

CHAPTER 7

Applicable Laws, Regulations, and Other Requirements

Environmental compliance requirements, including statutes, regulations, and orders, which are applicable to the alternatives, will be presented in this chapter.

7.1 INTRODUCTION

As part of the *National Environmental Policy Act* (NEPA) process, the Sandia National Laboratories/California (SNL/CA) Site-Wide Environmental Assessment (SWEA) should consider, in determining the impacts, if actions described under the SWEA alternatives threaten to violate any Federal, state, or local law or requirement and must list all required Federal permits, licenses, or other entitlements (40 *Code of Federal Regulations* [CFR] §1508.27(b)(10) and §1502.25, respectively). This chapter summarizes assessment of the major existing environmental requirements, agreements, and permits that relate to continuing operations at SNL/CA.

In addition to this introduction, Chapter 7 is divided into two sections. Section 7.2 describes general environmental laws, regulations, and other requirements under which the United States (U.S.) Department of Energy (DOE) must proceed in preparing the SWEA. Section 7.3 describes specific environmental requirements for each resource area.

7.2 GENERAL ENVIRONMENT, HEALTH, SAFETY LAWS, REGULATIONS, AND OTHER REQUIREMENTS

7.2.1 ATOMIC ENERGY ACT OF 1954 (42 U.S.C. §2011)

The *Atomic Energy Act* (AEA) of 1954 makes the Federal government responsible for regulatory control of the production, possession, and use of three types of radioactive material: source, special nuclear, and by-product. Regulations promulgated by the U.S. Nuclear Regulatory Commission (NRC) under the AEA establish standards for the management of these radioactive materials, licensing of nuclear facilities, and protection of the public and property against radiation. The AEA authorizes the DOE to set radiation protection standards for itself and its contractors for DOE nuclear facilities and provides exclusions from NRC licensing for defense production facilities. The NRC regulates private and commercial nuclear activities, but currently has no regulating authority at most DOE facilities. In December 1996, the DOE announced that it would begin a process of transferring oversight of nuclear safety to the NRC for all DOE nuclear facilities. The transfer, which requires legislative action, is to be phased-in over a 10-year period.

The AEA authorizes the DOE to establish standards that protect health and minimize danger to life or property from activities under the DOE's jurisdiction. The mechanisms through which DOE manages its facilities are the promulgation of regulations and the issuance of DOE orders and associated standards and guidance. Requirements for the protection of environment, safety, and health are implemented at DOE sites primarily through contractual mechanisms, which establish the applicable DOE requirements for management and operating contractors.

7.2.2 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, AS AMENDED (42 U.S.C. §4321)

NEPA requires Federal agencies to evaluate the environmental impacts of proposed actions on the quality of the human environment and to document this evaluation with a succinct statement. The Act also created the Council on Environmental Quality (CEQ), which oversees the NEPA process. NEPA requires an agency to consider the environmental impacts of an action, prior to taking action that would preclude any reasonable alternative actions. It also provides for public input into the decision-making process.

7.2.3 REGULATIONS FOR IMPLEMENTING THE PROCEDURAL PROVISIONS OF THE NATIONAL ENVIRONMENTAL POLICY ACT (40 CFR PARTS 1500-1508)

The implementing regulations for NEPA were developed by the CEQ. These regulations seek to integrate the NEPA process into the early planning phase of a project to insure appropriate consideration of NEPA policies and to eliminate delay; emphasize cooperative consultation among agencies before the environmental document is prepared; identify at an early stage the significant environmental issues deserving of study and de-emphasize insignificant issues, thus, narrowing the scope of the environmental document; provide a mechanism for putting appropriate time limits on the environmental documentation process; and provide for public participation in the NEPA process.

7.2.4 NATIONAL ENVIRONMENTAL POLICY ACT IMPLEMENTING PROCEDURES (10 CFR PART 1021)

The DOE established its NEPA implementing procedures to meet the requirements of Section 102(2) of NEPA,

CEQ implementing regulations, and Executive Order (EO) 11514, *Protection and Enhancement of Environmental Quality* (35 Federal Register [FR] 4247). The procedures formalize DOE's policy to follow the letter and spirit of NEPA, comply fully with the CEQ regulations, and apply the NEPA review process early in the planning stages for DOE proposals. The Site-Wide Environmental Assessment is being prepared under 10 CFR §1021.330, programmatic (including site-wide) NEPA documents, requiring preparation of site-wide environmental documentation for certain of its large, multiple-facility sites.

7.2.5 PROTECTION AND ENHANCEMENT OF ENVIRONMENTAL QUALITY (EO 11514)

Under EO 11514, Federal agencies are required to monitor and control their activities continually to protect and enhance the quality of the environment (35 FR 4247). It directs agencies to develop programs and measures to protect and enhance environmental quality and further directs heads of agencies to consult with appropriate Federal, state, and local agencies in carrying out their activities as they affect the quality of the environment. EO 11514 contains requirements to ensure that Federal agencies include the public in the decision-making process. This order was in part responsible for the development of the DOE implementing procedures for NEPA and DOE Order 451.1A, *National Environmental Policy Act Compliance Program*.

7.2.6 FEDERAL COMPLIANCE WITH POLLUTION CONTROL STANDARDS (EO 12088)

Under EO 12088, the head of each executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under their control (43 FR 47707). Specifically, they must ensure compliance with applicable pollution control standards, including those established by, but not limited to, the *Clean Air Act* (CAA), *Noise Control Act* (NCA), *Clean Water Act* (CWA), *Safe Drinking Water Act* (SDWA), TSCA, and RCRA.

7.2.7 DOE O 451.1A, NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM

This order establishes DOE internal program requirements and responsibilities for implementing NEPA, CEQ implementing regulations, and DOE NEPA implementing procedures.

7.2.8 DOE O 5400.1, GENERAL ENVIRONMENTAL PROTECTION PROGRAM

This order establishes the environmental protection program requirements, authorities, and responsibilities for DOE operations for ensuring compliance with applicable

Federal, state, and local environmental protection laws and regulations, EOs, and internal DOE policies. This order also provides for environmental protection standards, notification, and reporting requirements for discharges and unplanned releases, environmental protection and program plans, and environmental monitoring and surveillance requirements. It establishes formal recognition that DOE's environmental management activities are extensively, but not entirely, regulated by the U.S. Environmental Protection Agency (EPA), state, and local environmental agencies, and it provides requirements for satisfying these externally imposed regulations. In addition, it establishes requirements for those environmental protection programs that are not externally regulated.

7.3 ENVIRONMENT, HEALTH, AND SAFETY LAWS, REGULATIONS, AND OTHER REQUIREMENTS FOR EACH RESOURCE AREA

Because SNL/CA was constructed and began operations in the 1950s, before the advent of current environmental requirements, operational nuclear safety and national security were the dominant factors in the early design and operation of facilities. With the enactment of environmental laws and regulations from the 1960s to the present, resources and philosophies have changed to place greater emphasis on achieving compliance with all applicable environmental requirements. Due to its long history, SNL/CA has had difficulty in achieving compliance with some regulatory requirements and has a legacy from past management practices of environmental cleanup requirements for waste, spills, and releases. All environmental protection, legacy environmental cleanup, and operational compliance activities at SNL/CA are covered by laws, regulations, permits, and DOE orders. Several agreements are also in effect with regulatory agencies to bring SNL/CA into full compliance with some regulatory requirements. In general, the DOE and SNL/CA must now comply with applicable Federal and state requirements to the same extent as any other entity. Noncompliance with these requirements can lead to enforcement actions.

Applicable environmental laws, regulations, and other requirements have been identified for each of the resources evaluated in this SWEA. These are discussed below by resource.

7.3.1 LAND USE AND VISUAL RESOURCES

7.3.1.1 DOE P 430.1, DOE Land Use and Facility Policy

This policy governs DOE's management of its land and facilities as valuable national resources, based on the principles of ecosystem management and sustainable development.

7.3.2 INFRASTRUCTURE

7.3.2.1 Hazardous Materials (29 CFR Part 1910, Subpart H)

This regulation provides the health and safety requirements for work with and around hazardous materials. Subpart H covers work involving compressed gas cylinders, hazardous compounds and elements (such as acetylene, explosive agents, and hydrogen), and mechanical processes involving dip tanks and spray finish units. It includes Subpart 1910.120, *Hazardous Waste Operations*, which is the main health and safety regulation for work in hazardous waste operations.

7.3.2.2 Hazardous Waste Operations and Emergency Response (29 CFR §1910.120)

This regulation specifies requirements for conducting waste operations and response activities. These requirements include both activity and training requirements for personnel.

7.3.2.3 Materials Handling and Storage (29 CFR Part 1910, Subpart N)

This regulation specifies requirements for material handling equipment such as cranes, derricks, helicopters, slings, and powered industrial trucks. This subpart covers the minimum distance a worker must be from a single rim and multi-piece rim wheel while servicing the tire and the maintenance and use of forklifts, cranes, and derricks.

7.3.2.4 Toxic and Hazardous Substances (29 CFR Part 1910, Subpart Z)

This regulation provides requirements for performing air monitoring and medical monitoring for a variety of hazardous chemicals and materials such as asbestos, methyl chloromethyl ether, vinyl chloride, benzene, blood borne pathogens, and cotton dust. It also establishes acceptable levels for toxic and hazardous substances in the blood of workers, as well as proper collection and measuring techniques.

7.3.2.5 *California Electric Utility Industry Restructuring Act (Assembly Bill 1890)*

The *California Electric Utility Industry Restructuring Act* provides requirements for establishing the restructure of the electric utility industry, including customer choice in the supply of electricity, and establishment of the Independent System Operator to control electric transmission.

7.3.2.6 DOE O 251.4, Environmental, Safety, and Health Program for Department of Energy Operations

This order applies to ES&H programs at all government-owned, contractor-operated facilities including the occu-

pational safety and health programs for DOE contractor employees at facilities where the contracts include the occupational safety and health contract clause specified in 48 CFR, *Federal Acquisition Regulations*. This order also applies to environmental protection programs and programs for protection against accidental loss or damage to property as provided by law or contract and as implemented by the appropriate contracting officer.

7.3.2.7 DOE 5480.4, Environmental Protection, Safety and Health Protection Standards

This order specifies the requirements for the application of mandatory ES&H standards applicable to all DOE and DOE contractor operations, provides a listing of reference ES&H standards, identifies the sources of the mandatory and reference ES&H standards, and specifies several mandatory and reference standards applicable to nuclear criticality protection for all DOE nuclear facilities. It also mandates that hazardous waste regulations set forth in 40 CFR Parts 260-265 be followed as a matter of policy.

7.3.3 GEOLOGY AND SOILS

Regulatory environmental protection statutes governing geology and soils are addressed under other resource areas in this chapter. They include the RCRA (42 U.S.C. §6901), the *Comprehensive Environmental Response Compensation and Liability Act (CERCLA)* (42 U.S.C. §6902), and the 1986 amendment to the CERCLA, the *Superfund Amendments and Reauthorization Act (SARA)* (42 U.S.C. §6902, as amended).

7.3.4 WATER RESOURCES AND HYDROLOGY

7.3.4.1 *Clean Water Act of 1948, as Amended (33 U.S.C. §1251)*

The goals of the CWA are to restore and maintain waters of the U.S. in order to protect human health and safety and to provide for the protection and propagation of fish, shellfish, and wildlife. The Act authorizes regulations that establish limitations and permitting requirements for hazardous substances being discharged from point sources, dredge or fill operations at wetlands and other waters of the U.S., storm water discharges from industrial runoff, and oil discharges. Key elements of the Act include nationally applicable, technology-based effluent limitations set by the EPA for specific industry categories, and water quality standards set by states.

The U.S. Army Corps of Engineers administers the dredge or fill material permit program (Section 404) of the Act.

The CWA contains provisions for the National Pollutant Discharge Elimination System (NPDES), a permitting program for the discharge of pollutants from any point source into waters of the U.S. Individual NPDES permits

set parameters and maximum contaminant levels for specified pollutants at specific outfall sites.

To comply with the CWA, the City of Livermore issues wastewater permits under the *City of Livermore Sewer Use and Wastewater Control Ordinance*. Under this ordinance, SNL/CA is subject to limitations on volumes and constituent concentrations for wastewater discharged to the sanitary sewer.

7.3.4.2 Safe Drinking Water Act of 1944, as Amended (42 U.S.C. §300f)

The SDWA sets national standards for contaminant levels in public drinking water systems, regulates the use of underground injection wells, and prescribes standards for groundwater aquifers that are a sole source of drinking water. Primary enforcement responsibility for the Act is by the states. The Act authorizes regulations that establish national drinking water standards for contaminants in public drinking water systems. The EPA maintains oversight responsibilities over the states, sets new contaminant standards as appropriate, and maintains separate enforcement responsibility for the Underground Injection Control Program.

The SDWA applies to Federal facilities that own or operate a public water system. A public water system is defined as a system for the provision of piped water for human consumption that has at least 15 service connections or regularly serves at least 25 individuals. Lawrence Livermore National Laboratory (LLNL) provides drinking water to SNL/CA. LLNL is required to monitor drinking water quality for organic and inorganic compounds, radionuclides, metals, turbidity, and total coliforms.

7.3.4.3 National Drinking Water Regulations (40 CFR Parts 141-143)

These regulations establish primary (40 CFR Part 141) and secondary (40 CFR Part 143) drinking water standards; 40 CFR Part 141 also establishes regulations applicable to public water systems. Although the primary standards are Federally enforceable (40 CFR Part 142), the secondary standards are intended as guidelines for the states. The primary and secondary standards have been adopted by California. Along with inorganic and organic constituents, the primary standards also establish limits for radioactivity and some radioactive constituents in drinking water. The annual dose to the general public from beta and photon emitters is limited to 4 millirem (1/1000 of a rem) and there are maximum contaminant levels for alpha, radium, and uranium. The DOE also establishes this same level in DOE 5400.5, *Radiation Protection of the Public and the Environment*. The secondary standards relate to contaminants in drinking water that primarily affect aesthetic qualities related to public acceptance of drinking water.

7.3.4.4 Spill Control and Countermeasures Plan (40 CFR Part 112)

SNL/CA has a spill control and countermeasures plan, as required by 40 CFR Part 112. The 1990 *Oil Pollution Act* rewrote sections of the CWA. This plan requires that secondary containment be provided for all aboveground storage tanks. The plan also provides for spill control at oil storage sites at SNL/CA. This plan meets requirements of both EPA and California for control of spills to surface areas and below the ground surface.

7.3.4.5 DOE 5400.1, General Environmental Protection Program (modified by DOE O 231.1)

This order requires SNL/CA to prepare a groundwater protection management program plan (GWPMPP) and to implement the program outlined by that plan. GWPMPP also fulfills the requirements of Chapter IV, Section 9, of the order, which requires development of a groundwater-monitoring plan. The groundwater-monitoring plan identifies all DOE requirements and regulations applicable to groundwater protection and includes strategies for sampling, analysis, and data management.

Chapter IV, Section 9c, of DOE 5400.1 requires that groundwater monitoring be determined by site-specific characteristics and, where appropriate, that groundwater monitoring programs be designed and implemented in accordance with RCRA regulations 40 CFR Part 264, Subpart F, or 40 CFR Part 265, Subpart F. These regulations also require that monitoring for radionuclides be in accordance with DOE 5400.5, *Radiation Protection of the Public and the Environment*.

7.3.4.6 Porter-Cologne Water Quality Control Act (California Water Code §13000, et seq.)

In the state of California, both surface water and groundwater resources are protected under the *Porter-Cologne Water Quality Control Act*, which created the State Water Resources Control Board and nine Regional Water Quality Control Boards (RWQCBs). Each RWQCB is responsible for preparing and updating a water quality control plan (basin plan) every three years; the basin plan for a specific region identifies water quality protection policies and procedures for that region.

7.3.4.7 Section 1601/1603 of the Fish and Game Code

The California Department of Fish and Game (CDFG) typically specifies water quality protection measures when they issue streambed alteration agreements pursuant to Section 1601/1603 of the Fish and Game Code. However, as an agency of the Federal government, DOE is exempt from these requirements.

7.3.5 BIOLOGICAL RESOURCES

7.3.5.1 *Endangered Species Act of 1973, as Amended (16 U.S.C. §1531)*

The *Endangered Species Act* requires that a Federal agency ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify critical habitat. The Act is jointly administered by the U.S. Department of Commerce, National Marine Fisheries Service (NMFS), the U.S. Department of the Interior (DOI), and the U.S. Fish and Wildlife Service (USFWS). Under the Act, agencies undergo a process of informal and formal consultation, which may include preparation of a biological assessment, to determine if a threatened or endangered species would be affected by planned agency activities.

The DOE has consulted with the USFWS and the CDFG regarding concerns each agency may have about the impact of SNL/CA activities on protected animal and plant species.

7.3.5.2 *Migratory Bird Treaty Act of 1918, as Amended (16 U.S.C. §703)*

This Act protects migratory birds by making it unlawful to pursue, take, attempt to take, capture, possess, or kill any migratory bird, or any part, nest, or egg of any such bird, unless and except as permitted by regulation. The Act is intended to protect birds that have common migratory patterns within the U.S., Canada, Mexico, Japan, and Russia.

7.3.5.3 *Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. §668)*

This Act makes it unlawful to capture, kill, destroy, molest, or disturb bald (American) and golden eagles, their nests, or their eggs anywhere in the U.S. A permit must be obtained from the DOI to relocate a nest that interferes with resource development or recovery operations.

7.3.5.4 *Fish and Wildlife Coordination Act of 1934 (16 U.S.C. §661, et seq.)*

This Act requires Federal agencies involved in actions that result in structural modification or control of any natural stream or body of water for any purpose to take action to protect the fish and wildlife resources that may be affected by the action.

7.3.5.5 *Section 404 of the Clean Water Act of 1948 (33 U.S.C. §1344)*

Section 404 of the CWA requires permits to authorize the discharge of dredged or fill material into navigable waters

or wetlands and to authorize certain structures or work in or affecting navigable waters. Authority to issue permits resides with the USACE.

Individual permits issued by the USACE under Section 404 are reviewed at the Federal level by EPA.

7.3.5.6 *Protection of Wetlands (EO 11990) and Floodplain Management (EO 11988)*

EO 11990 requires government agencies to avoid short- and long-term adverse impacts to wetlands whenever a practicable alternative exists (42 FR 26961). EO 11988 directs Federal agencies to establish procedures to ensure that the potential effects of flood hazards and floodplain management are considered for any action undertaken (42 FR 26951). Impacts to floodplains are to be avoided to the extent practicable. The DOE issued regulations (10 CFR Part 1022) that establish procedures for compliance with these EOs.

7.3.5.7 *California Endangered Species Act (Fish & Game Code §§2050, et seq.)*

The *California Endangered Species Act* (CESA) generally parallels the main provisions of the Federal *Endangered Species Act* and is administered by the CDFG. Under CESA, the term “endangered species” is defined as a species of plant, fish, or wildlife that is “in serious danger of becoming extinct throughout all, or a significant portion of its range” and is limited to species or subspecies native to California. CESA establishes a petitioning process for the listing of threatened or endangered species. The California Fish and Game Commission is required to adopt regulations for this process and establish criteria for determining whether a species is endangered or threatened. The California Code of Regulations, Title 14, §670.1(a), sets forth the required contents for such a petition. CESA prohibits the “taking” of listed species except as otherwise provided in state law. Unlike its Federal counterpart, CESA applies the take prohibitions to species petitioned for listing (state candidates).

7.3.5.8 *California Wildlife Conservation Law of 1947 (Fish & Game Code §§ 1300, et seq.)*

This law establishes requirements for protecting wildlife, primarily related to taking for sport purposes, and permits for collecting and use. The law also protects endangered and threatened animals listed by the state of California.

7.3.5.9 *Natural Community Conservation Planning Act (Fish & Game Code §§2800, et seq.)*

The Natural Community Conservation Planning (NCCP) program of the Department of Fish and Game is an effort by the State of California, and numerous private and

public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The goal of a NCCP programs identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

The NCCP program is a cooperative effort to protect habitats and species. The program, which began in 1991 under the State's *Natural Community Conservation Planning Act*, is broader in its orientation and objectives than the California and Federal *Endangered Species Acts*. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

The NCCP program applies statewide, although there is currently no NCCP region near SNL/CA.

7.3.6 CULTURAL RESOURCES

7.3.6.1 National Historic Preservation Act of 1966, as Amended (16 U.S.C. §470)

This Act directs that sites with significant historic value be placed on the National Register of Historic Places (NRHP). Government agencies must locate and inventory historic properties and cultural resources under their jurisdiction before taking an action that might harm them, with the intent of minimizing such harm through appropriate mitigation actions. As required by Section 106 of the Act, proposed SNL/CA activities are evaluated in consultation with the State Historic Preservation Officer (SHPO) for possible effects on historic properties.

7.3.6.2 The American Indian Religious Freedom Act of 1978 (42 U.S.C. §1996)

This Act establishes that it is the policy of the United States to protect and preserve for Native Americans their inherent right of freedom to believe, express, and exercise their traditional religions. This includes access to sites, use and possession of sacred objects, and the freedom to worship through ceremonies and traditional rites.

7.3.6.3 Archeological Resources Protection Act of 1979, as amended (16 U.S.C. §470aa)

This Act requires the preservation and management of archaeological resources greater than 100 years old on lands administered by Federal agencies.

7.3.6.4 The Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. §3001)

This Act states that tribal descendants shall own Native American human remains and cultural items discovered on Federal lands after November 16, 1990. When items are discovered during an activity on Federal lands, the activity is to cease and the appropriate tribal government is to be notified. Work on the activity can resume 30 days after the receipt of certification that notice has been received by the tribal government. A consultation process is used to determine which tribe(s) is affiliated with the remains or items, and disposition and treatment is accomplished in accordance with the wishes of the affiliated tribe.

7.3.6.5 Protection of Historic and Cultural Properties (36 CFR Part 800)

This regulation defines the process used by Federal agencies to meet their responsibilities under Section 106 of the *National Historic Preservation Act*. Section 106 of the Act requires Federal agencies to take into account the effects of the agency's activities on properties included in or eligible for the NRHP and, prior to approval of an undertaking, to afford the State Historic Preservation Officer and the Advisory Council on Historic Preservation a reasonable opportunity to comment on the activity. The overall goal is to accommodate historic preservation concerns during Federal undertakings.

7.3.6.6 National Historic Preservation (EO 11593)

This EO requires Federal agencies, including the DOE, to locate, inventory, and nominate properties under their jurisdiction or control to the NRHP if those properties qualify (36 FR 8921). The DOE is required to provide the Advisory Council on Historic Preservation the opportunity to comment on possible impacts of a proposed activity on any potentially eligible or listed resources.

7.3.6.7 Indian Sacred Sites (EO 13007)

This EO requires that each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, accommodate access to and ceremonial use of sacred sites by Native American religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites (61 FR 26771).

7.3.6.8 Consultation and Coordination with Indian Tribal Governments (EO 13175)

This EO establishes regular and meaningful consultation and collaboration with tribal officials in developing Federal policies. It also requires each Federal agency to have an answerable process to ensure meaningful and timely input by tribal officials in developing Federal policies and other activities that have tribal implications (65 FR 67249).

7.3.6.9 American Indian Tribal Government Policy (DOE Order 1230.2)

This order provides guidance for consulting and coordinating with Indian tribal governments in compliance with Federal statutes and regulations. The policy directs all DOE officials, staff, and contractors regarding fulfilling trust obligations and responsibilities arising from Departmental actions that may potentially affect American Indians' and Alaska Natives' traditional, cultural, and religious values and practices; natural resources; and treaties and other Federally recognized and reserved rights.

7.3.6.10 Department of Energy Management of Cultural Resources (DOE Policy 141.1)

This policy ensures that DOE and NNSA programs integrate cultural resource management into their missions and activities, and raises the awareness of the importance of the Department's cultural resource-related legal and trust responsibilities. The policy directs that all DOE programs and missions will be implemented in a manner consistent with Federal statutes, regulations, orders, DOE Orders, and implementation guidance protecting cultural resources.

7.3.7 AIR QUALITY

7.3.7.1 *Clean Air Act of 1955, as Amended* (42 U.S.C. §7401)

The CAA establishes air quality standards to protect public health and the environment from the harmful effects of air pollution. The Act requires establishment of national standards of performance for new stationary sources of atmospheric pollutants, emissions limitations for any new or modified structure that emits or may emit an air pollutant, and standards for emission of hazardous air pollutants. In addition, the CAA requires that specific emission increases be evaluated to prevent a significant deterioration in air quality.

The *Clean Air Act Amendments of 1990*, signed into law on November 15, 1990, enhanced and expanded existing authorities and created new programs in the areas of permitting, enforcement, and operations in nonattainment areas (areas not meeting air quality standards),

control of acid rain, regulation of air toxins, mobile sources, and protection of the ozone layer. Section 118 of the Act and EO 12088, *Federal Compliance With Pollution Control Standards* (43 FR 47707), require that each Federal agency, such as the DOE, with jurisdiction over any property or facility 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 to the same extent as any nongovernmental entity.

The EPA is the regulating authority for the CAA. However, the EPA has granted authority to the state of California for regulating air quality under an approved state implementation plan (SIP). The EPA has delegated to the state the authority for implementing the regulations promulgated for stratospheric ozone protection and the accidental release provisions of the Act.

The EPA continues to regulate the radionuclide National Emissions Standards for Hazardous Air Pollutants (NESHAP) and radon emissions.

7.3.7.2 Protection of Environment: National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)

This regulation limits the radiation dose to the public from airborne radionuclide emissions from DOE facilities to 10 mrem per year effective dose equivalent (EDE) (40 CFR §61.92). The standards also prescribe emission monitoring and test procedures for determining compliance with the 10 mrem per year standard and reporting and permit provisions.

7.3.7.3 Accidental Release Prevention Requirements: Risk Management Programs (40 CFR Part 68)

The intent of this regulation is to prevent accidental releases to the air and mitigate the consequences of such releases by focusing prevention measures on chemicals that pose the greatest risk to the public and the environment. This regulation requires the preparation of risk management plans for listed regulated chemicals and within 3 years after listing any new regulated chemical.

7.3.7.4 Protection of Stratospheric Ozone (40 CFR Part 82)

The primary purposes of this regulation are to eliminate the production of certain ozone-depleting substances and require users of the substances to reduce emissions to the atmosphere through recycling and mandatory use of certified maintenance technicians. These requirements are applicable to SNL/CA and are implemented accordingly.

7.3.7.5 **California Clean Air Act and Amendments (California Health and Safety Code, §§40910 et seq.)**

Nonradioactive air emissions from SNL/CA facilities are subject to the regulatory requirements established under this Act. The California Air Resources Board (CARB), as provided by the Act, regulates air quality through a series of air quality control regulations. These regulations include ambient air quality standards (AAQS) and emission standards for emission sources and processes such as backup generators, boilers, and asphalt plants. At SNL/CA, these regulations are administered by the Bay Area Air Quality Management District (BAAQMD).

7.3.7.6 **Bay Area Air Quality Management District, Regulation 2, Permitting**

On July 21, 1992, the EPA promulgated 40 CFR Part 70, *Operating Permit Program*, which implements Title V of the CAA. The purposes of this program are to identify all the air quality regulations and emission limitations applicable to an air pollution source and establish monitoring, record-keeping, and reporting requirements necessary to demonstrate continued compliance with these requirements. This regulation required each state to develop an operating permit program meeting the minimum requirements set forth in 40 CFR Part 70.

Local authority rests with the BAAQMD. SNL/CA has several operating permits. A list of BAAQMD regulations is available in the *SNL/CA Environmental Information Document*.

7.3.7.7 **California Construction Permits**

Provisions of this regulation require construction permits for any new or modified source of any regulated air contaminant if the source is expected to exceed threshold emission rates. More than 500 toxic air pollutants are regulated, and each chemical's threshold hourly rate is based on its toxicity. Each new or modified air emission source is reviewed and conservative estimates are made of maximum hourly chemical use and emissions.

7.3.7.8 **Conformity of General Federal Actions to the State Implementation Plan**

The purpose of this regulation is to implement Section 176(c) of the CAA and regulations under 40 CFR Part 51, Subpart W, *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*, with respect to the conformity of general Federal actions to the SIP. Under those authorities, no department, agency, or instrumentality of the Federal government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity that does not conform to a SIP. This regulation sets forth policy,

criteria, and procedures for demonstrating and assuring conformity of such actions to the SIP.

7.3.8 **HUMAN HEALTH AND WORKER SAFETY (INCLUDING ACCIDENTS)**

7.3.8.1 **Occupational Radiation Protection (10 CFR Part 835)**

This regulation derives regulatory requirements from the AEA and not from the *Occupational Safety and Health Act* of 1970 (OSHA). 10 CFR Part 835 establishes worker radiation protection standards limiting exposures from ionizing radiation. For the occupational worker, the standard is 5 Roentgen equivalent, man (rem) (5,000 mrem) in any one year; and for members of the public entering a controlled area, the standard is 100 mrem per year. The standards for both internal and external exposure are described in Subpart C. The as low as reasonably achievable (ALARA) goal is set forth as the approach to be implemented by the DOE for radiation protection of workers and the general public. The management and control of radiation exposure will involve ALARA when considering individual and collective exposures.

7.3.8.2 **Occupational Safety and Health Act of 1970 (29 U.S.C. §651)**

OSHA, administered and enforced by the U.S. Department of Labor (DOL), establishes a national policy to provide safe and healthful working conditions. States are encouraged to assume responsibility for administration of their own safety and health standards. Only public employers, (that is, Federal, state, and municipal governments) and mining employers are excluded. Mining employers are covered by other safety and health acts. Federal agencies such as the DOE must have in place equivalent safety standards, as a minimum.

OSHA standards are designed to reduce on-the-job injuries and to develop health standards to limit workers risk of developing occupational disease. OSHA standards are universal and cover hazards that exist in a wide variety of industries. These are compiled as general industry standards. 29 CFR Part 1910 covers general industry standards, including walking and working surfaces, platforms and their use, health and environmental controls, hazardous materials, personal protective equipment, medical and first aid, fire protection, compressed gas and air equipment, materials handling and storage, machinery and machine guarding, hand and portable tools, welding, cutting and brazing, electrical, commercial diving, and toxic and hazardous substances. OSHA has promulgated industry-specific standards for construction, agriculture, and maritime sectors.

The provisions of Section 19 of the OSHA; EO 12196 (45 FR 12769); and Part 1925 (*Safety and Health Stan-*

dards for Federal Service Contracts) and Part 1960 (*Basic Program Elements for Federal Employees OSHA*) of Title 29 identify OSHA's applicability to DOE operations. These provisions are summarized as follow:

- Furnish employees with places and conditions of employment that are free from recognized hazards that are causing or are likely to cause death or serious physical harm.
- Set up procedures for responding to employee reports of unsafe and unhealthful working conditions.
- Acquire, maintain, and require the use of approved personal protective equipment and safety equipment.
- Inspect all workplaces at least annually with participation by representatives of employees.
- Establish procedures to ensure that no employee is subject to restraint, interference, coercion, discrimination or reprisal for exercising his/her right under the agency's safety and health program.
- Post notices of unsafe or unhealthful working conditions found during inspections.
- Ensure prompt abatement of hazardous conditions. Employees exposed to the conditions must be so informed and Imminent-danger corrections must be made immediately.
- Set up management information systems to keep records of occupational accidents, injuries, illnesses, and their causes, and post annual summaries of injuries and illnesses for a minimum of 30 days at each establishment.
- Conduct occupational safety and health training programs for top management, supervisors, safety and health personnel, employees, and employee representatives.

7.3.8.3 Occupational Safety and Health Standards (29 CFR Part 1910)

29 CFR Part 1910 provides standards for safe operations of facilities. Part 1910 includes 19 subparts, all of which are applied to SNL/CA operations. These subparts cover items such as toxic and hazardous substances, personal protective equipment, material handling and storage, permissible exposure limits, general environmental controls, and reporting of occupational accidents, injuries, and illnesses.

7.3.8.4 Federal Employee Occupational Safety and Health Programs and Related Matters (29 CFR Part 1960)

29 CFR Part 1960 provides regulations and guidelines for implementation of EO 12196, *Occupational Safety and Health Programs for Federal Employees*, which establishes

requirements and procedures for Federal agencies to provide occupational safety and health programs for their employees (45 FR 12769). Federal agencies such as the DOE must have in place equivalent safety standards, as a minimum.

The head of each Federal agency is charged with the responsibility to "establish and maintain an effective and comprehensive occupational safety and health program which is consistent with the standards" set by OSHA for private sector employees. That broad mandate is further defined by EO 12196, which identifies the responsibilities of the agencies and the role of the Secretary of Labor in developing, implementing, and evaluating such programs. DOE safety standards are specified in DOE Orders.

Although OSHA does not directly apply to DOE employees, SNL/CA's prime contract with the DOE requires adherence to DOE O 440.1, which states that contractors and contractor employees shall adhere to DOE-prescribed OSHA standards and requirements (29 CFR) for worker safety. Sandia Corporation, as a private company, is required to abide by OSHA regulations as well as any DOE contractual obligations or requirements in its operation of SNL/CA. These two sets of agency requirements (DOE and OSHA) may overlap in numerous health and safety areas.

7.3.8.5 Recording and Reporting Occupational Injuries and Illnesses (29 CFR Part 1904)

29 CFR Part 1904 specifies *The Record-Keeping Guidelines For Occupational Injuries and Illnesses, 1986*, which contains the description of the system requirements that businesses must follow in keeping records of work-related occupational deaths, injuries, or illnesses. It includes requirements for recording and reporting to the U.S. Bureau of Labor Statistics, all occupational injuries and illnesses requiring more than a first-aid response and reporting all occupational fatalities. These occupational injury and illness records have multiple purposes. Mainly, they are to provide information for employers and employees, raising their awareness of the frequency and kinds of injuries and illnesses occurring in the workplace and their related hazards. They also serve as a "management tool" for the administration of company safety and health programs. The information is also used by OSHA compliance staff to focus their inspections on the safety and health hazards revealed by the injury and illness records. Lastly, the records may be used to produce statistical data on the incidence of workplace injuries and illnesses, thereby measuring the magnitude of the injury and illness problem across the country.

7.3.8.6 DOE O 232.1A Occurrence Reporting and Processing of Operations Information

DOE O 232.1 establishes a system for occurrence reporting and defines a number of situations that must be formally reported, all of which are important to the overall safety, health, and security of workers in the workplace. These requirements include the categorization of occurrences that have potential safety, environmental, health, or operational significance; DOE notification of these occurrences; and the development and submission of documented follow-up reports. Occurrence reports must be done in a timely manner and contain sufficient information describing the occurrence, significance, causal factors, and corrective actions. Occurrence reporting increases sensitivity to potentially unsafe conditions, requires analysis to determine causes of events, is a vehicle for formal corrective actions, and fosters lessons-learned programs. The documentation and distribution requirements for the occurrence reports are satisfied with a centralized, unclassified operational database called the Occurrence Reporting and Processing System (ORPS).

7.3.8.7 DOE O 231.1, Environment, Safety, and Health Reporting

The objective of this order is to ensure the collection and reporting of information on ES&H that is required by law or regulation or that is essential for evaluation of DOE operations and for identifying opportunities for improvement needed for planning purposes within the DOE. Elements contained in this order link to requirements specified in parts of cancelled DOE 5483.1A, *Occupational Safety and Health Program for DOE Contractor Employees at Government-Owned Contractor-Operated Facilities*, and parts of cancelled DOE 5484.1, *Environmental Protection, Safety, and Health Protection Information Reporting Requirements*. Requirements for an annual site environmental report, containing summary environmental data, are set forth in DOE O 231.1. It also specifies the need for the annual reporting of occupational safety and health information to the Secretary of Energy in order to allow the Secretary to comply with 29 CFR Part 1960.

7.3.8.8 DOE 5400.5, Radiation Protection of the Public and Environment

This order establishes standards and requirements for operations of the DOE and its contractors with respect to protection of members of the public and the environment against undue risk from radiation. This order provides for general standards; requirements for radiation protection of the public and the environment; derived concentration guides for air and water; and guidelines, limits, and controls for residual radioactive materials. The order also establishes the DOE's objective to operate its facilities and conduct its activities so that radiation exposures to

members of the public are maintained within the limits established by this order, and to control radioactive contamination through the management of the DOE's real and personal property. This order limits the annual effective dose equivalent (EDE) to any member of the public from all sources to 100 mrem per year. The requirements of this order are being incorporated into a nuclear safety regulation.

7.3.8.9 DOE O 440.1A, Worker Protection Management for Department of Energy Federal and Contractor Employees

The purpose of DOE O 440.1A is to establish the framework for an effective worker protection program that will reduce or prevent injuries, illnesses, and accidental losses by providing Federal and contractor employees with a safe work environment. This order replaces elements contained in cancelled DOE 5480.4. It contains requirements for mandatory environmental, safety, and health standards for areas such as fire protection, threshold limit value (TLVs) for chemical substances and physical agents in the workplace and other industrial hygiene requirements; construction safety, general safety, explosives safety, firearms safety, and motor vehicle safety. It also establishes radiological protection program requirements that, combined with 10 CFR Part 835 and associated implementation guidance, form the basis of a comprehensive radiological protection program.

7.3.8.10 DOE 5480.1B, Environment, Safety, and Health Program for Department of Energy Operations

The purpose of DOE 5480.1B is to establish the environment, safety, and health program for the DOE. It establishes standards and requirements for the DOE and DOE contractor operations regarding protection of the public and the environment from undue radiological risk. It contains the DOE's policy of adopting and implementing radiation protection standards consistent with those of the U.S. Nuclear Regulatory Commission (NRC). These standards are applied to DOE facilities and activities not subject to NRC licensing.

7.3.8.11 DOE O 225.1A, Accident Investigations

The objective of this DOE Order is to prescribe requirements for conducting investigations of certain accidents occurring at DOE sites. The prevention of reoccurrence of such accidents is also prescribed. The order aims to contribute to the improved environmental protection and safety of DOE employees, contractors, and the public. Requirements set forth in this order include the categorization of accidents, the notification of other agencies, the conduct of investigations of the accidents, and the close-out of the investigations.

7.3.8.12 Accidents

Risk Management Program Rule (40 CFR Part 68, Subpart G) This rule establishes the contents of Risk Management Plans (RMP) that the owner or operator of a facility handling regulated substances must submit to the EPA. An RMP includes information on the accidental release prevention and emergency response policies in effect, regulated substances handled, worst-case release scenario(s), the general accidental release prevention program and chemical-specific prevention steps, a 5-year accident history, the emergency response program, and planned changes to improve safety. In addition, the owner or operator must complete a single registration form that covers all regulated substances handled.

7.3.8.13 *California Safe Drinking Water and Toxic Enforcement Act of 1986, known as Proposition 65 (California Code of Regulations, Title 22, §12000, et seq.)*

Proposition 65 requires the Governor to publish a list of chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm. This list must be updated at least once a year. Over 550 chemicals have been listed as of May 31, 2002. Proposition 65 imposes certain controls that apply to chemicals that appear on this list. These controls are designed to protect California's drinking water sources from contamination by these chemicals, to allow California consumers to make informed choices about the products they purchase, and to enable residents or workers to take whatever action they deem appropriate to protect themselves from exposures to these harmful chemicals.

7.3.9 TRANSPORTATION

7.3.9.1 *Hazardous Materials Transportation Act of 1994 (49 U.S.C. §5101, et seq.)*

Under this Act, the Secretary of Transportation may establish regulations for the safe transport of hazardous materials. Such regulations may be applicable to manufacturers as well as transporters. Covered activities include packing, handling, labeling, marking, and routing of hazardous materials, as well as manufacturing, marking, maintaining, repairing, and testing of packages or containers used in the transportation of such materials.

7.3.9.2 *DOE O 460.2, Departmental Materials Transportation and Traffic Management*

This order establishes DOE policies and procedures for the management of materials transportation activities, including traffic management, for other than intrabuilding and intrasite transfers. The provisions of this order apply to all elements of the DOE involved in transportation activities and responsible for the payment or reim-

bursement of charges for transportation services. It is DOE policy to ensure that traffic and transportation management shall be accomplished in a manner commensurate with operational requirements for transportation services, established practices and procedures for transportation safety, economy, efficiency, and cargo security, national transportation policy as established in 49 U.S.C. §1801 *et seq.*, *Transportation*, and implemented by the Federal agencies, and applicable Federal, state, local, and international transportation regulations.

7.3.9.3 *International Atomic Energy Agency, Regulations for the Safe Transport of Radioactive Materials (1996 Edition)*

The International Atomic Energy Agency, a specialized agency of the United Nations, is the primary international organization that enforces a system of safeguards to ensure that nonnuclear weapons states do not divert shipments of sensitive nuclear-related equipment from peaceful applications to the production of nuclear weapons. The agency's regulations for transporting radioactive materials have gained worldwide adoption, helping to control the radiation hazards associated with all modes of transport. They cover general provisions, activity limits and material restrictions, requirements and controls for transport, test procedures, and administrative requirements. Schedules are also included detailing transport requirements for specific radioactive material consignments.

7.3.9.4 *California Code of Regulations, Title 22*

Under these regulations, the State of California established requirements for the safe transport of hazardous wastes. Covered activities include packing, handling, labeling, marking, and transporting hazardous waste.

7.3.10 WASTE GENERATION

7.3.10.1 *Solid Waste Disposal Act of 1976 (42 U.S.C. §6902)*

This Act regulates the management of solid waste. Solid waste is broadly defined to include any garbage, refuse, sludge, or other discarded material including solid, liquid, semisolid, or contained gaseous materials resulting from requirements and controls for transport, test procedures, and administrative requirements. Schedules include industrial, commercial, mining, or agricultural activities. Specifically excluded as solid waste is source-special nuclear or by product material as defined by the AEA.

7.3.10.2 *Resource Conservation and Recovery Act of 1976 (42 U.S.C. §6901)*

This Act amends the *Solid Waste Disposal Act* and establishes requirements and procedures for the management

of hazardous wastes. As amended by the *Hazardous and Solid Waste Amendments of 1984* (HSWA), RCRA defines hazardous wastes that are subject to regulation and sets standards for generation, treatment, storage, and disposal facilities. The HSWA emphasize reducing the volume and toxicity of hazardous waste. They also establish permitting and corrective action requirements for RCRA-regulated facilities. RCRA was also amended by the *Federal Facilities Compliance Act* (FFCA) in 1992. It requires the EPA, or a state with delegated authority, to issue an order for compliance. A federal facilities compliance order was issued by the New Mexico Environment Department (NMED), requiring the DOE, SNL/NM, and SNL/CA to comply with FFCA. Compliance with the order is achieved through site treatment plans prepared by DOE.

Original jurisdiction for implementing RCRA was with EPA; however, RCRA authorizes EPA to turn this responsibility over to individual states as they develop satisfactory implementation programs. EPA granted base RCRA authorization to California, transferring regulatory control of hazardous wastes under RCRA to California EPA.

Both EPA and the State of California established regulations for the safe management of hazardous waste from the point of generation to disposal. Covered requirements include seismic considerations under 40 CFR 264 Part 18, Location Standards.

7.3.10.3 Underground Storage Tanks (42 U.S.C. §6901, Subtitle I)

Underground storage tanks (UST) are regulated as a separate program under RCRA, which establishes regulatory requirements for underground storage tanks containing hazardous or petroleum materials. California EPA has been delegated authority for regulating SNL/CA.

7.3.10.4 Federal Facility Compliance Act of 1992 (42 U.S.C. §6961)

This 1992 Act waives sovereign immunity from fines and penalties for RCRA violations at Federal facilities. However, it postponed the waiver for three years for storage prohibition violations with regard to land disposal restrictions for the DOE's mixed wastes. It required DOE to prepare plans for developing the required treatment capacity for each site at which it stores or generates mixed waste. The state or EPA must approve each plan (referred to as a Site Treatment Plan) after consultation with other affected states, consideration of public comments, and issuance of an order by the regulatory agency requiring compliance with the plan. The Act further provides that DOE will not be subject to fines and penalties for storage prohibition violations for mixed waste as long as it complies with an existing agreement, order, or permit.

The FFCA requires that site treatment plans contain schedules for developing treatment capacity for mixed waste for which identified technologies exist. The DOE must provide schedules for identifying and developing technologies for mixed waste without an identified existing treatment technology.

A Federal Facility Compliance Order was signed on October 4, 1995, to address storage and treatment of mixed waste.

7.3.10.5 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as Amended (42 U.S.C. §9601, *et seq.*)

This Act, commonly referred to as the CERCLA, or Superfund, establishes liability standards and governmental response authorization to address the release of a hazardous substance or contaminant into the environment. The EPA is the regulating authority for the Act.

CERCLA was amended by the *Superfund Amendments and Restoration Act* (SARA) in 1986. SARA Title III establishes additional requirements for emergency planning and reporting of hazardous substance releases. These requirements are also known as the *Emergency Planning and Community Right-to-Know Act* (EPCRA), which, due to its unique requirements is discussed separately below. SARA also created liability for damages to or loss of natural resources resulting from releases into the environment and required the designation of Federal and state officials to act as public trustees for natural resources. SNL/CA is subject to, and required to report releases to the environment under the notification requirements in, 40 CFR Part 302 (*Designation, Reportable Quantities, and Notification*) and EPCRA, as applicable.

7.3.10.6 Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. §11001)

EPCRA is also known as SARA Title III. Section 313 of the Act requires facilities meeting certain standard industrial classification code criteria to submit an annual toxic chemical release inventory report (*Toxic Chemical Release Reporting: Community-Right-to-Know* [40 CFR Part 372]). For covered facilities, a report describing the use of, and emissions from, Section 313 chemicals stored or used onsite and meeting threshold-planning quantities, must be submitted to the EPA and California every July for the preceding calendar year (CY). Other provisions of the Act require planning notifications (Sections 302 and 303), extremely hazardous substance release notifications (Section 304), and annual chemical inventory/material safety data sheet reporting (Sections 311 and 312). EPCRA required all Federal facilities, regardless of standard industrial classification code, to meet the requirements of the Act.

SNL/CA does not meet standard industrial classification code criteria for Section 313 reporting, but has voluntarily submitted annual toxic chemical release inventory reports since 1987. All research operations are exempt under provisions of the regulation, and only pilot plants, production, or manufacturing operations at SNL/CA are reported.

7.3.10.7 Pollution Prevention Act of 1990 (42 U.S.C. §13101)

This Act sets the national policy for waste management and pollution control that focuses first on source reduction, followed sequentially by environmentally safe recycling, treatment, and disposal. In response, the DOE committed to voluntary participation in EPA's 33/50 Pollution Prevention Program, as set forth in Section 313 of SARA.

7.3.10.8 Toxic Substances Control Act of 1977 (15 U.S.C. §2601)

The TSCA, unlike other statutes that regulate chemicals and their risk after they have been introduced into the environment, was intended to require testing and risk assessment before a chemical is introduced into commerce. It also establishes record-keeping and reporting requirements for new information regarding adverse health and environmental effects of chemicals. The Act governs the manufacture, use, storage, handling, and disposal of polychlorinated biphenyls (PCBs); sets standards for cleaning up PCB spills, and establishes standards and requirements for asbestos identification and abatement in schools. It is administered by the EPA.

Because SNL/CA's research and development activities are not related to the manufacture of new chemicals, PCBs are SNL/CA's main concern under the Act. Activities at SNL/CA that involve PCBs include, but are not limited to, management and use of authorized PCB-containing equipment, such as transformers and capacitors, management and disposal of substances containing PCBs (dielectric fluids, contaminated solvents, oils, waste oils, heat transfer fluids, hydraulic fluids, paints, slurries, dredge spoils, and soils), and management and disposal of materials or equipment contaminated with PCBs as a result of spills.

The TSCA regulates PCB items and materials having concentrations exceeding 50 parts per million (ppm). Implementing regulations (40 CFR 761) contain an antidilution clause that requires waste to be managed based on the PCB concentration of the source (transformer, capacitor, PCB equipment, etc.), regardless of the actual concentration in the waste. If the concentration at the source is unknown, the waste must be managed as though it were a spill of mineral oil with an assumed PCB concentration of 50 to 500 ppm. At SNL/CA, PCB-contaminated wastes are transported offsite for treatment and disposal unless

they also have a radioactive component. Solid wastes containing PCBs are disposed of at an offsite facility that has been approved by the EPA for such disposal (provided that strict requirements are met with respect to notification, reporting, record-keeping, operating conditions, environmental monitoring, packaging, and types of wastes disposed).

SNL/CA currently has no treatment or disposal facilities for liquid wastes that contain PCBs. Such wastes have been collected from site generators, stored at the Hazardous Waste Storage Facility for offsite shipment.

The asbestos abatement implementing regulations of the Act (40 CFR Part 763) relate primarily to the identification and abatement of asbestos-containing materials in schools. SNL/CA conducts asbestos abatement projects in accordance with OSHA requirements (29 CFR Part 1926), applicable requirements of the CAA and the *California Solid Waste Management Regulations*.

7.3.10.9 Radioactive Waste Management Regulations

Low-level radioactive waste is a waste that contains radioactivity and is not classified as high-level radioactive waste, transuranic (TRU) waste, or spent nuclear fuel. Solid low-level radioactive waste usually consists of clothing, tools, and glassware. Low-level radioactive liquid waste consists primarily of experiment debris. Radioactive waste management at SNL/CA is regulated under the AEA, through applicable DOE orders (primarily DOE Order 5820.2A, *Radioactive Waste Management*, and DOE 435.1, *Radiation Protection of the Public and the Environment*).

7.3.10.10 Right-to-Know Laws and Pollution Prevention Requirements (EO 12856)

This EO directs all Federal agencies to reduce and report toxic chemicals entering any waste stream; improve emergency planning, response, and accident notification; and encourage clean technologies and testing of innovative prevention technologies (58 FR 41981). The DOE and SNL/CA meet applicable reporting requirements under the provisions of EPCRA and California EPCRA, in accordance with the EO.

7.3.10.11 DOE O 435.1, Radioactive Waste Management

This order establishes the policies, guidelines, and minimum requirements by which the DOE and its contractors manage radioactive waste, mixed waste, and contaminated facilities. This order establishes DOE policy that radioactive and mixed wastes be managed in a manner that ensures protection of the health and safety of the public, the DOE, contractor employees, and the environ-

ment. In addition, the generation, treatment, storage, transportation, and disposal of radioactive wastes, and the other pollutants or hazardous substances they contain, must be accomplished in a manner that minimizes the generation of such wastes across program office functions and complies with all applicable Federal, state, and local environmental, safety, and health laws and regulations and DOE requirements.

7.3.11 NOISE

7.3.11.1 *Noise Control Act of 1972* (42 U.S.C. §4901)

By this Act, Congress directed all Federal agencies to carry out the programs under their control to promote an environment free from noise that jeopardizes public health or welfare. Furthermore, it requires any Federal agency engaged in any activity resulting, or which may result, in the emission of noise, to comply with Federal, state, interstate, and local requirements regarding control and abatement of environmental noise to the same extent that any person is subject to such requirements. Beyond the general obligation in the Act and implementing regulations, there are no specific Federal or state requirements regulating environmental noise.

7.3.11.2 *Occupational Noise Exposure* (29 CFR §1910.95)

This regulation provides protection to workers from excessive levels of noise. It establishes sound levels that

are not to be exceeded for specific periods of time without protective measures being taken. When employees are subjected to sound exceeding the specified levels, feasible administrative or engineering controls are to be instituted. If such controls fail to reduce sound levels to the prescribed levels, personal protective equipment must be provided and used to reduce sound levels.

7.3.11.3 *Environmental Justice—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)*

This EO directs each Federal agency to identify and address disproportionately high adverse human health or environmental impacts on minority and low-income populations resulting from an agency's programs, policies, or activities (59 FR 7629). The order further directs each Federal agency to collect, maintain, analyze, and make information publicly available on the race, national origin, and income level of populations in areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on these populations. This requirement applies when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Environmental justice impacts are being identified and addressed through the SWEA, and the policies and data analysis requirements of this EO remain applicable to future actions at SNL/CA.