

DEPARTMENT OF ENERGY
National Nuclear Security Administration

Record of Decision

for the Continued Operation of the Y-12 National Security Complex

AGENCY: Department of Energy, National Nuclear Security Administration.

ACTION: Record of Decision.

SUMMARY: The National Nuclear Security Administration (NNSA) of the U.S. Department of Energy (DOE) is issuing this Record of Decision (ROD) for the Y-12 National Security Complex (Y-12) in Oak Ridge, Tennessee based on information and analyses contained in the *Final Site-Wide Environmental Impact Statement for the Y-12 National Security Complex*, DOE/EIS-0387 (Y-12 Final SWEIS, Y-12 SWEIS or 2011 Y-12 SWEIS) issued on March 4, 2011; comments on the Draft and Final Y-12 SWEIS; and other factors, including costs, security considerations and the missions of NNSA. The 2011 Y-12 SWEIS analyzes the potential environmental impacts for ongoing and reasonably foreseeable future operations and activities at Y-12, including alternatives for changes to site infrastructure and levels of operation. Five alternatives are analyzed in

this Y-12 SWEIS: (1) No Action Alternative (maintain the status quo); (2) Uranium Processing Facility (UPF) Alternative; (3) Upgrade-in-Place Alternative; (4) Capability-sized UPF Alternative; and (5) No Net Production/Capability-sized UPF Alternative. Both the Draft and the Y-12 Final SWEISs identified the Capability-sized UPF Alternative (Alternative 4) as NNSA's preferred alternative. NNSA has decided to select Alternative 4, to continue operation of Y-12, and to construct and operate one new facility-a Capability-sized UPF. A separate decision may be made at a later date regarding whether to construct and operate a Complex Command Center (CCC).

FOR FURTHER INFORMATION CONTACT: For further information on the 2011 Y-12 SWEIS or this ROD, or to receive a copy of this SWEIS or ROD, contact: Ms. Pam Gorman, Y-12 SWEIS Document Manager, U.S. Department of Energy, National Nuclear Security Administration, Y-12 Site Office, P.O. Box 2050, Oak Ridge, TN 37831, (865) 576-9903. For information on the DOE National Environmental Policy Act (NEPA) process, contact: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (GC-54), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-4600, or leave a message at (800) 472-2756. Additional information regarding DOE NEPA activities and access to many DOE NEPA documents, including the 2011 Y-12 SWEIS, are available on the Internet through the DOE NEPA Web site at: <http://nepa.energy.gov>.

SUPPLEMENTARY INFORMATION

Background

Y-12 is one of three primary installations on the DOE Oak Ridge Reservation (ORR) in Oak Ridge, Tennessee. The other installations are the Oak Ridge National Laboratory and the East Tennessee Technology Park (formerly the Oak Ridge K-25 Site). As one of the NNSA production facilities, Y-12 is the primary site for enriched uranium processing and storage, and one of the manufacturing facilities for maintaining the U.S. nuclear weapons stockpile. Y-12 is unique in that it is the only source within the NNSA nuclear security enterprise for certain mission critical nuclear weapons components. Y-12 also dismantles weapons components, safely and securely stores and manages special nuclear material (SNM), supplies SNM for use in naval and research reactors, and disposes surplus materials. Y-12 nuclear nonproliferation programs play a critical role in securing our nation and the world and combating the spread of weapons of mass destruction by removing, securing, and dispositioning SNM, and down-blending weapons-grade materials to non-weapons forms suitable for use in commercial reactors. Y-12 also conducts nondefense-related activities including: environmental monitoring, remediation, and decontamination and decommissioning activities of the DOE Environmental Management Program; managing waste materials from past and current operations; supporting the production of medical isotopes; and developing highly specialized technologies to support the capabilities of the U.S. industrial base.

NNSA prepared the 2011 Y-12 SWEIS and this ROD pursuant to the regulations of the Council on Environmental Quality (CEQ) for implementing NEPA (40 CFR Parts 1500–1508) and DOE’s NEPA Implementing Procedures (10 CFR Part 1021).

The process for preparing the 2011 Y-12 SWEIS began on November 28, 2005, when NNSA published a Notice of Intent (NOI) in the *Federal Register* (70 FR 71270), announcing its intent to prepare this Y-12 SWEIS. NNSA distributed the Draft Y-12 SWEIS in October 2009. The public comment period for the Draft Y-12 SWEIS began on October 30, 2009, with publication of the Environmental Protection Agency’s Notice of Availability in the *Federal Register* (74 FR 56189). That notice invited public comment on the Draft Y-12 SWEIS through January 4, 2010. During the comment period, two public hearings were held in Oak Ridge, Tennessee, on November 17 and 18, 2009. At the first hearing, NNSA announced an extension of the comment period until January 29, 2010. That announcement was formalized with a notice in the *Federal Register* on December 28, 2009 (74 FR 68599). Following issuance of the Draft SWEIS, NNSA determined that a Haul Road was needed to support UPF construction. The Final SWEIS also includes information and analysis of a Haul Road extension corridor for the UPF, including a detailed Wetlands Assessment that was prepared in accordance with 10 CFR Part 1022. This Assessment is contained in Appendix G of the Final SWEIS. Comments received on the Haul Road and Wetlands Assessment were addressed in the Final SWEIS.

Alternatives Considered

The No Action Alternative (Alternative 1) for the 2011 Y-12 SWEIS is the continued implementation of the 2002 ROD (67 FR 11296), which was based on the Final SWEIS for the Y-12 National Security Complex (DOE/EIS-0309), and modified by subsequent NEPA decisions. Four action alternatives are considered in this SWEIS in addition to the No Action Alternative: UPF Alternative (Alternative 2); Upgrade-in-Place Alternative (Alternative 3); Capability-sized UPF Alternative (Alternative 4); and No Net Production/Capability-sized UPF Alternative (Alternative 5). The four action alternatives differ in that: Alternative 2 involves a new, fully modernized manufacturing facility (the UPF) optimized for safety, security and efficiency; Alternative 3 involves upgrading the existing facilities to attain the highest level of safety, security, and efficiency possible without constructing new production facilities; and both Alternatives 4 and 5 involve constructing a UPF that would be approximately 10 percent smaller than the UPF assessed for Alternative 2. Alternatives 4 and 5 would also result in reductions in the production capability level at Y-12 to support the requirements of a smaller stockpile. Alternative 4 analyzes a production capability level equivalent to approximately 80 secondaries and cases per year and Alternative 5 analyzes a production capability level equivalent to approximately 10 secondaries and cases per year. The construction and operation of a CCC, which would provide a new Emergency Services Complex for Y-12 is analyzed for Alternatives 2-5.

Preferred Alternative

As discussed in Section 3.6 of the Y-12 Final SWEIS, NNSA identified the Capability-sized UPF Alternative (Alternative 4) as its preferred alternative in both the Draft and the Final Y-12 SWEIS.

Environmentally Preferable Alternative

Considering the many environmental facets of the alternatives analyzed in the Y-12 Final SWEIS, and looking out over the long term, NNSA believes that the No Net Production/Capability-sized UPF Alternative (Alternative 5) would be the environmentally preferable alternative. Replacing older, inefficient facilities with new facilities that incorporate modern safety, security and efficiency standards, would improve Y-12's ability to protect human health and the environment. Modernizing and replacing older facilities with more energy efficient and environmentally-protective facilities would minimize environmental impacts compared to the No Action and Upgrade in Place Alternatives. Under Alternative 5, NNSA would minimize the use of electricity and water, improve health and safety for workers and the public, streamline operations through consolidation, and reduce the resource consumption "footprint" of Y-12. Operating at a reduced production level would minimize the volume of all classes of waste generated at Y-12. NNSA notes that the Capability-sized UPF Alternative (Alternative 4) would result in environmental benefits of a similar nature as those

associated with Alternative 5, but to a slightly reduced extent due to the higher level of operations associated with Alternative 4.

Environmental Impacts of Alternatives

NNSA analyzed the potential impacts of each alternative on: land use; visual resources; site infrastructure; traffic and transportation; geology and soils; air quality and noise; greenhouse gases; water resources; wetlands; ecological resources; threatened and endangered species; cultural resources; socioeconomics; environmental justice; human health and safety; waste management; facility accidents; and intentional destructive acts.

NNSA also evaluated the potential impacts of each alternative as to irreversible and irretrievable commitments of resources, and the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity. In addition, NNSA evaluated the impact of potential accidents at Y-12 on workers and surrounding populations. These analyses and results are described in the Summary and Chapters 4 and 5 of the SWEIS. In a classified appendix, NNSA evaluated the potential impacts of intentional destructive acts that might occur at Y-12.

Comments on the Final Site-Wide Environmental Impact Statement

NNSA distributed more than 500 copies of the Y-12 Final SWEIS to Congressional members and committees, the State of Tennessee, local governments, other Federal

agencies, non-governmental organizations, and individuals. Additionally, the Y-12 Final SWEIS is, available electronically via the Internet at <http://nepa.energy.gov>.

Following publication of the Y-12 Final SWEIS in March 2011, and prior to issuing this ROD, NNSA received three comment documents related to the Y-12 Final SWEIS. Two of the three documents were submitted by the Oak Ridge Environmental Peace Alliance (OREPA) on April 1, 2011 and April 4, 2011, and the third was submitted on April 4, 2011 by the following organizations: Southwest Research and Information Center, Tri-Valley CAREs, Friends of the Earth, Nuclear Watch of New Mexico, Fernald Residents for Environmental Safety and Health, Nuclear Age Peace Foundation, JustPeace, Cumberland Countians for Peace and Justice, Network for Environmental and Economic Responsibility, and Nukewatch. The Appendix to this ROD identifies the comments contained in these three documents and provides NNSA's responses. NNSA has concluded that none of the comments received necessitate further NEPA analysis.

Decision

NNSA has decided to select the Capability-sized UPF Alternative (Alternative 4). Under this Alternative, NNSA will continue to operate Y-12 to meet the stockpile stewardship mission critical activities assigned to the site. NNSA will also construct and operate a Capability-sized UPF at Y-12 adjacent to the Highly Enriched Uranium Materials Facility (HEUMF) and consolidate its enriched uranium operations. This new facility is described in Section 1.4.4 of the Y-12 Final SWEIS. NNSA will reduce the production

capability level of facilities that support NNSA's stockpile stewardship mission to a level that equates to approximately 80 secondaries and cases per year (compared to a capability level that equates to 125 secondaries and cases per year for Alternatives 1, 2, and 3 and a capability level that equates to 10 secondaries and cases per year for Alternative 5). This alternative also includes continuing operations related to other NNSA National Security Programs, such as Nonproliferation, Global Threat Reduction Initiatives, and support to Naval Reactors. Under this alternative, activities conducted at Y-12 under non-NNSA Programs such as the Complementary Work/Work for Others Program, Environmental Management Programs, Non-defense Research and Development Program and Complementary Work/Technology Program would also continue. These programs, their missions and their major activities are described in Chapter 2 of the Final Y-12 SWEIS. Additionally, NNSA has decided, for the time being, to defer making a decision regarding the construction and operation of the CCC. At an appropriate time, a separate decision will be made regarding whether to construct and operate a CCC.

Basis for Decision

NNSA's decisions are based on its mission responsibilities and its need to sustain Y-12's ability to operate in a manner that allows it to fulfill its existing responsibilities in an environmentally sound, timely, and fiscally prudent manner. National security policies require NNSA to maintain the nation's nuclear weapons stockpile as well as its core technical competencies and capabilities. Y-12's operations support a wide range of

scientific and technological capabilities for NNSA's national security missions, including nonproliferation.

The benefits of implementing the Capability-sized UPF Alternative include reliable, long-term, consolidated enriched uranium processing capability for the nuclear security enterprise with modern technologies and facilities; improved security posture for SNM; reduced accident risks; improved health and safety for workers and the public; improved operational efficiency; and reductions in the cost of operating and maintaining key site facilities. The UPF will replace multiple aging facilities with a modern facility that will be synergistic with the new HEUMF to provide a robust SNM capability and improve responsiveness, flexibility, and efficiency of operations.

Significant improvements in operation and maintenance costs and operational efficiency can be expected from a new Capability-sized UPF. These improvements include plans for installing new, reliable equipment which is expected to, greatly reduce the need for major corrective maintenance (e.g., less than half of the existing casting furnaces are normally available because of reliability problems). In addition, security improvements will be an integral part of the new facility, reducing the number of personnel required to protect material. It is also expected that the inventory cycle can be greatly reduced because of more effective means of real-time inventory controls. A more efficient facility layout is expected to decrease material handling steps and reduce intra-plant transfers.

With the consolidation of SNM operations, incorporation of integral security systems, and the 90 percent reduction of the protected area, the security posture will be greatly improved under the Capability-sized UPF Alternative. The use of engineered controls to reduce reliance on administrative controls and personal protection equipment to protect workers will improve worker health and safety. In addition, use of new technologies and processes may eliminate the need for some hazardous materials, reduce emissions, and minimize wastes. Cost savings and cost avoidances are expected to include the following:

- Savings from consolidation related to right-sizing of facilities/footprint, more efficient operations, and simplification of SNM movement;
- Operating and maintenance cost reductions of approximately 33 percent from current operations;
- Reducing the footprint of the Perimeter Intrusion Detection and Assessment System (PIDAS) protected area by 90 percent (from 150 acres to about 15 acres), which will allow better concentration of the protective force over a smaller area; and
- Reducing the number of workers required to access the protected area, which will improve the productivity of workers assigned to non-SNM activities that are currently located in the protected area. By reducing the size of the PIDAS, it is forecast that approximately 600 fewer employees will have to enter the PIDAS. An improvement in efficiency of up to 20 percent in non-SNM operations, including environmental clean-up projects, could be realized by avoiding the

access requirements and restrictions of the PIDAS. Projects that support non-SNM operations will be less expensive because of improved productivity.

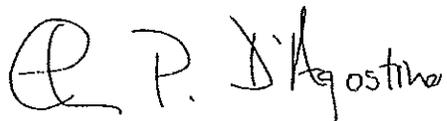
Mitigation Measures for the Capability-sized UPF Alternative (Alternative 4)

As described in the 2011 Y-12 SWEIS, Y-12 operates in compliance with environmental laws, regulations, and policies within a framework of contractual requirements. Many of these contractual requirements mandate controls and actions intended to protect human health and the environment as well as limit and mitigate potential adverse environmental effects. Examples include the Environment, Safety, and Health Manual, Integrated Safety Management System, emergency plans, pollution prevention and waste minimization programs. NNSA and Y-12 will continue to impose contractual requirements for actions necessary to comply with these or similar controls.

Mitigation measures are included in the UPF project design and are integral components of the project to be implemented during the construction project with all necessary funding provided by the project. Mitigation measures specific to the UPF project include the wetlands and stream mitigations described in Section 4.3 of Appendix G. Other mitigation measures are identified in the Y-12 Final SWEIS (Chapter 5) and NNSA will impose all mitigation commitments associated with the Capability-sized UPF Alternative by including these measures in all appropriate contractual documents and providing oversight to ensure that the commitments are met. Monitoring of project activities will occur through NNSA oversight which ensures fulfillment of imposed requirements so

that potential conditions adverse to quality, security, safety health, and environment are promptly identified and actions are taken to correct the conditions and prevent recurrence.

Issued at Washington, DC, this 14 day of July.



Thomas P. D'Agostino,

Administrator, National Nuclear Security Administration

Appendix to the Y-12 SWEIS ROD

Following publication of the *Final Site-Wide Environmental Impact Statement for the Y-12 National Security Complex*, DOE/EIS-0387 (Y-12 Final SWEIS or 2011 Y-12 SWEIS) in March 2011, and prior to issuing of this Record of Decision (ROD), the National Nuclear Security Administration (NNSA) received three comment documents related to the Y-12 Final SWEIS. These comments were received outside of the public comment period established by NNSA for consideration of the SWEIS. However, NNSA endeavors to consider all public comments where reasonably practicable, even when not obligated to do so by the requirements of NEPA and the DOE and CEQ regulations.

As discussed below, the comments raised in the three documents were largely similar to, and in many cases identical to comments that were submitted on the Draft Y-12 SWEIS, and to which NNSA responded in the Y-12 Final SWEIS. Listed below is a summary of the major the comments contained in these three documents, along with NNSA's response to these comments.

Comment 1. The 2011 Y-12 SWEIS is not a site-wide EIS and focused almost exclusively on two proposed DOE actions—construction of a new Uranium Processing Facility (UPF) and the construction of a Complex Command Center (CCC).

Response. The 2011 Y-12 SWEIS provides a comprehensive analysis of the current environmental situation at Y-12, and of ongoing and reasonably foreseeable future

operations and activities at existing and proposed facilities. The SWEIS includes an analysis of all proposed actions and reasonable alternatives ripe for analysis and decisionmaking. The SWEIS was prepared by NNSA in accordance with the requirements of the National Environmental Policy Act (NEPA) and the U.S. Department of Energy (DOE) and the Council on Environmental Quality (CEQ) NEPA regulations. In preparing the 2011 Y-12 SWEIS, NNSA used current and well-documented, well-known scientific models and data to analyze potential environmental impacts. Consequently, NNSA disagrees that the 2011 Y-12 SWEIS is not a site-wide EIS.

In addition to analyzing all current, ongoing and reasonably foreseeable operations and activities at Y-12 that support NNSA's stockpile stewardship and nonproliferation missions, the 2011 Y-12 SWEIS includes an analysis of constructing and operating a UPF at Y-12 in accordance with NNSA's decision to pursue such a facility in the ROD (73 FR 77644) for the *Complex Transformation Supplemental PEIS* (SPEIS) (DOE/EIS-0236-S4). The SWEIS includes an analysis of constructing and operating a CCC at Y-12 because NNSA is considering this facility as a replacement for existing facilities that house equipment and personnel for the plant shift superintendent, fire department, and emergency operations center. Analyzing reasonably foreseeable project-specific actions in a SWEIS, such as the construction and operation of a UPF or CCC, is appropriate. (See comment-response 2.F on page 3-11 of Volume II of the Y-12 Final SWEIS.)

Comment 2. Because NNSA's activities are part of the "nuclear security enterprise," NNSA needs to conduct an updated "nonproliferation assessment" to reassess whether

the activities addressed by the Y-12 Final SWEIS are still consistent with US nonproliferation policy.

Response. As discussed above, the Y-12 Final SWEIS was prepared by NNSA in accordance with the requirements of NEPA and the DOE and CEQ regulations.

Notwithstanding the fact that this comment is beyond the scope of NEPA considerations for a site-wide EIS, NNSA believes that its activities, including those considered in the Y-12 Final SWEIS, are fully consistent with current U.S. nuclear weapons policies and treaty obligations, including the 2010 Nuclear Posture Review (NPR), (U.S. Department of Defense, Nuclear Posture Review Report (2011), available at <http://www.defense.gov/npr>).

An extensive discussion of current nonproliferation and national security policies is included in Section 1.5 of the Y-12 Final SWEIS. The NNSA's nonproliferation mission is actively supported at Y-12. Y-12 participates in developing and implementing domestic and international programs and projects aimed at reducing threats, both internal and external, to the United States from the proliferation of nuclear weapons, weapons technologies, and weapons usable materials.

Comment 3. The Y-12 Final SWEIS fails to fully describe and analyze environmental impacts of excavation, soil characterization, transportation or disposal associated with the UPF.

Response. The Y-12 Final SWEIS includes an analysis of the impacts of the UPF construction, including soil disturbance, transportation, and disposal. Soil disturbance and disposal is addressed in Section 5.1.2 and 5.5.2. Transportation of soil is addressed in Section 5.4.1.2. (See comment-response 12.T.13 on page 3-52 of Volume II of the Y-12 Final SWEIS).

Soil characterization information is contained in detail in the referenced *Wetland and Sensitive Species Survey Report for Y-12: Proposed Uranium Processing Facility*, November 2009, which is a reference for the Wetlands Assessment (Appendix G of the Y-12 Final SWEIS). (See comment-response 12.T.20 on page 3-54 of Volume II of the Y-12 Final SWEIS). Potential impacts related to excavation, soil characterization, transportation and disposal are also considered in the state Aquatic Resource Alteration Permit application. During project execution, characterization of soils excavated and managed for the UPF will be conducted as described in Section 4.0 of the Wetlands Assessment utilizing MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual) processes. (See comment-response 12.T.23 on page 3-55 of Volume II of the Y-12 Final SWEIS). In planning for the Haul Road Extension Corridor and wetland development, no contaminated soil is anticipated. Walk-over radiological surveys have been done and sampling for site characterization is being performed according to MARSSIM and U.S. Environmental Protection Agency requirements. Historical land use in the region is also known which lends support to NNSA's expectation that no contamination will be encountered on the project. Nevertheless, the potential exists for contaminated soils and possibly other media to be encountered during excavation and

other site activities. Prior to commencing ground disturbance, NNSA would survey potentially affected areas to determine the extent and nature of any contaminated media and required remediation in accordance with the procedures established under the site's environmental restoration program and in accordance with appropriate requirements and agreements. As discussed in Section 5.5.2 of the Y-12 Final SWEIS, the potential for additional soil contamination from project activities would be minimized by complying with waste management procedures specified in DOE Order 435.1, Radioactive Waste Management, and DOE Order 450.1A, Environmental Protection Programs.

Comment 4. The Y-12 Final SWEIS provides inadequate analysis of seismic risks and steps taken to ameliorate risks.

Response. Seismology is addressed in Sections 4.5.3 and 5.5.1 of the Y-12 Final SWEIS. As discussed in those sections, Y-12 lies at the boundary between seismic Zones 1 and 2, indicating that minor to moderate damage could typically be expected from an earthquake. Y-12 is traversed by many inactive faults formed during the late Paleozoic Era. There is no evidence of capable faults (surface movement within the past 35,000 years or movement of a recurring nature within the past 500,000 years) in the immediate area of Y-12, as defined by the Nuclear Regulatory Commission's (NRC's) "Reactor Site Criteria" (10 CFR Part 100). The nearest capable faults are approximately 300 miles west of Y-12 in the New Madrid Fault zone. Based on the seismic history of the area, a moderate seismic risk exists at Y-12. However, this should not negatively impact the construction and operation of facilities at Y-12. All new facilities and building

expansions would be designed to withstand the maximum expected earthquake-generated ground acceleration in accordance with DOE Order 420.1B, Facility Safety, and accompanying safety guidelines. (See comment-response 12.E on page 3-33 of Volume II of the Y-12 Final SWEIS.)

The Y-12 Final SWEIS also considers potential impacts that could be caused by earthquakes and other natural phenomena (see Section D.9). Table D.9.3-1 identifies the accidents that were considered for the major operations at Y-12. The accidents analyzed in detail for the Y-12 Final SWEIS bound any impacts that would be associated with earthquakes and other natural phenomena. This is due to the fact that the accidents analyzed in detail in the SWEIS would be expected to result in greater radiological releases than reasonably foreseeable accidents caused by natural phenomena, including seismic activity. (See comment-response 12.M.1 on page 3-39 of Volume II of the Y-12 Final SWEIS.)

Comment 5. NNSA failed to provide adequate public comment opportunity for wetlands proposal announced after close of the Draft SWEIS comment period.

Response. NNSA has never intended to proceed with the proposed action without public comment and compliance with applicable permitting processes and regulations. The need for the Haul Road Extension Corridor and associated potential impacts to wetlands were not identified until after the Draft SWEIS was released for public comment in October 2009. NNSA issued a separate Notice of Proposed Wetlands Action and Wetlands

Assessment (Appendix G of the Y-12 Final SWEIS) in June 2010 in compliance with 10 CFR Part 1022, and provided an 18 day public comment period. In addition, Y-12 has fully complied with the process of obtaining permits for the Haul Road Extension Corridor which is intended to help to identify and resolve environmental impact issues and/or concerns that State or Federal agencies may have. The permitting processes also included public comment periods. The public was given a 30 day comment period for each of the permitting processes conducted by the Tennessee Department of Environment and Conservation (TDEC) and the U.S. Army Corps of Engineers (USACE). Full, detailed project plans and design drawings for the proposed Haul Road Extension Corridor were also available through the USACE and TDEC in addition to the abridged summaries provided in their respective public notices. (See comment-response 12.T.2 on page 3-47 of Volume II of the Y-12 Final SWEIS).

Comment 6. NNSA inappropriately declares the environmental impact of wetlands disruption “not relevant” to the SWEIS.

Response. Following the requirements of 10 CFR Part 1022, NNSA prepared a Wetlands Assessment (Appendix G of the Y-12 Final SWEIS) and determined that the information in the Wetlands Assessment does not reflect a significant impact or substantial change to the SWEIS and the NEPA process. The Y-12 Final SWEIS includes the potential impacts related to the Haul Road Extension Corridor Project. The Y-12 Final SWEIS analyzes all reasonably foreseeable potential environmental impacts associated with implementation of the alternatives analyzed in the SWEIS. (See comment-response 12.T.9 on page 3-50 of Volume II of the Y-12 Final SWEIS.)

Comment 7. The Y-12 Final SWEIS fails to provide adequate analysis of Alternative 6, proposed by the Oak Ridge Environmental Peace Alliance (OREPA) and supported by broader public, which provides a reasonable, unexamined alternative to those considered in the Y-12 Final SWEIS.

Response. NNSA continues to believe that “Alternative 6” is not a reasonable alternative based on its determination that this alternative would not support current and reasonably foreseeable national security requirements.

As discussed in comment-response 9.A on page 3-25 of Volume II of the Y-12 Final SWEIS, NNSA believes that many of the elements of “Alternative 6”, proposed by OREPA, are analyzed in the Y-12 Final SWEIS. For example, the Y-12 Final SWEIS includes an alternative (Alternative 3, Upgrade in-Place) that would accomplish all required dismantlements (and any required assembly) in existing facilities that would be upgraded. As such, the SWEIS includes an alternative that recognizes a need for a Stockpile Stewardship mission that can be achieved through an upgrade in-place to existing facilities. While NNSA agrees that consolidating operations and upgrading in-place could render facilities functional for at least another decade, during which the future of U.S. nuclear force needs could become more clear, NNSA notes that the recently completed Nuclear Posture Review specifically concludes that a UPF is a key investment required to sustain a safe, secure, and effective nuclear arsenal.

The SWEIS also includes an alternative that would provide the minimum assembly/disassembly capacity which NNSA believes would meet national security requirements, which “Alternative 6” does not satisfy. Under this alternative (Alternative 5 – No Net Production/Capability-sized UPF Alternative), NNSA would maintain the capability to conduct surveillance and produce and dismantle secondaries and cases. NNSA would reduce the production capability level to approximately 10 secondaries and cases per year, which would support surveillance operations and a limited Life Extension Program workload; however, this alternative would not support adding new types or increased numbers of secondaries to the stockpile.

decommissioning (D&D) of approximately 188 facilities at ORNL, 112 facilities at Y-12, and remediation of soil and groundwater contamination would occur over the next 30 to 40 years. The IFDP will be conducted as a remedial action under the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA). Cleanup and D&D activities conducted under CERCLA are reviewed through the CERCLA process, which incorporates NEPA values. The potential impacts of the IFDP are analyzed in the cumulative impacts section of the SWEIS in Chapter 6 (See comment-response 12.P on page 3-44 of Volume II of the Y-12 Final SWEIS). Although IFDP D&D activities are expected to commence within the next three to five years, the major IFDP D&D activities would not take place for many years (e.g., most likely any D&D activities associated with the action alternatives in this SWEIS would not take place prior to approximately 2018). These major D&D activities are to be resolved under the provisions of CERCLA and are beyond the planning basis for this SWEIS (See Section 5.16 on page 5-100 of Volume I of the Y-12 Final SWEIS). NNSA believes that the Y-12 Final SWEIS includes an analysis of all reasonable alternatives and all cleanup/waste management actions that are required to be included in a NEPA analysis.

Comment 10. The Tennessee Division of Radiological Health is not listed as a consulting agency. They should be given an opportunity, and time, to comment on the Y-12 Final SWEIS before any ROD is issued.

Response. During the Y-12 SWEIS process, NNSA specifically invited TDEC to be a cooperating agency in the preparation of the SWEIS and also requested that other

agencies express their interest in being designated as a cooperating agency in the preparation of the Y-12 SWEIS (see 70 FR 71270, November 28, 2005). The Tennessee Division of Radiological Health is part of TDEC. TDEC comments on the Draft Y-12 SWEIS are contained on page 2-123 of Volume II of the Y-12 Final SWEIS.

Comment 11. Commentors stated that an article in the Knoxville News-Sentinel on March 31, 2011, casts new light on the seismic conditions of current facilities and underscores OREPA's concerns, first raised in 1994 and repeatedly in the succeeding years, about the structural integrity of facilities at Y-12 including building 9212. The Y-12 Final SWEIS does not include a thorough assessment of risks associated with ongoing operations at Y-12 in the "No Action Alternative," and provides an inadequate evaluation in its accident scenarios.

Response. The Y-12 Final SWEIS considers potential impacts that could be caused by earthquakes and other natural phenomena such as wind, rain/snow, tornadoes and lightning (see Section D.9). Criticality is also considered. Table D.9.3-1 identifies the accidents that were considered for the major operations at Y-12. As shown in that table, the SWEIS considered potential impacts from earthquakes and other natural phenomena, including wind, flood, and lightning. The impacts associated with accidents analyzed in detail for the Y-12 Final SWEIS bound any impacts that would be associated with earthquakes and other natural phenomena. This is due to the fact that the accidents analyzed in detail in the SWEIS would be expected to result in greater radiological releases than reasonably foreseeable accidents caused by natural phenomena at Y-12.

With respect to potential accidents associated with existing/old facilities, as discussed in Section 5.14.1.1, the Y-12 Final SWEIS accident analysis process began with a review of all Y-12 facilities, including Building 9212, with emphasis on building hazard classification, radionuclide inventories, including type, quantity, and physical form, and storage and use conditions. For each of these facilities, the next step was to identify the most current documentation describing and quantifying the risks associated with its operation. Current safety documentation was obtained for all of these facilities. From these documents, potential accident scenarios and source terms (release rates and frequencies) associated with those facilities were identified. (See comment-response 12.M.1 on page 3-39 of Volume II of the Y-12 Final SWEIS).