

**FINDING OF NO SIGNIFICANT IMPACT FOR THE  
ENVIRONMENTAL ASSESSMENT FOR OFF-SITE  
DEPLETED URANIUM MANUFACTURING**



November 2024

U.S. DEPARTMENT OF ENERGY  
NATIONAL NUCLEAR SECURITY ADMINISTRATION  
FINDING OF NO SIGNIFICANT IMPACT FOR THE  
ENVIRONMENTAL ASSESSMENT FOR  
OFF-SITE DEPLETED URANIUM MANUFACTURING

AGENCY: Department of Energy, National Nuclear Security Administration

ACTION: Finding of No Significant Impact

SUMMARY: The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the United States (U.S.) Department of Energy (DOE), has the primary responsibility to maintain and enhance the safety, security, and performance of the U.S. nuclear weapons stockpile, and support other DOE/NNSA missions. One of NNSA's critical production sites is the Y-12 National Security Complex (Y-12) in Oak Ridge, Tennessee. Y-12 is the lead manufacturing plant for depleted uranium (DU) and DU alloy capabilities, which are an important strategic material for ongoing and planned modernization of the nation's nuclear weapons stockpile. DU manufacturing is currently performed in multiple facilities at Y-12, but those facilities are aging and would require significant upgrades and investments to meet future DU requirements. Replacement facilities currently in preliminary planning would also not be reasonably accomplished in time to meet future DU requirements. Until new facilities are available, supplemental production with relocatable government furnished equipment (GFE) is being evaluated. Consequently, NNSA prepared an Environmental Assessment (EA) (DOE/EA-2252) to analyze the potential environmental effects associated with contracting for DU manufacturing in existing commercial facilities in Oak Ridge, Tennessee and Jonesborough, Tennessee to supplement the DU production at Y-12.

NNSA is proposing to contract for supplemental DU manufacturing in three commercial facilities: (1) the Teledyne Brown Engineering (TBE) Test and Demonstration Facility (TDF), located at 350 Centrifuge Way in Oak Ridge, approximately 0.75 miles northeast of Y-12; (2) the Manufacturing Sciences Corporation (MSC) facility, located at 804 S. Illinois Avenue in Oak Ridge, approximately 0.7 miles northeast of Y-12; and (3) the Aerojet Ordnance Tennessee (AOT) facility, located at 1367 Old State Route 34 in Jonesborough, Tennessee, approximately 100 miles east of Y-12. Each of these facilities currently conducts DU operations for the commercial industry and/or in support of federal agencies such as NNSA and the Department of Defense (DoD). To support supplemental DU manufacturing when needed, minor internal upgrades would be required at each of the three commercial facilities and GFE would be installed at the TDF and the MSC facility. External changes at each of the three commercial facilities would be required to support construction activities, utility upgrades, and/or installation of storage facilities. Less than one acre of land could be disturbed at each commercial site. Upon completion of all appropriate *National Environmental Policy Act* (NEPA) documentation, operations, which could begin as soon as 2024 under a service agreement/contract, would be conducted by commercial personnel, with technical oversight from Y-12 personnel to ensure manufacturing meets quality and technical requirements.

In July 2024, NNSA published the Draft EA on the NNSA NEPA web page (<https://www.energy.gov/nnsa/nnsa-nepa-reading-room>) and the DOE NEPA web page (<https://www.energy.gov/nepa/nepa-documents>) for public review and comment. NNSA also notified the City of Oak Ridge and the Tennessee Department of Environment and Conservation (TDEC) that the Draft EA was available for review. NNSA also announced the availability of the Draft EA in newspapers in the Oak Ridge and Jonesborough areas. In the notices, NNSA provided an email address and postal address where comments could be submitted. During the approximately 30-day comment period (August 1-31, 2024) on the Draft EA, six comment documents were received by NNSA. Appendix A of the Final EA identifies the comments in those comment documents, as well as NNSA's responses to those comments. NNSA made appropriate changes to the Draft EA in response to public comments.

The Y-12 Field Office (YFO) Manager has determined that the Proposed Action described in the EA is not a major Federal action that significantly affects the quality of the human environment within the meaning of the NEPA. Therefore, preparation of an environmental impact statement (EIS) is not required.

**ADDRESS:** The Final EA and this Finding of No Significant Impact (FONSI) have been prepared and are available to the general public on the NNSA NEPA web page (<https://www.energy.gov/nnsa/nnsa-nepa-reading-room>) and/or the DOE NEPA web page (<https://www.energy.gov/nepa/doe-environmental-assessments>). Requests for additional information may be submitted via regular mail to the NNSA NEPA Document Manager, Attn: DU EA, P.O. Box 2050, Oak Ridge, TN 37831; or by email: [NEPA.Comments@yfo.doe.gov](mailto:NEPA.Comments@yfo.doe.gov).

**SUPPLEMENTARY INFORMATION:** The EA analyzes the potential environmental effects of NNSA's proposal to perform DU manufacturing in existing commercial facilities in Oak Ridge, Tennessee and Jonesborough, Tennessee to supplement the DU production at Y-12.

**ENVIRONMENTAL IMPACTS:** The analysis in Chapter 3 of the EA shows that the effects associated with construction and operation related to the GFE equipment and manufacturing would be minor at all three commercial facilities. Land disturbance would be minimal (i.e., less than one acre) and generally limited to previously disturbed land. Visually, the external modifications would not notably change the appearances of any of the facilities. Short-term air quality effects associated with construction would occur, but emissions would be below *de minimis* thresholds. There would be no notable operational air emissions or increases in greenhouse gases. There would also be no notable noise sources associated with construction and operation at any of the facilities. Effluent discharges would not appreciably change and groundwater and surface water would not be affected. At all three facilities, there would be no notable exterior construction; therefore, impacts to biological resources, including threatened and endangered or special status species, would not be expected. Construction or manufacturing activities at the sites would not affect cultural resources.

Because the peak construction workforce (20-40 persons) at any of the commercial facilities would be negligible compared to the populations in the regions of influence (ROIs), socioeconomic effects during construction, although beneficial, are expected to be negligible. The additional



operational workforce (a maximum of 10 persons) would also be inconsequential compared to the populations in the ROIs. During construction and operations, the addition of a maximum of 40 persons at any of the commercial facilities would not affect traffic on area roads.

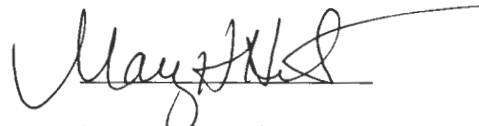
No disproportionate and adverse environmental or economic effects on minority or low-income populations are expected. Workers would be subject to minimal occupational risks and would be expected to receive radiological doses similar to existing operations at the three commercial facilities.

At the TDF and MSC facilities, there would be no additional radiological or hazardous chemical emissions or effluents and no additional accident risks compared to current operations. At the AOT facility, potential accident impacts would result in negligible radiological and chemical consequences. NNSA is required to consider intentional destructive acts, such as sabotage and terrorism, in the NEPA documents it prepares. As at any location, the possibility exists for random acts of violence and vandalism. Because of the low hazard posed by DU oxide, the material would not be an attractive target for a terrorist attack or other intentional destructive acts.

Operations would generate minor quantities of low-level radioactive waste (LLW), hazardous waste, and nonhazardous waste that would be disposed of in existing treatment, storage, and disposal facilities. Transportation of DU materials and LLW would result in essentially no latent cancer fatality risks to transport crews or the public. With regard to utility requirements, water and electricity requirements would increase, but would be adequately supported by the existing infrastructure.

**DETERMINATION:** Based on the analysis in DOE/EA-2252, I conclude that the Proposed Action of contracting for DU manufacturing in existing commercial facilities in Oak Ridge, Tennessee and Jonesborough, Tennessee to supplement the DU production at Y-12 does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, preparation of an EIS is not required.

Issued in Oak Ridge, Tennessee, this 25 day of November 2024.



Mary Helen Hitson  
Manager, Y-12 Field Office