

**CHAPTER 1**  
**INTRODUCTION AND PURPOSE AND NEED FOR**  
**AGENCY ACTION**

---



---

## 1.0 INTRODUCTION AND PURPOSE AND NEED FOR AGENCY ACTION

### 1.1 Introduction

This *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)* analyzes potential environmental impacts of continued management and operation of the Nevada National Security Site (NNSS) (formerly known as the Nevada Test Site) and other sites managed by the National Nuclear Security Administration (NNSA) in Nevada. The primary purpose of continuing operation of the NNSS is to provide support for NNSA's nuclear weapons stockpile stewardship missions. NNSA also supports other U.S. Department of Energy (DOE) programs and Federal agencies such as the U.S. Department of Defense (DoD), U.S. Department of Justice, and U.S. Department of Homeland Security. This site-wide environmental impact statement (SWEIS) analyzes the potential environmental impacts of reasonable alternatives for current and reasonably foreseeable missions, programs, capabilities, and projects at the NNSS and offsite locations in Nevada during a 10-year period.

Established by Congress through the National Nuclear Security Administration Act (Title XXXII of the National Defense Authorization Act for Fiscal Year 2000, Public Law [P.L.] 106-65), NNSA is a separately organized, semiautonomous agency within DOE. NNSA operates programs at the NNSS and at offsite locations in Nevada, including the North Las Vegas Facility (NLVF), the Remote Sensing Laboratory (RSL) on Nellis Air Force Base in North Las Vegas, the Tonopah Test Range (TTR), and environmental remediation areas on the U.S. Air Force Nevada Test and Training Range (formerly the Nellis Air Force Range) through the Nevada Site Office in North Las Vegas, Nevada. These facilities and sites are shown in **Figure 1-1**. The NNSS and the TTR are located in Nye County; NLVF and RSL are located in Clark County; and the Nevada Test and Training Range is located in Nye, Lincoln, and Clark Counties in southern Nevada.

DOE's National Environmental Policy Act (NEPA) implementing procedures (10 *Code of Federal Regulations* [CFR] 1021.330(c)) 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. NNSA determines whether an existing SWEIS remains adequate or a new SWEIS or supplement to the existing SWEIS is needed. NNSA has prepared this SWEIS to comply with NEPA and Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and DOE NEPA implementing procedures (10 CFR Part 1021).

In 1996, DOE issued the *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (1996 NTS EIS)* (DOE 1996c) and an associated Record of Decision (ROD) (61 *Federal Register* [FR] 65551). DOE selected the 1996 NTS EIS Expanded Use Alternative for most activities, but decided to manage low-level radioactive waste (LLW) and mixed low-level radioactive waste (MLLW) at levels described under the No Action Alternative, pending decisions on the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (WM PEIS)* (DOE 1997). In the February 2000 WM PEIS ROD (65 FR 10061), DOE announced that the NNSS would be one of two regional sites to be used for LLW and MLLW disposal. At the same time, DOE amended the 1996 NTS EIS ROD to select the Expanded Use Alternative for waste management activities at the NNSS (65 FR 10061).

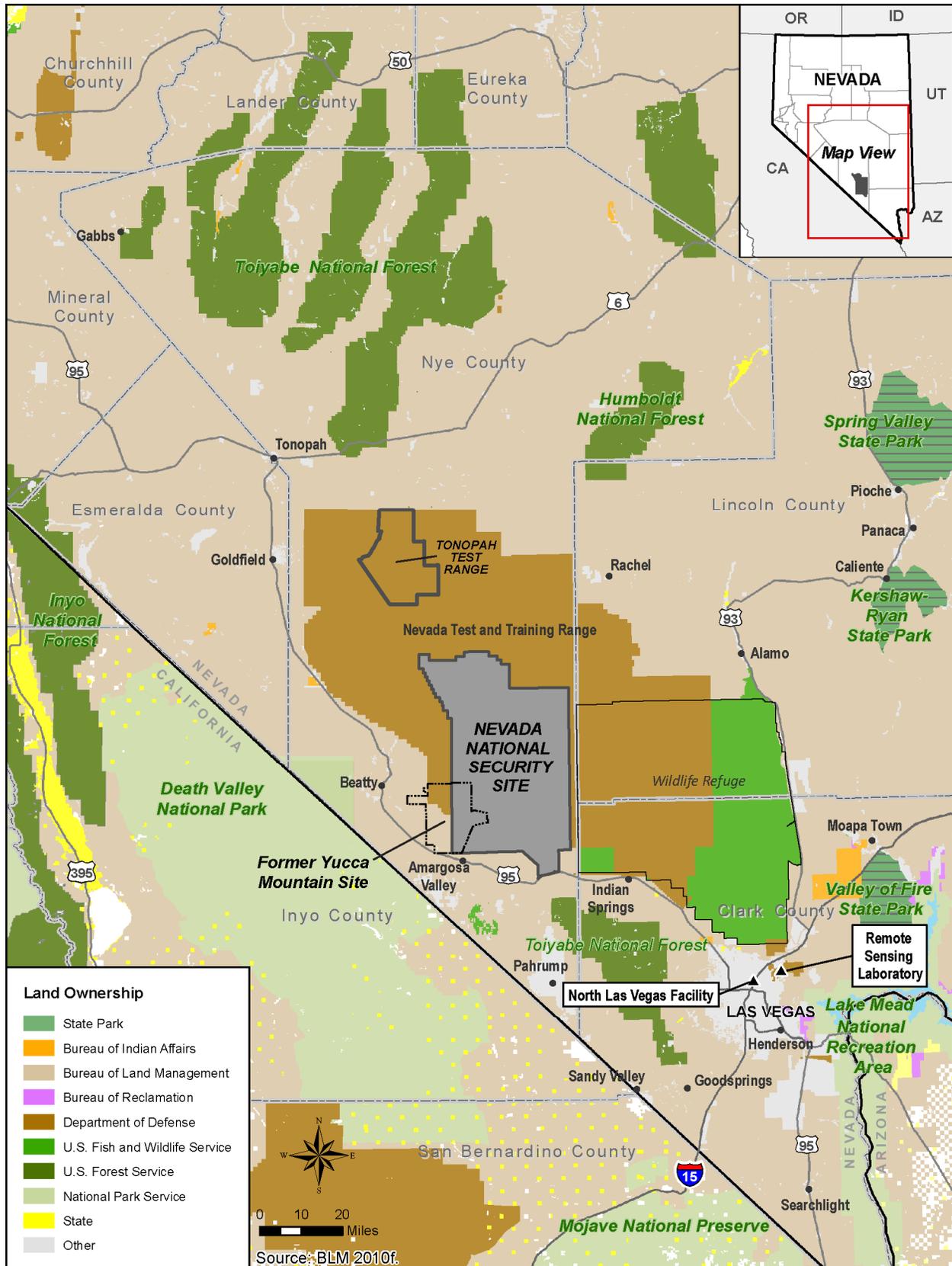


Figure 1-1 Location of the Nevada National Security Site and Offsite Locations

Subsequently, as required by DOE regulations (10 CFR 1021.330(d)), NNSA conducted the first 5-year review of the 1996 NTS EIS, as documented 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 (2002 NTS SA)* (DOE 2002g). The review found that there were no substantial changes to the actions proposed in the 1996 NTS EIS and no significant new circumstances or information relevant to environmental concerns. Thus, NNSA determined that no further NEPA documentation was required (i.e., the existing 1996 NTS EIS remained adequate based on the supplement analysis [SA], in accordance with 10 CFR 1021.330(d)).

In 2007, NNSA initiated its second 5-year review of the 1996 NTS EIS and, in April 2008, issued the *Draft Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (2008 Draft NTS SA)* (DOE 2008f). Based on consideration of comments received on the 2008 *Draft NTS SA*, potential changes to the NNS program work scope, and changes to the environmental baseline, NNSA decided to prepare this SWEIS to update its analysis of the NNS and offsite location operations in Nevada.

This chapter provides information on the purpose and need for agency action and introduces the alternatives analyzed for NNSA operations in Nevada and decisions to be supported through the development of this SWEIS. Also included in this chapter are descriptions of related NEPA analyses and a summary of the public involvement process and stakeholder scoping comments, as well as American Indian perspectives prepared by the American Indian Writers Subgroup (AIWS). The AIWS input is in text boxes identified with a Consolidated Group of Tribes and Organizations (CGTO) feather icon.

## 1.2 Purpose and Need for Agency Action

The purpose and need for agency action is to support NNSA's core missions established by Congress and the President. Through its Nevada Site Office, 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 NNS 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.

NNSA also 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, NNSA's purpose and need also is to satisfy the requirements of these Executive orders and comply with congressional



**Introduction—American Indian Perspective**

Since the beginning of time, the area encompassing the Nevada National Security Site (NNS) and the offsite locations has been essential to the lives of American Indian tribes. These lands contain traditional gathering, ceremonial, and recreational areas for the American Indian people. They contain ecological resources and power places that are crucial for the continuation of American Indian culture, religion, and society.

In consideration of our ties to these lands and their resources, and to comply with U.S. Department of Energy (DOE) Order 144.1 and Executive Order 13127, DOE invited the Consolidated Group of Tribes and Organizations (CGTO) to contribute to the development of this site-wide environmental impact statement (SWEIS). Specifically, DOE provided the CGTO with the opportunity to develop text summarizing our perspective and concerns regarding the resources and alternatives presented in this SWEIS.

The CGTO has had a long-standing relationship with DOE since 1987. We are comprised of 17 tribes and organizations, representing the Southern Paiute, Western Shoshone, and Owens Valley Paiute and Shoshone people. Each of these groups has substantiated cultural and historic ties to the NNS and the surrounding areas (Steward 1938; Stoffle and Evans 1988).

Information provided by the CGTO for inclusion in the chapters of this SWEIS is presented in text boxes such as this to distinguish it from DOE text. The full text of American Indian perspective and concerns related to the resources and alternatives evaluated in this SWEIS is presented in Appendix C.

mandates to promote, expedite, and advance the production of environmentally sound energy resources, including renewable energy resources such as solar and geothermal energy systems.

The NNSS has a long history of supporting national security objectives by conducting underground nuclear tests and other nuclear and nonnuclear activities. Since October 1992, there has been a moratorium on underground nuclear testing (a brief description of underground nuclear testing is provided in Appendix H). Thus, NNSA has evolved from an active nuclear testing program to maintaining readiness and the capability to conduct underground nuclear weapons tests if so directed by the President. NNSA's primary mission at the NNSS is supporting nuclear weapons stockpile reliability through subcritical experiments. The limitation on conducting underground nuclear weapons testing has resulted in resource reallocation and the introduction and expansion of other national security missions, programs, and activities at the NNSS and offsite locations in Nevada. In addition, the NNSS supports DOE waste management activities, including disposal; environmental restoration activities; and research, development, and testing programs related to national security. The NNSS also provides opportunities for various environmental research projects and the development of commercial-scale solar energy projects, as well as innovative solar and other renewable energy technologies.

**Purpose and Need for Agency Action—American Indian Perspective**



The Consolidated Group of Tribes and Organizations (CGTO) knows American Indian people are charged by the Creator to interact with the environment and its resources in culturally appropriate ways to maintain balance, regardless of the U.S. Department of Energy's (DOE's) stated purpose and need for agency action. American Indians further believe these lands and their resources contain life-sustaining characteristics that must be properly respected and cared for to ensure harmony.

The CGTO does not support harmful land-disturbing activities currently conducted and proposed within the Nevada National Security Site (NNSS) area and offsite locations. These lands are part of the traditional holy lands of the Southern Paiute, Western Shoshone, and Owens Valley Paiute and Shoshone people (Stoffle et al. 1990). Harmful land disturbing activities threaten the health and welfare of Indian people through possible contamination and resource destruction.

As Indian people, we are obligated to manage the land and its resources for seven generations. This means we evaluate and guide our actions in terms of what they could do for or to the next seven generations. The CGTO takes this obligation very seriously and has provided information throughout the site-wide environmental impact statement (SWEIS) so we can continue to fulfill our purpose and need to care for these lands.

*See Appendix C for more details.*

### **1.3 Alternatives Analyzed**

The proposed action in this SWEIS is the continued operation of the NNSS, other NNSA sites in Nevada, and environmental restoration sites in Nevada. The alternatives in this SWEIS are structured to provide information regarding current and future use of NNSA facilities in Nevada. The following three alternatives are analyzed: (1) No Action, (2) Expanded Operations, and (3) Reduced Operations. These alternatives were developed to reflect current operations and reasonably foreseeable future operations and to allow NNSA to analyze and compare the potential environmental effects of a wide range of use options. Chapter 3, Table 3–1, provides a summary of the alternatives analyzed in this SWEIS.

The alternative descriptions are organized under the three NNSS missions. Each mission includes two or more associated programs. The missions and associated programs are (1) the National Security/Defense Mission, which includes the Stockpile Stewardship and Management, Nuclear Emergency Response, Nonproliferation, Counterterrorism, and Work for Others Programs; (2) the Environmental Management Mission, which includes the Waste Management and Environmental Restoration Programs; and (3) the Nondefense Mission, which includes the General Site Support and Infrastructure, Conservation and Renewable Energy, and Other Research and Development Programs. More information about the NNSS missions and programs and associated capabilities, projects, and facilities and the levels of operations under each alternative can be found in Chapter 3 of this SWEIS.

### **Terminology Used in this *NNSS SWEIS***

**Missions.** In this site-wide environmental impact statement (SWEIS), the term “missions” refers to the major responsibilities assigned to the U.S. Department of Energy (DOE) and National Nuclear Security Administration (NNSA) (described in Section 1.1). DOE and NNSA accomplish these major responsibilities by assigning groups or types of activities to DOE’s system of security laboratories, production facilities, and other sites.

**Programs.** DOE and NNSA are organized into program offices, each of which has primary responsibilities within the set of DOE and NNSA missions. Funding and direction for activities at DOE facilities are provided through these program offices, and similarly coordinated sets of activities to meet program office responsibilities are often referred to as “programs.” Programs are usually long-term efforts with broad goals or requirements.

**Capabilities.** This term refers to the combination of facilities, equipment, infrastructure, and expertise necessary to undertake types or groups of activities and implement mission assignments. Capabilities at the Nevada National Security Site (NNSS) have been established over time, principally through mission assignments and activities directed by program offices.

**Projects.** This term is used to describe activities with a clear beginning and end that are undertaken to meet a specific goal or need. Projects can vary in scale from very small (such as a project to undertake one experiment or a series of small experiments) to major (such as a project to construct and start up a new nuclear facility). Projects are usually relatively short-term efforts and can cross multiple programs and missions, although they are usually “sponsored” by a primary program office. In this SWEIS, “project” is usually used more narrowly to describe construction activities, including facility modifications (such as a project to build a new office building or to establish and demonstrate a new capability). Construction projects considered reasonably foreseeable at the NNSS over about a 10-year period are discussed and analyzed in this SWEIS.

**Activities.** In this SWEIS, activities are those physical actions used to implement missions, programs, capabilities, or projects.

#### **1.3.1 No Action Alternative**

As defined in this *NNSS SWEIS*, 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. For each of the three mission areas and their supporting programs, the level of operation for associated capabilities, projects, and activities is determined by operational levels actually realized since 1996. Examples include the number of experiments performed at the Joint Actinide Shock Physics Experimental Research Facility (JASPER) or the U1a Complex; reasonable expectations for recently implemented projects, such as the number of shots for the Large-Bore Powder Gun; or the nature and number of activities, such as training undertaken for the Office of Secure Transportation. Accordingly, under the No Action Alternative, Stockpile Stewardship and Management Program activities would continue at NNSA facilities in Nevada under the conditions of the ongoing nuclear testing moratorium. These activities would emphasize U.S. science-based stockpile stewardship tests, experiments, and projects to maintain the safety and reliability of the Nation’s nuclear weapons stockpile without underground nuclear testing. By Presidential Decision Directive 15 (November 1993), DOE/NNSA must be able to resume underground nuclear weapons tests within 24 to 36 months if so directed by the President. This capability is maintained at the NNSS.

In support of the Nuclear Emergency Response, Nonproliferation, and Counterterrorism Programs, under the No Action Alternative, NNSA would continue its responsibilities regarding (1) support for the Nuclear Emergency Support Team, the Federal Radiological Monitoring and Assessment Center, the Accident Response Group, and the Radiological Assistance Program; (2) Aerial Measuring System activities; (3) weapons of mass destruction emergency responder training; (4) disposition of improvised nuclear devices and radiological dispersion devices; (5) support for NNSA’s Emergency Communications

Network; and (6) integration of existing activities and facilities to support U.S. efforts to control the spread of weapons of mass destruction.

Under the No Action Alternative, the Work for Others Program, which is hosted by NNSA, would entail the shared use of certain facilities, such as the Big Explosives Experimental Facility (BEEF), the Nonproliferation Test and Evaluation Complex, and the T-1 Training Area, with other agencies, such as DoD, as well as the shared use of resources at the NNSS, RSL, NLVF, and the TTR. NNSA would continue to host the projects of other Federal agencies, such as DoD and the U.S. Department of Homeland Security, as well as state and local government agencies and some nongovernmental organizations.

Under the No Action Alternative, in support of the Environmental Management Mission and Waste Management Program, the NNSS would continue accepting and disposing LLW and MLLW from approved generators as long as such wastes meet the NNSS waste acceptance criteria. The projected LLW volume analyzed is based on the average annual disposal of LLW from 1997 to 2010. The volume of MLLW analyzed is the permitted capacity of the Mixed Waste Disposal Unit (Cell 18) at the Area 5 Radioactive Waste Management Complex. The Environmental Restoration Program would continue to ensure compliance with the Federal Facility Agreement and Consent Order (FFACO) to characterize, monitor, and, if necessary, remediate locations that have sustained adverse environmental impacts from past DOE activities. These impacts include hazardous material and radioactively contaminated areas, facilities, soils, and groundwater.

Under the No Action Alternative, the Nondefense Mission includes those activities that are necessary to support mission-related programs, such as construction and maintenance of facilities, provision of supplies and services, and warehousing. Activities related to supply and conservation of energy, including renewable energy and other research and development projects, are also conducted under the Nondefense Mission. NNSA would continue to identify and implement energy conservation measures and projects related to energy efficiency, renewable energy, water conservation, transportation/fleet management, and high-performance and sustainable buildings.

#### **Federal Facility Agreement and Consent Order**

The Nevada National Security Site Environmental Restoration Program includes activities to comply with the Federal Facility Agreement and Consent Order, which was entered into in 1996 by the U.S. Department of Energy, the U.S. Department of Defense, and the State of Nevada. The Federal Facility Agreement and Consent Order provides a process for identifying sites having potential historic contamination, implementing state-approved corrective actions, and instituting closure actions for remediated sites.

### **1.3.2 Expanded Operations Alternative**

The Expanded Operations Alternative includes the level of operations under the No Action Alternative, plus the level of operations associated with additional capabilities at the NNSS and offsite locations in Nevada. The additional level of operations would include modification and/or expansion of existing facilities and construction of new facilities. An example of an additional level of operations would be the increased number of experiments that would be conducted at the NNSS with conventional high explosives under the Expanded Operations Alternative (100 experiments within limited areas of the NNSS) compared with the number that would be conducted under the No Action Alternative (20 experiments in the same areas). An example of facility expansion would be adding a new firing table at BEEF. As with the No Action Alternative, the Expanded Operations Alternative reflects continued implementation of previous NEPA decisions (see Section 1.5) and retains the necessary capabilities from those decisions. The key differences from the No Action Alternative are shown in Chapter 3, Table 3–1, of this SWEIS, and a detailed description of the Expanded Operations Alternative is provided in Chapter 3, Section 3.2.

### 1.3.3 Reduced Operations Alternative

The Reduced Operations Alternative analyzed in this SWEIS 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 (see Section 1.5), 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. Using the same example used for the Expanded Operations Alternative, the number of conventional high-explosives experiments under the Reduced Operations Alternative would be 10 experiments compared with the 20 experiments proposed under the No Action Alternative. A geographical constraint example would be the cessation of most activities in the northwest portion of the NNSS (although activities such as security, monitoring, environmental restoration, and military exercises would continue). The key differences from the No Action Alternative are shown in Chapter 3, Table 3–1, of this SWEIS, and a detailed description of the Reduced Operations Alternative is provided in Chapter 3, Section 3.3.

### 1.3.4 Relationship to 1996 NTS EIS

In 1996, DOE issued the final *NTS EIS* and its associated ROD. The *1996 NTS EIS* (DOE 1996c) evaluated four alternatives: (1) Continue Current Operations (No Action Alternative), (2) Discontinue Operations, (3) Expanded Use, and (4) Alternate Use of Withdrawn Lands. These alternatives are described below.

- Alternative 1, Continue Current Operations (No Action): DOE and interagency programs, activities, and operations at the NNSS that are associated with the five program areas would continue in the same manner and degree (level of operations) as during the 3 to 5 years previous to 1996. For example, at the NNSS, DOE would continue to undertake nuclear weapons stockpile and stewardship experiments and operations; environmental restoration would continue in the form of characterization and remediation of contaminated areas and facilities; and waste would be disposed at then-current yearly rates or levels.
- Alternative 2, Discontinue Operations: DOE and interagency programs, activities, and operations at the NNSS would be terminated. Facilities would be placed in cold standby after operations cease. Only those environmental monitoring and security functions necessary for human health, safety, and security would be maintained at the NNSS.
- Alternative 3, Expanded Use: DOE and interagency programs, activities, and operations at the NNSS associated with the five program areas would be maintained, but in a manner and level above that of the 3 to 5 years previous to 1996. Defense Program activities associated with stockpile stewardship would increase, as would waste management and environmental restoration activities.
- Alternative 4, Alternate Use of Withdrawn Lands: All defense-related activities and most interagency programs would discontinue at the NNSS.

In its 1996 ROD, DOE selected the Expanded Use Alternative, which provided for increasing the level of operations of most programs, activities, and operations, but decided to manage LLW and MLLW at levels described under the No Action Alternative. However, in a 2000 amendment to the 1996 ROD, DOE selected the Expanded Use Alternative for waste management activities at the NNSS.

For the most part, the level of operations envisioned and analyzed in the *1996 NTS EIS* (DOE 1996c) has not been realized. **Table 1–1** provides a comparison of the *1996 NTS EIS* Expanded Use Alternative and the current *NNSS SWEIS* No Action Alternative. As shown in Table 1–1, under the Expanded Use Alternative, DOE proposed undertaking approximately 110 dynamic experiments (i.e., experiments designed to improve knowledge of plutonium properties and assess performance and safety of nuclear weapons) each year. Since then, however, fewer than 10 such experiments have occurred each year. Also, the Expanded Use Alternative analyzed the transport and disposal of about 37 million cubic feet of LLW and 11 million cubic feet of MLLW at the NNSS. At the end of 2010, however, almost 22 million cubic feet of LLW and 370,000 cubic feet of MLLW had been disposed.

This *NNSS SWEIS* includes three alternatives: (1) No Action, (2) Expanded Operations, and (3) Reduced Operations. The No Action Alternative reflects the NNSA and interagency programs, activities, and operations in the program areas addressed in the *1996 NTS EIS* Expanded Use Alternative, but at the historic or baseline level of operations experienced since 1996. For example, under the No Action Alternative in this *NNSS SWEIS*, NNSA analyzes 10 dynamic experiments per year and the transport and disposal of 15 million cubic feet of LLW and 900,000 cubic feet of MLLW.

The No Action Alternative also includes the level of operations associated with missions, programs, capabilities, and projects analyzed in other NEPA documents. For example, NNSA completed the *Final Environmental Impact Statement for the Proposed Relocation of Technical Area 18 Capabilities and Materials at the Los Alamos National Laboratory* (DOE 2002h; DOE/EIS-319) and its ROD (67 FR 79906) and then relocated materials and equipment associated with criticality experiments to the NNSS. Consistent with the baseline level of operations, under the No Action Alternative, the Criticality Experiment Facility is expected to conduct up to 500 criticality operations for training, experiments, and other purposes each year.

As described in Section 1.3.2, the Expanded Operations Alternative includes a higher level of operations than under the No Action Alternative, plus operations associated with proposed additional capabilities, which is a similar concept to the Expanded Use Alternative considered in the *1996 NTS EIS*. The Reduced Operations Alternative reflects diminished levels of operation, as well as geographic restrictions on some activities at the NNSS. There is no clear equivalent to the Reduced Operations Alternative in the *1996 NTS EIS*.

**Table 1–1 Comparison of the 1996 NTS EIS Expanded Use Alternative and the NNSS SWEIS No Action Alternative**

<i>Mission, Program, Project, or Activity Analyzed</i>	<i>Analyzed in the 1996 NTS EIS <sup>a</sup></i>	<i>Analyzed in this NNSS SWEIS <sup>a</sup></i>
<b>General</b>		
Mission/program	Five program areas: Defense, Waste Management, Environmental Restoration, Nondefense Research and Development, and Work for Others	Three mission areas: National Security/Defense Mission, Environmental Management Mission, and Nondefense Mission
<b>NATIONAL SECURITY/DEFENSE MISSION</b>		
<b>Stockpile Stewardship and Management Program</b>		
Maintain readiness to conduct an underground nuclear test	Addressed as overarching mission	Addressed as overarching mission
Conduct dynamic experiments	110 per year	10 per year
Conduct high-explosives tests and experiments	100 per year at BEEF, up to 70,000 pounds of high explosives per detonation, including limited use of certain hazardous materials; no SNM would be used in any experiment	To support Stockpile Stewardship and Management Program: 20 per year at BEEF (70,000 pounds TNT-equivalent maximum per event) and 10 per year at other locations within the Nuclear Test Zone and Nuclear and High Explosives Test Zone; explosives experiments at BEEF may include limited use of certain hazardous materials  To support Work for Others Program: 40 experiments using up to 2,000 pounds TNT-equivalent of explosives at various locations on the NNSS
Disposition of damaged U.S. nuclear weapon(s)	Disposition damaged U.S. nuclear weapon(s) on an as-needed basis	Disposition damaged U.S. nuclear weapon(s) on an as-needed basis
Reserve land and infrastructure for a large, heavy-industrial facility and/or next generation nuclear weapons simulators	Consistent with analyses in other NEPA documents that considered the NNSS as an alternative location, such as the <i>Pantex Plant Site-Wide EIS</i> and the National Ignition Facility in the <i>Stockpile Stewardship and Management PEIS</i>	Not analyzed
Conduct underground nuclear test, if so directed by the President of the United States	Yes	Not analyzed
Reserve land and infrastructure for nuclear weapons assembly/disassembly operations and/or long-term storage and disposition of weapons-usable fissile material	Yes	Not analyzed
Shock physics experiments	Not analyzed <sup>b</sup>	12 per year at JASPER and 10 per year at the U1a Complex
Criticality experiments at DAF	Not analyzed <sup>b</sup>	500 operations per year
Pulsed-power experiments at the Atlas Facility	Not analyzed <sup>b</sup>	Facility maintained on standby with capability to conduct up to 12 experiments per year
Plasma physics and fusion experiments	Not analyzed <sup>b</sup>	Conduct up to 600 per year at NLVF and 50 per year at Area 11 of the NNSS
Conduct drillback operations	Yes, as part of maintaining readiness to conduct or as part of actual conduct of an underground nuclear test	Up to five over the next 10 years as part of maintaining readiness to test
Stage SNM, including nuclear weapons pits	Yes	Yes

<b>Mission, Program, Project, or Activity Analyzed</b>	<b>Analyzed in the 1996 NTS EIS <sup>a</sup></b>	<b>Analyzed in this NNSS SWEIS <sup>a</sup></b>
Training for the Office of Secure Transportation	Yes, as part of conducting unspecified exercises and training	Yes, up to six times per year
Conduct stockpile stewardship activities at the TTR, including experiments using SNM, where containment is assured	Yes	Yes, but SNM use not expected
<b>Nuclear Emergency Response, Nonproliferation, and Counterterrorism Programs</b>		
Support various DOE nuclear emergency response activities, including FRMAC, NEST, ARG, RAP, and AMS	Yes	Yes
Disposition improvised nuclear devices	Not analyzed <sup>a</sup>	Yes
Support U.S. efforts to control the spread of WMDs, including arms control, nonproliferation activities, nuclear forensics, and counterterrorism capabilities	Partial; counterproliferation and nonproliferation activities, treaty verification, and training and exercises were addressed	Yes; counterterrorism activities <sup>b</sup> are also included
<b>Work for Others Program</b>		
Support U.S. Department of Homeland Security testing and evaluation of detection devices for use in transportation-related applications at RNCTEC and other locations on the NNSS	Not analyzed <sup>b</sup>	Yes
Experiments using releases of chemicals and/or biological simulants	Partial; chemical releases at NPTEC (Liquefied Gaseous Fuels Spill Test Facility in the <i>1996 NTS EIS</i> ) were addressed	Yes; an unspecified number of release experiments at NPTEC and up to 20 experiments using releases of low concentrations of chemicals and biological simulants per year NNSS-wide <sup>a</sup>
Support development of capabilities to detect and defeat assets in deeply buried/hardened targets	Yes	Yes
Host the use of various aerial platforms for tests, experiments, training, and exercise	Yes	Yes
<b>ENVIRONMENTAL MANAGEMENT MISSION</b>		
<b>Waste Management Program</b>		
LLW disposal	Almost 36,800,000 cubic feet	15,000,000 cubic feet
MLLW disposal	About 10,600,000 cubic feet	900,000 cubic feet <sup>c</sup>
Manage onsite-generated TRU and TRU mixed wastes pending shipment to offsite treatment and disposal facilities	Yes	About 9,600 cubic feet over the next 10 years
Generate and temporarily store hazardous waste pending shipment to a permitted treatment, storage, and disposal facility	Yes	About 190,400 cubic feet over the next 10 years
Operate the Area 11 Explosives Ordnance Disposal Unit	Yes	Yes
Operate the Area 6 hydrocarbon landfill	Yes	Yes
Operate the Area 23 and the U10c Solid Waste Disposal Sites	Yes	About 3,810,000 cubic feet of sanitary solid waste and construction/ decontamination and demolition debris
<b>Environmental Restoration Program</b>		
Underground Test Area Project to characterize, monitor, and remediate, as necessary, groundwater contaminated by underground nuclear testing	Yes	Yes, in accordance with the FFAO; analyze up to 50 additional characterization and/or monitoring wells over the next 10 years

<i>Mission, Program, Project, or Activity Analyzed</i>	<i>Analyzed in the 1996 NTS EIS <sup>a</sup></i>	<i>Analyzed in this NNSS SWEIS <sup>a</sup></i>
Soils Project to investigate and characterize soil contamination at non-industrial sites on the NNSS, TTR, and Nevada Test and Training Range and perform corrective actions, as necessary	Yes	Yes, in accordance with the FFAO
Industrial Sites Project to identify, characterize, and remediate, as necessary, industrial sites at the NNSS and TTR	Yes	Yes, in accordance with the FFAO
Conduct environmental restoration activities at Defense Threat Reduction Agency sites on the NNSS	Yes	Yes
Conduct environmental characterization and monitoring at two former offsite underground nuclear weapons test sites: Central Nevada Test Area and Project Shoal	Yes	No; stewardship of both sites has been assumed by the DOE Office of Legacy Management
<b>NONDEFENSE MISSION</b>		
<b>General Site Support and Infrastructure Program</b>		
Infrastructure	Upgrade, renovate, replace, and construct new common site support facilities to support ongoing and additional activities	Maintain, repair, and replace current infrastructure; the only new “infrastructure” would be LLW cells, as needed, and construction of the Underground Test Area Project wells, in consultation with the Nevada Division of Environmental Protection
<b>Conservation and Renewable Energy Program</b>		
Energy conservation	Not addressed	Reduce energy consumption and improve efficiency of energy use
Renewable energy	Up to 1,000 megawatts of solar power generation in one of two Solar Enterprise Zones on the NNSS: Area 22/23 and Area 25  Also considered solar power generation facilities at three non-DOE sites outside of the NNSS	“Solar Enterprise Zone” renamed “Renewable Energy Zone”  Allow commercial entity to construct and operate up to 240 megawatts of solar power generation in the Renewable Energy Zone in Area 25
<b>Other Research and Development Program</b>		
Support nondefense research and development	Yes	Yes

AMS = Aerial Measuring System; ARG = Accident Response Group; BEEF = Big Explosives Experimental Facility; DAF = Device Assembly Facility; FFAO = Federal Facility Agreement and Consent Order; FRMAC = Federal Radiological Monitoring and Assessment Center; JASPER = Joint Actinide Shock Physics Experimental Research Facility; LLW = low-level radioactive waste; MLLW = mixed low-level radioactive waste; NEPA = National Environmental Policy Act; NEST = Nuclear Emergency Support Team; NLVF = North Las Vegas Facility; NNSS = Nevada National Security Site; NPTEC = Nonproliferation Test and Evaluation Complex; RAP = Radiological Assistance Program; RNCTEC = Radiological/Nuclear Countermeasures Test and Evaluation Complex; SNM = special nuclear material; TNT = 2,4,6 trinitrotoluene; TRU = transuranic; TTR = Tonopah Test Range; WMD = weapon of mass destruction.

<sup>a</sup> Quantitative bases for analyses used in this table were derived from the published *1996 NTS EIS* and assumptions used in this *NNSS SWEIS*. For some activities, such as training and exercises, the bases for impact assessment were not derived from the number of events but from the potential to disturb previously undisturbed land.

<sup>b</sup> Addressed in other NEPA documentation.

<sup>c</sup> Actual permitted capacity of the Mixed Waste Disposal Unit (Cell 18) is 899,996 cubic feet.

#### **1.4 Decisions to be Supported by this Site-Wide Environmental Impact Statement**

This SWEIS analyzes and evaluates the potential impacts of existing and proposed capabilities and projects. The results documented in this SWEIS will provide the basis for NNSA to determine the nature of these capabilities, projects, and activities, as well as their associated level of operations, over about a 10-year period at the NNSA and offsite locations in Nevada. Where information is insufficient to support an implementing decision or there are statutory or regulatory uncertainties, a more “programmatic” description is provided; in these cases, implementation would require an appropriate level of additional NEPA analysis.

NNSA may choose to implement any alternative in its entirety or to select a hybrid that incorporates parts of the different proposed alternatives. NNSA may make the following decisions regarding its operations:

- *Implement the No Action Alternative, either wholly or in part.* Under the No Action Alternative, NNSA operations in Nevada would continue in accordance with previous decisions made pursuant to NEPA analyses.
- *Implement the Expanded Operations Alternative, either wholly or in part.* The Expanded Operations Alternative includes planned and proposed capabilities and projects and an overall increase in the level of operations, relative to the No Action Alternative, that could be implemented over about a 10-year period.
- *Implement the Reduced Operations Alternative, either wholly or in part.* The Reduced Operations Alternative involves reductions of operations for many of the activities that would continue under the No Action Alternative. Choosing to implement this alternative in whole or in part would result in reductions of affected capabilities and projects.

The decision on a preferred alternative is based on analysis of how various operations fulfill DOE mission requirements and responsibilities, as well as consideration of economic, environmental, and technical factors.

NNSA capabilities and projects at the NNSA are located in seven land use zones that were developed and designated following decisions made in the *1996 NTS EIS ROD*. Implementation of any of the alternatives analyzed in this SWEIS, either in whole or in part, could result in changes to the name, size, or location of these land use zones, or in the location of proposed capabilities and projects within these zones.

Although an analysis of environmental restoration activities’ impacts is included in this SWEIS, environmental restoration activities at the NNSA, the TTR, and sites on the Nevada Test and Training Range are driven by the FFACO. The State of Nevada, through the Nevada Division of Environmental Protection, oversees FFACO compliance and enforces its provisions. Therefore, NNSA would not make any decisions regarding environmental restoration activities that are inconsistent with the FFACO without consultation with the Nevada Division of Environmental Protection.

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.

Decisions such as removing mission support assignments from the NNSA or altering the operational level of ongoing capabilities at the NNSA would only be made if the pertinent information has been identified in the alternatives analyzed in this SWEIS. NNSA will not consider shutting down the NNSA because it

does not meet the agency's purpose and need. Programmatic changes to the NNSA nuclear weapons complex were addressed in the *Complex Transformation Supplemental Programmatic Environmental Impact Statement (Complex Transformation SPEIS)* (NNSA 20081) (see Section 1.5 of this chapter). As discussed in Section 1.5, decisions made in the *Complex Transformation SPEIS* RODs (73 FR 77644 and 73 FR 77656) will best enable NNSA to meet its statutory missions while minimizing technical risks, risks to mission objectives, costs, and potential environmental impacts.

### **1.5 Relationship Between this Site-Wide Environmental Impact Statement and Other National Environmental Policy Act Analyses**

Decisions made in the *1996 NTS EIS* ROD (61 FR 65551) and various subsequent NEPA documents have defined implementation of proposed projects at the NNSS. These NEPA compliance reviews, which are summarized below, were used to identify operational changes and potential environmental impacts in this SWEIS.

*Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (1996 NTS EIS)* (DOE/EIS-0243) (DOE 1996c) – As discussed in Section 1.3.4, the *1996 NTS EIS* evaluated four alternatives for the continued operation of the Nevada Test Site (now called the NNSS): (1) Continue Current Operations (No Action Alternative), (2) Discontinue Operations, (3) Expanded Use, and (4) Alternate Use of Withdrawn Lands. Included in the *1996 NTS EIS* was an assessment of reasonable alternatives for flight testing at the TTR. DOE published a ROD on December 13, 1996 (61 FR 65551), selecting the Expanded Use Alternative plus the public education activities from the Alternate Use of Withdrawn Lands Alternative. Under that decision, NNSA continued the multipurpose, multiprogram use of the NNSS and a continuation and diversification of the DOE Nevada Operations Office (the predecessor of the NNSA Nevada Site Office) and interagency programs and operations at the NNSS. The Expanded Use Alternative included support for ongoing DOE Nevada Operations Office program categories defined under the Continue Current Operations (No Action) Alternative and increased the use of the NNSS and its related resources and capabilities. The Expanded Use Alternative also made the NNSS more available to both public and private institutions for demonstration of new technologies.

A subsequent amendment to the *1996 NTS EIS* was included in a February 2000 ROD (65 FR 10061) for the *WM PEIS* (discussed below). This ROD announced DOE's decision to implement LLW and MLLW activities in accordance with the *1996 NTS EIS* Expanded Use Alternative. The new *NNSS SWEIS* and its ROD(s) will supersede the *1996 NTS EIS* and its ROD and amended ROD.

*Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (WM PEIS)* (DOE/EIS-0200) (DOE 1997) – The *WM PEIS* examined the potential environmental impacts of strategic alternatives for managing five types of radioactive and hazardous wastes resulting from nuclear defense and research activities at DOE sites around the United States. When the *1996 NTS EIS* (DOE 1996c) was issued, the NNSS was under consideration in the *Draft WM PEIS* as a site for centralized or regional management of certain DOE wastes.

DOE published four RODs associated with the *WM PEIS*, three of which are relevant to the NNSS. In its ROD for the treatment and management of transuranic waste, published January 23, 1998 (63 FR 3629), and subsequent revisions to this ROD, published December 9, 2000, July 25, 2001, and September 6, 2002 (65 FR 82985, 66 FR 38646, and 67 FR 56989, respectively), DOE decided (with one exception) that each DOE site that either had or might generate transuranic waste would prepare the waste for disposal and store it on site until it could be shipped to the Waste Isolation Pilot Plant near Carlsbad, New Mexico, for disposal. In the second ROD, published August 5, 1998 (63 FR 41810), DOE decided

to continue using offsite facilities for the treatment of major portions of nonwastewater hazardous wastes generated at DOE sites.

In the third ROD, which addressed the management and disposal of LLW and MLLW and was published February 25, 2000 (65 FR 10061), DOE decided to perform minimal treatment of LLW at all sites and to continue, to the extent practicable, onsite disposal of LLW at Idaho National Laboratory, Los Alamos National Laboratory, Oak Ridge Reservation, and the Savannah River Site. DOE decided to establish regional disposal capacity at the Hanford Site and the NNSS. Specifically, in addition to disposing their own LLW, the Hanford Site and the NNSS would dispose LLW generated at other DOE sites, provided the waste met their respective waste acceptance criteria. DOE decided to treat MLLW at the Hanford Site, Idaho National Laboratory, Oak Ridge Reservation, and the Savannah River Site, with disposal at either the Hanford Site or the NNSS.<sup>1</sup>

*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.

*Final Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio, Site (DOE/EIS-0360) (DOE 2004e)* – This 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 Portsmouth 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 44649) stated that DOE planned to decide the specific disposal location(s) after further NEPA review.

*Draft Supplement Analysis for Location(s) to Dispose of Depleted Uranium Oxide Conversion Product Generated from DOE's Inventory of Depleted Uranium Hexafluoride (DOE 2007d) (DOE/EIS-0359-SA1 and DOE/EIS-0360-SA1)* – DOE issued a Notice of Availability for this draft SA on April 3, 2007 (72 FR 15869). DOE is proposing to amend the two site-specific RODs (69 FR 44649 and 69 FR 44654) for depleted uranium hexafluoride conversion to decide whether the depleted uranium conversion product would be disposed at the NNSS or at the EnergySolutions (formerly Envirocare of Utah, Inc.) LLW disposal facilities.

*Final Environmental Assessment for the Site Launch, Reentry and Recovery Operations at the Kistler Launch Facility, Nevada Test Site (NTS) (FAA 2000)* – The Federal Aviation Administration (FAA) prepared an environmental assessment (EA) and issued a Finding of No Significant Impact (FONSI) on May 3, 2002 (67 FR 22479), for the Kistler Launch Facility (KLF); this EA analyzed preflight processing activities, launch/flight operations, and reentry and recovery operations. To conduct operations, Kistler

---

<sup>1</sup> DOE has established a moratorium on the receipt of offsite waste at the Hanford Site until 2022 or until the Waste Treatment Plant at the Hanford Site is operational. This facility is currently under construction and is designed to treat radioactive waste from the Hanford Site's underground storage tanks.

Aerospace Corporation proposed to construct a base of operations consisting of a private launch site (including a vehicle processing facility); a vehicle reentry, landing, and recovery area; and a payload processing facility. KLF operations and activities were to occur in Area 18 and at an adjacent location in Area 19. The proposed launch site was on the southern slopes of Pahute Mesa, south of Rattlesnake Ridge and north of Stockade Wash, at an elevation of about 5,800 feet. FAA proposed to license Kistler's proposed space launch and reentry activities. FAA issued a FONSI, but the KLF project was subsequently cancelled.

*The Nevada Test Site Development Corporation's Desert Rock Sky Park at the Nevada Test Site Environmental Assessment* (DOE/EA-1300) (DOE 2000a) – This EA analyzed the potential environmental effects of developing, operating, and maintaining a commercial/industrial park in Area 22 of the NNSS, between Mercury and U.S. Route 95, east of Desert Rock Airport. DOE issued a FONSI in March 2000, but the project was not implemented.

*Aerial Operations Facility, Nevada Test Site Environmental Assessment* (DOE/EA-1334) (DOE 2001a) – This EA analyzed the potential environmental effects of developing, operating, and maintaining an aerial operations facility for testing and operating aerial vehicles at an existing facility located at the southern end of Yucca Lake in Area 6 of the NNSS. DOE issued a FONSI based on this EA in 2001. The facility is in operation.

*Final Environmental Assessment for Aerial Operations Facility Modifications, Nevada Test Site* (DOE/EA-1512) (DOE 2004g) – This EA evaluated the potential impacts of constructing a new runway, hangars, and operations buildings and performing infrastructure upgrades to accommodate an increase in Aerial Operations Facility operations and personnel. NNSA issued a FONSI based on this EA in October 2004. The facility is in operation.

*Atlas Relocation and Operation at the Nevada Test Site Final Environmental Assessment* (DOE/EA-1381) (DOE 2001b) – This EA analyzed the relocation of the Atlas pulsed-power machine from Los Alamos National Laboratory to the NNSS. At the NNSS, the Atlas Facility would be reassembled in a newly constructed building within a designated industrial, research, and support site in Area 6. NNSA issued a FONSI based on this EA in May 2001. The facility was relocated to the NNSS and is currently in a standby status.

*Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (2002 NTS SA)* (DOE/EIS-0243-SA-01) (DOE 2002g) – In 2002, NNSA completed the first of three SA processes of the *1996 NTS EIS* (DOE 1996c). The *2002 NTS SA* provided a 5-year review of the *1996 NTS EIS* to determine whether there were sufficient changes to either the NNSS operations or environmental impacts to warrant a new SWEIS, a supplemental EIS, or whether no further NEPA action was warranted. NNSA found that there were no substantial changes to the actions proposed in the *1996 NTS EIS* and no significant new circumstances or information relevant to environmental concerns; thus, no further NEPA documentation was required (i.e., the existing *1996 NTS EIS* remained adequate based on the SA, in accordance with 10 CFR 1021.332(d)).

*Final Environmental Impact Statement for the Proposed Relocation of Technical Area 18 Capabilities and Materials at the Los Alamos National Laboratory* (DOE/EIS-0319) (DOE 2002h) – This EIS addressed the potential impacts of relocating criticality missions and materials from Technical Area 18 at Los Alamos National Laboratory to several sites, including the NNSS. In a December 31, 2002, ROD (67 FR 79906), NNSA made the decision to relocate Security Category I/II missions and materials to the Device Assembly Facility at the NNSS. The relocation has been completed.

*Hazardous Materials Testing at the Hazardous Materials Spill Center, Nevada Test Site Environmental Assessment* (DOE/EA-0864) (DOE 2002i) – This EA established potential environmental impacts from

planned releases of hazardous and toxic materials at the Hazardous Materials Spill Center (formerly the Liquefied Gaseous Fuels Spill Test Facility and now the Nonproliferation Test and Evaluation Complex). NNSA issued a FONSI based on this EA in September 2002. The facility is in operation.

*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 (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. As reflected in the Administration's fiscal year 2010, 2011, and 2012 budget requests, however, the Administration has determined that a repository at Yucca Mountain is not a workable option and has called for all funding and activities related to development of a repository at Yucca Mountain to be eliminated.

*Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada to Address the Increase in Activities Associated with the National Center for Combating Terrorism and Counterterrorism Training and Related Activities (DOE/EIS-0243-SA-02) (DOE 2003e)* – This second SA to the *1996 NTS EIS* was prepared to determine whether impacts of NNSA operations, which include activities and potential facility and infrastructure improvements proposed for the NNSS related to combating terrorism and performing counterterrorism training, would be within the limits of impacts identified in the *1996 NTS EIS*. NNSA determined that there were no significant new circumstances or information relevant to environmental concerns that would require preparation of a supplemental EIS or a new EIS (i.e., the existing *1996 NTS EIS* remained adequate based on the SA, in accordance with 10 CFR 1021.332(d)).

*Final Environmental Assessment for Activities Using Biological Simulants and Releases of Chemicals at the Nevada Test Site (DOE/EA-1494) (DOE 2004c)* – This EA analyzed the potential environmental effects of conducting experiments, training, and other similar activities involving controlled releases of biological simulants (noninfectious bacteria, fungi, killed viruses, and similar materials) and low concentrations of various chemicals at the NNSS. NNSA issued a FONSI based on this EA in June 2004. These activities are ongoing at the NNSS.

*Radiological/Nuclear Countermeasures Test and Evaluation Complex, Nevada Test Site Final Environmental Assessment (DOE/EA-1499) (DOE 2004f)* – This EA evaluated the potential effects of constructing and operating a Radiological/Nuclear Countermeasures Test and Evaluation Complex at the NNSS for post-bench-scale testing and evaluation of radiological and nuclear detection devices that may be used in transportation-related facilities. The new facility would be used by the U.S. Department of Homeland Security. NNSA issued a FONSI based on this EA in September 2004. The facility was constructed and is operational.

*Draft Revised Environmental Assessment, Large-Scale, Open-Air Explosive Detonation, DIVINE STRAKE, at the Nevada Test Site (DOE/EA-1550) (DOE 2006e)* – This draft revised EA was published in December 2006 to document an analysis of the potential impacts of a proposal by the Defense Threat Reduction Agency, an NNSA customer, to conduct a single large-scale, open-air explosive detonation of up to 700 tons of an ammonium nitrate and fuel oil mixture above an existing tunnel complex in Area 16

at the NNSS. The proposed experiment is known as DIVINE STRAKE. The Defense Threat Reduction Agency cancelled the project.

*Draft 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-D) – On February 25, 2011, the U.S. Environmental Protection Agency issued a Notice of Availability (76 FR 10583) for this *Draft GTCC EIS* that addressed disposal of LLW generated by activities licensed by the U.S. Nuclear Regulatory Commission or an Agreement State that contains radionuclides in concentrations exceeding Class C limits, as defined in 10 CFR Part 61 (referred to as “greater-than-Class C [GTCC] LLW”), as well as disposal of DOE’s GTCC-like waste. Currently, there is no location for disposal of GTCC LLW, although the Federal Government is responsible for such disposal under the Low-Level Radioactive Waste Policy Amendments Act (P.L. 99-240). The NNSS is being considered as one of seven candidate disposal sites in the *Draft GTCC EIS*. DOE is evaluating several disposal technologies in the *Draft GTCC EIS*, including above-grade vaults, intermediate-depth boreholes, and enhanced near-surface disposal facilities.

*Draft Supplement Analysis for the Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (2008 Draft NTS SA)* (DOE/EIS-0243-SA-03) (DOE 2008f) – The *2008 Draft NTS SA* is the third SA and 5-year comprehensive review of the *1996 NTS EIS* (DOE 1996c). In preparation of the *2008 Draft NTS SA*, a systematic environmental impacts review was conducted to determine whether there were substantial changes in the actions proposed in the *1996 NTS EIS* or significant new circumstances or information relevant to environmental concerns. Projects and activities introduced since the *1996 NTS EIS* ROD or proposed for the next 5 years were screened. The *2008 Draft NTS SA* was not finalized; instead, NNSA elected to proceed with a new SWEIS (this *NNSS SWEIS*) to provide an updated analysis of NNSA operations in Nevada. All comments from the *2008 Draft NTS SA* were considered in the scoping of this SWEIS.

*Complex Transformation Supplemental Programmatic Environmental Impact Statement (Complex Transformation SPEIS)* (DOE/EIS-0236-S4) (DOE 2008i) – In the *Complex Transformation SPEIS*, alternatives were analyzed for the potential environmental impacts of transforming the nuclear weapons complex into a smaller, more-efficient enterprise that can respond to changing national security challenges and ensure the long-term safety, security, and reliability of the nuclear weapons stockpile. The NNSS was evaluated, but not selected, as a potential location for a consolidated plutonium center or a consolidated nuclear production center, both of which would entail consolidation of Category I/II special nuclear material. The NNSS was also evaluated, but not selected, as a potential site for consolidated hydrotesting, high-explosives research and development, and environmental testing.<sup>2</sup> In addition, existing DoD and NNSA test ranges (such as White Sands Missile Range in New Mexico and the NNSS) were considered as alternatives to continued use of the TTR for NNSA flight test operations. Two RODs were issued on December 19, 2008. In the ROD for Tritium Research and Development, Flight Test Operations, and Major Environmental Test Facilities (December 19, 2008, 73 FR 77656), NNSA decided to continue to conduct flight testing at the TTR in Nevada under a reduced footprint (i.e., 1 square mile) permit using a campaign mode of operations. The “campaign mode of operations” would continue operations at the TTR but reduce permanent staff and conduct tests and experiments by deploying NNSA and national laboratory personnel from other locations, as needed. In the ROD for Operations Involving Plutonium, Uranium, and the Assembly and Disassembly of Nuclear Weapons (December 19, 2008, 73 FR 77644), NNSA decided to transform the plutonium and uranium aspects of the complex into smaller and more-efficient operations while maintaining the capabilities NNSA needs to perform its national security missions.

---

<sup>2</sup>In this context, “environmental testing” refers to subjecting a test unit to specified, controlled environments such as vibration, shock, or static acceleration.

*Environmental Assessment for a Solar Demonstration Project at the Nevada National Security Site (DOE/EA-1842)* – DOE’s Office of Energy Efficiency and Renewable Energy is preparing this EA on its proposal to support the demonstration of concentrating solar power (CSP) technologies in Area 25 of the NNSS. The intent would be to demonstrate technology advancements that are proven at a prototype level, but have not yet been demonstrated at a scale or for a sufficient period for deployment in a commercial setting. DOE held scoping meetings on the EA in Las Vegas and Amargosa Valley in November 2010.

DOE expects to issue a Funding Opportunity Announcement in the near future to solicit proposals for CSP demonstration projects (collectively, the “CSP Validation Project”). Applicants may propose projects to be located in Area 25 of the NNSS or at an offsite location. The EA will address potential projects at the NNSS and any proposed offsite locations that are close enough to Area 25 to pose potential cumulative impacts. DOE would provide partial funding for the selected projects. For any project proposed to be located on the NNSS, in addition to the use of land, DOE would offer basic infrastructure, such as power, water, telecommunications, and security, as well as other operation and support facilities. The funding provided by DOE would partially cover the construction, operation, and decommissioning (dismantling and removal) of various solar technology demonstration projects. DOE expects the proposed projects would involve a combined generating capacity of about 20 megawatts. Any projects proposed for the NNSS would be located on approximately 300 acres within Area 25 of the NNSS along its southern border, just east of Lathrop Wells Road.

DOE’s decision regarding the proposed CSP Validation Project is independent of the alternatives analyzed in this SWEIS and does not limit the range of alternatives analyzed herein or influence NNSA’s decision regarding alternatives analyzed in this SWEIS. The potential environmental impacts of the CSP Validation Project are discussed qualitatively under Cumulative Impacts in Chapter 6, Section 6.2.1.1.

## **1.6 Cooperating Agencies/Tribal Involvement**

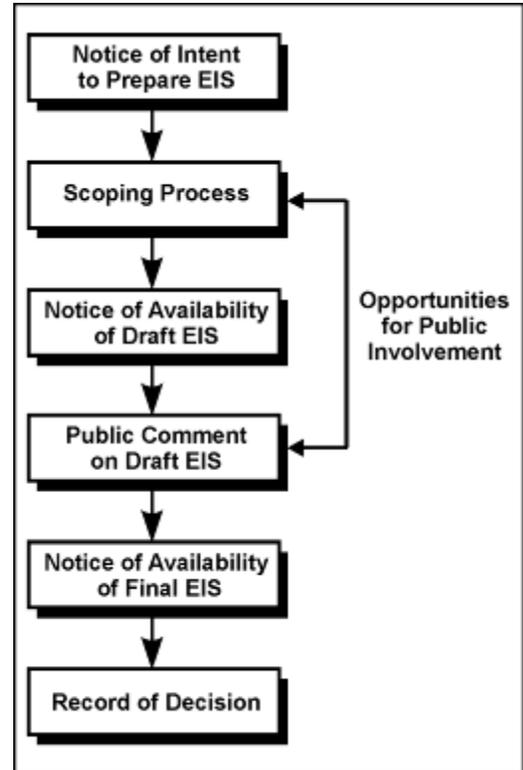
DOE/NNSA is the lead agency for this SWEIS. Under CEQ NEPA regulations, other Federal agencies, as well as state and local agencies and American Indian tribes, may request designation as cooperating agencies in the preparation of this SWEIS if they can offer special, relevant expertise or have legal jurisdiction over one of the affected areas being studied (40 CFR 1501.6 and 1508.5). Three government agencies requested cooperating agency status for this SWEIS: the U.S. Bureau of Land Management; the U.S. Air Force; and Nye County, Nevada. DOE/NNSA, as the lead agency, has designated these three organizations as cooperating agencies.

As mentioned in Section 1.1, 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 a result of consultation with the CGTO, the AIWS prepared the summary assessments and recommendations that appear in text boxes placed throughout this SWEIS, as well as the text provided in Appendix C, “The American Indian Assessment of Resources and Alternatives Presented in the SWEIS.” Appendix C summarizes the beliefs expressed by the CGTO regarding this SWEIS and contains (a) general concerns regarding long-term impacts of NNSA operations on the NNSS and (b) a synopsis of specific comments made by the AIWS for various chapters of this SWEIS. Although the consultation focused specifically on the three alternatives analyzed in this *NNSS SWEIS*, the CGTO responses in the text boxes and Appendix C also integrate relevant recommendations made by American Indian people regarding previous NNSA projects in which American Indians participated.

## 1.7 Public Involvement Process in this NNS SWEIS

During development of an EIS, there are opportunities for public involvement (see **Figure 1–2**). As an early step in the development of an EIS, the regulations established by CEQ (40 CFR 1501.7) and DOE require “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a Proposed Action.” The purpose of the scoping process is (1) to inform the public about a proposed action and the alternatives being considered and (2) to identify and clarify issues relevant to the EIS by soliciting public comments.

The *NNS SWEIS* public scoping process began with issuance of a Notice of Intent (NOI) (74 FR 36691) on July 24, 2009, and concluded on October 16, 2009. In the NOI, NNSA invited public comment on the scope of this SWEIS and described four alternatives (No Action, Expanded Operations, Reduced Operations, and Renewable Energy Operations) and environmental issues to be considered. As discussed in Section 1.7.1, “Summary of Major Scoping Comments and National Nuclear Security Administration Responses,” the components of the Renewable Energy Operations Alternative were incorporated as part of the three other alternatives in response to public comments, and Renewable Energy Operations was removed as a separate alternative. Public scoping meetings for this SWEIS were conducted in Las Vegas, Nevada (September 10, 2009); Pahrump, Nevada (September 14, 2009); Tonopah, Nevada (September 16, 2009); and St. George, Utah (September 18, 2009). NNSA received approximately 150 comment documents regarding this *NNS SWEIS*, submitted by email, fax, U.S. mail, telephone message, written comment forms at public meetings, or transcribed oral statements at public meetings. In addition, comments provided on the *2008 Draft NTS SA* were considered in developing the scope of this SWEIS.



**Figure 1–2 The National Environmental Policy Act Process**

While many of the comment documents were from private individuals, comment documents were also received from government and nongovernmental organizations, including the U.S. Environmental Protection Agency, the State of Nevada (Office of the Attorney General, State Historic Preservation Officer, Commission on Minerals, and Division of State Lands), Nye County, the Western Shoshone National Council, Tri-Valley Communities Against a Radioactive Environment (Tri-Valley CAREs), the Western States Legal Foundation, Citizens for Dixie’s Future, and Nuclear Watch New Mexico. Comments on similar or related topics were grouped into common categories as a means of summarizing them. After the issues were identified, they were evaluated to determine whether they were within the scope of this SWEIS. Issues found to be within the scope of this SWEIS are addressed in the appropriate chapters or appendices of this draft SWEIS.

### 1.7.1 Summary of Major Scoping Comments and National Nuclear Security Administration Responses

Scoping comments are summarized in **Table 1–2**, including NNSA’s response and how the comments were incorporated into this SWEIS.

**Table 1–2 Summary of Key Scoping Comments on this NNS SWEIS**

<b>General Topic</b>	<b>Issue and Response</b>
<b>Land Withdrawal</b>	<p>Commenters asked NNSA to identify concrete steps to reconcile the current uses of the NNS with the uses identified in existing land withdrawals (i.e., to assure that ongoing or proposed activities at the NNS will be lawful and permitted under existing Federal law). One commenter also recommended that NNSA consider each of its activities within the context of the land withdrawals and make a judgment as to whether it meets the purpose for which the withdrawal was issued. One commenter was concerned about the status of the land withdrawal.</p> <p><b>Response:</b> <i>NNSA believes the land withdrawals are not restrictive with respect to NNS activities in support of its three missions (National Security/Defense, Environmental Management, and Nondefense). As part of a Settlement Agreement (April 1997) between the State of Nevada and DOE, consultation with the U.S. Department of the Interior was initiated concerning the status of existing land withdrawals with regard to LLW storage and disposal. The consultation process concluded in November 2009, when NNSA accepted custody and control of the approximately 740 acres constituting the NNS Area 5 Radioactive Waste Management Complex. Land withdrawal is discussed in Chapter 4, Section 4.1.1.3.</i></p>
<b>Alternatives</b>	<p>NNSA received several comments related to the range of reasonable alternatives and the recommended scope of those alternatives. One commenter requested that this SWEIS be a programmatic document, given the range of decisions intended to be supported by the proposed EIS. Some commenters favored the cessation of all defense-related activities at the NNS and the removal of associated infrastructure, with only environmental remediation and monitoring activities allowed to continue. One commenter specifically favored expansion of programs aimed at controlling the illicit use and transportation of nuclear materials. Another commenter provided a detailed recommendation for a “curatorship” approach in lieu of the current Stockpile Stewardship and Management Program. A commenter also requested that NNSA evaluate an alternative whereby the NNS lands would be withdrawn permanently and NNSA would take responsibility for environmental impacts far into the future. In addition, commenters supported the inclusion of renewable energy development projects under the No Action, Expanded Operations, and Reduced Operations Alternatives, as opposed to under a separate alternative. One commenter stated that the Expanded Operations Alternative and the Renewable Energy Operations Alternative described in the “Alternatives for the SWEIS” section of the <i>Federal Register</i> NOI should be combined into a single Expanded Operations Alternative.</p> <p><b>Response:</b> <i>This SWEIS tiers from NNSA and DOE programmatic EISs that have facilitated decisionmaking regarding the assignment of missions to the NNS, 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 NNS 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 NNS, prepare SWEISs. This NNS SWEIS addresses the full range of missions, programs, capabilities, projects, and activities under the purview of NNSA in Nevada.</i></p> <p><i>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.</i></p>

<i>General Topic</i>	<i>Issue and Response</i>
<b>Alternatives (continued)</b>	<p>A commenter stated that the only actions that should be considered within the No Action Alternative are actions that are currently ongoing or in existence at the NNSS.</p> <p><b>Response:</b> <i>In response to this comment, SWEIS alternatives were restructured. The No Action Alternative now reflects the current missions, programs, capabilities, projects, and activities. It includes reasonably foreseeable actions not yet implemented, but analyzed and approved under previous NEPA decisions.</i></p> <p>Commenters showed preferences for particular alternatives. One commenter stated that the Nation’s pressing needs in the areas of defense technology testing and counterterrorism preparedness, along with the suitability of the NNSS to support such programs, make the Expanded Operations Alternative the preferred choice. Another commenter favored the Reduced Operations Alternative, with a focus on phasing out unnecessary defense programs in light of changing national policies to focus more on remediation and alternative energy research.</p> <p><b>Response:</b> <i>Regarding the commenters’ preferences for specific alternatives, DOE/NNSA has not yet selected a preferred alternative. However, the final SWEIS will identify DOE/NNSA’s preferred alternative. Renewable energy projects have been consolidated into the Conservation and Renewable Energy Program under the Nondefense Mission and have been incorporated into each of the three alternatives considered in this NNSS SWEIS: No Action, Expanded Operations, and Reduced Operations.</i></p> <p>A commenter stated that this SWEIS should evaluate a potential future scenario in which DOE must maintain sole control of vast areas of the NNSS that must remain perpetually isolated from other uses. This alternative would require DOE to seek congressional legislation to establish a perpetual withdrawal of land and would have significant implications in terms of long-term stewardship, costs, etc. Additionally, a commenter stated that this SWEIS should consider closing the NNSS in its entirety (Discontinued Operations Alternative).</p> <p><b>Response:</b> <i>Closure of the NNSS with or without perpetual control and isolation would not meet the purpose and need for agency action as identified in Section 1.2 of this SWEIS. Should the missions of the NNSS change such that perpetual control and isolation is a valid scenario, either through presidential decision directives or congressional direction, NNSA would revisit this SWEIS and determine through the supplement analysis process whether additional NEPA analysis is warranted.</i></p> <p>A commenter stated that this draft SWEIS should describe how each alternative was developed, how it addresses each project objective, and how it would be implemented.</p> <p><b>Response:</b> <i>Chapter 3 of this SWEIS describes how each alternative was developed and presents information on programs supporting the missions, as well as specific information on the implementation of the projects (such as the number of tests, experiments, or training activities; location/facility; and purpose of activity).</i></p>

General Topic	Issue and Response
<p><b>Transportation</b></p>	<p>NNSA received comments regarding how analyses such as transportation of waste and other materials should be addressed. Commenters stated that this SWEIS should evaluate impacts associated with the transportation of wastes on communities along the shipping routes within Nevada and in corridor states. In addition, a commenter asked for assurances that shipments from offsite waste generators would continue to be prohibited from routes through the Las Vegas metropolitan area. One commenter asked that the waste disposal analysis identify waste volumes by specific generator or origin location, as well as specific transportation routes and times.</p> <p><b>Response:</b> <i>This SWEIS presents the potential transportation impacts on communities along shipping routes in Nevada and representative routes in corridor states (see Chapter 5, Section 5.1.3.1, and Appendix E, “Evaluation of Human Health Effects from Transportation”). This SWEIS does evaluate transportation routes through Las Vegas. The NNSA/NSO has historically avoided travelling through the Las Vegas metropolitan area (Interstate 15/U.S. Route 95 interchange, known as the Spaghetti Bowl) with LLW and MLLW shipments 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 not adequate to handle the rapidly expanding volume of traffic. Since the mid-2000s, U.S. Route 95 has been widened and expanded, and overpasses have been built to accommodate traffic much more safely. In addition, Interstate 215 (encompassing 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 was opened to all traffic in October 2010. Specific LLW/MLLW waste generators tied to specific waste streams are not addressed in the transportation analysis; instead, reference routes were used. Existing waste generators are identified in Appendix A, “Detailed Description of Alternatives.” Total estimated waste volumes by waste type were used to calculate transportation impacts.</i></p> <p>A commenter stated that this SWEIS should contain an analysis of how intermodal transport (rail-to-truck transfer) would be done (if planned) and a comprehensive evaluation of risks and impacts, regardless of where the intermodal transfer(s) would take place.</p> <p><b>Response:</b> <i>An analysis of rail-to-truck transport is included in the transportation analysis of this SWEIS (see Chapter 5, Section 5.1.3.1).</i></p>
<p><b>Contamination</b></p>	<p>NNSA received comments requesting that this SWEIS contain the following analyses:</p> <ul style="list-style-type: none"> <li>• A comprehensive analysis of contamination from all activities that have occurred and are ongoing at the NNSS and offsite locations</li> <li>• An assessment of what has been “cleaned up” since the inception of DOE’s Environmental Management Mission and what remains to be assessed and remediated for industrial sites, contaminated soils, and groundwater under the Environmental Management Mission programs at the NNSS and all offsite locations for the foreseeable future</li> <li>• An extensive analysis of groundwater contamination within the NNSS to determine to what extent and where contamination is or could be migrating off site</li> </ul> <p><b>Response:</b> <i>Impacts from contamination are analyzed in Chapter 5, “Environmental Consequences,” and Chapter 6, “Cumulative Impacts.” A description of the Environmental Restoration Program, (including an update on Environmental Restoration Program projects and activities and remaining projects and activities to clean up the NNSS) is included in Chapter 3, Section 3.1.2.2, and in more detail in Appendix A, Section A.1.2.2.</i></p>
<p><b>Nye County Impacts</b></p>	<p>NNSA received the following comments from Nye County, in summary: (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.</p> <p><b>Response:</b> <i>Impacts from previous activities at the NNSS and offsite locations are included in the analysis of cumulative impacts presented in Chapter 6, “Cumulative Impacts,” of this SWEIS. Chapter 6 analyses of potential environmental impacts generally encompass the impacts of past, present, and reasonably foreseeable actions. Text provided by Nye County describing its perspective on cumulative impacts of primarily Federal actions has been included in its entirety in Chapter 6.</i></p>

<i>General Topic</i>	<i>Issue and Response</i>
<b>Waste Disposal</b>	<p>Commenters requested that this SWEIS contain a comprehensive and thorough evaluation of all current and potential waste disposal activities at the NNSS, including LLW, MLLW, transuranic waste, GTCC waste, depleted uranium, and any other existing or foreseeable waste stream.</p> <p><b>Response:</b> <i>The Waste Management Program is part of the Environmental Management Mission performed at the NNSS. Chapter 3 describes the Waste Management Program activities to be performed under each of the alternatives analyzed in this SWEIS. Under all of the alternatives, NNSS would continue to receive LLW and MLLW, including depleted uranium waste streams, for disposal. Transuranic waste would not be disposed at the NNSS, but would be transferred off site for disposal at the Waste Isolation Pilot Plant. DOE has prepared the Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste (DOE/EIS-0375) to evaluate the potential environmental impacts of siting and operating a GTCC disposal facility or facilities. The GTCC facility is included in the cumulative impacts analysis in Chapter 6. Chapter 5, Section 5.1.11, of this SWEIS contains a thorough analysis of the capacity of the waste management system to manage all current and potential NNSS waste streams.</i></p> <p>Commenters requested that this SWEIS also identify waste volumes by generator/origin location, where such waste would be disposed, the facilities required (existing and new), the transportation requirements for moving various waste streams from generator locations to the NNSS for disposal, the interrelationships of waste disposal activities, and the cumulative impacts associated with all of the current and future NNSS onsite and offsite waste disposal activities.</p> <p><b>Response:</b> <i>Consistent with the 1996 NTS EIS and 2000 revised Record of Decision, this SWEIS does not evaluate specific generators tied to specific waste streams because of the variability that can occur both in waste stream characteristics and future waste volumes. Instead, this SWEIS evaluates the potential impacts of transporting and disposing LLW and MLLW that meet the NNSS waste acceptance criteria based on transportation from various regions of the country. The list of waste generators used in the analysis of potential impacts is included in Appendices A and E.</i></p> <p>Commenters requested that this SWEIS discuss the following topics and assess their programmatic, environmental, and legal ramifications: disposal of various waste streams; the interrelationships of waste disposal activities; and the cumulative impacts associated with all of the current and future on- and offsite NNSS waste disposal activities, and, in particular, plans to accept new LLW streams, including any that may be of commercial origin.</p> <p><b>Response:</b> <i>Chapter 5, Section 5.1.11, of this SWEIS contains a thorough analysis of all current and potential NNSS waste disposal activities and waste streams. Additionally, cumulative impacts of waste management activities are evaluated in Chapter 6, "Cumulative Impacts." See the next response concerning waste of commercial origin.</i></p> <p>A commenter requested that this SWEIS address DOE's proposal for taking LLW from commercial entities, subsequently declaring it to be DOE waste, and disposing it at the NNSS.</p> <p><b>Response:</b> <i>In reference to activities performed by DOE's Office of Global Threat Reduction, the goal of the Offsite Source Recovery Project is to recover excess, unwanted, or abandoned sealed sources that pose a potential risk to health, safety, and national security. DOE/NSA takes ownership of some sealed sources under its Global Threat Reduction Initiative. If no reuse of these sealed sources is identified, they may be declared waste and be disposed as LLW.</i></p>

<b>General Topic</b>	<b>Issue and Response</b>
<b>Coordination and Consultation</b>	<p>A commenter stated that this SWEIS should acknowledge Nevada’s important role in overseeing aspects of NNSS activities that are of special concern to the state and the importance of the Agreement in Principle framework for cooperative efforts. In addition, commenters stated that this SWEIS should evaluate the potential for more formal state regulatory oversight of LLW activities, such as the application of the state’s authority (delegated by the U.S. Nuclear Regulatory Commission) to oversee LLW disposal operations at the NNSS.</p> <p><b>Response:</b> <i>This SWEIS discusses the Agreement in Principle, under which the State of Nevada provides enhanced oversight of DOE’s management of MLLW. DOE’s authority is vested pursuant to the Atomic Energy Act authority. LLW is managed solely under DOE directives pursuant to DOE’s Atomic Energy Act authority. However, DOE and NDEP have an Agreement in Principle whereby NDEP participates in the Low-Level Waste Acceptance Program.</i></p> <p>NNSA received several comments addressing outreach and consultations. Commenters urged continued dialogue and collaborative planning efforts with local American Indian groups in the NEPA process. A commenter stressed the need for consultations with the State Historic Preservation Office on this SWEIS and recommended that the alternatives describe the consultation process for key issues, including cultural resources surveys and impact assessments. Commenters stated that the NNSS should pursue more partnerships with local organizations, including the University of Nevada at Las Vegas and Nye County businesses, for future research and testing projects. One commenter stated that NNSA should consider additional opportunities for training local first responder personnel at the NNSS.</p> <p><b>Response:</b> <i>Outreach and consultations are discussed in Section 1.6 and Chapter 10, “Consultation and Coordination.” American Indian groups have been invited to participate in the preparation of this SWEIS. Text prepared by the Consolidated Group of Tribes and Organizations’ American Indian Writers Subgroup appears in text boxes throughout this SWEIS and as Appendix C. NNSA is carrying out consultations with the State Historic Preservation Office and the U.S. Fish and Wildlife Service, as appropriate, regarding the preparation of this SWEIS. Descriptions of these consultation processes appear in the cultural resources and biological resources impacts sections of this SWEIS. Copies of correspondence with these agencies will appear in an appendix of the final SWEIS. NNSA will consider proposals for research and development projects from academic institutions, other government agencies, and private companies and individuals.</i></p> <p>Nye County requested that NNSA consider the benefits of partnering with Nye County for delivery of infrastructure services.</p> <p><b>Response:</b> <i>Although this comment is not within the scope of this SWEIS, NNSA/NSO will take this under consideration.</i></p> <p>Nye County suggested that it conduct the groundwater characterization program for NNSA. Nye County offered to provide a fully developed programmatic alternative for review in this SWEIS.</p> <p><b>Response:</b> <i>NNSA/NSO conducts a robust Underground Test Area (UGTA) Monitoring Project. NNSA/NSO will continue to interact with Nye County on this UGTA Project.</i></p> <p>Nye County suggested that the draft and final SWEIS incorporate text it prepared for inclusion in the discussion of cumulative impacts presenting the Nye County perspective.</p> <p><b>Response:</b> <i>Nye County text has been included in its entirety in the cumulative impacts discussion in Chapter 6.</i></p>
<b>Land Use</b>	<p>A comment was made that this SWEIS should address the land transfer and all incidental activities contemplated for this acreage, including closure of Pit 3 and new state-imposed permitting requirements under RCRA.</p> <p><b>Response:</b> <i>In November 2009, 740 acres in Area 5 of the NNSS were transferred for custody and control to the NNSA/NSO. Chapter 5, Section 5.1.11, of this SWEIS contains a thorough analysis of all current and potential NNSS waste disposal activities, including establishment of a new mixed-waste pit under a new RCRA permit.</i></p>

<i>General Topic</i>	<i>Issue and Response</i>
<b>Yucca Mountain</b>	<p>A commenter stated that this <i>NNSS SWEIS</i> must:</p> <ul style="list-style-type: none"> <li>• Fully evaluate the relationship between the potential repository and <i>NNSS</i> activities</li> <li>• Assess any potential cumulative impacts with respect to the former DOE Yucca Mountain Project</li> <li>• Identify, assess, and address the combined effects of these two facilities and related associated activities</li> </ul> <p><b>Response:</b> <i>As indicated in the fiscal year 2010, 2011, and 2012 budget requests, the Administration decided to cease funding and activities related to development of a repository at Yucca Mountain while developing alternative storage and disposal approaches for spent nuclear fuel and high-level radioactive waste. Proposed actions associated with the former Yucca Mountain Project included construction, operation, monitoring, and eventual closure of a geologic repository at Yucca Mountain for disposal of spent nuclear fuel and high-level radioactive waste in storage or projected to be generated at 72 commercial and 5 DOE sites across the United States. In 1994, the DOE/Nevada Operations Office (the predecessor of NNSA/NSO) entered into a management agreement with the DOE Yucca Mountain Site Characterization Office for use of about 58,000 acres of <i>NNSS</i> land for site characterization activities related to the former Yucca Mountain Project. Under the agreement, the former Yucca Mountain Project was responsible for meeting the same environmental requirements that applied to the <i>NNSS</i> independent of, but in coordination with, the <i>NNSS</i> organizations. 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.</i></p>
<b>Cumulative Impacts</b>	<p>A commenter stated that the analysis of cumulative impacts in this <i>SWEIS</i> must include the following:</p> <ul style="list-style-type: none"> <li>• A comprehensive evaluation of the combined impacts of all activities, programs, and projects currently ongoing at the <i>NNSS</i> or reasonably foreseeable in the future</li> <li>• An assessment of impacts from past <i>NNSS</i> activities and an examination of how they interact with impacts from current and future activities</li> <li>• An assessment of the cumulative impacts on groundwater from past activities, in combination with potential additional contamination from current and future <i>NNSS</i> activities</li> </ul> <p><b>Response:</b> <i>NNSA concurs with the commenter; Chapter 6, “Cumulative Impacts,” contains a comprehensive evaluation of cumulative impacts, including past, present, and reasonably foreseeable activities and cumulative groundwater impacts.</i></p>
<b>Project Shoal, Central Nevada Test Area, and the Tonopah Test Range</b>	<p>A commenter stated that this <i>SWEIS</i> should contain an assessment of environmental conditions (surface and subsurface) for Project Shoal and the Central Nevada Test Area to establish environmental baselines against which any future impacts may be measured.</p> <p><b>Response:</b> <i>Remediation of the Project Shoal and Central Nevada Test Area sites was completed and transferred to the DOE Office of Legacy Management for long-term stewardship. These sites are no longer under NNSA control and, by agreement with the DOE Office of Legacy Management, they are not addressed in this <i>NNSS SWEIS</i>.</i></p> <p>A commenter stated that this <i>SWEIS</i> should address DOE Environmental Management Mission and <i>NNSA</i> activities at the <i>NNSS</i> and <i>NNSS</i>-related sites and locations. Of particular concern is plutonium contamination on the Tonopah Test Range.</p> <p><b>Response:</b> <i>DOE Environmental Management Mission activities (under the Environmental Restoration Program) at the <i>NNSS</i>, Tonopah Test Range, and Nevada Test and Training Range are evaluated in this <i>SWEIS</i>.</i></p>

<b>General Topic</b>	<b>Issue and Response</b>
<b>NEPA Implementation</b>	<p>A commenter requested that the period for comments on this draft SWEIS should be no less than 180 days.</p> <p><b>Response:</b> <i>NNSA has lengthened the comment period from 60 days (see NOI) to 90 days, twice the minimum requirement.</i></p> <p>A commenter requested that the public hearings be held in locations throughout Nevada and in other states affected by NNSS activities (including, but not limited to, the transportation of radioactive and hazardous materials to and from the NNSS).</p> <p><b>Response:</b> <i>Public hearings will be held in the same locations as the scoping meetings (Las Vegas, Pahrump, and Tonopah in Nevada and St. George in Utah).</i></p> <p>A commenter requested that the hearings be structured so as to meaningfully facilitate public comments, i.e., in such a way that permits individuals to make comments for the record in a public forum.</p> <p><b>Response:</b> <i>Comments will be taken and recorded in a public hearing format. In addition, the open-house format will be set up to allow the general public a better forum to ask questions and have one-on-one discussions with the NNSA subject matter experts. This format received positive review in every meeting location during the public scoping period.</i></p> <p>A commenter requested that all related EISs, environmental assessments, categorical exclusions, and referenced documents be made publicly available online.</p> <p><b>Response:</b> <i>Many DOE EISs and environmental assessments are available online at the DOE NEPA website (<a href="http://nepa.energy.gov">http://nepa.energy.gov</a>). Occasionally, due to national security requirements, some NEPA documents are not available online. The references for this draft SWEIS are available at the public reading rooms listed on the cover page of this SWEIS, and copies also may be obtained by request.</i></p> <p>A commenter stated that the purpose and need should be a clear, objective statement of the rationale for the proposed project.</p> <p><b>Response:</b> <i>DOE/NNSA has provided a detailed description of the purpose and need in Section 1.2.</i></p>
<b>Terrorism and Sabotage</b>	<p>A commenter requested that this SWEIS evaluate risks and impacts relating to acts of terrorism and sabotage against NNSS-related radioactive materials shipments.</p> <p><b>Response:</b> <i>DOE/NNSA concurs with the commenter. A classified appendix with this information was prepared in conjunction with this SWEIS. Pertinent unclassified data from the appendix are included in Chapter 5, Section 5.1.12.3.</i></p>

<i>General Topic</i>	<i>Issue and Response</i>
<b>Renewable Energy</b>	<p>Commenters stated that renewable energy should be adopted as a secondary mission.</p> <p><b>Response:</b> <i>Renewable energy research and development, as well as commercial development, are discussed in this SWEIS.</i></p> <p>A commenter stated that the environmental consequences associated with reasonable buildout of renewable energy facilities should be evaluated in this SWEIS.</p> <p><b>Response:</b> <i>DOE/NNSA concurs with the commenter and has included renewable energy projects in all alternatives evaluated in this SWEIS.</i></p> <p>The U.S. Environmental Protection Agency commented that it supports increasing the development of renewable energy resources.</p> <p><b>Response:</b> <i>DOE/NNSA acknowledges the U.S. Environmental Protection Agency's support for renewable energy.</i></p> <p>Commenters asked for clarification of the renewable energy technologies considered in this SWEIS.</p> <p><b>Response:</b> <i>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.</i></p>
<b>Water Resources</b>	<p>A commenter stated that access limitations to water resources on withdrawn lands constitute a significant, adverse impact on the socioeconomic condition of Nye County. The impact is an indirect result of land access restrictions that have no demonstrated basis and must be recognized and identified as an impact on Nye County in this SWEIS.</p> <p><b>Response:</b> <i>Access restrictions are an integral part of the security of the NNSS. Nye County text concerning lack of access to water resources on withdrawn lands is incorporated in its entirety in Chapter 6, "Cumulative Impacts."</i></p>

<b>General Topic</b>	<b>Issue and Response</b>
<b>Potential Impacts</b>	<p>The U.S. Environmental Protection Agency requested that specific discussions and data regarding the following issues related to renewable energy projects be incorporated into this SWEIS:</p> <ul style="list-style-type: none"> <li>• Water supply and quality</li> <li>• Disposal of discharges</li> <li>• Clean Water Act, Sections 404 and 303(d)</li> <li>• Biological resources and habitat</li> <li>• Invasive species</li> <li>• Indirect and cumulative impacts</li> <li>• Implementation of adaptive management techniques for mitigation measures</li> <li>• Climate change</li> <li>• Air quality</li> <li>• Coordination with American Indian tribal governments</li> <li>• Environmental justice</li> <li>• Hazardous materials/hazardous waste/solid waste</li> <li>• Mitigation and pollution prevention</li> <li>• Coordination with land use planning activities</li> </ul> <p><b>Response:</b> <i>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></p> <p>A commenter stated that this draft SWEIS should clearly describe the rationale used to determine whether impacts of an alternative are significant and suggested that thresholds of significance consider the context and intensity of an action and its effects.</p> <p><b>Response:</b> <i>Wherever possible, impacts are quantified and compared with regulatory standards, system capacities, or other appropriate data. The criteria for determining whether the proposed alternatives impact each resource are identified in each of the Chapter 5 resource impacts sections.</i></p> <p>A commenter requested that groundwater contamination from radionuclides or other materials, airborne pollutants, and the full range of other environmental impacts be evaluated in relation to their impacts on people and the environment in communities and areas surrounding the site and along transportation corridors leading to and from the NNSS.</p> <p><b>Response:</b> <i>This SWEIS analyzes the potential direct and indirect impacts on people and the environment from groundwater contamination, transportation impacts, airborne pollutants, and all other emissions, as well as impacts on other resources (such as cultural resources and socioeconomic resources). These impacts are presented in Chapter 4, "Affected Environment," Chapter 5, "Environmental Consequences," and Chapter 6, "Cumulative Impacts."</i></p> <p>A commenter stated that impacts must be considered in a global context.</p> <p><b>Response:</b> <i>Some global impacts are outside the scope of this SWEIS; however, others are analyzed, such as the contribution of greenhouse gas emissions from activities at the NNSS and offsite locations.</i></p>
<b>Treaty of Ruby Valley</b>	<p>A commenter was in favor of returning lands to the Western Shoshone.</p> <p><b>Response:</b> <i>The U.S. Supreme Court ruled against claims by the Western Shoshone under the Ruby Valley Treaty. NNSA is aware of significant disagreement with the rulings of the U.S. Supreme Court by the Western Shoshone.</i></p>

CFR = Code of Federal Regulations; CSP = concentrating solar power; EIS = environmental impact statement; GTCC = greater-than-Class C; LLW = low-level radioactive waste; MLLW = mixed low-level radioactive waste; NDEP = Nevada Division of Environmental Protection; NEPA = National Environmental Policy Act; NNSA = National Nuclear Security Administration; NNSS = Nevada National Security Site; NOI = Notice of Intent; NSO = Nevada Site Office; RCRA = Resource Conservation and Recovery Act; SWEIS = site-wide environmental impact statement.

### 1.7.2 Next Steps in the Public Involvement Process

DOE/NNSA is soliciting comments on this *Draft NNSS SWEIS* during a 90-day public comment period. During the public comment period, NNSA will hold public hearings to provide interested members of the public with the following opportunities:

- Learn more about the content of this *Draft NNSS SWEIS* from exhibits, fact sheets, and other materials
- Hear NNSA representatives present the results of the impact analyses
- Ask clarifying questions
- Provide oral or written comments

The *NNSS SWEIS* website (<http://www.nv.doe.gov/emprograms/impact.aspx>) has been established to further inform the public about this *NNSS SWEIS*, public meetings, comment submittal methods, and other pertinent information. Additionally, comment submittal methods and public meeting dates, times, and locations were announced in the *Federal Register*, in local newspapers, and on the *NNSS SWEIS* website.

NNSA will evaluate comments received on this *Draft NNSS SWEIS* in preparing the *Final NNSS SWEIS*. Public comments and responses will be included in the *Final NNSS SWEIS*. NNSA will announce its decision(s) regarding the selected alternative or alternatives in a ROD no sooner than 30 days after the U.S. Environmental Protection Agency Notice of Availability for the *Final NNSS SWEIS* is published. The ROD will be published in the *Federal Register* and will explain all factors, including the potential environmental impacts, considered by NNSA in reaching its decision. The ROD will identify the environmentally preferred alternative or alternatives. If mitigation measures, monitoring, or other conditions are adopted as part of NNSA's decision, these will be summarized in the ROD, as applicable, and will be included in a mitigation action plan that would be prepared following issuance of the ROD. The mitigation action plan would explain how and when mitigation measures would be implemented and how the NNSA would monitor the mitigation measures over time to judge their effectiveness. After NNSA issues its ROD, both the ROD and the mitigation action plan will be posted on DOE's NEPA website (<http://nepa.energy.gov>), and copies will be placed in the NNSA Reading Room in Las Vegas, Nevada, and in public libraries in southern Nevada and southwestern Utah; they also will be made available to interested parties upon request.