

**CHAPTER 9**  
**LAWS, REGULATIONS, AND PERMITS**

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## 9.0 LAWS, REGULATIONS, AND PERMITS

Chapter 9 presents the environmental, safety, and health laws, regulations, and permits that potentially apply to the alternatives in 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)*. Federal, State of Nevada, Executive Orders, and U.S. Department of Energy (DOE) environmental, safety, and health requirements are summarized in Section 9.1. Applicable permits that may be required to implement the alternatives are identified in Section 9.2.

### 9.1 Introduction

The major Federal and State of Nevada laws and regulations, Executive Orders, DOE Orders, and other requirements that may apply to the various alternatives analyzed in this site-wide environmental impact statement (SWEIS) are identified in **Table 9–1**. These compliance requirements are summarized in Sections 9.1.1 through 9.1.14. Executive Orders and DOE Orders that are new or that have been revised since the *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada* are easily identified in this chapter with their date of issuance and change date(s) transpiring after 1996.

**Table 9–1 Potentially Applicable Laws, Regulations, Orders, and Other Requirements**

<i>Law, Regulation, Order, or Other Requirement</i>	<i>Citation/Date</i>
<b>Environmental Quality</b>	
National Environmental Policy Act of 1969	42 U.S.C. 4321 et seq.
Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act	40 CFR Parts 1500–1508
U.S. Air Force Environmental Impact Analysis Process	32 CFR Part 989 (July 15, 1999)
National Environmental Policy Act Implementing Procedures	10 CFR Part 1021
Protection and Enhancement of Environmental Quality, as amended by Executive Order 11991	Executive Order 11514 (May 24, 1977)
Environmental Protection Program	DOE Order 450.1A (June 4, 2008)
Environment, Safety, and Health Reporting	DOE Order 231.1A (August 19, 2003; Change 1, June 3, 2004)
<b>Land Use</b>	
Federal Land Policy and Management Act of 1976	43 U.S.C. 1701–1784, enacted by P.L. 94-579, as amended
Military Lands Withdrawal Act of 1999	P.L. 106-65
Real Property Assessment Management	DOE Order 430.1B (September 24, 2003; Change 1, February 8, 2008)
<b>Infrastructure and Energy</b>	
Energy Policy Act of 2005	42 U.S.C. 15801 et seq.
Strengthening Federal Environmental, Energy, and Transportation Management	Executive Order 13423 (January 24, 2007)
Federal Leadership in Environmental, Energy, and Economic Performance	Executive Order 13514 (October 5, 2009)
Departmental Energy, Renewable Energy, and Transportation Management	DOE Order 430.2B (February 27, 2008)
<b>Transportation</b>	
Hazardous Materials Transportation Act of 1975, as amended	49 U.S.C. 5101 et seq.
Packaging and Transportation of Radioactive Material	10 CFR Part 71

<b>Law, Regulation, Order, or Other Requirement</b>	<b>Citation/Date</b>
Packaging and Transfer or Transportation of Materials of National Security Interest	DOE Order 461.1A (April 26, 2004)
Departmental Materials Transportation and Packaging Management	DOE Order 460.2A (December 22, 2004)
Packaging and Transportation Safety	DOE Order 460.1B (April 4, 2003)
<b>Geology and Soils</b>	
Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction	Executive Order 12699 (December 22, 2005)
Facility Safety	DOE Order 420.1B (December 22, 2005)
<b>Hydrology</b>	
Clean Water Act of 1972, as amended	33 U.S.C. 1251 et seq.
Safe Drinking Water Act of 1974, as amended	42 U.S.C. 300(f) et seq.
National Wellhead Protection Program	Established by the 1986 Amendments to the Safe Drinking Water Act
National Primary Drinking Water Regulations	40 CFR Part 141 (July 1, 2003)
National Primary Drinking Water Regulations Implementation	40 CFR Part 142 (July 1, 2003)
National Secondary Drinking Water Regulations	40 CFR Part 143 (July 1, 2003)
Compliance with Floodplain and Wetland Environmental Review Requirements	10 CFR Part 1022
Floodplain Management	Executive Order 11988 (May 24, 1977)
Underground Water and Wells	NRS 534
Water Controls – Public Water Systems	NAC 445A
Water Controls – Water Pollution Control and Sanitation	NAC 445A and 444
Underground Injection Control Program	NAC 445A.810–445A.925
Fluid Management Plan for the Underground Test Area Project	DOE/NV-370-Rev. 4 (May 2009)
<b>Biological Resources</b>	
Bald and Golden Eagle Protection Act of 1973, as amended	16 U.S.C. 668–668d
Clean Water Act, Section 404, Jurisdictional Wetlands	33 U.S.C. 1251 et seq., Section 404
Endangered Species Act of 1973, as amended	16 U.S.C. 1531 et seq.
Migratory Bird Treaty Act of 1918, as amended	16 U.S.C. 703 et seq.
National Wildlife Refuge System Administrative Act of 1966, as amended	16 U.S.C. 668dd-668ee
Wild Horses and Burros Act of 1971	16 U.S.C. 1331–1340
Protection of Wetlands	Executive Order 11990 (May 24, 1977)
Invasive Species	Executive Order 13112 (February 3, 1999)
Responsibilities of Federal Agencies to Protect Migratory Birds	Executive Order 13186 (January 10, 2001)
Five-Party Cooperative Agreement	1977 (see also Wild Horses and Burros Act of 1971)
Protection of Wildlife	NAC 503.010 – 503.104
<b>Air Quality and Climate</b>	
Clean Air Act of 1970, as amended	42 U.S.C. 7401 et seq.
National Ambient Air Quality Standards	40 CFR Part 50
National Emission Standards for Hazardous Air Pollutants	40 CFR Part 61
Stratospheric Ozone Protection	40 CFR Part 82
Mandatory Greenhouse Gas Reporting	40 CFR Part 98
Standards of Quality for Ambient Air	NAC 445B.22097
Class II Operating Permits	NAC 445B.3455 – 445B.3477
Air Pollution Alternative Fuels; Clean Burning Fuels	NRS 445B.100 – 445B.825 and NRS 486A.010 – 486A.180
<b>Visual Resources</b>	
Visual Resource Management	BLM Manual Section 8400

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<i>Law, Regulation, Order, or Other Requirement</i>	<i>Citation/Date</i>
<b>Cultural Resources</b>	
American Indian Religious Freedom Act of 1978	42 U.S.C. 1996
Antiquities Act of 1906, as amended	16 U.S.C. 431–433
Archaeological and Historic Preservation Act of 1960, as amended	16 U.S.C. 469–469c-2
Archaeological Resources Protection Act of 1979, as amended	16 U.S.C. 470aa et seq.
National Historic Preservation Act of 1966, as amended	16 U.S.C. 470 et seq.
Native American Graves Protection and Repatriation Act of 1990	25 U.S.C. 3001 et seq.
Protection and Enhancement of the Cultural Environment	Executive Order 11593 (May 13, 1971)
Indian Sacred Sites	Executive Order 13007 (May 24, 1996)
Consultation and Coordination with Indian Tribal Governments	Executive Order 13175 (November 6, 2000)
Preserve America	Executive Order 13287 (March 3, 2003)
American Indian Tribal Government Interactions and Policy	DOE Order 144.1 (January 16, 2009; Change 1, November 6, 2009)
<b>Waste Management</b>	
Atomic Energy Act of 1954	42 U.S.C. 2011 et seq.
Resource Conservation and Recovery Act of 1976, as amended	42 U.S.C. 6901 et seq.
Federal Facility Compliance Act of 1992	P.L. 102-386
Federal Facility Agreement and Consent Order, as amended	February 2008
Low-Level Radioactive Waste Policy Act of 1980, as amended	42 U.S.C. 2021 et seq.
Toxic Substances Control Act of 1976	15 U.S.C. 2601 et seq.
Disposal of Solid Waste	NAC 444.570 – 444.7499
Disposal of Hazardous Waste	NAC 444.850 – 444.8746
Storage Tanks	NAC 459.9921 – 459.999
Polychlorinated Biphenyl	NAC 444.940 – 444.9555
Radioactive Waste Management	DOE Order 435.1 (July 9, 1999; Change 1, August 28, 2001; Certified, January 9, 2007)
Mutual Consent Agreement	January 1994; modified 1995 and 1998
Settlement Agreement for Mixed Transuranic Waste	June 1992
<b>Human Health</b>	
Occupational Safety and Health Act of 1970	29 U.S.C. 651 et seq.
Noise Control Act of 1972, as amended	42 U.S.C. 4901 et seq.
Procedural Rules for DOE Nuclear Facilities	10 CFR Part 820
Nuclear Safety Management	10 CFR Part 830
Occupational Radiation Protection	10 CFR Part 835
Worker Safety and Health Program	10 CFR Part 851
Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, as amended by Executive Order 13286	Executive Order 12699 (January 5, 1990)
Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities	DOE Order 5480.20A (November 15, 1994; Change 1, July 12, 2001)
Conduct of Operations Requirements for DOE Facilities	DOE Order 5480.19 (July 9, 1990; Change 1, May 18, 1992; Change 2, October 23, 2001)
Radiation Protection of the Public and the Environment	DOE Order 458.1 (February 11, 2011)
Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees	DOE Order 440.1B (May 17, 2007)
Maintenance Management Program for DOE Nuclear Facilities	DOE Order 433.1B (April 21, 2010)
Verification of Readiness to Startup or Restart Nuclear Facilities	DOE Order 425.1D (April 16, 2010; cancels DOE Order 425.1C, March 13, 2003)
Facility Safety	DOE Order 420.1B (December 22, 2005; Change 1, April 19, 2010)

<b>Law, Regulation, Order, or Other Requirement</b>	<b>Citation/Date</b>
Quality Assurance	DOE Order 414.1C (June 17, 2005)
DOE Radiological Health and Safety Policy	DOE Policy 441.1 (April 26, 1996)
<b>Environmental Justice</b>	
Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	Executive Order 12898 (February 11, 1994)
Protection of Children from Environmental Health Risks and Safety Risks, as amended by Executive Order 13229	Executive Order 13045 (April 21, 1997)
<b>Emergency Planning, Pollution Prevention, and Conservation</b>	
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also known as Superfund)	42 U.S.C. 9601 et seq.
Emergency Planning and Community Right-to-Know Act of 1986	42 U.S.C. 11001 et seq.
Pollution Prevention Act of 1990	42 U.S.C. 13101 et seq.
Homeland Security Act of 2002	6 U.S.C. 101 et seq. enacted by Public Law 107-296
Management of Domestic Incidents	Homeland Security Presidential Directive 5 (February 28, 2003)
National Preparedness	Homeland Security Presidential Directive 8 (December 17, 2003)
Designation, Reportable Quantities, and Notification	40 CFR 302.1 – 302.8
Federal Compliance with Pollution Control Standards, as amended by Executive Order 12580, Superfund Implementation	Executive Order 12088 (October 13, 1978)
Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements	Executive Order 12856 (August 3, 1993)
Strengthening Federal Environmental, Energy, and Transportation Management	Executive Order 13423 (January 24, 2007)
Federal Leadership in Environmental, Energy, and Economic Performance	Executive Order 13514 (October 5, 2009)
Safeguards and Security Program	DOE Order 470.4A (May 25, 2007)
Independent Oversight and Performance Assurance Program	DOE Order 470.2B (October 31, 2002)
Comprehensive Emergency Management System	DOE Order 151.1C (November 2, 2005)
Departmental Radiological Emergency Response Assets	DOE Order 153.1 (June 27, 2007)
State of Nevada Chemical Catastrophe Prevention Act and the Chemical Accident Prevention Program	Nevada Legislature Senate Bill 641 (July 1991) and NRS 459.380 – 459.3874

BLM = Bureau of Land Management; CFR = Code of Federal Regulations; EPA = U.S. Environmental Protection Agency; NAC = Nevada Administrative Code; NRS = Nevada Revised Statute; P.L. = Public Law; U.S.C. = United States Code.

### 9.1.1 Environmental Quality

**National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.).** The purposes of NEPA, as amended, are: (1) to declare a national policy that will encourage productive and enjoyable harmony between man and his environment; (2) to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; (3) to enrich the understanding of the ecological systems and natural resources important to the Nation; and (4) to establish a Council on Environmental Quality (CEQ). NEPA establishes a national policy requiring that Federal agencies consider the environmental impacts of major Federal actions that significantly affect the quality of the human environment before making decisions and taking actions to implement those decisions. Implementation of NEPA requirements in accordance with CEQ regulations (40 CFR Part 1500 et seq.) may result in a categorical exclusion, an environmental assessment and Finding of No Significant Impact, or an environmental impact statement. This *NNSS SWEIS* has been prepared in accordance with NEPA requirements, CEQ regulations (40 CFR Part 1500 et seq.), and DOE provisions for implementing the procedural requirements of NEPA (10 CFR Part 1021; DOE Order 451.1B, Change 1). It discusses reasonable alternatives and their potential environmental consequences.

**U.S. Air Force (USAF) Environmental Impact Analysis Process (32 CFR Part 989).** This regulation implements the USAF environmental impact analysis process and provides procedures for environmental impact analysis both within the United States and abroad. The National Nuclear Security Administration (NNSA) would comply with U.S. Department of Defense and USAF management policies and directives that are applicable to the activities discussed in this SWEIS and/or are conducted on USAF installations and ranges (e.g., the Nevada Test and Training Range, the Tonopah Test Range, and Nellis Air Force Base). Such USAF policies and directives standardize implementation of higher-level guidance, including laws and statutes, across the entire USAF. One example of such higher-level guidance is 32 CFR Part 989, “Environmental Impact Analysis Process,” which deals with implementing NEPA on USAF real property.

**Executive Order 11514, *Protection and Enhancement of Environmental Quality* (March 5, 1970), as amended by Executive Order 11991 (May 24, 1977).** This Order requires Federal agencies to continuously monitor and control their activities (1) to protect and enhance the quality of the environment and (2) to develop procedures to ensure the fullest practicable provision of timely public information and understanding of Federal plans and programs that may have potential environmental impacts so that interested parties can submit their views. DOE issued regulations (10 CFR Part 1021) and DOE Order 451.1B, *National Environmental Policy Act Compliance Program*, in compliance with this Order.

**DOE Order 450.1A, *Environmental Protection Program* (June 4, 2008).** The purpose of this Order is to implement sound stewardship practices that are protective of the air, water, land, and other natural and cultural resources affected by DOE operations and that allow DOE to cost-effectively meet or exceed compliance with applicable environmental, public health, and resource protection requirements. The objectives are: (1) to implement sustainable practices for enhancing environmental, energy, and transportation management performance, as stipulated in Section 3(a) of Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, through environmental management systems that are part of Integrated Safety Management systems established pursuant to DOE Policy 450.4, *Safety Management System Policy*, dated 10-15-96; and (2) to achieve the DOE Sustainable Environmental Stewardship goals found in the attachment to this Order.

**DOE Order 231.1A, *Environment, Safety, and Health Reporting* (August 19, 2003; Change 1, June 3, 2004).** In accordance with DOE Order 231.1A, *Environment, Safety, and Health Reporting*, Annual Site Environmental Reports are prepared and submitted annually to DOE Headquarters, regulatory agencies, and interested stakeholders. These reports summarize calendar year environmental monitoring data at DOE sites (1) to describe the performance of the site’s environmental management system, (2) to confirm compliance with standards and regulations, and (3) to highlight important programs.

### 9.1.2 Land Use

**Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701–1784, enacted by Public Law 94-579, as amended).** FLPMA governs the use of Federal lands that may be overseen by several agencies and establishes the procedure for applying to the Bureau of Land Management (BLM) for land withdrawals and rights-of-way. Land use is addressed in Chapter 4, Sections 4.1.1, 4.2.1, 4.3.1, and 4.4.1.

**Military Lands Withdrawal Act of 1999 (Public Law 106-65).** On October 5, 1999, this Act renewed withdrawal of lands known as Pahute Mesa that are an integral part of the Nevada National Security Site (NNSS) and include the site of nuclear weapons testing activities. Pursuant to the Act, these lands were transferred from the U.S. Department of Defense to DOE, thus aligning jurisdictional responsibilities consistent with DOE’s retention of environmental, safety, and health responsibilities at the NNSS.

**DOE Order 430.1B, *Real Property Assessment Management (September 24, 2003; Change 1, February 8, 2008)***. The objective of this Order is to establish a corporate, holistic, and performance-based approach to real property life-cycle asset management that links real property asset planning, programming, budgeting, and evaluation to program mission projections and performance outcomes. To accomplish the objective, this Order sets forth the requirements for the major real property asset management functional components of planning, real estate, acquisition, maintenance and recapitalization, disposition and long-term stewardship, value engineering, and performance goals and measures. One of the requirements is documentation of the results of real property asset site planning and performance in a Ten-Year Site Plan (TYSP) that is kept current and covers a 10-year planning horizon. The content of the TYSP must address how the site's real property assets will support the DOE's strategic plan, the Secretary of Energy's 5-year planning guidance, and appropriate program guidance. It must be a comprehensive site-wide plan encompassing the needs of tenant activities. This Order applies to DOE/NNSA for operations on the NNSS, as well as at the North Las Vegas Facility (NLVF) and Remote Sensing Laboratory (RSL).

### **9.1.3 Infrastructure and Energy**

**Energy Policy Act of 2005 (42 USC 15801 et seq.)**. Signed on August 8, 2005, this Act was the first omnibus energy legislation enacted in more than a decade. Major provisions include tax incentives for domestic energy production and energy efficiency, a mandate to double the Nation's use of biofuels, repeal of restrictions on interstate utility holding companies, faster procedures for energy production on Federal lands, and authorization of numerous Federal energy research and development programs. Applicability for DOE ranges from energy management requirements, procurement of energy-efficient products, assessment of renewable energy resources, and Price-Anderson Amendments Act requirements.

**Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management (January 24, 2007)***. This Order sets goals for Federal agencies to conduct their environmental, transportation, and energy-related activities in support of their respective missions in an integrated, efficient, continuously improving, and sustainable manner that complies with the law and all regulatory requirements and is environmentally, economically, and fiscally sound.

**Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance (October 5, 2009)***. This Order focuses on improving and strengthening the overall sustainability of the Federal Government. All Federal agencies are required to inventory their greenhouse gas (GHG) emissions, set targets to reduce their emissions by 2020, and develop a plan for meeting a wide range of goals for improving sustainability, such as water efficiency, waste reduction, sustainable community development planning, high-performance buildings, sustainable acquisition, electronics stewardship, and environmental management.

In accordance with Executive Order 13514, DOE published its *Strategic Sustainability Performance Plan – Discovering Sustainable Solutions to Power and Secure America's Future* (Strategic Sustainability Performance Plan) (DOE 2010f) in September 2010. The Strategic Sustainability Performance Plan, will be updated annually, and progress toward its goals will be reported. The Plan includes the following: (1) sustainability goals and targets, including GHG reduction targets; (2) integration with overall strategic planning and budgeting processes within DOE; (3) activities, policies, plans, procedures, goals, schedules, and milestones needed to implement Executive Order 13514; (4) performance metrics and evaluation of projects based on lifecycle return on investment; (5) involvement of DOE employees in achieving sustainability goals; and (6) climate change adaptation planning.

**DOE Order 430.2B, *Departmental Energy, Renewable Energy, and Transportation Management (February 27, 2008)*.** This Order provides the requirements and responsibilities for DOE or NNSA sites to assist DOE in meeting its energy efficiency goals and objectives in electricity, water, and thermal consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423. This Order requires sites to develop an energy management program and to have an Executable Plan for the program in place by December 31, 2008. The Executable Plan must be integrated with the site's TYSP.

#### **9.1.4 Transportation**

**Hazardous Materials Transportation Act of 1975, as amended (49 U.S.C. 5101 et seq.).** The transportation of radioactive materials is regulated jointly by the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Transportation (DOT). DOT regulates shippers and carriers of hazardous materials, including radioactive material. DOT's responsibility includes vehicle safety, routing, shipping papers, and emergency response information and shipper/carrier training requirements. NRC regulates users of radioactive material in 17 states (33 states regulate material within their borders) and approves the design, fabrication, use, and maintenance of shipping containers for more-hazardous radioactive material shipments (NTA 2009). NRC requires radioactive materials to be shipped in accordance with the hazardous materials transportation safety regulations of DOT. DOT regulations prescribe limits on the maximum amounts of radioactivity that can be transported, such that doses from any accidents involving these packages would have no substantial health risks.

Transportation of hazardous materials that occurs entirely on DOE property (i.e., on the NNSS), to which public access is controlled at all times through the use of gates and guards, is subject to applicable DOE directive and transportation safety requirements set forth in 10 CFR Part 830, Subpart B. DOE transport of hazardous materials (e.g., mixed low-level radioactive waste) off site for treatment, over highways to which the public has access, would be subject to applicable DOT, DOE, and U.S. Environmental Protection Agency (EPA) directives. Potential transportation impacts from implementation of the alternatives analyzed in this SWEIS are discussed in Chapter 5, Sections 5.1.3, 5.2.3, 5.3.3, and 5.4.3.

**10 CFR Part 71, "Packaging and Transportation of Radioactive Material."** These NRC regulations include detailed packaging design requirements and package certification testing requirements. Complete documentation of design and safety analysis and the results of the required testing are submitted to NRC to certify the package for use. This certification testing involves the following components: heat, physical drop onto an unyielding surface, water submersion, puncture by dropping the package onto a steel bar, and gas tightness.

**DOE Order 461.1A, *Packaging and Transfer or Transportation of Materials of National Security Interest (April 26, 2004)*.** This Order establishes the requirements and responsibilities for offsite shipments of naval nuclear fuel elements, Category I and Category II special nuclear material (SNM), nuclear explosives, nuclear components, special assemblies, and other materials of national security interest; onsite transfers of naval nuclear fuel elements, Category I and II SNM, nuclear components, special assemblies and other materials of national security interest; and certification of packages for Category I and II SNM, nuclear components, and other materials of national security interest. This Order is applicable to primary DOE organizations, including NNSA.

**DOE Order 460.2A, *Departmental Materials Transportation and Packaging Management (December 22, 2004)*.** This Order states that DOE operations shall be conducted in compliance with all applicable international, Federal, state, local, and tribal laws, rules, and regulations governing materials transportation that are consistent with Federal regulations, unless exemptions or alternatives are approved in accordance with DOE Order 460.1B. This Order also states that it is DOE policy that shipments will

comply with the DOT requirements of 49 CFR Parts 100–185, except those that infringe on maintenance of classified information. This Order applies to NNSA.

**DOE Order 460.1B, *Packaging and Transportation Safety (April 4, 2003)*.** The objective of this Order is to establish safety requirements for the proper packaging and transportation of NNSA offsite shipments and onsite transfers of hazardous materials and for modal transport. (Offsite is any area within or outside a DOE site to which the public has free and uncontrolled access; onsite is any area within the boundaries of a DOE site or facility to which access is controlled.) Operations conducted under DOE Order 461.1, *Packaging and Transfer or Transportation of Materials of National Security Interest*, are excluded from this Order.

### **9.1.5 Geology and Soils**

**Executive Order 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction (January 5, 1990)*, as amended by Executive Order 13286 (February 28, 2003).** This Order requires Federal agencies to: (1) reduce risks to occupants of buildings owned, leased, or purchased by the Federal government or buildings constructed with Federal assistance and to persons who would be affected by failures of Federal buildings in earthquakes; (2) improve the capability of existing Federal buildings to function during or after an earthquake; and (3) reduce earthquake losses of public buildings, all in a cost-effective manner. Each Federal agency responsible for the design and construction of a Federal building shall ensure that the building is designed and constructed in accordance with appropriate seismic design and construction standards. This requirement pertains to all building projects for which development of detailed plans and specifications is initiated subsequent to the issuance of this Order; therefore, it applies to the proposed activities evaluated in this SWEIS. Seismic risks and potential impacts are evaluated in Chapters 4 and 5 of this SWEIS.

**DOE Order 420.1B, *Facility Safety (December 22, 2005)*.** This Order requires that nuclear and nonnuclear facilities be designed, constructed, and operated so that the public, workers, and environment are protected from adverse impacts of natural phenomena hazards, including earthquakes. The Order stipulates natural phenomena hazards mitigation for DOE facilities and specifically provides for reevaluation and upgrade of existing DOE facilities when there is a significant degradation in the safety basis for the facility. The design and construction of new facilities and major modifications to existing facilities proposed in this SWEIS must address natural phenomena mitigation design.

### **9.1.6 Hydrology**

**Clean Water Act of 1972, as amended (33 U.S.C. 1251 et seq.).** The Clean Water Act, which amended the Federal Water Pollution Control Act, was enacted to “restore and maintain the chemical, physical, and biological integrity of the Nation’s water.” The Act prohibits the unpermitted discharge of toxic pollutants in toxic amounts to navigable waters of the United States. Section 313 of the Clean Water Act requires all branches of the Federal Government engaged in any activity that might result in a discharge or runoff of pollutants to surface waters to comply with Federal, state, interstate, and local requirements.

Section 404 of the Clean Water Act, providing the U.S. Army Corps of Engineers permitting authority over activities that discharge dredge or fill materials into waters of the United States, including wetlands, is addressed in Section 9.1.7, “Biological Resources.”

The Act also provides guidelines and limitations for effluent discharges from point-source discharges and establishes the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES program is administered by EPA, pursuant to regulations in 40 CFR Part 122 et seq., and may be delegated to states. Stormwater provisions of the NPDES program are set forth in 40 CFR 122.26, and

require discharge permits for industrial and construction activities disturbing 0.4 hectares (1 acre) or more. The NNSS operations do not require any NPDES permits (DOE/NV 2009d). At NLVF, a NPDES permit regulates the discharge of pumped groundwater. At the NNSS, Clean Water Act regulations are followed through compliance with wastewater discharge permits issued by the Nevada Division of Environmental Protection (NDEP). Wastewater discharge permits held by NNSA for the NNSS and other locations are identified in this chapter in Section 9.2, “Applicable Permits.”

**Safe Drinking Water Act of 1974, as amended (42 U.S.C. 300(f) et seq.).** The primary objective of the Safe Drinking Water Act is to protect the quality of public drinking water supplies and sources of drinking water. The implementing regulations, administered by EPA unless delegated to states, establish national primary drinking water standards applicable to public water systems. These regulations (40 CFR Parts 123, 141, 145, 147, and 149) specify maximum contaminant levels, including those for radioactivity, in public water systems, which are generally defined as systems that have at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents. These standards apply to the NNSS and other locations for community and non-community water supplies. The State of Nevada implements its own safe drinking water program under authority of the Safe Drinking Water Act. Nevada has adopted standards at least as stringent as the EPA’s and has a safe drinking water program in place to make sure water systems meet these standards. NDEP’s Bureau of Safe Drinking Water is responsible for enforcement of these standards.

**National Wellhead Protection Program (established by the 1986 amendments to the Safe Drinking Water Act).** The Safe Drinking Water Act amendments require each state to develop a Comprehensive State Groundwater Protection Program and encourage local water systems to develop wellhead protection plans for their community water systems.

**40 CFR Part 141, “National Primary Drinking Water Regulations.”** These regulations provide maximum contaminant levels, monitoring and analytical requirements, reporting and record-keeping requirements, special regulations such as prohibition of lead use, maximum contaminant level goals, national primary drinking water regulations, filtration and disinfection rules; and control of lead and copper requirements, as well as other subparts to follow.

**40 CFR Part 142, “National Primary Drinking Water Regulations Implementation.”** These regulations provide the proper measures for implementation and enforcement of the National Primary Drinking Water Regulations (40 CFR Part 141).

**40 CFR Part 143, “National Secondary Drinking Water Regulations.”** This part establishes national secondary drinking water regulations pursuant to Section 1412 of the Safe Drinking Water Act, as amended (42 U.S.C. 300g-1). These regulations control contaminants in drinking water that primarily affect the aesthetic qualities relating to the public acceptance of drinking water. At considerably higher concentrations of these contaminants, health implications may also exist as well as aesthetic degradation. The regulations are not federally enforceable, but are intended as guidelines for the states.

**10 CFR Part 1022, “Compliance with Floodplain and Wetland Environmental Review Requirements.”** DOE requirements for compliance with Executive Order 11988, “Floodplain Management,” and Executive Order 11990, “Protection of Wetlands,” are set forth in 10 CFR Part 1022, “Compliance with Floodplain and Wetland Environmental Review Requirements.” 10 CFR Part 1022 establishes policy and procedures for DOE responsibilities under both Executive Orders, including: (1) DOE policy regarding the consideration of floodplain and wetland factors in DOE planning and decisionmaking and (2) DOE procedures for identifying proposed actions located in a floodplain or wetland, providing opportunity for early public review of such proposed actions, preparing floodplain or wetland assessments, and issuing statements of findings for actions in a floodplain. DOE shall

accommodate the requirements of Executive Order 11988 and Executive Order 11990, to the extent possible, through applicable DOE NEPA procedures or, when appropriate, using the environmental review process under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see Section 9.1.14 of this Chapter). Additionally, DOE must specifically to adhere to the flood design and evaluation criteria specified in DOE Standards 1020–2002, *Natural Phenomena Hazards Design and Evaluation Criteria for Department of Energy Facilities*, and 1023–95, *Natural Phenomena Hazards Assessment Criteria*. Chapter 5 of this SWEIS addresses the potential floodplain impacts associated with the activities analyzed for each of the alternatives.

**Executive Order 11988, Floodplain Management (May 24, 1977).** This Order (implemented by DOE in 10 CFR Part 1022) directs Federal agencies to evaluate the potential effects of any actions that may be taken in a floodplain. When conducting activities in a floodplain, Federal agencies are required to take actions to reduce the risk of flood damage; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

**State of Nevada, Nevada Revised Statutes (NRS) 534, “Underground Water and Wells.”** The Nevada Division of Water Resources oversees these regulations. This statute regulates the drilling, construction, and licensing of new wells and reworking of existing wells to prevent the contamination and excess use (i.e., waste) of groundwater. NNSA complies with this NRS as a matter of comity, holding to the position that state licensing requirements do not apply to the Federal government and its contractors as a matter of law, under the principle of Federal supremacy and associated case law. Two current operations that voluntarily comply with this Nevada Administrative Code (NAC) are the Underground Test Area (UGTA) Project, which drills new wells and reworks old wells, and the Borehole Management Program, which plugs abandoned the NNSS boreholes (DOE/NV 2009d). For information on the current status of the Borehole Management Program, see Chapter 3 of this SWEIS.

**State of Nevada, NAC 445A, “Water Controls (Public Water Systems).”** This regulation enforces Safe Drinking Water Act requirements and sets standards for permitting, design, construction, operation, maintenance, certification of operators, and water quality of public water systems. NDEP’s Bureau of Safe Drinking Water oversees and enforces compliance with public water system permit requirements. Permits issued by the Bureau for three of the NNSS public water systems and two potable water hauler trucks are listed in Section 9.2.

**NAC 445A and 444, “Water Controls (Water Pollution Control and Sanitation).”** This regulation protects the waters of the state from the discharge of pollutants. NDEP’s Bureau of Water Pollution Control oversees and enforces compliance with Nevada’s water pollution control laws and regulations. These regulations apply to the collection, treatment, and disposal of wastewater and sewage at the NNSS. The requirements are issued in permits to NNSA as shown in Table 9-2. NNSA also obtains underground injection control (UIC) permits from NDEP for tracer tests in UGTA Project characterization wells (DOE/NV 2009d).

**NAC 445A.810–445A.925, “UIC Program.”** NDEP’s Bureau of Safe Drinking Water issues permits to protect the public health and safety and the general welfare of the people of Nevada. An applicant for a permit to inject fluids must satisfy the state that the underground injection will not endanger any source of drinking water (NAC 445A.865, NAC 445A.867). Construction of an injection well for which a permit is required may not begin until the permit has been issued (**NAC 445A.905**). Plugging and abandonment requirements may be added as a condition to the permit or the requirements in the NAC must be followed. (See NRS 534 above for information on plugging abandoned boreholes on the NNSS.)

**Fluid Management Plan for the UGTA Project.** UGTA Project wells are regulated by the State of Nevada through an agreement between NNSA and the NDEP called the Fluid Management Plan for the

UGTA Project (DOE 2009l). The plan was developed in place of issuing separate water pollution control permits for each UGTA characterization well under the Clean Water Act. The plan identifies the methods for disposing groundwater pumped from UGTA wells during drilling, construction, development, testing, experimentation, and/or well water sampling based on radiological contamination levels.

### **9.1.7 Biological Resources**

**Bald and Golden Eagle Protection Act of 1973, as amended (16 U.S.C. 668–668d).** The Bald and Golden Eagle Protection Act, as amended, makes it unlawful to take, pursue, molest, or disturb bald (American) and golden eagles, their nests, or their eggs anywhere in the United States. A permit must be obtained from the U.S. Department of Interior to relocate a nest that interferes with resource development or recovery operations. Both bald and golden eagles occur on the NNSS (DOE/NV 2009d). During the project planning phase and prior to construction, biological surveys are conducted to prevent direct harm to eagles and their nests and eggs. See Chapter 5, Sections 5.1.7, 5.2.7, 5.3.7, and 5.4.7, for bald and golden eagle impact analysis.

**Clean Water Act, Section 404, Jurisdictional Wetlands.** The Clean Water Act prohibits the discharge of pollutants (including dredged or fill material) into “waters of the United States,” except as authorized by a permit. Joint guidance by EPA and the U.S. Army Corps of Engineers, issued in response to a June 2006 Supreme Court decision, provides new guidelines for determining whether tributaries and wetlands are waters of the United States and are regulated under the Clean Water Act (EPA and Army 2007). Based on the new guidance, no wetlands at the NNSS are expected to qualify as waters of the United States; a site-specific evaluation by the U.S. Army Corps of Engineers, based on the new guidance, will be determinative.

**Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).** The Endangered Species Act is intended to prevent the further decline of endangered and threatened species and to restore these species and habitats. Section 7 of this Act requires Federal agencies having reason to believe that a prospective action may affect an endangered or threatened species or its habitat to consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to ensure that the action does not jeopardize the species or destroy its habitat (50 CFR Part 17). If, despite reasonable and prudent measures to avoid or minimize such impacts, the species or its habitat would be jeopardized by the action, a review process is specified to determine whether the action may proceed as an incidental taking. Chapter 4 identifies potential endangered, threatened, or listed species in the affected environment. Chapter 5 describes the potential impacts on those species from implementation of the alternatives.

**Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et seq.).** The Migratory Bird Treaty Act, as amended, is intended to protect birds that have common migration patterns between the United States and Canada, Mexico, Japan, and Russia. It regulates the harvest of migratory birds by specifying conditions such as mode of harvest, hunting seasons, and bag limits. The Act stipulates that it is unlawful, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess...any migratory bird...or any part, nest, or egg of any such bird.” Of the 239 species of birds observed on the NNSS, 234 are protected under the Migratory Bird Treaty Act (DOE/NV 2009d). During the project planning phase and prior to construction, biological surveys are conducted to prevent direct harm to the birds and their nests and eggs. Potential impacts on migratory birds from implementation of the alternatives are analyzed in Chapter 5, Sections 5.1.7 and 5.4.7.

**National Wildlife Refuge System Administrative Act of 1966, as amended (16 U.S.C. 668dd-668ee).** This Act provides for the administration and management of the national wildlife refuge system, including wildlife refuges, areas for the protection and conservation of fish and wildlife threatened with extinction, wildlife ranges, game ranges, wildlife management areas, and waterfowl production areas.

The Desert National Wildlife Refuge is protected under this act. Biological monitoring is conducted to verify that tests conducted at the Nonproliferation Test and Evaluation Complex in Area 5 on the NNSS do not disperse toxic chemicals that could harm Desert National Wildlife Refuge biota (DOE/NV 2009d).

**Wild Horses and Burros Act of 1971 (16 U.S.C. 1331–1340).** This Act requires the protection, management, and control of wild free-roaming horses and burros on public lands. Wild horses on the NNSS may wander off the site onto public lands; therefore, they are protected under this Act (DOE/NV 2009d). Potential impacts on wild horses and burros protected under this Act are analyzed in Chapter 5, Sections 5.1.7, 5.2.7, 5.3.7, and 5.4.7.

**Executive Order 11990, *Protection of Wetlands* (May 24, 1977).** This Order, implemented by DOE through 10 CFR Part 1022, directs Federal agencies to ensure consideration of wetlands protection in decisionmaking and to evaluate the potential impacts of any new construction proposed in a wetland. Federal agencies shall avoid the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands if a practicable alternative exists.

**Executive Order 13112, *Invasive Species* (February 3, 1999).** This Order establishes the National Invasive Species Council. It requires Federal agencies to act to prevent the introduction of invasive species and provide for their control; to implement restoration with native species; and to minimize actions that could spread invasive species. This Order applies to NNSA as land-disturbing activities on the NNSS have resulted in the spread of numerous invasive plant species (DOE/NV 2009d). Potential impacts and habitat reclamation to control invasive species are addressed in Chapter 5, Sections 5.1.7 and 5.4.7.

**Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (January 10, 2001).** This Order directs Federal agencies taking actions with a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding with the U.S. Fish and Wildlife Service that promotes the conservation of migratory bird populations, in support of the Migratory Bird Treaty Act.

**Five-Party Cooperative Agreement (1977 – see also *Wild Horses and Burros Act of 1971*).** This five-party agreement between NNSA, the U.S. Air Force, the U.S. Fish and Wildlife Service, BLM, and the Nevada State Clearinghouse seeks coordination and cooperation in conducting resource inventories and developing management plans for wild horses and burros, and to maintain desirable habitat on federally withdrawn lands for these animals.

**NAC 503.010–503.104, “Protection of Wildlife.”** This regulation identifies Nevada animal species (i.e., protected and not protected), and prohibits harm to protected species without a special permit. This applies to NNSA; potential impacts are addressed in Chapter 5, Sections 5.1.7, 5.2.7, 5.3.7, and 5.4.7.

### **9.1.8 Air Quality and Climate**

**Clean Air Act of 1970, as amended (42 U.S.C. 7401 et seq.).** The Clean Air Act is intended to “protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” Section 118 of the Clean Air Act (42 U.S.C. 7418) requires that each Federal agency with jurisdiction over any property or facility engaged in any activity that might result in the discharge of air pollutants comply with “all Federal, state, interstate, and local requirements” with regard to the control and abatement of air pollution. Emissions of air pollutants from DOE facilities are regulated by EPA under 40 CFR Parts 50–99. Potential air quality impacts from implementation of the alternatives in this SWEIS are analyzed in Chapter 5, Sections 5.1.8, 5.2.8, 5.3.8, and 5.4.8.

**40 CFR Part 50, “National Ambient Air Quality Standards (NAAQS).”** The Clean Air Act requires EPA to set NAAQS for pollutants considered harmful to public health and the environment. The Clean Air Act establishes two types of NAAQs. *Primary standards* set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. *Secondary standards* set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Air quality permits for the NNSS, NLVF, and RSL demonstrate compliance with NAAQS criteria pollutants as well as requirements such as applicable reporting and recordkeeping, opacity field monitoring, emission quantities of hazardous air pollutants (e.g., lead) and criteria pollutants, and summaries of significant malfunctions and repairs.

**40 CFR Part 61, “National Emission Standards for Hazardous Air Pollutants (NESHAPs).”** DOE facility emissions of radionuclides and other hazardous air pollutants, including a release of asbestos during demolition and renovation activities, are regulated under the NESHAPs program (40 CFR Part 61, and 40 CFR Part 63, “NESHAPs for Source Categories” [i.e., Maximum Achievable Control Technology]). The NNSS radioactive air emissions are monitored on site to determine the public dose from inhalation and to determine compliance with NESHAPs under the Clean Air Act (DOE 2009d).

**40 CFR Part 82, “Stratospheric Ozone Protection.”** The Clean Air Act establishes limits on the production and consumption of certain ozone-depleting substances according to specified schedules. At the NNSS, ozone-depleting substances are mainly used in air conditioning units in vehicles, buildings, refrigerators, drinking water fountains, vending machines, and laboratory equipment. While there are no reporting requirements, recordkeeping to document the usage of ozone-depleting substances and technician certification is required, and EPA may conduct random inspections to determine compliance (DOE/NV 2009d).

**40 CFR Part 98, “Mandatory Greenhouse Gas Reporting.”** On October 30, 2009, EPA issued this regulation, which requires reporting of GHG emissions from large sources and suppliers in the United States. Its purpose is to collect accurate and timely emissions data for future policy decisions. Suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to EPA. EPA’s GHG reporting system will provide a better understanding of where GHGs are coming from and guide development of sound policies and programs to reduce emissions. These comprehensive, nationwide emissions data will help in the study of climate change.

On July 20, 2010, EPA signed revisions to certain provisions of the Mandatory Greenhouse Gas Reporting Rule. These proposed amendments primarily make clarifying and technical changes to specific sections of the final rule that either were not clear or did not have the intended effect. This proposal is complementary to the proposed rulemaking, *Technical Corrections, Clarifying and Other Amendments to Certain Provisions of the Mandatory Greenhouse Gas Reporting Rule* (FR 75 114), published on June 15, 2010. Together, these two proposed rulemakings address the most significant questions raised during implementation. This proposed rule was published in the *Federal Register* on August 11, 2010.

**NAC 445B.22097, “Standards of Quality for Ambient Air.”** This regulation identifies the minimum standards of quality for ambient air in Nevada, as required by NRS 445B.210. These standards shall be used when considering issuance of a permit for a stationary source and shall ensure that the stationary source will not cause the Nevada standards to be exceeded in areas where the general public has access. Minimum standards for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter smaller or equal to 10 microns in size (PM<sub>10</sub>), lead, and hydrogen sulfide are identified. This regulation applies to NNSA; potential impacts are addressed in Chapter 5, Sections 5.1.8, 5.2.8, 5.3.8, and 5.4.8.

**NAC 445B.3455 – 445B.3477, “Class II Operating Permits.”** These regulations specify the general requirements for obtaining a Class II air quality operating permit in Nevada for a proposed stationary source or a proposed modification to a stationary source. The application process is outlined and a list of required contents of the permit is provided. Necessary steps toward either applying for a revision or renewing an existing permit are also identified. All Class II operating permits must be renewed 5 years after their date of issuance. In accordance with NAC 445B.3477, a Class II general permit covering numerous similar stationary sources may be issued. NNSA has Class II permits for its facilities in Nevada. Impacts to air quality are addressed in Chapter 5, Sections 5.1.8, 5.2.8, 5.3.8, 5.4.8.

**State of Nevada, NRS 445B.100–445B.825, “Air Pollution,” and NRS 486A.010–486A.180, “Alternative Fuels; Clean Burning Fuels.”** The mission of NDEP’s Bureau of Air Pollution Control is to achieve and maintain levels of air quality to protect human health and safety; prevent injury to plant and animal life; prevent damage to property; and preserve visibility and the scenic, esthetic, and historic values of the state (NDEP 2009a). The authority for the Bureau to implement air pollution control requirements has been established in NRS 445B.100 – 445B.825, inclusive, and NRS 486A.010 – 486A.180, inclusive. DOE works with the Bureau’s Compliance and Enforcement Branch to ensure that all air quality sources operate in compliance with Federal and state laws and regulations. For example, NNSA must allow the Clark County Department of Air Quality and Environmental Management to conduct inspections of NLVF and RSL permitted equipment.

#### **9.1.9 Visual Resources**

**BLM Manual Section 8400 – Visual Resource Management (BLM 2009a).** This manual describes BLM’s policy that it has a basic stewardship responsibility to identify and protect visual values on all BLM lands (BLM 2009b). BLM is responsible for ensuring that the scenic values of public lands are considered before allowing uses that may have negative visual impacts. This is accomplished through BLM’s Visual Resource Management system described in Section 8400 of the manual, a system that involves inventorying scenic values and establishing management objectives for those values through the resource management planning process, and evaluating proposed activities to determine whether they conform to management objectives (BLM 2009c). The visual resource impacts on public lands from implementation of the proposed alternatives are presented in Chapter 5, Sections 5.1.9, 5.2.9, 5.3.9, and 5.4.9.

#### **9.1.10 Cultural Resources**

**American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. 1996 and 1996a).** This Act reaffirms American Indian religious freedom rights under the First Amendment and establishes U.S. policy to protect and preserve the inherent and constitutional right of American Indians to believe, express, and exercise their traditional religions. It includes access to sites on Federal properties integral to religious ceremonies and traditional rites. It also directs agencies to consult with interested American Indian groups and leaders to develop and implement policies and procedures to protect and preserve cultural and spiritual traditions and sites. Potential impacts from implementation of the SWEIS alternatives are analyzed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10.

**Antiquities Act of 1906, as amended (16 U.S.C. 431–433).** This Act was the first Federal involvement in the protection and management of cultural resources on public lands and allows the President to set aside federally owned land as historic landmarks. It also established that objects of antiquity on Federal lands had to be preserved, restored, and maintained; could only be disturbed under permit from a Federal agency; and could only be disturbed for scientific and educational purposes by qualified personnel. It required that artifacts and associated documents be cared for in public museums; a system be created to establish national historic monuments; and criminal penalties be assessed for violations by any person

who excavates, injures, obtains objects from, or destroys any historical ruin or monument on federally owned or controlled land without the permission of the appropriate Federal department (DOE/NV 2009d). Potential impacts from implementation of the SWEIS alternatives are analyzed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10.

**Archaeological and Historic Preservation Act of 1960, as amended (16 U.S.C. 469–469c-2).** The purpose of this Act is to provide for the preservation of historical and archaeological data (including relics and specimens) that might otherwise be irreparably lost or destroyed as a result of Federal actions. Potential impacts from implementation of the SWEIS alternatives are analyzed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10.

**Archaeological Resources Protection Act of 1979, as amended (16 U.S.C. 470aa et seq.).** This Act protects cultural resources on Federal lands greater than 100 years old and prohibits looting, vandalism, and unauthorized excavation. No one may sell, buy, or trade items from a cultural resource on Federal land. Criminal and civil penalties for violations are mandated, including forfeiture of equipment and vehicles used in any violations. Permits for excavation and removal of cultural resources on Federal lands by qualified persons are obtained from the appropriate Federal agency and for the purpose of furthering archaeological knowledge for the benefit of the public. The Federal land manager must contact any American Indian tribe or organization with an interest in the cultural resource to be excavated. Recovered items remain the property of the United States and are to be preserved by a qualified institution. Federal agencies cannot reveal the location of a cultural resource if by doing so the cultural resource is at risk of being altered or destroyed. Agencies are also to develop plans for surveying lands other than those scheduled for undertakings and to record and report violations of the Act. Potential impacts from implementation of the SWEIS alternatives are analyzed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10.

**Historic Sites, Buildings, and Antiquities Act of 1935.** This Act established a national policy of preserving historic sites, buildings, and objects of national significance. It gave the Secretary of Interior authority to acquire, restore, and maintain such sites and established the National Survey of Historic Sites and Buildings (now known as the National Register of Historic Places [NRHP]), the Historic Sites Survey, the Historic American Buildings Survey (HABS), and the Historic American Engineering Record (HAER).

**National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 et seq.).** This Act establishes a leadership role for the Federal government in the preservation of cultural resources and promotes a policy of cooperation between Federal agencies, states, tribes, and local governments. The Act also created the Advisory Council on Historic Preservation to serve as an independent counsel on historic preservation issues to the President, Congress, and Federal and state agencies. Most importantly, the Act explains the responsibilities of Federal agencies and outlines a process by which significant cultural resources are recognized and protected from undertakings and potential effects. Key sections of the NHPA pertaining to this SWEIS are described below.

- **NHPA Section 106** requires Federal agencies to consider in the planning stages of undertakings the potential impacts on historic properties listed on or eligible for the NRHP and provide consulting agencies, including the Nevada State Historic Preservation Office and the Advisory Council on Historic Preservation, sufficient information and time to comment on the effects of the undertaking.
- **NHPA Section 110** requires Federal agencies to inventory cultural resources under their jurisdiction, evaluate and nominate eligible cultural resources for listing on the NRHP, and establish a historic preservation program. Compliance with Section 110 implies monitoring the

conditions of historic properties and taking action to preserve them, stressing that Federal agencies must take an active role in the preservation and management of all significant cultural resources under their jurisdiction.

- **NHPA Section 112** requires that both agency and contracting personnel conducting cultural resources investigations meet certain professional qualifications and that their investigations meet certain standards. All data and records for historic properties are to be maintained and available for research purposes.
- **NHPA Section 304** directs Federal agencies, after consultation with the Secretary of the Interior, to withhold from the public information regarding the location or character of a cultural resource when such disclosure may cause substantial risk, such as theft or destruction, to the resource.

Potential impacts from implementation of the alternatives are analyzed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10. In addition, DOE has started consultations under Section 106 with the State Historic Preservation Officer, Advisory Council on Historic Preservation, and American Indian tribes on the possible adverse impacts of the proposed actions and alternatives being evaluated in this SWEIS. For further information on consultations with American Indians, see Chapter 10 of this SWEIS.

**Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 U.S.C. 3001 et seq.).** This Act requires Federal agencies to consult with American Indian tribes regarding human remains and materials in their collections. The Act acknowledges tribal rights to American Indian human remains, funerary objects, sacred objects, and objects of cultural patrimony. Persons can be prosecuted who knowingly sell or purchase, use for profit, or transport for sale or profit American Indian human remains or objects covered by this Act. In the case of unexpected discoveries of American Indian graves or grave goods during activities on Federal lands, the tribes or organizations are to be notified and procedures are agreed upon to establish affiliation and for disposition of the remains or objects. The Act provides for the repatriation of these cultural items from Federal archaeological collections and collections held by museums receiving Federal funding to federally recognized tribes when cultural affiliations can be established. This regulation applies to NNSA during implementation of activities analyzed in this SWEIS. Impacts of proposed DOE/NNSA activities on cultural resources important to American Indians, are addressed in Chapter 5, Sections 5.1.10, 5.2.10, 5.3.10, and 5.4.10.

**Executive Order 11593, *Protection and Enhancement of the Cultural Environment* (May 13, 1971).** This Order formally designates the Federal Government as the leader in preserving, restoring, and maintaining the historic and cultural environment of the Nation. It gives Federal agencies the responsibility for locating, inventorying, and nominating cultural resources to the NRHP.

**Executive Order 13007, *Indian Sacred Sites* (May 24, 1996).** This Order directs Federal agencies to accommodate the access and ceremonial use of American Indian sacred sites on their lands by American Indian religious practitioners. The confidentiality of these sites is to be maintained by the Federal agency and their physical integrity is not to be adversely affected.

**Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000).** This Order supplements the Executive Memorandum (dated April 29, 1994) entitled “Government-to-Government Relations with Native American Tribal Governments,” and states that each executive department and agency shall consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. This Order also states that each executive department and agency shall assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and

ensure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

**Executive Order 13287, *Preserve America* (March 3, 2003).** This Order reemphasizes the Federal Government policy to provide leadership in advancing the protection, enhancement, and contemporary use of federally owned historic properties and to promote intergovernmental cooperation and partnerships for the preservation and use of the historic properties. Federal agencies are to maximize their efforts to integrate the policies, procedures, and practices of the NHPA and this Order into their program activities to efficiently and effectively advance historic preservation objectives in the pursuit of their missions.

**DOE Order 144.1, *American Indian Tribal Government Interactions and Policy* (January 16, 2009; Change 1, November 6, 2009).** This Order communicates responsibilities for interacting with American Indian governments and transmits the DOE American Indian and Alaska Native Tribal Government Policy (i.e., “Indian Policy”), including its guiding principles. This policy outlines the requirements to be followed by DOE in its interactions with federally recognized American Indian tribes. It is based on the U.S. Constitution, treaties, Supreme Court decisions, Executive Orders, statutes, existing Federal policies, and tribal laws, as well as the dynamic political relationship between Indian nations and the Federal Government. The policy principles include DOE’s responsibilities to implement a proactive outreach effort consisting of notice and consultation regarding current and proposed actions affecting the tribes and to ensure integration of Indian nations into the decisionmaking processes.

#### 9.1.11 Waste Management

**Atomic Energy Act (AEA) as amended in 1954 (42 USC 2011 et seq.).** The AEA provides fundamental jurisdictional authority to DOE and NRC over governmental and commercial use of nuclear materials. The AEA authorizes DOE to establish standards to protect health and minimize danger to life or property for activities under DOE’s jurisdiction. DOE has issued a series of departmental orders to establish an extensive system of standards and requirements to ensure safe operation of DOE facilities. DOE regulations are found in 10 CFR. The DOE regulations that are the most relevant to radioactive waste and materials management include:

- Nuclear Safety Management (10 CFR Part 830)
- Occupational Radiation Protection (10 CFR Part 835)
- Byproduct Material (10 CFR Part 962)

The AEA also gives EPA the authority to develop generally applicable standards for protection of the general environment from radioactive materials. EPA has promulgated several regulations under this authority. The EPA regulation that is the most relevant to radioactive waste and materials management activities addressed by this SWEIS (e.g., transuranic waste at the NNSS) is 40 CFR Part 191, “Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level, and Transuranic Radioactive Wastes.” Transuranic waste (including mixed transuranic waste) generated as part of NNSS operations or from in-state environmental restoration programs is sent to the Area 5 Radioactive Waste Management Complex for temporary storage before shipment off site for further characterization and/or final disposition. See Chapter 4, Section 4.1.11.1.3, for a summary of transuranic waste management at NNSS.

**Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 U.S.C. 6901 et seq.).** RCRA has four main goals: (1) to protect human health and the environment from hazards posed by waste disposal; (2) to conserve energy and natural resources through waste recycling and recovery; (3) to

reduce or eliminate the generation of waste, including hazardous waste; and (4) to ensure that wastes are managed in an environmentally safe manner. RCRA focuses only on active and planned facilities. *(Note: Hazardous waste cleanup operations at NNSS [i.e., nonhistoric waste management activities, including satellite accumulation and the RCRA Part B Permit for the hazardous waste accumulation facility] are regulated under RCRA; they are not regulated under CERCLA. Historic contamination from the nuclear testing era is covered by the Federal Facilities Agreement and Consent Order [described below in Section 9.1.11]. Typically, the CERCLA regulations apply to historic cleanups such as Superfund and emergency response. The applicable emergency response requirements of CERCLA, as well as an overview of CERCLA, are described in Section 9.1.14.)*

The transportation and treatment, storage, and disposal (TSD) of solid and hazardous wastes are regulated by EPA under the authority of RCRA. The EPA regulations implementing RCRA (40 CFR Parts 260–282) define and identify hazardous waste; establish standards for waste transportation and TSD; and require permits for persons engaged in hazardous waste activities.

RCRA applies mainly to owners and operators of facilities that generate and manage hazardous waste. This Act imposed management requirements on generators and transporters of hazardous waste and upon owners and operators of TSD facilities. EPA has established a comprehensive set of regulations governing all aspects of TSD facilities, including location, design, operations, and closure. Any state that seeks to administer and enforce a hazardous waste program pursuant to RCRA may apply to EPA for authorization to administer its state program in lieu of the Federal program. EPA has authorized the State of Nevada to implement the state hazardous waste management program in lieu of the Federal RCRA program. Waste management is discussed in Chapter 4, “Affected Environment,” and Chapter 5, “Environmental Consequences.”

**Federal Facility Compliance Act of 1992 (Public Law 102-386).** The Federal Facility Compliance Act, enacted on October 6, 1992, amended RCRA Section 6961 and other sections and requires DOE to prepare plans that develop treatment capacity for mixed waste stored or generated at each facility, except for those facilities subject to a permit that establishes a schedule for treatment of such waste or an existing agreement or order governing the treatment of such waste to which the state is a party. The host state and/or EPA must approve each plan. Compliance with this Act by NNSA per the State of Nevada requires the identification of existing quantities for mixed waste, the proposal of methods and technologies of mixed treatment and management, the creation of enforceable timetables, and the tracking and completion of deadlines.

**Federal Facility Agreement and Consent Order, as amended (February 2008).** This Consent Order, agreed to by the State of Nevada, DOE Environmental Management, the U.S. Department of Defense, and DOE Legacy Management, became effective in May 1996. It addresses the environmental restoration of historically contaminated sites at the NNSS, parts of the Tonopah Test Range, parts of the Nevada Test and Training Range, the Central Nevada Test Area, and the Project SHOAL Area (DOE/NV 2009d). The Federal Facility Agreement and Consent Order incorporates RCRA and CERCLA elements that promulgate the characterization, restoration, and closure of identified sites.

**Low-Level Radioactive Waste Policy Act, as amended in 1985 (42 USC 2021b et. seq.).** This Act amended the AEA to specify that the Federal government (i.e., DOE and NRC) is responsible for disposal of low-level radioactive waste (LLW). If authorized by NRC under interstate compacts, states may regulate disposal of LLW from commercial sources. DOE remains responsible for the disposition of defense LLW (i.e., from DOE and U.S. Navy origin).

**Toxic Substances Control Act of 1976 (15 U.S.C. 2601 et seq.).** The Toxic Substances Control Act provides EPA with the authority to require testing of chemical substances entering the environment and to

regulate them as necessary. EPA is also authorized to impose strict limitations on the use and disposal of polychlorinated biphenyls (PCBs), chlorofluorocarbons, asbestos, dioxins, certain metalworking fluids, and hexavalent chromium. The EPA regulations that establish prohibitions of and requirements for PCBs and PCB items are found in 40 CFR Part 761, “Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.” Removal of any PCB transformers remaining at facilities on the NNSS and other locations would require disposition in compliance with this Act.

**NAC 444.570–444.7499, “Disposal of Solid Waste.”** These regulations set standards for solid waste management systems, including the storage, collection, transportation, processing, recycling, and disposal of solid waste in Nevada. These regulations apply on the NNSS for active and inactive landfills as described in Chapter 4, Sections 4.1.11, 4.2.11, 4.3.11, and 4.4.11.

**NAC 444.850–444.8746, “Disposal of Hazardous Waste.”** These regulations apply to the operation of hazardous waste disposal facilities in Nevada to comply with Federal RCRA regulations. These regulations apply on the NNSS for the operation of a hazardous waste storage unit in Area 5, the Explosives Ordnance Disposal Unit in Area 11, and the disposal of mixed low-level radioactive waste from DOE offsite facilities into a mixed waste disposal unit (DOE/NV 2009d). The impacts of hazardous waste storage on the NNSS from implementation of the alternatives proposed in this SWEIS are analyzed in Chapter 5, Sections 5.1.11, 5.2.11, 5.3.11, and 5.4.11.

**NAC 459.9921–459.999, “Storage Tanks.”** These regulations enforce Federal RCRA regulations for the maintenance and operation of storage tanks, including underground storage tanks, to prevent environmental contamination. The underground storage tanks located on the NNSS and RSL–Nellis are either: (1) fully regulated under RCRA and registered with the state, (2) regulated under RCRA and registered with the state, but deferred from leak detection requirements, or (3) excluded from Federal and state regulations. For example, at RSL, Clark County enforces these regulations under approval from NDEP and issues permits to NNSA (DOE/NV 2009d). Underground storage tanks would be used not to store waste, but to store consumable materials such as fuel oil (e.g., diesel) or gasoline.

**NAC 444.940–444.9555, “Polychlorinated Biphenyl.”** These regulations enforce Federal requirements for the handling, storage, and disposal of PCBs and contain record-keeping requirements for PCB activities.

**DOE Order 435.1, *Radioactive Waste Management*, and DOE’s associated, *Radioactive Waste Manual* (DOE M 435.1-1; July 9, 1999; Change 1, August 28, 2001; Certified, January 9, 2007).** The objective of this Order is to ensure that all DOE radioactive waste is managed in a manner that is protective of worker and public health and safety, and the environment. DOE radioactive waste management activities are required to be systematically planned, documented, executed, and evaluated.

**Mutual Consent Agreement (January 1994; modified 1995 and 1998).** This agreement between NNSA and the State of Nevada covered the storage and management of mixed waste on the NNSS that was generated or identified after March 1996. The Mutual Consent Agreement authorized the storage of newly identified mixed waste at the NNSS Area 5 Radioactive Waste Management Site. State of Nevada approval of a Treatment and Disposal Plan is required for mixed waste storage greater than 9 months (DOE 2008f).

**Settlement Agreement for Mixed Transuranic Waste (June 1992).** The NNSA Nevada Site Office signed this agreement with the State of Nevada that requires operation of the NNSS Area 5 TRU Waste Storage Pad in accordance with 40 CFR Part 264, Subpart I. Transuranic waste is discussed in Chapter 4, Sections 4.1.11, 4.2.11, 4.3.11, and 4.4.11.

### **9.1.12 Human Health**

**Occupational Safety and Health Act (OSHA) of 1970 (29 U.S.C. 651 et seq.).** Section 4(b)(1) of OSHA exempts DOE and its contractors from the occupational safety requirements of OSHA. However, 29 U.S.C. 668 requires Federal agencies to establish their own occupational safety and health programs for their places of employment, consistent with OSHA standards. DOE Order 440.1B, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees*, states that DOE will implement a written worker protection program appropriate for the facility hazards that: (1) provides a place of employment free from recognized hazards that are causing or are likely to cause death or serious physical harm to their employees and (2) integrates all requirements contained in paragraphs 4a through 4m of this Order, program requirements contained in 29 CFR Part 1960, “Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters;” applicable functional area requirements contained in Attachment 1; and other related site-specific worker protection activities. Potential impacts on human health associated with implementation of the proposed alternatives are analyzed in Chapter 5, Sections 5.1.12, 5.2.12, 5.3.12, and 5.4.12.

**Noise Control Act of 1972, as amended (42 U.S.C. 4901 et seq.).** Section 4 of the Noise Control Act of 1972, as amended, directs all Federal agencies to carry out “to the fullest extent within their authority” programs within their jurisdictions in a manner that furthers a national policy of promoting an environment free from noise jeopardizing health and welfare. Chapter 5 addresses the noise impacts associated with the activities analyzed for each of the alternatives.

**10 CFR Part 835, “Occupational Radiation Protection.”** This regulation establishes radiation protection standards, limits, and program requirements for protecting occupational workers and visitors from ionizing radiation resulting from the conduct of DOE activities. These requirements are applicable to employees involved in activities being considered in this SWEIS that could result in the occupational exposure of an individual to radiation or radioactive materials.

**10 CFR Part 851, “Worker Safety and Health Program.”** Effective February 9, 2007, DOE established worker safety and health regulations to govern contractor activities at DOE sites. This program established the framework for a worker protection program that will reduce or prevent occupational injuries, illnesses, and accidental losses by requiring DOE contractors to provide their employees with safe and healthful workplaces. Also, the program established procedures for investigating whether a requirement has been violated, for determining the nature and extent of such violation, and for imposing an appropriate remedy.

**Executive Order 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction* (January 5, 1990).** See Section 9.1.5, “Geology and Soils.”

**DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities* (July 9, 1990; Change 1, May 18, 1992; Change 2, October 23, 2001).** The purpose of this Order is to provide requirements and guidelines for DOE, including NNSA, to use in developing directives, plans, and/or procedures relating to the conduct of operations at DOE facilities, to result in improved quality and uniformity of operations.

**DOE Order 440.1B, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees* (May 17, 2007).** This Order establishes the framework for an effective worker protection program to reduce or prevent injuries, illnesses, and accidental losses by providing safe and healthful DOE Federal and contractor workplaces.

## **Radiological Safety Oversight and Radiation Protection**

**10 CFR Part 820, “Procedural Rules for DOE Nuclear Facilities.”** DOE issued procedural rules for use in applying its substantive regulations and orders relating to nuclear safety. These procedural rules are intended to be an essential part of the framework through which DOE deals with its contractors, subcontractors, and suppliers to ensure its nuclear facilities are operated in a manner that protects public and worker safety and the environment. In particular, this part sets forth the procedures to implement the provisions of the Price-Anderson Amendments Act of 1988, which subjects DOE contractors to potential civil and criminal penalties for violations of DOE rules, regulations, and orders relating to nuclear safety (DOE Nuclear Safety Requirements). DOE also published its enforcement policy to inform contractors and other persons of the bases and anticipated processes for various enforcement actions.

**10 CFR Part 830, “Nuclear Safety Management.”** Specific requirements in these regulations apply to DOE contractors, DOE personnel, and other persons conducting activities (including providing items and services) that affect, or may affect, the safety of DOE nuclear facilities. These regulations include quality assurance (10 CFR Part 830, Subpart A) and safety-basis (10 CFR Part 830, Subpart B) requirements. The latter require the contractor responsible for a DOE nuclear facility to analyze the facility, work to be performed and associated hazards, and to identify the conditions, safe boundaries, and hazard controls necessary to protect workers, the public, and the environment from adverse consequences. DOE relies on these analyses and hazard controls to operate facilities safely.

**DOE Order 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities* (November 15, 1994; Change 1, July 12, 2001).** The purpose of this Order is to establish selection, qualification, and training requirements for management and operating contractor personnel involved in the operation, maintenance, and technical support of DOE and NNSA Category A and B reactors and nonreactor nuclear facilities. DOE objectives are to ensure the development and implementation of contractor-administered training programs that provide consistent and effective training for personnel at DOE nuclear facilities. This Order contains minimum requirements that must be included in training and qualification programs. The requirements are based on DOE, NRC, and related industry standards, and are applicable to all operable DOE nuclear facilities. Because the operation of DOE reactor and nonreactor nuclear facilities involves certain risks to employees, the public, and the environment, well-trained and qualified operating organization personnel are of extreme importance.

**DOE Order 458.1, *Radiation Protection of the Public and the Environment* (February 11, 2011).** This Order establishes requirements to protect the public and the environment against undue risk from radiation associated with radiological activities conducted under the control of the DOE pursuant to the Atomic Energy Act of 1954, as amended. The objectives of this Order are to (1) conduct DOE radiological activities so that exposure to members of the public is maintained within the dose limits established in this Order; (2) control the radiological clearance of DOE real and personal property; (3) ensure that potential radiation exposures to members of the public are as low as is reasonably achievable; (4) ensure that DOE sites have the capabilities, consistent with the types of radiological activities conducted, to monitor routine and non-routine radiological releases and to assess the radiation dose to members of the public; and (5) provide protection of the environment from the effects of radiation and radioactive material. NNSA employees and contractors shall comply with their respective responsibilities under this Directive.

**DOE Order 433.1B, *Maintenance Management Program for DOE Nuclear Facilities* (April 21, 2010).** The objective of this Order is to define the safety management program required by 10 CFR 830.204(b)(5) for maintenance and reliable performance of structures, systems, and components that are part of the safety basis required by 10 CFR 830.202 at hazard category 1, 2 and 3 DOE nuclear facilities. Radiological facilities (e.g., facilities with quantities of hazardous radioactive materials that fall

below the hazard category 3 threshold per DOE Standard 1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*) are excluded from the provisions of this order; however, the maintenance management program requirements of DOE Order 430.1B, *Real Property Asset Management*, are applicable to radiological facilities. Radiological facilities that warrant additional controls may apply appropriate requirements of this Order until further guidance is issued. A single maintenance program may be used to address the requirements of this Order and the requirements of DOE Order 430.1B.

**DOE Order 425.1D, *Verification of Readiness to Startup or Restart Nuclear Facilities* (April 16, 2010; cancels DOE Order 425.1C, March 13, 2003).** This Order establishes DOE requirements for verifying readiness for startup of new hazard category 1, 2, and 3 nuclear facilities, activities, and operations, and for restart of existing hazard category 1, 2, and 3 nuclear facilities, activities, and operations that have been shut down. The requirements specify a readiness review process (e.g., operational readiness reviews or readiness assessments) that provides an independent verification of readiness to start or restart operations. DOE Standard 3006–2010, *Planning and Conducting Readiness Reviews*, provides guidance on approaches and methods approved as acceptable for implementing the requirements of this Order. In all cases, the readiness review process must demonstrate there is a reasonable assurance for adequate protection of workers, the public, and the environment from adverse consequences from the start (or restart) of a hazard category 1, 2, or 3 nuclear facility, activity, or operation. Such facilities, activities, or operations may be started (or restarted) only after readiness reviews have been conducted and the approvals specified in this Order have been received.

**DOE Order 420.1B, *Facility Safety* (December 22, 2005; Change 1, April 19, 2010).** This Order establishes facility safety requirements related to nuclear and explosives safety design criteria; a comprehensive fire protection program for DOE sites, facilities, and emergency service organizations; nuclear criticality safety (i.e., a criticality safety program that is applicable to DOE nuclear facilities and activities, including transportation activities, that have a potential for criticality hazards); natural phenomena hazards mitigation; and a system engineer program for hazard category 1, 2, and 3 nuclear facilities to ensure continued operational readiness of the systems within its scope. This Order requires that all DOE facilities and sites be designed, constructed, and operated so that the public, workers, and environment are protected from impacts of natural phenomena hazards (e.g., earthquake, wind, flood, and lightning). This Order applies to design and construction of new DOE hazard category 1, 2, and 3 nuclear facilities, as well as to major modifications to such nuclear facilities that could substantially change the approved facility safety analysis.

**DOE Order 414.1C, *Quality Assurance* (June 17, 2005).** DOE uses two requirements documents to express identical sets of quality assurance requirements for two distinct organizational groups. The first, DOE Order 414.1C, applies to practically all DOE organizations and all contractors whose contract includes the DOE Order. The second is a regulation, 10 CFR Part 830 (including Subpart A), that applies to nuclear facility contractors indemnified under the Price Anderson Amendments Act and suppliers of items and services to those nuclear facilities. Application of quality assurance basic requirements (i.e., management, performance, assessment) extends from the planning and conduct of basic and applied research, scientific investigation, and engineering design to operations, maintenance and repair of facilities, and eventual environmental restoration. These basic requirements reflect a comprehensive way of doing business throughout the life cycle of DOE programs and projects (DOE 2009h).

**DOE Policy 441.1, *DOE Radiological Health and Safety Policy* (April 26, 1996).** This document states that it is DOE policy to conduct its radiological operations in a manner that ensures the health and safety of all its employees, contractors, and the general public. The policy states that in achieving this objective, DOE will ensure that radiation exposures of its workers and the public and releases of radioactivity to the environment are maintained below regulatory limits, and deliberate efforts are taken to further reduce

exposures and releases to as low as is reasonably achievable levels. DOE is committed to implementing a radiological control program of the highest quality that consistently reflects this policy.

### 9.1.13 Environmental Justice

**Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994)*.** This Order requires each Federal agency to identify and address disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority and low-income populations. CEQ, which oversees the Federal Government's compliance with Executive Order 12898 and NEPA, has developed guidelines to assist Federal agencies in incorporating the goals of Executive Order 12898 in the NEPA process. This guidance, published in 1997, was intended to "...assist Federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed." As part of this process, DOE has performed an analysis to determine whether implementing any of the proposed alternatives would result in disproportionately high or adverse impacts on minority or low-income populations. The results of this analysis are discussed in the environmental justice sections of Chapter 5 of this SWEIS for each of the alternatives under consideration.

**Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks (April 21, 1997)*, as amended by Executive Order 13229 (October 9, 2001).** This Order requires each Federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

### 9.1.14 Emergency Planning, Pollution Prevention, and Conservation

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980/Superfund Amendments and Reauthorization Act (SARA) (42 U.S.C. 9601 et seq.).** CERCLA provides a statutory framework for the remediation of abandoned or historical waste sites, including Federal facilities, containing hazardous substances. Using a hazard-ranking system, Federal and private contaminated sites are ranked and may be included on the National Priorities List. CERCLA requires Federal facilities with contaminated sites to undertake investigations, remediation, and natural resource restoration, as necessary. Hazardous waste clean-up operations on the NNSS are not regulated under CERCLA.

CERCLA, as amended by SARA, also provides an emergency response program for releases or threatened releases of hazardous substances, pollutants, and contaminants that may endanger public health or the environment. Releases of hazardous substances exceeding reportable quantities must be reported on a timely basis to the National Response Center. The emergency response program requirements of CERCLA are applicable on the NNSS and other locations. This is addressed in Chapter 4, Section 4.1.12.6.

**Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 U.S.C. 11001 et seq.).** This Act requires that Federal, state, and local emergency planning authorities be provided information regarding the presence and storage of hazardous substances and their planned and unplanned environmental releases, including provisions and plans for responding to emergency situations involving hazardous materials. For NNSA compliance, see the Executive Order 12856 summary below.

**Pollution Prevention Act of 1990 (42 U.S.C. 13101 et seq.).** The Pollution Prevention Act establishes a national policy for waste management and pollution control. Source reduction is given first preference,

followed by environmentally safe recycling, with disposal or releases to the environment as a last resort. Current waste management and pollution prevention practices are discussed in Chapter 4, Sections 4.1.11, 4.2.11, 4.3.11, and 4.4.11.

**Homeland Security Act of 2002 (6 U.S.C. 101 et seq. enacted by Public Law 107-296).** This Act established the U.S. Department of Homeland Security, integrating the functions of organizations related to national security. The Act authorizes the U.S. Department of Homeland Security to enter into work agreements, joint sponsorships, contracts, and any other agreement with DOE regarding the use of the national laboratories or sites and support of the science and technology base at those facilities.

**Homeland Security Presidential Directive 5, *Management of Domestic Incidents* (February 28, 2003).** The purpose of this Directive is to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system. The system provides a consistent, integrated nationwide approach for Federal, State, local and tribal governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents (e.g., terrorist attacks, major disasters, and other emergencies), regardless of cause, size, or complexity.

**Homeland Security Presidential Directive 8, *National Preparedness* (December 17, 2003).** This Directive establishes policies to strengthen the United States preparedness in order to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies. It requires a national domestic all-hazards preparedness goal, with established mechanisms for improved delivery of Federal preparedness assistance to State and local governments. This directive is a companion to Homeland Security Presidential Directive 5, which identifies steps for improved coordination in response to incidents. This *National Preparedness* Directive describes the way Federal departments and agencies will strengthen preparation for such a response, including prevention activities during the early stages of a terrorism incident.

**Executive Order 12088, *Federal Compliance with Pollution Control Standards* (October 13, 1978), as amended by Executive Order 12580, *Superfund Implementation* (January 23, 1987).** This Order directs Federal agencies to comply with applicable administrative and procedural pollution control standards established by, but not limited to, the Clean Air Act, the Noise Control Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act, and RCRA.

**Executive Order 12856, *Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements* (August 3, 1993).** This Order requires that all Federal facilities comply with the provisions of EPCRA. The NNSA Nevada Site Office is required to submit reports pursuant to EPCRA Sections 302–303 (Planning Notification), 304 (Extremely Hazardous Substances Release Notification), 311–312 (Material Safety Data Sheet/Chemical Inventory), and 313 (Toxic Chemical Release Inventory Reporting).

**Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (October 5, 2009).** See Section 9.1.3, “Infrastructure and Energy.”

**DOE Order 470.4A, *Safeguards and Security Program* (May 25, 2007).** This Order establishes responsibilities for the DOE Safeguards and Security Program and the managerial framework for implementing DOE Policy 470.1, “*Integrated Safeguards and Security Management*,” dated May 8, 2001. The requirements identified in this Order and its topical manuals are based on national policy promulgated in laws, regulations, and Executive Orders to prevent unacceptable adverse impacts on national security and the health and safety of DOE and contractor employees, the public, or the environment. Assignment of roles and responsibilities in this Order include identification and definition

of interfaces and necessary interactions between safeguards and security programs and other disciplines such as safety, emergency management, counterintelligence, facility operations, cyber system operations, and business/budget operations (including property management).

**DOE Order 470.2B, *Independent Oversight and Performance Assurance Program* (October 31, 2002).**

The Independent Oversight Program is designed to enhance the DOE safeguards and security; cyber security; emergency management; and environment, safety, and health programs by providing DOE and contractor managers, Congress, and other stakeholders with an independent evaluation of the adequacy of DOE policy and the effectiveness of line management performance in safeguards and security; cybersecurity; emergency management; environment, safety, and health; and other critical functions as directed by the Secretary of Energy. The following are to be used as the basis for independent oversight: DOE Orders, Notices, and Manuals; approved site safeguards and security plans, cyber security plans, and other security plans; DOE threat statements; emergency management program plans; approved site safety management system description documents, integrated safety management contract clauses, other integrated safety management implementation documents, and other quality assurance documentation; safety basis, authorization basis, and authorization agreements; applicable statutes and rules; other contractually mandated requirements; and approved deviations.

**DOE Order 151.1C, *Comprehensive Emergency Management System* (November 2, 2005).**

This Order establishes policy; assigns roles and responsibilities; and provides the framework for developing, coordinating, controlling, and directing DOE's emergency management system (i.e., emergency planning, preparedness, response, recovery, and readiness assurance). Emergency planning must include identification of hazards and threats, hazard mitigation, development and preparation of emergency plans and procedures, and identification of personnel and resources needed for an effective response. Emergency preparedness must include acquisition and maintenance of resources, training, drills, and exercises. Emergency response must include the application of resources to mitigate consequences to workers, the public, the environment, and the national security, and the initiation of recovery from an emergency. Recovery must include planning for and actions taken following termination of the emergency to return the facility/operations to normal. Readiness assurance must include assessments and documentation to ensure that stated emergency capabilities are sufficient to implement emergency plans.

**DOE Order 153.1, *Departmental Radiological Emergency Response Assets* (June 27, 2007).**

This Order establishes requirements and responsibilities for NNSA's national radiological emergency response assets and capabilities and Nuclear Emergency Support Team assets. The assets described in this Order consist of both the personnel and equipment needed to perform carefully defined missions related to nuclear/radiological emergency response. Other existing statutes, regulations, directives, and standards applicable to emergency response assets also apply for planning, preparedness, and response.

**State of Nevada Chemical Catastrophe Prevention Act (Nevada Legislature Senate Bill 641, July 1991) and Chemical Accident Prevention Program (CAPP) (NRS 459.380 through 459.3874).**

In July 1991, the Nevada Legislature passed Senate Bill 641, the Chemical Catastrophe Prevention Act, primarily in response to a large chlorine release in Henderson, Nevada, in May 1991 and a large ammonium perchlorate explosion in May 1988, also in Henderson. The resulting statute, codified at NRS 459.380–459.3874, directed NDEP to develop and implement an accident prevention program, which was renamed CAPP.

CAPP requirements fall into one of three categories: accident prevention, emergency response, or public right-to-know. For accident prevention, facilities are required to evaluate and mitigate hazards, understand the design parameters of their processes and operate within the appropriate design limits, prepare comprehensive operating procedures, thoroughly train operators in those procedures, and maintain the facility equipment and instruments to prevent premature failure. For emergency response,

facilities are required to develop an action plan for dealing with potential emergency situations and they are further required to coordinate emergency response activities with local responders, to ensure that the responders are prepared to deal with the emergencies appropriately. For the public right-to-know, all information disseminated by the facilities is available to the public, as are all site inspection reports generated by CAPP staff (NDEP 2009b).

## **9.2 Applicable Permits**

Implementation of activities and alternatives proposed in this SWEIS would require compliance with existing environmental permits, modification to existing permits, or the acquisition of new permits, if applicable. A list of all required Federal and state environmental permits that are issued for NNSS, NLVF, RSL, and TTR operations is presented in **Table 9-2**.

Future environmental permits, including modifications to existing permits that may be required for implementation of the alternatives analyzed in this SWEIS are identified below.

NNSS Drinking Water System Permits are renewed annually; modification of the applicable permits would be required to include potable water system tie-in(s) to new facilities. Coordination with NDEP's Bureau of Safe Drinking Water is necessary.

The NNSS Water Pollution Control General Permit was renewed in August 2010, and will require renewal in 5 years. Stormwater Pollution Prevention Plans would need to be updated to include provisions for new construction activities prior their undertaking.

The NNSS Class II Air Quality Operating Permit is renewed every 5 years. This permit would require modification to include new construction and operation activities associated with implementation of the *NNSS SWEIS* preferred alternative. For example, dust control measures for proposed activities would need to be identified and incorporated into the permit. Coordination with the NDEP's Bureau of Air Pollution Control for permit modification is mandatory.

The NNSS Hazardous Waste Management Permit expires on December 1, 2015. When applying for renewal, RCRA-related activities associated with this SWEIS would need to be included.

**Table 9–2 Environmental Permits Required for the Nevada National Security Site and the Nevada National Security Site Facility Operations**

<i>Permit Number</i>	<i>Description</i>	<i>Location/Notes</i>
<b>Air Quality</b>		
AP9711-0549.01	NNSS Class II Air Quality Operating Permit	NNSS
08-29	NNSS Burn Variance (various locations)	NNSS
08-30	NNSS Open Burn Variance, A-23, Facility #23-T00200	NNSS Fire and Rescue Training Center
Facility 657, Mod. 3	Clark County Authority to Construct/Operating Permit for a Testing Laboratory	NLVF
Facility 348, Mod. 2	Clark County Authority to Construct/Operating Permit for a Testing Laboratory	RSL-Nellis
AP8733-0680.02	Class II Air Quality Operating Permit	TTR
<b>Drinking Water</b>		
NY-0360-12NTNC	Areas 6 and 23	NNSS
NY-4098-12NC	Area 25	NNSS
NY-4099-12NC	Area 12	NNSS
NY-0835-12NP	NNSS Water Hauler #84846	NNSS
NY-0836-12NP	NNSS Water Hauler #84847	NNSS
NY-3014-12NTNC	Well 6 Production Well	TTR
NY-3014-1112NTNC	Permit to Operate a Treatment Plant	TTR
<b>NNSS Septic Systems and Pumpers</b>		
NY-1054	Septic System, Area 3	Waste Management Offices
NY-1069	Septic System, Area 18	820 <sup>th</sup> Red Horse Squadron
NY-1076	Septic System, Area 6	Airborne Response Team Hanger
NY-1077	Septic System, Area 27	Baker Compound
NY-1079	Septic System, Area 12	U12g Tunnel
NY-1080	Septic System, Area 23	Building 1103
NY-1081	Septic System, Area 6	Control Point-170
NY-1082	Septic System, Area 22	Building 22-01
NY-1083	Septic System, Area 5	Radioactive Material Management Site
NY-1084	Septic System, Area 6	Device Assembly Facility
NY-1085	Septic System, Area 25	Central Support Area
NY-1086	Septic System, Area 25	Reactor Control Point
NY-1087	Septic System, Area 27	Able Compound
NY-1089	Septic System, Area 12	Camp
NY-1090	Septic System, Area 6	Los Alamos National Laboratory Construction Camp Site
NY-1091	Septic System, Area 23	Gate 100
NY-1103	Septic System, Area 22	Desert Rock Airport
NY-1106	Septic System, Area 5	Hazmat Spill Center
NY-1110-HAA-A	Individual Sewage Disposal System	A12, Building 12-910
NY-1112	Commercial Sewage Disposal System, Area 1	U1a
NY-1113	Commercial Sewage Disposal System, Area 1	Building 121
NY-1124	Commercial Individual Sewage Disposal System, Area 6	NNSS
NY-1128	Commercial Individual Sewage Disposal System, Area 6	NNSS, Yucca Lake Project
NY-17-03313	Septic Tank Pumper E 106785	

<b>Permit Number</b>	<b>Description</b>	<b>Location/Notes</b>
NY-17-03315	Septic Tank Pumper E 107107	
NY-17-03317	Septic Tank Pumper E 105918	
NY-17-03318	Septic Tank Pumping Contractor	One unit
NY-17-06838	Septic Tank Pumper E 105919	
NY-17-06839	Septic Tank Pumper E 107103	
<b>Wastewater Discharge</b>		
GNEV93001	Water Pollution Control General Permit	NNSS sewage lagoons (both operational and inactive)
NEV96021	Water Pollution Control Permit	NNSS, E Tunnel Wastewater Disposal System and Monitoring Well ER-12-1
VEH-112	NLVF Wastewater Contribution Permit	NLVF
NV0023507	North Las Vegas National Pollutant Discharge Elimination System Permit	NLVF
CCWRD-080	Industrial Wastewater Discharge Permit	RSL–Nellis
SNL/NM-NV 10031	Backfilling Horse Pond	TTR
<b>Hazardous Materials</b>		
2287-5146	Hazardous Materials Permit	NNSS
2287-5147	Nonproliferation Test and Evaluation Complex	NNSS
2287-5144	Hazardous Materials Permit	NLVF
2287-5145	Hazardous Materials Permit	RSL–Nellis
212 FDID 13007	Hazardous Materials Permit	TTR
<b>Hazardous Waste</b>		
NEV-HW0021	NNSS Hazardous Waste Management Permit	NNSS
0510003453	Utah Generator Site Access Permit	NNSS
<b>NNSS Waste Management</b>		
U1576-33N-01	Waste Management Permit – Underground Storage Tank	RSL–Nellis
<b>NNSS Disposal Sites</b>		
SW 13 000 01	Asbestiform Low-Level Solid Waste Disposal Site, Area 5	
SW 13 097 02	Hydrocarbon Disposal Site, Area 6	
SW 13 097 03	U10c Solid Waste Disposal Site, Area 9	
SW 13 097 04	Solid Waste Disposal Site, Area 23	
<b>Endangered Species/Wildlife/Special Use</b>		
File No. 1-5-96-F-33	U.S. Fish and Wildlife Service – Desert Tortoise Incidental Take Authorization (Biological Opinion for Programmatic NNSS Activities)	
MB008695-0	U.S. Fish and Wildlife Service – Migratory Bird Scientific Collecting Permit	
MB037277-1	U.S. Fish and Wildlife Service – Migratory Bird Special Purpose Possession – Dead Permit	
S29157	Nevada Division of Wildlife – Scientific Collection of Wildlife Samples	

NLVF = North Las Vegas Facility; NNSS = Nevada National Security Site; RSL = Remote Sensing Laboratory; TTR = Tonopah Test Range.  
 Source: DOE/NV 2009d; SNL 2010b.