

## CHAPTER 7: REGULATORY REQUIREMENTS

*This chapter provides information concerning environmental, safety, and health standards with which the proposed plans for the Y-12 National Security Complex (Y-12) are required to comply. These requirements are formally stated in Federal and state statutes, regulations, orders and directives, as indicated, and in agreements, such as the Federal Facility Agreement, between the responsible executive agencies. In addition, implementation of plans for Y-12 must satisfy requirements to obtain permits, approvals, and consultations with appropriate governmental authorities, as directed by law. The regulatory framework also provides a substantive basis for evaluating the proposed action and alternatives based on the ability of the alternatives to comply with these Federal and state regulatory requirements and qualify for the necessary permits and licenses.*

### 7.0 INTRODUCTION

During the 1940s and 1950s, when Y-12 was constructed, national security requirements were the dominant consideration for facilities design and operation. Since then, emphasis has shifted to operational safety, worker health and safety, and public and environmental health and safety, resulting in the need for the U.S. Department of Energy (DOE) to comply with new requirements as it continues to carry out its national security mission. Today, both Federal and state environmental, health, and safety agencies exercise regulatory authority over Y-12 operations, and agreements between DOE and the agencies ensure DOE compliance with applicable environmental, health, and safety laws.

Because facilities at Y-12 are more than 40 years old, achieving compliance with evolving environmental, health and safety requirements represents an expensive challenge. However, all facilities at Y-12, whether newly constructed or existing, must comply with an increasing number of complex regulations. Ongoing operations at Y-12, and any changes in operations at Y-12, are also governed by the same requirement to meet current environmental, health and safety standards, as the laws require.

An overview of Federal and state regulatory framework that applies to Y-12 facilities and operations is provided in the following sections. Section 7.1 presents Federal and state environmental, safety, and health agencies with authority to regulate DOE facilities and operations at Y-12. Section 7.2 presents the legal authorities, including statutes, regulations, directives, and orders which govern Y-12 facilities and operations, with which Y-12 facilities and operations are required to comply, and with which the Site-Wide Environmental Impact Statement (SWEIS) proposed action and alternatives must also comply. Section 7.3 identifies and discusses additional coordination between DOE and other agencies that may also be required, along with this SWEIS, to satisfy the requirements of the *National Environmental Policy Act* (NEPA), under which this SWEIS has been prepared. Section 7.4 provides information about Y-12 current compliance with environmental requirements and indicates the results of regulatory reviews for 2007.

## 7.1 REGULATORY AGENCIES

Environmental, safety, and health requirements applicable to facilities and operations at Y-12 are based on Federal and state law. Federal law incorporates legislation enacted by Congress, signed by the President or not vetoed by the President, and codified in the United States Code. State law governing operations at Y-12 is the law of the State of Tennessee.

Implementation of Federal environmental, safety and health statutes is delegated to specific Federal agencies, including the Environmental Protection Agency (EPA), the Department of Transportation, and the Department of Labor. This delegation of responsibility to an agency may be statutory or by Executive Order (EO). In some cases, particularly as regards programs under the jurisdiction of the EPA, such as permitting and enforcement, responsibility is further delegated by the agency to state agencies with the Federal agency retaining program oversight.

Like Federal agencies, state agencies also operate under legal authority to implement and enforce environmental, health, and safety laws, as embodied in state statutes as provided for by federal statutes and delegated by federal agencies. Regulations issued by state agencies support this process. The Tennessee Department of Environment and Conservation (TDEC) is responsible for protecting and improving Tennessee land, air, water and recreation resources; most Tennessee environmental regulations are published by the Tennessee Department of State as Chapter 1200–Health, Environment and Conservation of the Rules and Regulations of the State of Tennessee (TDEC 1999a).

## 7.2 FEDERAL AND STATE ENVIRONMENTAL STATUTES AND REGULATIONS

The NEPA (Public Law [Pub. Law] 91-190, 42 *United States Code* [U.S.C.] 4321 et seq.) and its implementing regulations (40 *Code of Federal Regulations* [CFR] Parts 1500-1508) require that Federal agencies, including DOE, analyze and consider the potential environmental impacts of proposed major actions and alternatives before decisions are made and actions taken, such as the proposed action and alternative actions under consideration for Y-12. The analysis identifies possible means of avoiding or mitigating potential environmental, safety and health impacts. Identification of applicable environmental protection statutes, regulations, and orders thus provides a legal framework for examination of the proposed action and the alternative actions to ensure that at least a threshold level environmental, health and protection is provided. In addition a comparison can be made among the alternatives with regard to compliance with regulatory requirements as a means of identifying the alternative most likely to have the least environmental impact.

Regulatory authority over the production, possession, use and disposal of source, special nuclear, and byproduct material was addressed in the *Atomic Energy Act* of 1954 (42 U.S.C. §2011 *et seq.*), which established the Atomic Energy Commission. As one of two successor agencies to the Atomic Energy Commission, the DOE is responsible for establishing standards to protect health and minimize danger to life or property from activities under its jurisdiction, except cases where the Nuclear Regulatory Commission (NRC), the other successor agency, has been granted statutory regulatory control. Regulatory activity within NRC's jurisdiction, which covers commercial nuclear materials, facilities, and activities, including waste management, is exercised

directly by NRC or indirectly through approved state regulatory programs. Some DOE activities, such as the disposal of civilian reactor fuel and the disposal of transuranic wastes are subject to NRC regulation.

Federal agencies, including DOE, are required under EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, to comply with applicable administrative and procedural pollution control standards established by, but not limited to, the *Clean Air Act (CAA)*, *Noise Control Act*, *Clean Water Act (CWA)*, *Safe Drinking Water Act*, *Toxic Substances Control Act (TSCA)*, and *Resource Conservation and Recovery Act (RCRA)*. DOE Order 450.1A, *Environmental Protection Program*, addresses DOE compliance with applicable laws, regulations, and executive orders, recognizes extensive regulation of DOE activities by outside agencies, and requires that each DOE facility prepare an Environmental Monitoring Plan. Except for certain specific activities involving radioactive materials, all environmental protection and compliance activities at DOE facilities, including Y-12, are subject to regulation by external Federal, state and local entities.

DOE regulations, which are contained in 10 CFR, address such areas as energy conservation, administrative requirements and procedures, nuclear safety, and classified information. For the purpose of this SWEIS, relevant regulations include: “Procedural Rules for DOE Nuclear Activities” (10 CFR Part 820), “Nuclear Safety Management” (10 CFR Part 830), “Occupational Radiation Protection” (10 CFR Part 835), “Compliance with the National Environmental Policy Act” (10 CFR Part 1021), and “Compliance with Floodplains/Wetlands Environmental Review Requirements” (10 CFR Part 1022).

Applicable regulatory environmental laws and regulations can be categorized by environmental pathways: air, water, land (which includes waste management and pollution prevention), and the subsequent impact to worker safety and health, the public, and the natural environment. Table 7.2.1-1 lists Federal statutes, regulations, and EO that pertain to control, remediation, and/or regulation of the environment and worker safety, grouped by the resources to which each requirement pertains. Table 7.2.1-2 lists state statutes, regulations, and EOs that pertain to control, remediation, and/or regulation of the environment and worker safety, similarly grouped by the resources to which each requirement pertains. For most requirements identified, the statute and corresponding regulatory citations are listed. A description providing the basic environmental actions resulting from each of the Federal and state statutes and EO is also provided. Details regarding specific compliance with the relevant statutes, regulations, and permits are included in Chapter 4 of this SWEIS, as appropriate for each relevant resource. DOE is committed to fully comply with all applicable environmental statutes, regulatory requirements, EOs and internal orders. Table 7.2.1-3 lists the most pertinent DOE directives (orders, manuals, and notices) for implementation of environmental safety and health regulations.

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic.**

| <b>Resource Category</b> | <b>Statute/Regulation/Order</b>   | <b>Citation</b>               | <b>Responsible Agency</b> | <b>Potential Applicability</b>  |
|--------------------------|---|-------------------------------|---------------------------|---|
| <b>Air and Noise</b>     | <i>Clean Air Act</i> of 1970, as amended  | 42 U.S.C. 7401 <i>et seq.</i> | EPA                       | Requires sources to meet standards and obtain permits to satisfy; National Ambient Air Quality Standards, State Implementation Plans, Standards of Performance for New Stationary Sources, National Emission Standards for Hazardous Air Pollutants, and Prevention of Significant Deterioration.   |
|                          | National Ambient Air Quality Standards/State Implementation Plans                         | 42 U.S.C. 7409 <i>et seq.</i> | EPA                       | Requires compliance with primary and secondary ambient air quality standards governing sulfur dioxide, nitrogen oxide, carbon monoxide, ozone, lead, and particulate matter and emission limits/reduction measures as designated in each State's implementation plan.   |
|                          | Standards of Performance for New Stationary Sources                                       | 42 U.S.C. 7411                | EPA                       | Establishes emission standards and recordkeeping requirements for new or modified sources specifically addressed by a standard.   |
|                          | National Emissions Standards for Hazardous Air Pollutants                                 | 42 U.S.C. 7412                | EPA                       | Requires sources to comply with emission levels of carcinogenic or mutagenic pollutants; may require a preconstruction approval depending on the process being considered and the level of emissions that will result from the new or modified source.  |
|                          | Prevention of Significant Deterioration   | 42 U.S.C. 7470 <i>et seq.</i> | EPA                       | Applies to areas that are in compliance with National Ambient Air Quality Standards. Requires comprehensive preconstruction review and the application of Best Available Control Technology to major stationary sources (emissions of 100 tons/yr) and major modifications; requires a preconstruction review of air quality impacts and the issuance of a construction permit from the responsible State agency setting forth emission limitations to protect the Prevention of Significant Deterioration increment. |
|                          | <i>Noise Control Act</i> of 1972, as amended  | 42 U.S.C. 4901 <i>et seq.</i> | EPA                       | Requires facilities to maintain noise levels that do not jeopardize public health and safety.   |
|                          | Greening the Government through Efficient Energy Management                               | EO 13123                      | EPA                       | Calls for Federal agencies to reduce greenhouse gas emissions by 30 percent and establish energy improvement goals.   |
|                          | Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances | EO 12843                      | EPA                       | Requires Federal agencies to minimize procurement of ozone depleting substances and comply with Title VI of CAA Amendments with respect to stratospheric ozone protection and to recognize the limited availability of Class I substances until final phase-out.  |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (continued).**

| Resource Category | Statute/Regulation/Order   | Citation                                     | Responsible Agency  | Potential Applicability   |
|-------------------|--|--|---|---|
| Water             | <i>Clean Water Act</i> , as amended  | 33 U.S.C. 1251 <i>et seq.</i>                | EPA   | Requires EPA or state-issued permits and compliance with provisions of permits regarding discharge of effluents (pollutants) to surface waters or other activities affecting water quality.   |
|                   | National Pollutant Discharge Elimination System (section 402 of the CWA)                           | 33 U.S.C. 1342                               | EPA   | Requires permit to discharge effluents and storm waters to surface waters; permit modifications are required if discharge effluents are altered.  |
|                   | Dredged or Fill Material (Section 404 of CWA) <i>Rivers and Harbors Appropriations Act</i> of 1899 | 33 U.S.C. 1344, 33 U.S.C. 401 <i>et seq.</i> | U.S. Army Corps of Engineers (USACE)  | Requires permits to authorize the discharge of dredged or fill material in wetlands and to authorize certain work in or structures affecting wetlands.  |
|                   | <i>Wild and Scenic Rivers Act</i> of 1968  | 16 U.S.C. 1271 <i>et seq.</i>                | U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management, U.S. Forest Service, National Park Service | Requires consultation prior to construction of any new Federal project associated with a river designated as wild and scenic or under study in order to minimize and mitigate any adverse effects on the physical and biological properties of the river. |
|                   | <i>Safe Drinking Water Act</i> of 1974, as amended   | 42 U.S.C. 300f <i>et seq.</i>                | EPA   | Requires permits for construction/operation of underground injection wells and subsequent discharging of effluents to ground aquifers and establishes minimum standards for drinking water at the tap of public water supplies.                           |
|                   | Floodplain Management  | EO 11988                                     | CEQ, Water Resources Council  | Requires consultation for project impacting a floodplain.   |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (continued).**

| <b>Resource Category</b>          | <b>Statute/Regulation/Order</b>  | <b>Citation</b>               | <b>Responsible Agency</b> | <b>Potential Applicability</b>   |
|-----------------------------------|--|-------------------------------|---------------------------|--|
| <b>Hazardous and Solid Wastes</b> | <i>Resource Conservation and Recovery Act/Hazardous and Solid Waste Amendments of 1984</i>   | 42 U.S.C. 6901 <i>et seq.</i> | EPA                       | Requires notification and permits for operations involving hazardous waste treatment, storage, or disposal facilities; changes to site hazardous waste operations could require amendments to RCRA hazardous waste permits.  |
|                                   | <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980; Superfund Amendments and Reauthorization Act of 1986</i> | 42 U.S.C. 9601 <i>et seq.</i> | EPA                       | Requires cleanup and notification if there is a release or threatened release of a hazardous substance; requires DOE to enter into Interagency Agreements with the EPA and State to control the cleanup of each DOE site on the National Priorities List.  |
|                                   | Superfund Implementation   | EO 12580                      | EPA                       | Establishes DOE responsibilities related to the National Contingency Plan.   |
|                                   | <i>Community Environmental Response Facilitation Act of 1992</i>   | PL 102-426                    | EPA                       | Amends the <i>Comprehensive Environmental Response, Compensation, and Liability Act</i> to establish a process for identifying, prior to the termination of Federal activities, property that does not contain contamination. Requires prompt identification of parcels that will not require remediation to facilitate the transfer of such property for economic redevelopment purposes. |
|                                   | <i>Farmland Protection Policy Act of 1981</i>  | 7 U.S.C. 4201 <i>et seq.</i>  | Soil Conservation Service | DOE shall avoid any adverse effects to prime and unique farmlands.   |
|                                   | <i>Toxic Substances Control Act of 1976</i>  | 15 U.S.C. 2601 <i>et seq.</i> | EPA                       | Requires inventory reporting and chemical control provisions to protect the public from the risks of exposures to chemicals; strict limitations on use and disposal imposed on polychlorinated biphenyls, lead-based paint, and asbestos-contaminated equipment and material.  |
|                                   | <i>Federal Facility Compliance Act of 1992</i>   | 42 U.S.C. 6961                | EPA                       | Waives sovereign immunity for Federal facilities under the <i>Resource Conservation and Recovery Act</i> and requires DOE to develop plans and enter into agreements with states as to specific management actions for specific mixed waste streams.   |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (continued).**

| Resource Category | Statute/Regulation/Order  | Citation                           | Responsible Agency  | Potential Applicability   |
|-------------------|---|------------------------------------|---|---|
| Biotic            | <i>Fish and Wildlife Coordination Act of 1934</i>                     | 16 U.S.C. 661 <i>et seq.</i>       | USFWS   | Requires consultation on the possible effects on wildlife if there is construction, modification, or control of bodies of water in excess of 10 acres (4 hectares) surface area.  |
|                   | <i>Bald and Golden Eagle Protection Act of 1973, as amended</i>       | 16 U.S.C. 668 <i>et seq.</i>       | USFWS   | Consultations should be conducted to determine if any protected birds are found to inhabit the area. If so, DOE must obtain a permit prior to moving any nests due to construction or operation of project facilities.  |
|                   | <i>Migratory Bird Treaty Act of 1918, as amended</i>                  | 16 U.S.C. 703 <i>et seq.</i>       | USFWS   | Requires consultation to determine if there are any impacts on migrating bird populations due to construction or operation of project facilities. If so, DOE will develop mitigation measures to avoid adverse effects.   |
|                   | Responsibilities of Federal Agencies to Protect Migratory Birds       | EO 13186                           | USFWS   | DOE shall take measures to develop and implement a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service that shall promote the conservation of migratory bird populations.   |
|                   | <i>Wilderness Act of 1964</i>   | 16 U.S.C. 1131 <i>et seq.</i>      | Department of Commerce (DOC),<br>Department of Interior (DOI) | DOE shall consult with the Department of Commerce and Department of the Interior (DOI) and minimize impacts.  |
|                   | <i>Wild Free-Roaming Horses and Burros Act of 1971</i>                | 16 U.S.C. 1331 <i>et seq.</i>      | DOI   | DOE shall consult with the DOI and minimize impacts.  |
|                   | Executive Order 11990 Protection of Wetlands                          | EO 11990                           | USACE,<br>USFWS   | Requires Federal agencies to avoid the long- and short-term adverse impacts associated with the destruction or modification of wetlands.  |
|                   | Compliance with Floodplain/Wetlands Environmental Review Requirements | 10 CFR 1022                        | DOE   | Requires DOE to comply with all applicable floodplain/wetlands environmental review requirements.   |
|                   | <i>Endangered Species Act of 1973</i>                                 | 16 U.S.C. 1531-1544 <i>et seq.</i> | USFWS,<br>National Marine Fisheries Service (NMFS)            | Requires consultation to identify endangered or threatened species and their habitats, assess DOE impacts thereon, obtain necessary biological opinions, and, if necessary, develop mitigation measures to reduce or eliminate adverse effects of construction or operations. |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (*continued*).**

| <b>Resource Category</b> | <b>Statute/Regulation/Order</b>   | <b>Citation</b>                    | <b>Responsible Agency</b>                                    | <b>Potential Applicability</b>  |
|--------------------------|---|------------------------------------|--|---|
| <b>Cultural</b>          | <i>National Historic Preservation Act</i> of 1966, as amended           | 16 U.S.C. 470 <i>et seq.</i>       | President's Advisory Council on Historic Preservation (ACHP) | Requires consultation with State Historic Preservation Office and interested parties prior to construction to ensure that no historical properties will be affected. The ACHP may choose to participate in the consultation and any subsequent agreements.  |
|                          | Curation of Federally Owned and Administered Archaeological Collections | 16 U.S.C. § 470 <i>et seq.</i>     | DOI  | Requires agencies to take responsibility for the curation of archaeological collections that are recovered from lands under their control. Agencies must assure through funding agreements and inspections that archaeological collections are properly curated in a facility that meets the standards outlined in the regulations. |
|                          | Indian Sacred Sites   | Executive Order 13007, 61 FR 26771 | DOE  | Requires agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites.   |
|                          | Consultation and Coordination With Indian Tribal Governments            | Executive Order 13175, 65 FR 67249 | DOE  | DOE shall establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies with tribal implications, strengthen U.S. government-to-government relations with Indian tribes, and reduce imposition of unfunded mandates upon Indian tribes.                              |
|                          | <i>Archaeological and Historical Preservation Act</i> of 1974           | 16 U.S.C. 469 <i>et seq.</i>       | DOI  | DOE shall obtain authorization for any disturbance of archeological resources.  |
|                          | <i>Archaeological Resources Protection Act</i> of 1979, as amended      | 16 U.S.C. 470aa <i>et seq.</i>     | DOI  | Requires a permit for the removal of archaeological resources from public land. If archaeological resources are discovered during construction, provides penalties for unauthorized removal or destruction.   |
|                          | <i>Antiquities Act</i> of 1906  | 16 U.S.C. 431-33                   | DOI  | DOE shall comply with all applicable sections of the act.   |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (*continued*).**

| <b>Resource Category</b>        | <b>Statute/Regulation/Order</b>                                       | <b>Citation</b>                   | <b>Responsible Agency</b>                            | <b>Potential Applicability</b>  |
|---------------------------------|---|-----------------------------------|--|---|
|                                 | <i>American Indian Religious Freedom Act of 1978</i>                  | 42 U.S.C. 1996                    | DOI  | Affirms the right of Native Americans to have access to their sacred places. Promotes consultation with Indian religious practitioners to identify, maintain access, and avoid impacts to places of religious importance to Native Americans. |
|                                 | <i>Native American Graves Protection and Repatriation Act of 1990</i> | 25 U.S.C. 3001                    | DOI  | Describes the procedures to be followed if Native American cultural items and human remains are discovered during construction and the conditions under which these items can be removed or excavated.  |
|                                 | Protection and Enhancement of the Cultural Environment                | EO 11593                          | DOI  | DOE shall aid in the preservation of historic and archeological data that may be lost during construction activities.   |
| <b>Worker Safety and Health</b> | <i>Occupational Safety and Health Act of 1970</i>                     | 5 U.S.C. 651                      | Occupational Safety and Health Administration (OSHA) | DOE shall comply with all applicable worker safety and health legislation (including guidelines of 29 CFR Part 1960) and prepare, or have available in the workplace, Material Safety Data Sheets.  |
|                                 | Hazard Communication Standard   | 29 CFR 1910.1200                  | OSHA   | Requires DOE to ensure that workers are informed of, and trained to handle, all chemical hazards in the DOE workplace.  |
|                                 | <i>Atomic Energy Act of 1954, as amended</i>                          | 42 U.S.C. 2011                    | EPA, DOE   | DOE shall follow its own standards and procedures, particularly with respect to radioactive substances, to ensure the safe operation of its facilities.   |
|                                 | <i>Nuclear Waste Policy Act of 1982</i>                               | 42 U.S.C. 10810101 <i>et seq.</i> | NRC, EPA, DOE  | Requires DOE to obtain all required permits and dispose of spent nuclear fuel, high level, and transuranic radioactive waste; requires certification and compliance of Waste Isolation Pilot Plan.  |
|                                 | <i>Low-Level Radioactive Waste Policy Act of 1954</i>                 | 42 U.S.C. 2021b-2021d             | DOE  | Requires DOE to dispose of low-level radioactive wastes in accordance with the requirements of the States in which it operates.   |
|                                 | Worker Safety and Health Program                                      | 10 CFR Part 851                   | DOE  | Establishes requirements for a worker safety and health program.  |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control  
Remediation and Worker Safety, Arranged by Topic (continued).**

| <b>Resource Category</b> | <b>Statute/Regulation/Order</b>   | <b>Citation</b>                         | <b>Responsible Agency</b> | <b>Potential Applicability</b>   |
|--------------------------|---|---|---------------------------|--|
|                          | Occupational Radiation Protection   | 10 CFR Part 835                         | DOE                       | Establishes limits for worker exposure to radioactivity.   |
| <b>Other</b>             | <i>National Environmental Policy Act</i> of 1969, as amended  | 42 U.S.C. 4321 <i>et seq.</i>           | CEQ, DOE                  | DOE shall comply with NEPA and its implementing procedures.  |
|                          | <i>Uranium Mill Tailings Radiation Control Act</i> of 1978  | 42 U.S.C. 7901 <i>et seq.</i>           | DOE, EPA and NRC          | EPA and NRC regulate remediation of abandoned uranium mill tailings sites. DOE is responsible for the remediation at those sites. DOE implements health and environmental standards and acquires licenses when required.   |
|                          | <i>Hazardous Materials Transportation Act</i> of 1975, as amended   | 49 U.S.C. 5101 <i>et seq.</i>           | DOT                       | DOE shall comply with the requirements governing hazardous materials and waste transportation.   |
|                          | <i>Hazardous Materials Transportation Uniform Safety Act</i> of 1990  | 49 U.S.C. 5105 <i>et seq.</i>           | DOT                       | Restricts shippers of highway route-controlled quantities of radioactive materials to use-only permitted carriers.   |
|                          | <i>Emergency Planning and Community Right-To-Know Act</i> of 1986   | 42 U.S.C. 11001 <i>et seq.</i>          | EPA                       | Requires the development of emergency response plans and reporting requirements for chemical spills and other emergency releases, and imposes right-to-know reporting requirements covering storage and use of chemicals which are reported in toxic chemical release forms. |
|                          | <i>Pollution Prevention Act</i> of 1990, under the provision of the <i>Superfund Amendments and Reauthorization Act</i> (SARA). | 42 U.S.C. 13101 and section 313 of SARA | EPA                       | Establishes a national policy that pollution should be reduced at the source and requires a toxic chemical source reduction and recycling report for an owner or operator of a facility required to file an annual toxic chemical release form under section 313 of SARA.    |
|                          | Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations                             | EO 12898                                | DOE                       | Requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. Amended by Executive Order 12948. |

**Table 7.2.1-1. Major Federal Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (continued).**

| Resource Category | Statute/Regulation/Order   | Citation | Responsible Agency                             | Potential Applicability  |
|-------------------|--|----------|--|--|
|                   | Strengthening Federal Environmental, Energy, and Transportation Management | EO 13423 | DOE, CEQ, OMB, Federal Environmental Executive | Requires Federal agencies to employ a range of actions to reduce energy and water consumption, use of efficient vehicles and energy conservation in new buildings  |
|                   | Protection and Enhancement of Environmental Quality                        | EO 11514 | CEQ  | Requires Federal agencies to demonstrate leadership in achieving the environmental quality goals of NEPA; provides for DOE consultation with appropriate Federal, State, and local agencies in carrying out their activities as they affect the environment. |
|                   | Federal Workforce Transportation   | EO 13150 | EPA, DOT, DOE                                  | Directs DOT, EPA and DOE to implement a “transit pass” transportation fringe benefit program as part of a three-year Nationwide Pilot Program no later than October 1, 2000.   |

**Table 7.2.1-2. Major State Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic.**

| Resource Category | Statute/Regulation/Order         | Citation                         | Responsible Agency                      | Potential Applicability   |
|-------------------|----------------------------------|----------------------------------|---|---|
| <b>Air</b>        | Air Pollution Control            | TCA, 68-201-105, 4-5-202         | TN Air Pollution Control Board          | Permit required to construct, modify, or operate an air contaminant source; sets fugitive dust requirements.  |
|                   | Hazardous Air Contaminants       | TCA, 68-201-105, 4-5-202 et seq. | TDEC, Division of Air Pollution Control | Adopts the primary NESHAP of Federal regulations for state enforcement.                                       |
|                   | <i>Tennessee Air Quality Act</i> | TCA, 53-3408 et seq.             | TDEC, Division of Air Pollution Control | Requires permits to construct, modify, or operate an air containment source; sets fugitive dust requirements. |

**Table 7.2.1-2. Major State Authorities for Regulation of Environmental Control  
Remediation and Worker Safety, Arranged by Topic (continued).**

| <b>Resource Category</b>          | <b>Statute/Regulation/Order</b>                                       | <b>Citation</b>                  | <b>Responsible Agency</b>               | <b>Potential Applicability</b>   |
|-----------------------------------|---|----------------------------------|---|--|
| <b>Water</b>                      | <i>Tennessee Water Quality Control Act</i>                            | TCA, 69-3-101 et seq., 70-324-70 | TDEC, Water Quality Control Board       | Authority to issue new or modify existing NPDES permits required for a water discharge source and mandates protection of water quality.  |
|                                   | Tennessee National Pollutant Discharge Elimination System             | TCA, 69-3-108                    | TDEC, Division of Water Quality         | In accordance with 33 U.S.C. 1342, Tennessee enforces an EPA-authorized state program that administers both Federal and state requirements for point and nonpoint source discharges to surface water.                                    |
|                                   | <i>Safe Drinking Water Act</i>  | TCA, 68-221-701                  | TDEC, Division of Water Supply          | Adopts Federal standards for drinking water.   |
|                                   | Aquatic Resource Alteration   | TDEC Rules, 1200-4-7 et seq.     | TDEC, Division of Water Quality         | Any activity which involves the alteration of waters of the state typically requires a state aquatic resource alteration permit, including activities in, but not limited to, wetlands, culverts, and road crossings over surface water. |
| <b>Hazardous and Solid Wastes</b> | Tennessee Underground Storage Tank Program Regulations                | TDEC Rules, 1200-1-15            | TDEC Division of UST Programs           | Permit required prior to construction or modification of an underground storage tank.  |
|                                   | <i>Tennessee Hazardous Waste Management Act</i>                       | TCA 68-212                       | TDEC Division of Solid Waste Management | Permit required to construct, modify, or operate a hazardous waste treatment, storage, or disposal facility.   |
|                                   | Tennessee Solid Waste Processing and Disposal Regulations             | TDEC Rules, 1200-1-7             | TN Division of Solid Waste Management   | Permit required to construct or operate a solid waste processing or disposal facility.   |
| <b>Biotic</b>                     | Tennessee State Executive Order on Wetlands                           | Tennessee Executive Order 8-65   | TN Division of Water Quality Control    | Requires consultation with responsible agency.   |
|                                   | <i>Tennessee Threatened Wildlife Species Conservation Act of 1974</i> | TCA 70 -8                        | TN Wildlife Resources Agency            | Requires consultation with responsible agency.   |

**Table 7.2.1-2. Major State Authorities for Regulation of Environmental Control Remediation and Worker Safety, Arranged by Topic (continued).**

| <b>Resource Category</b> | <b>Statute/Regulation/Order</b>                                     | <b>Citation</b>             | <b>Responsible Agency</b>            | <b>Potential Applicability</b>  |
|--------------------------|---|-----------------------------|--------------------------------------|---|
|                          | <i>Tennessee Rare Plant Protection and Conservation Act of 1985</i> | TCA 70-8-301 <i>et seq.</i> | TN Wildlife Resources Agency         | Requires consultation with responsible agency.  |
|                          | <i>Tennessee Water Quality Control Act</i>                          | TCA 69-3                    | TN Division of Water Quality Control | Permit required prior to alteration of a wetland.   |
| <b>Cultural</b>          | Desecration of Venerated Objects                                    | TCA 39-17-311               | Law enforcement, coroner             | Forbids a person to offend or intentionally desecrate venerated objects including a place of worship or burial. |
|                          | Abuse of Corpse   | TCA 39-17-312               | Law enforcement, coroner             | Forbids a person from disinterring a corpse that has been buried or otherwise interred.                         |
|                          | Excavation of areas containing Native American Indian human remains | TCA 11-6-116                | TDEC                                 | Requires notification prior to excavation in areas containing human remains of Native American Indian.          |
|                          | Tennessee Protective Easements                                      | TCA 11-15-101               | TN State Government                  | Grants power to the state to restrict construction on land deemed as a “protective” easement.                   |

**Table 7.2.1-3. Selected Department of Energy Directives.**

| DOE Directive  | Directive Title   |
|----------------|---|
| 5400.5 Chg 2   | Radiation Protection of the Public and the Environment                                    |
| 5480.19 Chg 2  | Conduct of Operations   |
| 5530.1A        | Accident Response Group   |
| 5530.4         | Aerial Measuring System   |
| 470.2A         | Security and Emergency Management Independent Oversight and Performance Assurance Program |
| 5632.1C        | Protection and Control of Safeguards and Security Interests                               |
| M 231.1A Chg 2 | Environment, Safety, and Health Reporting Manual  |
| N 441.1        | Radiological Protection for DOE Activities  |
| O 151.1C       | Comprehensive Energy Management System  |
| O 153.1        | Departmental Radiological Emergency Response Assets                                       |
| O 225.1A       | Accident Investigations   |
| O 231.1A Chg 1 | Environment, Safety and Health Reporting  |
| O 414.1C       | Quality Assurance   |
| O 420.1B       | Facility Safety   |
| O 430.1B Chg 1 | Real Property Asset Management  |
| O 435.1 Chg 1  | Radioactive Waste Management  |
| O 440.1B       | Worker Protection Management for DOE (including the NNSA) Federal Employees               |
| O 450.1A       | Environmental Protection Program  |
| O 451.1B Chg 1 | <i>National Environmental Policy Act</i> Compliance Program                               |
| O 460.1B       | Packaging and Transportation Safety   |
| O 460.2A       | Departmental Materials Transportation and Packaging Management                            |
| O 470.4A       | Safeguards and Security Program   |

### 7.3 CONSULTATION

DOE procedures for compliance with NEPA are specified in 10 CFR Part 1021, which supplements Council on Environmental Quality (CEQ) regulations implementing the procedural provisions of NEPA (40 CFR parts 1500-1508). Among other things, these procedures require consultations with Federal and state agencies having jurisdiction or special expertise, including those responsible for protecting significant resources, such as, endangered species, critical habitats, or historic resources. Federal and state agencies with jurisdiction or expertise in these areas were consulted during the development of the Y-12 SWEIS. Representatives of Federal and state agencies were involved in scoping activities for this SWEIS and were consulted in the preparation of the Final Y-12 SWEIS. Copies of letters from DOE inviting the participation of consulting agencies and response letters received by DOE are included in Appendix C.

Table 7.3-1 provides laws and EOs that involve consultation for this SWEIS and that are applicable to the Y-12 proposed action and alternatives. Accompanying each law or EO is a brief description of the purpose of the cited statutes and the consultation occurring for the current Y-12 proposed actions and alternatives.

**Table 7.3-1. Applicable Laws and Executive Orders Y-12 Proposed Action and Alternatives.**

| Statute/Executive Order   | Statute Citation                | Regulatory Citation   | Consulting Agency                 | SWEIS—Applicability; Consultations, and DOE involvement  |
|---|---------------------------------|---|-----------------------------------|--|
| <i>Endangered Species Act; The Rare Plant Protection and Conservation Act of 1985; Tennessee Nongame and Endangered or Threatened Wildlife Species Conservation Act of 1974</i> | 16 U.S.C. § 1531 <i>et seq.</i> | 19 CFR Parts 10, 12; 30 CFR Part 773; 32 CFR Part 190; 43 CFR Part 8340; 50 CFR Parts 17, 23, 81, 225, 230, 402, 424, 450-453<br><br>TAC Sections 70-8-301 to 314<br><br>TAC Sections 70-8-101 to 110 | USFWS<br><br><br>TDEC<br><br>TDEC | Ensures that actions authorized, funded, or carried out by DOE are not likely to jeopardize the continued existence of any Federally listed threatened or endangered species or destroy or adversely modify their critical habitat. A biological assessment and a Section 7 Endangered Species Consultation for proposed activities included in the SWEIS shall be conducted by DOE in consultation with the U.S. Fish and Wildlife Service. |
| Endangered and Threatened Wildlife and Plant/Interagency Cooperation  |                                 | 50 CFR Part 17; 50 CFR Part 402   | USFWS                             | Describes interagency implementation regulations for the <i>Endangered Species Act</i> .   |
| <i>Migratory Bird Treaty Act</i> , as amended   | 16 U.S.C. § 703 <i>et seq.</i>  | 30 CFR Part 773; 50 CFR Parts 14, 20  | Department of the Interior, USFWS | Federal statute mandates protection of sensitive or otherwise regulated wildlife species making it unlawful to pursue, hunt, take, capture, or kill (or attempt any of the preceding) any migratory bird, nest, or eggs of such birds.   |
| Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants/Migratory Bird Hunting  |                                 | 50 CFR Part 10; 50 CFR Part 20  | USFWS                             | Implementation regulations for the <i>Migratory Bird Treaty Act</i> .  |

**Table 7.3-1. Applicable Laws and Executive Orders Y-12 Proposed Action and Alternatives (continued).**

| Statute/Executive Order   | Statute Citation      | Regulatory Citation  | Consulting Agency | SWEIS—Applicability; Consultations, and DOE involvement  |
|---|-----------------------|--|-------------------|--|
| <i>National Historic Preservation Act</i> , as amended                | 16 U.S.C. § 470       | 7 CFR Part 656; 36 CFR Parts 61, 63, 65, 68, 78, 79, 800-811 | SHPO              | Protects sites with significant national historic value, placing them on the National Register of Historic Places (NRHP). DOE, as a governmental agency, must locate and inventory historic properties and cultural resources under their jurisdiction prior to undertaking an activity that might move or alter their appearance. As required by Section 106 of the NHPA and per DOE’s Memorandum of Agreement with the TSHPO, proposed Y-12 activities shall be evaluated in consultation with the SHPO. |
| National Historic Preservation Order                                  | Executive Order 11593 | NA   | DOE               | DOE, in consultation with the ACHP (16 U.S.C. § 470i), is to institute procedures to assure Federal plans and programs that contribute to historic preservation and to proactively interact with the SHPO to identify structures, buildings, and properties to nominate for listing in the NRHP.   |
| <i>Native American Graves Protection and Repatriation Act</i> of 1990 | 25 U.S.C. § 3001      | 43 CFR Part 10   | CIN               | Tribal descendants shall own American Indian human remains and cultural items discovered on Federal lands after November 16, 1990. Notification of tribal governments by DOE is required if and when items are discovered during an activity at Y-12 or elsewhere on the DOE ORR.  |
| Protection of Wetlands  | Executive Order 11990 | NA   | USACE             | Federal activities are required to avoid short- and long-term adverse impacts to wetlands whenever a practicable alternative exists.   |
| Floodplains Management  | Executive Order 11988 | NA   | USACE             | DOE is directed to establish procedures to ensure that the potential effects of flood hazards and floodplain management are considered for any action undertaken. Impacts to floodplains are to be avoided to the extent practicable.  |
| Wetland Protection and Floodplain Management                          |                       | 10 CFR Part 1022   | DOE               | Regulations establish requirements for compliance with Executive Orders 11990 and 11988. No floodplain impacts are identified for the SWEIS; wetland impacts are under consultation.   |

The ORR implements protection of wetlands through each site’s NEPA program in accordance with 10 CFR 1022, “Compliance with Floodplain/Wetlands Environmental Review Requirements.” Each of the sites has also conducted surveys for the presence of wetlands and conducts surveys on a project- or program-as needed basis.

Two surveys of wetlands resources were conducted on the Y-12 Complex. *Identification and Characterization of Wetlands in the Bear Creek Watershed* (ORNL 1993) surveys the Y-12 Complex and surrounding areas. *Wetland Survey of Selected Areas in the Oak Ridge Y-12 Plant Area of Responsibility, Oak Ridge, Tennessee* (LMES 1997) surveys selected areas in the Y-12 Complex area of responsibility.

**Table 7.3-1. Applicable Laws and Executive Orders Y-12 Proposed Action and Alternatives (continued).**

| Statute/Executive Order   | Statute Citation   | Regulatory Citation | Consulting Agency                         | SWEIS—Applicability; Consultations, and DOE involvement   |
|---|--|---------------------|---|---|
| Environmental Justice   | Executive Order 12898                                      | NA                  | DOE                                       | Federal entities are directed to identify and address disproportionately high adverse human health or environmental impacts on minority and low-income populations resulting from an agency's program, policies, or activities. Data must be collected, analyzed, and made publicly available on race, national origin, and income level of populations in areas surrounding the Federal facility expected to have a substantial environmental, human health, or economic effect. Environmental justice issues for Y-12 have been identified and addressed prior to preparation of this SWEIS, and are further addressed through this SWEIS; the policy requirements of this EO remains applicable to future actions at Y-12.   |
| Protection of Children from Environmental Health Risks and Safety Risks | Executive Order 13045, as amended by Executive Order 13229 | NA                  |   | Directs Federal agencies, to the extent permitted by law and appropriate, and consistent with the agency's mission, to: (a) make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) ensure that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.   |
| Federal Workforce Transportation  | Executive Order 13150                                      | NA                  | EPA/DOT/<br>Treasury<br>Dept./OMB/<br>GSA | Directs DOT, EPA and DOE to implement a "transit pass" transportation fringe benefit program as part of a three-year Nationwide Pilot Program no later than October 1, 2000. Before extending the program to other Federal agencies and their employees nationwide, results from the pilot program will be analyzed by an entity to be determined by the consulting agencies to determine whether it is effective in reducing single occupancy vehicle travel and local area traffic congestions. Federal agencies are encouraged to use any non-monetary incentive that the agencies may otherwise offer under any other provision of law or other authority to encourage mass transportation and vanpool use.<br><br>Under this EO, DOE is required to implement a carpool program for all Federal employees working at ORR facilities, including Y-12. |

**Table 7.3-1. Applicable Laws and Executive Orders Y-12 Proposed Action and Alternatives (continued).**

| Statute/Executive Order                                      | Statute Citation      | Regulatory Citation | Consulting Agency | SWEIS—Applicability; Consultations, and DOE involvement   |
|--|-----------------------|---------------------|-------------------|---|
| Federal Environmental, Energy, and Transportation Management | Executive Order 13423 | NA                  |                   | Requires that Federal agencies: ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use. |

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Notes: EO—Executive Order.

## 7.4 ENVIRONMENTAL COMPLIANCE

As described above, DOE activities, including operations at Y-12, are required to comply with environmental standards established by a number of federal and state legal authorities. Principal among the regulating agencies that verify this compliance are the EPA and TDEC. These agencies issue permits, review compliance reporting, participate in joint monitoring programs, inspect facilities and operations, and oversee adherence to the requirements of applicable law.

See Chapter 4, Section 4.6.2 for a description of air quality, permit limitations and emissions at ORR and Section 4.7.2 for a description of surface water quality, permit limitations and discharges on the ORR. It also describes the current status of compliance issues associated with the current NPDES permit.

There were no penalties or consent orders issued to Y-12 in 2007. One Notice of Violation was issued, which resulted from two minor violations noted during the annual RCRA audit conducted by the TDEC in 2007. Both violations were corrected to the satisfaction of TDEC (DOE 2008).