011 Nevada legislature passed a resolution tasking the attorney  
15 general's office, the state Department of Conservation and Natural Resources, and the  
16 governor's office Agency for Nuclear Projects to prepare a report for the 2013 legislature  
17 addressing whether Nevada could potentially receive monetary compensation from the  
18 federal government for contamination of the environment in Nevada with radioactive and  
19 other hazardous contaminants as a result of military exercises, nuclear weapons testing, and  
20 other activities conducted by the federal government of Nevada. Contamination from these  
21 activities will of necessity be a major focus of this investigation, and the information  
22 contained in the final EIS must be such that it provides a full and complete picture of the  
23 groundwater resource that has been removed from the public domain, the level and  
24 distribution of contamination of that resource, and potential, if any, for future uses of the  
25 resource.

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602-1  
*cont'd*

602-2

602-3

**602-2** This *NNSS SWEIS* provides a description of groundwater at the NNSS in Chapter 4, Section 4.1.6.2, including current knowledge of the extent of radiological contamination. As discussed in Section 5.1.6.2, groundwater quality would not be impacted by any of the activities proposed under any of the alternatives in this *NNSS SWEIS*. Because it is not a proposed activity in this *SWEIS*, DOE/NNSA analyzes the impact of past nuclear weapons testing on groundwater as a cumulative impact in Chapter 6, Section 6.3.6.2. That analysis provides a sufficient basis for purposes of differentiating among the alternatives considered for continued operation of the NNSS. As defined by CEQ, cumulative impacts result from the "incremental impact of the action when added to other past, present, and reasonably foreseeable future actions..." (40 CFR 1508.7).

DOE/NNSA believes the analysis in this *SWEIS* is sufficient for purposes of differentiating among the alternatives considered for continued operation of the NNSS Chapter 6, Section 6.3.6.2, provides DOE/NNSA's estimation of potential cumulative environmental impacts on groundwater resources resulting from past nuclear weapons testing on the NNSS.

Although DOE/NNSA believes the groundwater analyses in the *Draft NNSS SWEIS* were sufficient for purposes of differentiating among alternatives, in response to a number of requests this *Final NNSS SWEIS* has been revised to enable the public to better understand the extent of groundwater contaminated by historic nuclear weapons testing on the NNSS. Chapter 4, Section 4.1.6.2, and Chapter 6, Section 6.3.6.2, have been revised, based on information developed for the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively.

Because of the new information provided in Section 4.1.6.2, DOE/NNSA has also revised the discussion of potential cumulative impacts from radiologically contaminated groundwater at the NNSS (see Chapter 6, Section 6.3.6.2).

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DOE/NNSA, in consultation with NDEP, developed UGTA Corrective Action Strategy to address the contamination created by the testing of nuclear devices in shafts and tunnels at the NNSS. The UGTA Corrective Action Strategy is discussed in detail in Section 4.1.6.2 of this NNSS SWEIS.

- 602-3 Groundwater resources at the NNSS, including groundwater use, depth to groundwater, recharge and discharge, water supply systems, and groundwater monitoring and quality are described in Chapter 4, Section 4.1.6.2, of the SWEIS. Chapter 5, Section 5.1.6.2, provides estimates of the amount of groundwater (expressed as perennial yield in terms of acre-feet per year) underlying the NNSS, as well as historic and projected future demands on this groundwater to support ongoing and proposed projects and activities under each alternative. Chapter 6, Section 6.3.6.2, analyzes the potential cumulative impacts of past nuclear weapons testing on groundwater. When the United States withdraws public land for uses such as the NNSS, it also implicitly reserves sufficient water to satisfy the purposes for which the reservation was created. Accordingly, DOE/NNSA maintains a Federal reserved water right at the NNSS to support its mission requirements, one of which includes ensuring compliance with the FFACO by characterizing and monitoring locations that have sustained adverse environmental impacts from past DOE activities, including groundwater contaminated by past nuclear weapons testing.

As noted in the response to comment 602-2 above, in response to comments, Chapter 4, Section 4.1.6.2 and Chapter 6, Section 6.3.6.2, have been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS.

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1        I would once again ask that the deadline for comments be extended to assure a full  
2 airing of the information contained in the draft EIS and adequate opportunity for state and  
3 public review and comment.

4        Thank you again for the opportunity to provide comments at this hearing tonight. The  
5 attorney general's office will be providing more detailed written comments prior to the end  
6 of the comment period.

7        Thank you.

8        MS. LOWE: Thank you very much.

9        MS. ADAMS: Thank you.

10        MS. LOWE: Okay. Bob Halstead. And he will be followed by John Hadder and  
11 Erik Emblem. And I do apologize if I mispronounce your name.

12        MR. HALSTEAD: Thank you. My name is Robert Halstead, H-A-L-S-T-E-A-D.  
13 I'm the executive director for the state of Nevada Agency for Nuclear Projects.

14        And I do appreciate the opportunity to provide comments on the draft Side-wide EIS  
15 tonight. And I'd like to thank DOE for scheduling this hearing in Carson City to afford the  
16 residents of northern Nevada and the state agencies the opportunity to make preliminary  
17 comments on this very important draft document.

18        My comments this evening are going to focus on one key issue that is of significant  
19 concern to the state. My agency, in conjunction with the attorney general's office, will be  
20 submitting detailed written comments prior to the close of the comment period and I  
21 certainly urge that any other residents of Nevada who perhaps weren't ready to make  
22 statements, they take advantage of this important opportunity to provide comments.

23        The state of Nevada is very concerned that the draft EIS appears to be setting the  
24 stage for abandonment by DOE of a long-standing agreement between the state and DOE  
25 whereby low-level radioactive waste and mixed hazardous and low-level radioactive waste

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603-1

603-1      In Chapter 5, Section 5.1.3.1, of the *Draft NNSS SWEIS* (and this *Final NNSS SWEIS*), DOE/NNSA analyzed shipments of LLW/MLLW for two cases: a Constrained Case that retained current restrictions to avoid routes in greater metropolitan Las Vegas, Nevada, and an Unconstrained Case that considered routes within greater metropolitan Las Vegas. The routes considered are within the bounds of existing regulatory parameters and legal constraints and reflect major changes and upgrades to the Las Vegas Valley highway infrastructure that have occurred over the past 15 years. By including these analyses, DOE/NNSA sought to understand the differences in potential environmental effects between different routing options (which incorporated changes to local transportation infrastructure since the *1996 NTS EIS* [DOE EIS-0243, August 1996] was completed), communicate those differences to the public, and seek stakeholder comments on the range of transportation routes. DOE/NNSA also stated that it did not intend to make any decisions regarding specific waste transportation routes via this NEPA process. Any changes to existing routing would be made through revisions to the NNSS WAC. Revisions to the WAC are undertaken in coordination with NDEP, pursuant to the Agreement in Principle between the State of Nevada and the DOE/NNSA NSO (State of Nevada 2011).

While DOE/NNSA's environmental analyses showed no meaningful differences in potential environmental effects between the Constrained and Unconstrained Cases, the preponderance of stakeholder comments recommended that DOE/NNSA retain highway routing restrictions to avoid shipments of LLW/MLLW through greater metropolitan Las Vegas (Constrained Case). In consideration of the environmental analyses and stakeholder comments, and after consultation with NDEP as part of the WAC revision process, DOE/NNSA determined that it would retain the highway routing restrictions for shipments of LLW/MLLW; therefore, there would be no need to revise the WAC in this regard (DOE 2012).

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1 are required to be transported to the Site using highway routes that avoid the heavily  
2 populated Las Vegas metropolitan area. The original agreement between then Governor  
3 Kenny Guinn and then Secretary of Energy Bill Richardson also banned waste shipments  
4 over Hoover Dam. However, that has since become moot due to security restrictions put in  
5 place following 9/11 that banned such shipments from traversing the Dam.

6 Now under the Unconstrained Routing Scenario evaluated in this draft EIS, DOE is  
7 proposing to abandon this agreement and begin shipping low level waste and mixed waste  
8 directly through the Las Vegas Valley using I-15, the I-15/US 95 interchange known as the  
9 Spaghetti Bowl, and also the Las Vegas Beltway. In addition, the Unconstrained Routing  
10 Scenario would allow waste to be shipped over the new Hoover Dam bypass bridge and  
11 funnel waste into the Las Vegas metro area from the south.

12 At this time I'd like to read a portion of a letter that was sent shortly ago by Governor  
13 Brian Sandoval to Energy Secretary Steven Chu that addresses this issue. I've submitted the  
14 letter with the record of my statement, which summarizes the first part on page 1. But On  
15 page 2, let me make what we think are the most significant points here.

16 For over 12 years, the existing arrangement has worked to the mutual benefit of DOE  
17 and the State of Nevada. Now it appears that DOE through the vehicle of the site-wide EIS,  
18 is considering abandoning its long-standing agreement. The draft of the EIS that was  
19 released for public comment on July 29<sup>th</sup> contains an unconstrained transportation scenario  
20 that assumes renewed shipments of waste along through the Las Vegas metro area.

21 The rationale for this proposed action appears to be financial. The draft EIS  
22 postulates the use of intermodal shipments of waste to the Site with the material being  
23 transported from DOE's generator sites by rail, then offloaded onto trucks at various  
24 locations proximate to Interstate 15 for the last leg of the trip to the Site. The draft EIS  
25 asserts that using I-15 and the Las Vegas beltway through metro Las Vegas is now

**603-I  
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1 acceptable because of improvements to the area's highway system that were not in place  
2 when the original agreement was made. This is emphatically not the case. Since 1999, the  
3 population of the Las Vegas metro area has increased exponentially. While I-15 and the  
4 beltway have undergone almost constant reconstruction over the past decade in an effort to  
5 mitigate the ever increasing traffic, congestion and gridlock continue to be major problems.

6 As the governor said, I am deeply concerned that DOE/NSS appears to be setting  
7 the stage for abandoning the extremely successful agreement that has served the interests of  
8 both DOE and the State of Nevada exceedingly well for over 12 years.

9 And the governor asks the Secretary of Energy to reaffirm DOE's commitment to the  
10 routing arrangements that were originally agreed to by Governor Guinn and Secretary  
11 Richardson in 1999.

12 If I could conclude my statement by saying that Nevada believes it's essential that the  
13 agreements remain in place. And that additionally, we propose that similar routing  
14 restrictions apply to any shipments destined for the Site that might be going through the  
15 Reno-Sparks-Carson metro area for the same reasons that the waste shipments are restricted  
16 from Las Vegas. An accident or an incident involving such shipments in a major metro area  
17 of the state could have significant public health and economic consequences. The use of  
18 existing alternative routes for these shipments has worked exceedingly well and there really  
19 is no reason at all for DOE to change them.

20 Thank you for the opportunity to make this comment. We will be submitting detailed  
21 comments on the entire draft EIS by the end of the comment period. And, again, I really  
22 urge any of you residents of Nevada concerned about the future of the Test Site, please take  
23 advantage of this important opportunity, put yourself on the record.

24 Thank you.

25 MS. COHN: Thank you.

**603-1  
cont'd**

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1 MS. LOWE: Thank you, Mr. Halstead. John Hadder who will be followed by Erik  
2 Emblem, and then followed by William Brooks.

3 MR. HADDER: My name is John Hadder, that's H-A-D-D-E-R. And I'm a board  
4 member in an organization called HOME, Healing Ourselves and Mother Earth. We have  
5 some literature out there. In fact, there's a set of topic points I'll submit those for tonight, if  
6 someone hasn't already done that yet. I'm from Reno, Nevada also speaking for myself as  
7 well.

8 Just going to raise a couple, a few general points. One, we also request that the  
9 comment period be extended. The document itself is enormous, there's a lot of information  
10 in there, but there's a lot of information we feel is missing and it takes quite a bit of time to  
11 track down some of the details. And as was mentioned earlier, with the contamination level  
12 get to go to several outside cited documents to find it. In fact, some of those documents are  
13 not available online either. And in fact, the 1996 EIS is not readily available for most people  
14 either, which is one of the main reference documents. So it's important for people to have an  
15 opportunity to get ahold of that background information. So we'd also request an extension,  
16 it would be in the best interest of not only the NNSA but the public in general to have more  
17 time, a lot more time for this big, big decision that we're asking for at this point.

18 We also -- we do appreciate the Native American perspective that were inserted in the  
19 document. We generally think that's an improvement over previous incarnations of the EIS  
20 that have come out of the government. So please continue that process.

21 In general, we feel that the contamination picture is not clear with the EIS. I spent  
22 quite a bit of time with the water and the soils issues as well. And in looking at the  
23 document, the general public does not get a complete sense of where the contamination is,  
24 especially in a visual way. Talk about people that aren't used to digging through technical  
25 documents so better representation of what's out there, where it's located, and some basic

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**604-1** The commentor's recognition of the inclusion of the American Indian perspectives is appreciated. This model started with the *1996 NTS EIS* (DOE EIS-0243, August 1996) and continues to be used by the DOE/NNSA NSO, as well as other Federal agencies in the region. In response to numerous requests from the public and other stakeholders, DOE/NNSA extended the public comment period on the draft SWEIS from 90 to 126 days. DOE/NNSA has also made the *1996 NTS EIS* available to the public by posting it on the NNSS NEPA website ([www.nv.doe.gov/library/publications/historical.aspx](http://www.nv.doe.gov/library/publications/historical.aspx)).

**604-1**

In addition, in response to a number of comments on the *Draft NNSS SWEIS*, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR. Chapter 4, Sections 4.1.5.4.1 (NNSS) and 4.4.5.4.1 (TTR), have been revised to include additional information regarding the location and extent of both radiological and chemical surface soil contamination. Figures depicting areas of soil contamination also have been added to these sections.

Chapter 4, Section 4.1.6.2, has been revised, based on information developed under the FFACO and in coordination with NDEP, to further describe current knowledge of the extent of groundwater contamination at the NNSS. The text has been modified to describe the distribution of that groundwater in these areas, and Figures 4-20 and 4-21 have been added to illustrate the modeled distribution of radioactively contaminated groundwater in Frenchman Flat in 1,000 years and the concentrations of tritium detected in hydrogeologic investigation wells and springs on and around the NNSS, respectively. Chapter 6, Section 6.3.6.2, has been revised to incorporate the additional information from Section 4.1.6.2 into the analysis of cumulative impacts on groundwater.

**604-2**

**604-2** As noted in the response to comment 604-1 above, DOE/NNSA has revised this *Final NNSS SWEIS* to enable the public to better understand the extent of surface soils and groundwater contaminated by historic nuclear weapons testing on the NNSS and TTR.

Contaminated soil sites and facilities at the NNSS, TTR, and Nevada Test and Training Range are grouped together in CAUs. Each CAU is composed of a number of CASs that exhibit geographical, contamination, and other similarities. CAUs and CASs are managed under the FFACO, in consultation with NDEP. CASs are characterized following specific protocols developed under the FFACO process. CASs and CAUs are closed under the FFACO when conditions specific to each site

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definitions would be useful. One definition, for example, with the soil cleanup site indicates where the site's closed. It indicates a number of sites are closed, but there's no discussion of what that means. I didn't -- at least I didn't see it anyway. What does it mean to have a closed site? What kind of -- what's the radioactive contamination levels or industrial levels? So those kinds of pictures are not clear from the EIS. And it's also true, we also agree with the state with the picture of underground water, again, it's not clear and that needs to be a real clear picture. Especially it's a public document. The main public document people have of the site. So better representation or complete representation at least in a summary form will be useful. People can go to other sources for more detail. And those sources should be available online in some way.

The other -- the other point that we think is important that's lacking in the document is an analysis of resource allocation at the Site. How much is the -- how much of the budget of the Site is going towards environmental management, how much is going towards weapons programs of various sorts. The public does not really have that kind of information to evaluate priorities. The statements in the EIS are kind of general well, this is important, this is important. But how much is important? Well, it's you know how important it is, it's how much dollars are spending on it. So I think there should be a budget table of some sort indicating these are projections and that way the public can weigh in on yes, we agree with this priority; no, we don't agree with this priority in a quantitative way and not just a hand waving way. So we think that's really important that that analysis be in there especially with the -- with the Site which is -- which is as complicated as this one.

And finally, we notice that the idea of returning southern Nevada Test Site and the lands to public use was not discussed at all in the documents, not even on the table. We think that should be on the table, in fact. Again, a clear picture of the contamination would help for people to understand if there are any portions that could be returned to public use.

604-2  
*cont'd*

are met. In general, closure of a CAS/CAU may range from "closure in place" to "clean closure." Sites where contamination is fairly stable and cleanup activities would be too costly or could unnecessarily spread contamination may be closed in place. If a site is in a location where the public, workers, or the environment may be harmed, clean closure may be prescribed. The level of cleanup is based, in part, on existing and anticipated future uses of the site and its environs. For this reason, although many CASs/CAUs have been closed under the FFACO, these areas are not necessarily suitable for public access or use.

As stated in DOE/NNSA's Notice of Availability for this *NNSS SWEIS* (76 FR 204), electronic copies of all but a few (i.e., those for which copying would violate copyright laws) of the references used for the *Draft NNSS SWEIS* were made available in DOE reading rooms and public libraries in 18 cities in Nevada, as well as one each in Utah and Arizona, and were also available via the Internet at the DOE/NNSA NEPA website ([www.nv.doe.gov](http://www.nv.doe.gov)). Electronic copies of additional references used for preparing this *Final NNSS SWEIS* are also available at the same sites.

604-3

DOE/NNSA believes that cost and budget data are not necessary or useful in understanding and evaluating the environmental impacts of actions addressed in this SWEIS. Future budgets for the NNSS and its various programs are uncertain, and the costs of some future activities have not been defined yet. Therefore, budget and cost data do not provide a meaningful method for defining and distinguishing between alternatives in this SWEIS. DOE/NNSA has presented a detailed description of the activities included under each alternative as well as the potential environmental consequences associated with implementing those activities.

604-4

To provide the public with a better understanding of areas of contamination at the NNSS, DOE/NNSA has revised Chapter 4, Sections 4.1.5.4.1 and 4.1.6.2, of this *Final NNSS SWEIS* to include additional information on the current knowledge of the extent of soil and groundwater contamination resulting from nuclear weapons testing activities.

Returning part or all of the lands withdrawn for the NNSS to BLM for other use is inconsistent with the original and ongoing purpose for which the land was withdrawn for use by DOE/NNSA. The original area withdrawn, which was part of the USAF Las Vegas Bombing and Gunnery Range, was selected, in part, due to its remote location, low nearby population, and minimal public use in the vicinity. As activities on the site evolved through the years, additional land was withdrawn (i.e., the original and three additional withdrawals constitute current site boundaries) to ensure

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1 Are there opportunities there that we're missing? It's clear that some of the missions are  
2 decreasing and that maybe some of these areas could be thought of in terms of public use  
3 once again. So that -- we think that should be back on the table as a discussion. And again,  
4 having a clear picture of the contamination, we really need that in the discussion process.

5 Thank you very much for allowing us the opportunity to comment and we will be  
6 submitting more detailed comments before the comment period closes.

7 MS. COHN: Thank you.

8 MS. LOWE: Thank you, Mr. Hader. Erik Emblem will be followed by William  
9 Brooks, who will be followed by John Christiansen.

10 MR EMBLEM: Good evening. My name is Erik Emblem, that's E-R-I-K. And the  
11 last name's Emblem, E-M-B-L-E-M. And I'm here tonight speaking for the Western State's  
12 Council of Sheet Metal Workers representing the states of California, Arizona, Nevada, and  
13 Hawaii. And I also speak to you here tonight as somebody who is very familiar with the  
14 mission, Department of Energy.

15 My home state is New Mexico. I grew up and was raised in Santa Fe and I worked at  
16 Los Alamos. So I'm very familiar with the programs and I left there many years ago. But  
17 I've had the opportunity to review the EIS, and I want to comment on DOE and the work  
18 that was done. Even though, you know, work's done and it's very expensive, and maybe  
19 there is some holes, but you know what, compared to where we were 30, 40 years ago, we're  
20 miles and leaps and bounds ahead.

21 I'm here tonight to recommend that DOE consider Expanded Operations Alternative.  
22 You look at the Expanded Operations Alternative as outlined in the book, it was very  
23 articulate with the subject matter experts in the next room. This is something that we need as  
24 a nation. What goes on within this Site is not only good for Nevada, but it's good for our  
25 nation.

604-4  
*cont'd*

sufficient land was reserved for national security activities and to maintain adequate buffers between publicly accessible locations off site and high-hazard and otherwise sensitive testing, experimental, and training activities on site. Returning NNSS land to BLM for other use would reduce lands available for national security needs, as well as buffer areas that are important for protection of the public. Consequently, there is no land area within the NNSS that does not serve one of these two primary uses.

In its *1996 NTS EIS* (DOE EIS-0243, August 1996), DOE considered ceasing all operations at the NNSS and placing all facilities into a cold standby status (Discontinue Operations Alternative). In the *1996 NTS EIS*, DOE also considered discontinuing all defense-related and most Work for Others Program activities at the NNSS (Alternate Use of Withdrawn Lands Alternative). In its December 9, 1996, *NTS EIS ROD* (61 FR 65551), DOE decided that it would implement the Expanded Use Alternative for all activities (except LLW/MLLW management, which was to continue under the Continue Current Operations Alternative), as well as the public education activities under the Alternate Use of Withdrawn Lands Alternative. DOE later decided to implement the Expanded Use Alternative for LLW/MLLW management at the NNSS (65 FR 10061). Because discontinuing operations at the NNSS was previously considered and DOE decided in 1996 to continue to operate the NNSS at an expanded level, in addition to the continuing need for the NNSS for National Security/Defense Mission programs, both closing the NNSS and discontinuing National Security/Defense Mission programs, projects, and activities are considered unreasonable alternatives at this time.

605-1

605-1 The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

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1 When we look at the downside, which everything has an upside and a downside, I  
2 grew up in Santa Fe, New Mexico, which was -- in my -- I grew up in a ranch south of town  
3 which was downwind from White Rock, New Mexico, the original dumpsite for Los  
4 Alamos. And having worked there, I understand how it worked, in having worked at the site.  
5 But since leaving the site, I was involved in a lot of the decommissioning efforts that  
6 happened in the '90s and the early 2000s. With those efforts, I toured sites not only Los  
7 Alamos, but in Hanford, Renault, Savannah River and some sites I did not do. And when  
8 you look at the monumental tasks we have to decommissioning the contaminated waste  
9 that's out there, it's just absolutely astonishing that we've come as far as we have and we've  
10 identified the resources at many of these sites to take care of the issue.

11 This site here with the Expanded Operations looking at alternative energy, it's cheap.  
12 I worked in California in energy environmental policy working a lot with the implementation  
13 of the Reduced Greenhouse Gas Emissions Act in the State of California. I see that the work  
14 being done here on site also follows that. And I thank you for that.

15 So tonight, I think in the interest in Nevada, the interest of the United States and it  
16 would be in our interest to expand those operations, continue the work. I compliment you on  
17 the work on the EIS.

18 Thank you.

19 MS. LOWE: Thank you, Mr. Emblem.

20 William Brooks will be next and he'll be followed by John Christiansen.

21 MR. BROOKS: Good evening, ladies and gentlemen, William Brooks, business  
22 representative, Sheet Metal Workers, Local 88, in Las Vegas, Nevada. Our comments are  
23 going to be very brief tonight.

24 As a former employee of Reynolds Electric, REECO, years ago, I worked on the  
25 Nevada Test Site. Firsthand, I can tell you that my experience has always been safety is

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The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 number one for all employees at the Nevada Test Site and the citizens in the various  
2 surrounding areas.

3 I'm here to speak on behalf of my members, the 17 members that I currently represent  
4 who are employees of the Nevada Test Site, combined with the wives and children,  
5 approximately 85 people altogether. Those jobs are critical for my members, for the Las  
6 Vegas Valley, for Pahrump, and Beatty. Those individuals contribute to the tax base in those  
7 cities. But they don't have a job, the individuals that work at the Nevada Test Site, or the  
8 new name or whatever you want to call it these days, some of them have been employed for  
9 over 20 years. It's a career. It's not a job, it's a career.

10 The expansion and utilization of the Nevada Test Site is what, I think, the state of  
11 Nevada needs. We can no longer afford to rely on two employers to subsidize the tax base  
12 of the state of Nevada, which would be MGM and Harrah's. Therefore, I would strongly  
13 encourage the Department of Energy to also negotiate extensive agreements with the  
14 Department of Defense to utilize every aspect of the Test Site or whatever means necessary  
15 to promote and secure the safety of the United States of America and the citizens of this  
16 great country.

17 Thank you.

18 MS. COHN: Thank you.

19 MS. LOWE: Thank you, Mr. Brooks. John Christiansen will be next.

20 Mr. Christiansen, Mr. Brooks did not spell his name, I think we figured it out, but  
21 would you help us with Christiansen?

22 MR. CHRISTIANSEN: Yes, Christiansen. It's spelled C-H-R-I-S-T-I-A-N-S-E-N.  
23 First name John, J-O-H-N.

24 I'm a business manager of the Sheet Metal Workers, Local 88 in Las Vegas, Nevada,  
25 representing 2000 members and their families. We're affiliates with Southern Nevada

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The commentor's preference for the Expanded Operations Alternative is noted. As stated in Chapter 3, Section 3.4, of this *NNSS SWEIS*, DOE/NNSA considered comments received on the *Draft NNSS SWEIS* as part of its evaluation in identifying a preferred alternative. DOE/NNSA's Preferred Alternative is described in Section 3.4 of this *Final NNSS SWEIS*.

**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 Building and Construction Trades Council which represents 22,000 members and their  
2 families. I'm also a husband and a father. Native Nevadan raised my family in Las Vegas.  
3 Seen a lot of changes in Nevada in my lifetime.

4 I'm here to support DOE and the draft EIS. I encourage both parties or all parties  
5 involved with it to reach an agreement.

6 Nevada needs this expansion and activities at the Nevada National Security Site. I  
7 have to look down because it's always been the Test Site to me. Nevada National Security  
8 Site employs a lot of people, not only construction workers, management, culinary. And  
9 again these are careers. These aren't jobs that we work for a year or a short time, we make a  
10 career out of it. With pensions and with healthcare benefits, things that are severely needed  
11 to have a decent living and provide for your family. So I encourage DOE and any parties  
12 that have issues with the draft EIS to work through them and get resolutions so that we could  
13 put people to work.

14 As mentioned by the speaker before me, Mr. Brooks, we have 17 members at the Test  
15 Site right now. We had as many as almost 80, so you can see that the work is down. He also  
16 mentioned that Nevada has become very dependent on just a couple of industries, gaming  
17 being one of them, mining being the other. And we found out in that the last couple of years  
18 what happens when tourism goes down, our economy goes in the tank. We've got to find  
19 ways to create jobs and put people to work. And I believe that this is a very good shot in the  
20 arm to the economy of Nevada, not just southern Nevada all of Nevada would benefit from  
21 this and I truly believe that.

22 So with that, Local 88 and its affiliates recommend that the draft EIS be negotiated to  
23 resolution so that expanded activities can go on at the Nevada National Security Site.

24 Thank you.

25 MS. COHN: Thank you.

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1 MS. LOWE: Thank you, Mr. Christiansen, did I say that right?

2 MR. CHRISTIANSEN: That's correct.

3 MS. LOWE: It's better than the first time? Thank you.

4 That is all the speaker registration cards I have. Anybody in the back there aware of  
5 any that I don't know about? No? Okay.

6 We will now take a recess, but we have advertised the availability of this meeting  
7 until 8:00 tonight so we will remain on the premises until 8:00. If anyone else comes and  
8 wants to speak, we will reconvene this hearing.

9 Thank you.

10 [Meeting temporarily adjourned]

11 MS. LOWE: I would like to reconvene the public hearing for the Draft Site-wide  
12 Environmental Statement for the continued operations of the Department of Energy National  
13 Nuclear Security Administration, Nevada National Security Site and offsite locations in the  
14 state of Nevada.

15 Today is Wednesday, September 28, 2011, and this hearing has been convened at the  
16 Carson Nugget, located at 507 North Carson Street, Carson City, Nevada. Let the record  
17 reflect that it is now 8:00. All registered speakers have been called upon to speak. We will  
18 now adjourn this public hearing.

19 Thank you so much for coming tonight.

20 [Meeting adjourned at 8:00 p.m.]

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**Comments from the Carson City, Nevada Public Hearing (September 28, 2011)**

1                           **REPORTER'S CERTIFICATE**

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STATE OF NEVADA      )     ss  
5 COUNTY OF CLARK      )

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I, JILL JACOBY, do hereby attest that I took down in shorthand all of the proceedings had in the before-entitled matter at the time and place indicated; and thereafter said shorthand notes were transcribed into computer-aided transcription; and that the foregoing transcript constitutes a full, true, and accurate record of the proceedings had to the best of my skill and ability.

13

Executed this 30th day of November 2011, at Las Vegas, Nevada.

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Jill Jacoby  
Scopeproof

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**Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)**

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3       THIS VERBATIM TRANSCRIPT CONSTITUTES  
4       THE OFFICIAL RECORD OF THE

5  
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8       SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
9       PUBLIC HEARING

10  
11                   Held at the

12  
13                   SANTA FE STATION  
14                   4949 N. Rancho Drive  
15                   Las Vegas, Nevada 89130

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17                   *Response side of this page intentionally left blank.*

18                   On  
19                   Thursday, October 6, 2011

20                   Beginning at  
21                   3:52 p.m.

22  
23  
24       Reported by: JILL JACOBY  
25                   Scopeproof

Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)

1                   THURSDAY, OCTOBER 6, 2011, 3:52 P.M.  
2                   SANTA FE STATION, LAS VEGAS, NEVADA  
3  
4                 MS. COHN: Good afternoon. I would like to welcome you to this formal public  
5                 hearing for the Draft Site-wide Environmental Impact Statement for the continued operation  
6                 of the Department of Energy National Nuclear Security Administration, Nevada National  
7                 Security Site and offsite locations in the state of Nevada.  
8                 Today is Thursday, October 6, 2011. This hearing is being convened at the Santa Fe  
9                 Hotel in Las Vegas, Nevada. It is now 3:52 p.m.  
10               I believe that you're going to be presenting your comments as a group; is that correct?  
11               MR. ARNOLD: Correct.  
12               MS. COHN: I'm going to go ahead and give you the microphone.  
13               This is Jill Jacoby, she's the stenographer, she will be taking down your comments.  
14               MR. ARNOLD: Good afternoon, my name is Richard Arnold, A-R-N-O-L-D,  
15               spokesperson for the Consolidated Group of Tribes and Organizations.  
16               We must emphasize recommendations made by the CGTO do not imply we support  
17               the proposed actions or the alternatives. Submission of our comments is merely our attempt  
18               to restore harmony and balance to restore resources impacted or potentially impacted by  
19               DOE activities using the National Environmental Policy Act process.  
20               One of our first comments is that we want to let -- DOE needs to know that it needs to  
21               systematically consider the Consolidated Group of Tribes and Organizations comments  
22               found on the Site-wide Environmental Impact Statement to fully understand and properly  
23               address the complexity related to the Nevada National Security Site and offsite locations  
24               prior to the selection of the alternatives.  
25               The CGTO should participate in the development of the Mitigation Action Plan. The

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The DOE/NNSA NSO appreciates the considerable efforts of CGTO in participating in the development of text for inclusion in this SWEIS. As an integral part of the SWEIS, the DOE/NNSA NSO agreed to incorporate CGTO recommendations without changes into separate text boxes for easier identification and evaluation in the document. It is understood that the CGTO recommendations do not imply support of proposed DOE/NNSA NSO actions or alternatives. DOE/NNSA has carefully reviewed the CGTO recommendations in the process of selecting its Preferred Alternative (described in Chapter 3, Section 3.4).

As part of the American Indian Consultation Program, the DOE/NNSA NSO has committed to holding annual meetings with CGTO as a method of providing program updates and information about future activities planned for the NNSS. DOE/NNSA appreciates CGTO's interest in participating in the development of the mitigation action plan and will be sharing identified mitigation strategies at the next regular annual meeting with CGTO. The DOE/NNSA NSO understands and supports CGTO's interest in visiting selected sites on the NNSS.

**Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)**

<p>1 CGTO should be notified of proposed land disturbing activities prior to implementation.</p> <p>2 Need to continue to hold annual meetings to provide tribal updates. This would be through</p> <p>3 the support of the Department of Energy National Nuclear Security Administration.</p> <p>4 We further need to arrange special trips to Gold Meadows and other areas to evaluate</p> <p>5 issues as intended in the spirit of the Native American Graves Protection and Repatriation</p> <p>6 Act and the American Indian Religious Freedom Act, and the Executive Order 13007 asked</p> <p>7 us to say these things.</p> <p>8 Under the socioeconomics, DOE should enhance their administrative action efforts to</p> <p>9 hire more American Indians and Indian-owned businesses to mitigate socioeconomic impacts</p> <p>10 to our people.</p> <p>11 Under geology and soils, DOE needs to adopt culturally appropriate stabilization</p> <p>12 efforts to revegetation techniques based on traditional ecological knowledge to respond to</p> <p>13 severe disturbance in the geology, soil, and minerals that are in large portions of the NNSS</p> <p>14 due to previous activities.</p> <p>15 Hydrology. CGTO must be involved in mitigating impacts through hydrological</p> <p>16 resources. Indian people must be permitted to minimize the efforts impacted by cleaning</p> <p>17 natural springs, seeps, tanks, and pohs, P-O-H-S, which are natural cavern places, to restore</p> <p>18 balance in the area.</p> <p>19 Biological resources. Notification of incidental taking of culturally important plants</p> <p>20 and animals, i.e., desert tortoise, requires notification to the Fish and Wildlife Service.</p> <p>21 Current notification must be provided to the CGTO due to the cultural significance of this</p> <p>22 particular animal.</p> <p>23 Number 2, in the past, DOE has supported various initiatives to restore animal</p> <p>24 habitats such as the big horn sheep with minimal success without participation of the CGTO.</p> <p>25 In order for these activities to become successful, it is essential to have tribal representatives</p>	<p><b>701-3</b></p> <p><b>701-4</b></p> <p><b>701-2 cont'd</b></p> <p><b>701-5</b></p> <p><b>701-3</b></p> <p><b>701-6</b></p> <p><b>701-4</b></p> <p><b>701-5</b></p> <p><b>701-6</b></p>	<p>The DOE/NNSA NSO appreciates the comments related to the socioeconomics impacts. The DOE/NNSA NSO is committed to enhancing efforts to identify qualified American Indians and American Indian-owned businesses to support NNSS activities to the extent practicable.</p> <p>DOE/NNSA will consult with CGTO, to the extent practicable, to develop an appropriate role in soil stabilization efforts at the NNSS and to incorporate traditional ecological knowledge as part of its response to disturbances to the geology, soils, and minerals at the NNSS.</p> <p>DOE/NNSA understands CGTO's unique cultural perspectives and is committed to working with CGTO to minimize impacts on hydrological resources on the NNSS. As part of the American Indian Consultation Program, CGTO is encouraged to identify activities designed to restore balance and health to the springs, seeps, tanks and pohs on the NNSS, as suggested in this comment.</p> <p>Under the terms of the NNSS Biological Opinion (USFWS 2009), DOE/NNSA submits an annual compliance report to the USFWS. That report is included in a larger annual Ecological Monitoring and Compliance Report. DOE/NNSA will ensure that CGTO receives a copy of that report each year.</p> <p>As noted by the commentor, DOE/NNSA has and will continue to support the efforts of the Nevada Division of Wildlife to establish and maintain viable populations of desert bighorn sheep in the area around the NNSS; however, no efforts have been made to establish a resident population of desert bighorn sheep on the NNSS. DOE/NNSA encourages CGTO to contact the Nevada Division of Wildlife to arrange participation in future efforts to establish desert bighorn populations in southern Nevada. There is an established population of desert bighorn sheep on the Specter Range, south of the NNSS, as well as other populations west and north of the NNSS. Although there have been few observations of desert bighorns reported on the NNSS (only eight between 1963 and 2009), in recent years motion-activated cameras on the NNSS have photographed the species 85 times in 2009 and 42 times during 2010. It is unknown whether these bighorns are from the Specter Range or other populations or whether there is animal movement between these distant populations. The NNSS may provide a suitable corridor between these populations or may provide suitable habitat for resident bighorn sheep. Recently, evidence has been found that desert bighorn sheep may be lambing in certain areas of the NNSS, as described in Chapter 4, Section 4.1.7.2, of this <i>Final NNSS SWEIS</i>. DOE/NNSA</p>
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**Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)**

1 involved around this process.

2 Number 3, DOE has not included the CGTO revegetation efforts which leads to  
3 culturally appropriate environmental restoration techniques. Revegetation and reclamation  
4 efforts require tribal participation.

5 Visual resources. DOE proposes to mitigate visual resources impact by painting  
6 structures to reduce visibilities. CGTO recommends landscape modifications including  
7 those associated with environmental restoration activities be done in conjunction with tribal  
8 representatives. DOE should make provisions for Indian people participating in the annual  
9 monitoring of land disturbing activities.

10 Three, DOE should include CGTO in the land restoration and concealing  
11 infrastructure using traditional Indian revegetation methods.

12 Number 4 is DOE should make provisions for Indian people to conduct ceremonies,  
13 prayers, and songs in an effort to rebalance the adversely impacted resources.

14 Cultural resources. The CGTO must be an integral part of the mitigation measures so  
15 impacts of varying cultural resources can be minimalized for earth.

16 Number 2, CGTO must assess and determine culturally appropriate measures to  
17 protect geological formations important to the cultural landscape. Implement culturally  
18 appropriate environmental restoration techniques that require minimal ground disturbance.  
19 Restore impacted plant and animal species essential to the spiritual and cultural landscape.  
20 Provide access to CGTO designated areas so that we can conduct purification and balancing  
21 ceremonies in an attempt to restore the natural and spiritual harmony of the NNSS landscape.  
22 Complete traditional and cultural property nomination process previously recommended by  
23 the CGTO in 2009 for the Shoshone Mountain and Water Bottle Canyon. Complete the  
24 Indian History Project Report prepared collaboratively with the DOE, with DOD, and the  
25 CGTO in 2009. Develop and implement systematic American Indian graphic studies to

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will continue to monitor the species as it occurs on the NNSS and include updated information in annual Ecological Monitoring and Compliance Reports.

Chapter 7, Section 7.7, of this *Final NNSS SWEIS* has been revised to indicate that the DOE/NNSA NSO will consult with CGTO to establish an appropriate role in revegetation efforts at the NNSS and will incorporate culturally appropriate environmental restoration techniques, as practicable.

DOE/NNSA supports CGTO's interest in providing guidance and recommendations related to visual resources mitigation, landscape modifications, and environmental restoration that is important to the tribes. DOE/NNSA understands CGTO's unique cultural perspectives and is committed to working with CGTO to minimize impacts on the NNSS. DOE/NNSA supports CGTO's interest in providing guidance and recommendations related to mitigation. DOE/NNSA will be sharing identified mitigation strategies at regular annual meetings with CGTO.

The DOE/NNSA NSO works closely with 16 culturally affiliated tribes that participate with the CGTO to maintain effective interactions. As such, arrangements are made to address tribal requests for accessing sacred, cultural, and resource sites in accordance with Federal mandates to the extent practicable. The DOE/NNSA NSO encourages CGTO to further define their desire to conduct ceremonies, prayers, and songs at the NNSS in future activities planning within the American Indian Consultation Program.

DOE/NNSA supports CGTO's interest in providing guidance and recommendations related to mitigation. DOE/NNSA will be sharing identified mitigation strategies at the next regular annual meeting with CGTO.

The DOE/NNSA NSO appreciates the comments of CGTO and their participation in the DOE/NNSA NSO American Indian Consultation Program. Through CGTO's efforts, various innovative cultural approaches have been recommended and further supported by the DOE/NNSA NSO to understand the cultural importance of areas and resources found on the NNSS. An important aspect of the DOE/NNSA American Indian Consultation Program is to address tribal requests for accessing sacred and cultural resource sites in accordance with Federal mandates to the extent practicable. The DOE/NNSA NSO is committed to supporting American Indian Consultation Program activities related to the NNSS as funding permits.

**Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)**

1 better understand the interconnectedness of the cultural landscape and the culturally  
 2 appropriate methods to protect the landscape and sustain spiritual and cultural balance.  
 3 Complete revegetation efforts of Clean Slates and projects started in 1996.

4       Waste Management. CGTO opposes the transportation, storage, and disposal of  
 5 radioactive waste at the NNSS. DOE EM, or Environmental Management, should make  
 6 efforts to allocate funds and resources to the CGTO to conduct systematic ethnographic  
 7 studies to document cultural perspectives relating to waste management programs.

8       If DOE selects the Expanded Use Alternative, CGTO must conduct a cultural  
 9 assessment of the Area 3 radioactive waste management site prior to new use for mitigating  
 10 potential impacts.

11      The CGTO supports DOE's intention to minimize waste within the NNSS area. DOE  
 12 should partner with the CGTO to develop and participate in DOE's waste minimization and  
 13 pollution prevention programs. Waste minimization efforts described in the SWEIS  
 14 regarding land commitments must include members of the CGTO to ensure that cultural  
 15 implications of these decisions are considered prior to the implementation.

16      The CGTO struggles with the ethics of relocating radioactive waste from other  
 17 American Indian lands so those people can live without fear of radioactivity. We are greatly  
 18 concerned about the adverse spiritual, environmental, and health impacts associated with  
 19 relocating these angry rocks from their current locations to our Holy Land. We believe  
 20 transporting these elements to our land perpetuates animosity and discord of our tribal  
 21 governments and disproportionately impacts natural balance of the area.

22      The CGTO recommends DOE host a break out session for culturally associated -- I'm  
 23 sorry, let me start over here. The CGTO recommends DOE host a break out session for  
 24 culturally affiliated tribes associated with the NNSS and multistate waste generator facilities

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DOE acknowledges CGTO's unique cultural perspectives and their opposition to transporting, storage, and disposal of radioactive waste at the NNSS. In 1997, DOE funded a Native American Transportation Study through the DOE/NNSA American Indian Consultation Program to evaluate culturally perceived risks associated with the transportation of LLW to the NNSS. Currently, NEPA does not contain provisions to evaluate perceived risks and no such analysis was conducted for the SWEIS. Requests for additional systematic ethnographic or perceived risk studies that fall outside of the scope of the SWEIS require consideration by the DOE/NNSA American Indian Consultation Program and the evaluation of required resources to implement such a request. Should the Expanded Alternative be selected, DOE believes CGTO's perspectives identified in a cultural assessment of the NNSS RWMS could be useful in mitigating potential impacts associated with NNSS activities.

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The DOE/NNSA NSO acknowledges CGTO's comment to host a breakout session for culturally affiliated tribes at DOE's Office of Environmental Management/NSO Annual Waste Generator Workshop. Unfortunately, this comment is outside the scope of the SWEIS, but was forwarded to the Office of Environmental Management Waste Management Program for future consideration.

**Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)**

1 during the DOE's Annual Waste Generator Conference. These efforts will facilitate further  
2 discussion, understanding, and develop culturally appropriate measures.

3 The CGTO and the tribal members will formally submit additional comments  
4 including but not limited to the transportation and human health impacts prior to the  
5 conclusion of the public comment period.

6 We've also advised tribal representatives here that they submit supplemental  
7 comments as well as individuals prior to the close of the DOE comment period.

8 And that concludes our remarks.

9 Thank you.

10 MS. COHN: Thank you, Mr. Arnold and CGTO.

11 Is there anybody else who would wish to speak on the record at this time?

12 Okay. As I see no takers for additional commenting, let the record reflect it is now  
13 4:02 p.m., all speakers have been called to speak that wish to do so. We'll now adjourn this  
14 public comment hearing and thank you for participating.

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## *Comments from the Las Vegas, Nevada Public Hearing (October 6, 2011)*

**REPORTER'S CERTIFICATE**

4 STATE OF NEVADA      )  
5 COUNTY OF CLARK      )      ss

I, JILL JACOBY, do hereby attest that I took down in shorthand all of the proceedings had in the before-entitled matter at the time and place indicated; and thereafter said shorthand notes were transcribed into computer-aided transcription; and that the foregoing transcript constitutes a full, true, and accurate record of the proceedings had to the best of my skill and ability.

Executed this 30th day of November 2011, at Las Vegas, Nevada.

Jill Jacoby  
Jill Jacoby  
Scopeproof

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## **SECTION 3**

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## **REFERENCES**



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