[6450-01-P]

DEPARTMENT OF ENERGY

National Nuclear Security Administration

Notice of Availability of Final Environmental Impact Statement for the Surplus Plutonium Disposition Program

AGENCY: National Nuclear Security Administration, Department of Energy.

ACTION: Notice of availability.

SUMMARY: The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy (DOE), announces the availability of the Final Environmental Impact Statement for the Surplus Plutonium Disposition Program (SPDP EIS) (DOE/EIS–0549) in compliance with the National Environmental Policy Act of 1969 (NEPA). NNSA prepared the Final SPDP EIS to evaluate the potential environmental impacts of dispositioning 34 metric tons (MT) of surplus plutonium.

DATES: NNSA will not issue a Record of Decision (ROD) on the proposal for a minimum of 30 days after the date that the U.S. Environmental Protection Agency (EPA) publishes its Notice of Availability (NOA) in the *Federal Register*.

ADDRESSES: Requests for additional information related to the EIS should be sent by email to *SPDP-EIS@nnsa.doe.gov* or to Ms. Maxcine Maxted, NEPA Document Manager, National Nuclear Security Administration, Office of Material Management and Minimization, P.O. Box A, Bldg. 730-2B, Rm. 328, Aiken, SC 29802.

The SPDP EIS is available on the internet at: *https://www.energy.gov/nnsa/nnsa-nepa-reading-room* and *https://www.energy.gov/nepa/doeeis-0549-surplus-plutonium-disposition-program*.

FOR FURTHER INFORMATION CONTACT: For further information about this notice, please contact Ms. Maxcine Maxted, NEPA Document Manager, National Nuclear Security Administration, Office of Material Management and Minimization, P.O. Box A, Bldg. 730-2B, Rm. 328, Aiken, SC 29802; phone: (803) 952-7434; email: *SPDP-EIS@nnsa.doe.gov*.

SUPPLEMENTARY INFORMATION:

Background

NNSA prepared the SPDP EIS pursuant to NEPA (Title 42 USC 4321 *et seq*.), the Council on Environmental Quality's NEPA regulations (40 CFR parts 1500–1508), and the DOE NEPA implementing procedures (10 CFR part 1021). NNSA's previous NEPA reviews and decisions regarding the disposition of surplus plutonium are summarized in Section 1.1 of the SPDP EIS. The following paragraphs describe recent developments relevant to the scope of the SPDP EIS. In 2015, NNSA completed the Surplus Plutonium Disposition Supplemental Environmental Impact Statement (SPD Supplemental EIS) (DOE/EIS-0283-S2). In the SPD Supplemental EIS, NNSA evaluated the environmental impacts of alternatives for dispositioning 13.1 MT of surplus plutonium (7.1 MT of pit and 6 MT of non-pit) for which a disposition path had not been assigned. The alternatives evaluated in the 2015 SPD Supplemental EIS included the Mixed Oxide (MOX) Fuel Alternative, the Waste Isolation Pilot Plant (WIPP) Alternative, and two variations of waste immobilization. In addition, NNSA evaluated four options for pit disassembly and conversion (pit disassembly and conversion is equivalent to pit disassembly and processing [PDP] as used in this Notice and the SPDP EIS) using facilities at the Savannah River Site (SRS) and Los Alamos National Laboratory (LANL). In 2015, NNSA announced that its preferred alternative for disposition of the six MT of non-pit surplus plutonium evaluated in the SPD Supplemental EIS was to prepare the non-pit surplus plutonium for eventual disposal at the WIPP facility in Carlsbad, New Mexico (80 FR 80348, December 24, 2015). In a 2016 ROD, NNSA announced a decision to disposition the six MT of non-pit surplus plutonium by downblending it with an adulterant (downblending is a process equivalent to dilution in the dilute and dispose strategy as used in the SPDP EIS), packaging it as defense-related contact-handled transuranic (CH-TRU) waste, and shipping it to the WIPP facility for disposal (81 FR 19588). In the 2016 ROD, NNSA did not make a decision about the disposition of the 7.1 MT of pit

plutonium or about the various options for pit disassembly and conversion that were analyzed in the 2015 SPD Supplemental EIS.

In 2016, NNSA, partnering with the U.S. Army Corps of Engineers, developed an independent cost estimate for the MOX Fuel Fabrication Facility (MFFF) project and concluded that the cost of the project, upon completion of construction, would be approximately $17 billion and construction would not be complete until 2048. Congress directed NNSA to prepare a lifecycle cost estimate for disposal of surplus plutonium using the same approach announced for the six MT, now referred to as the dilute and dispose strategy. The completed cost estimate indicated that the estimate-to-complete lifecycle cost of the dilute and dispose strategy would be substantially lower than the cost to complete the MOX project. In response, the Secretary of Energy halted construction of the MOX fuel project in May 2018 by waiving the requirement to use funds for construction and support activities for the MFFF per the National Defense Authorization Act. In a letter dated May 10, 2018, the Secretary of Energy certified that "the remaining lifecycle cost for the dilute and dispose strategy will be less than approximately half of the estimated remaining lifecycle cost of the MOX fuel program." On October 10, 2018, NNSA issued a notice terminating the contract for construction of MFFF. On February 8, 2019, the U.S. Nuclear Regulatory Commission (NRC) terminated the construction license for MFFF (NRC 2019). NNSA is preparing this SPDP EIS to evaluate alternatives for disposition of the 34 MT of surplus plutonium previously designated for disposition using the MOX fuel program that no longer has a disposition path.

In 2020, NNSA prepared a Supplement Analysis (SA) based on the analysis presented in the 2015 SPD Supplemental EIS. NNSA determined that disposition of 7.1 MT of non-pit surplus plutonium was not a substantial change in the action analyzed in the 2015 SPD Supplemental EIS to disposition 7.1 MT of pit plutonium via the WIPP Alternative and that the environmental impacts had been sufficiently analyzed. NNSA subsequently issued an Amended ROD (AROD) to include preparation of an additional 7.1 MT of non-pit surplus plutonium for disposal as

defense-related CH-TRU waste at the WIPP facility (85 FR 53350, August 28, 2020). In the same 2020 AROD, NNSA also decided that non-pit metal processing (NPMP) may be performed at either LANL or SRS. The SA and AROD are available online at *https://www.energy.gov/nnsa/nnsa-nepa-reading-room.*

The 7.1 MT of non-pit surplus plutonium referred to in the 2020 AROD is part of the 34 MT of surplus plutonium that NNSA had decided to disposition by fabricating it into MOX fuel for use in commercial reactors. The disposition of that 34 MT is the subject of this SPDP EIS.

Purpose and Need for Agency Action

Since the end of the Cold War in the early 1990s and the Presidential declarations of surplus fissile materials, DOE has been charged with the disposition of surplus plutonium.

NNSA's purpose and need for action is to safely and securely disposition plutonium that is surplus to the Nation's defense needs so that it is not readily usable in nuclear weapons. NNSA needs to disposition 34 MT of surplus plutonium in a safe and secure manner and in a reasonable time frame at a cost consistent with NNSA priorities and fiscal realities. To achieve this, NNSA must use mature methods and proven technologies that are based on processes requiring minimal research and engineering development.

Proposed Action and Alternatives

Both the Preferred Alternative and the No Action Alternative in the SPDP EIS use the dilute and dispose strategy, and both address up to 7.1 MT of non-pit surplus plutonium that NNSA previously decided to dispose of using the dilute and dispose strategy (85 FR 53350). The dilute and dispose strategy includes processing surplus plutonium to plutonium oxide, diluting it with an adulterant to inhibit plutonium recovery, and disposing the resulting defense-related CH-TRU waste at the WIPP facility.

Preferred Alternative

NNSA's Preferred Alternative is to use the dilute and dispose strategy for 34 MT of surplus plutonium comprised of both pit and non-pit surplus plutonium. The exact amounts of pit and

non-pit forms of plutonium that compose the 34 MT are safeguarded, so they cannot be delineated further. Therefore, to bound the impacts, the analysis in the SPDP EIS evaluates the impacts of dispositioning 34 MT of surplus plutonium in pit form and the impacts of dispositioning 7.1 MT of non-pit surplus plutonium. The activities that are part of the Preferred Alternative would occur at five DOE sites—the Pantex Plant (Pantex) in Texas, LANL in New Mexico, SRS in South Carolina, the Y-12 National Security Complex (Y-12) in Tennessee, and the WIPP facility in New Mexico. NNSA has developed four sub-alternatives for the Preferred Alternative based on the location of activities.

Base Approach Sub-Alternative

Under the Base Approach Sub-Alternative, NNSA analyzes the impacts of shipping 34 MT of surplus pit plutonium from Pantex to LANL and disassembling and processing (*i.e.*, PDP) of the 34 MT of surplus pit plutonium at LANL with subsequent shipment of the decontaminated and oxidized highly enriched uranium (HEU) to Y-12. NNSA also analyzes the impacts of processing 7.1 MT of non-pit surplus plutonium at LANL, using some of the same capabilities as PDP. This sub-alternative would rely on expanding existing capabilities at LANL in the Plutonium Facility (PF-4) for PDP and modifying or building additional support facilities. The resulting plutonium oxide from the surplus pit and non-pit surplus plutonium would be shipped to K-Area at SRS, where it would be diluted, characterized, and packaged for shipment to and disposal at the WIPP facility.

SRS NPMP Sub-Alternative

The SRS NPMP Sub-Alternative is similar to the Base Approach Sub-Alternative. NNSA analyzes the impacts of shipping 34 MT of surplus pit plutonium from Pantex to LANL and PDP of the 34 MT of surplus pit plutonium at LANL. The decontaminated and oxidized HEU would then be shipped to Y-12. This sub-alternative would rely on NNSA expanding existing capabilities at LANL in PF-4 for PDP and modifying or building additional support facilities. Plutonium oxide resulting from PDP would be shipped to SRS (K-Area). Unlike the Base

Approach Sub-Alternative, under this sub-alternative, NNSA does not analyze NPMP at LANL. Instead, processing of 7.1 MT of non-pit surplus plutonium would occur in the SRS K-Area either in Building 105-K or in a modular system adjacent to the building. Under this sub-alternative, NNSA considers the impacts of dilution and characterization and packaging (C&P) of the diluted plutonium oxide as defense-related CH-TRU waste in SRS's K-Area for shipment to and disposal at the WIPP facility.

All LANL Sub-Alternative

Under the All LANL Sub-Alternative, NNSA would use only capabilities at LANL for the entire disposition pathway prior to shipment to the WIPP facility. Under this Sub-Alternative, NNSA analyzes the impacts of shipping 34 MT of surplus pit plutonium from Pantex to LANL, PDP at LANL, and shipment of the decontaminated and oxidized HEU to Y-12. NNSA would rely on expanding existing capabilities at LANL in PF-4 and modifying or building additional support facilities. NNSA also analyzes the impacts of processing 7.1 MT of non-pit surplus plutonium at LANL in PF-4. Under the All LANL Sub-Alternative NNSA considers the impacts of dilution in PF-4 and C&P of the diluted plutonium oxide defense-related CH-TRU waste for shipment to and disposal at the WIPP facility.

All SRS Sub-Alternative

Under the All SRS Sub-Alternative, NNSA would use only capabilities at SRS for the entire disposition pathway prior to shipment to the WIPP facility. Under this sub-alternative, NNSA analyzes the impacts of shipping 34 MT of surplus pit plutonium from Pantex to SRS and the disassembly and processing of the 34 MT of surplus pit plutonium and processing 7.1 MT of non-pit surplus plutonium in a new capability installed at SRS in either K-Area or F-Area. NNSA analyzes the subsequent shipment of the decontaminated and oxidized HEU to Y-12 and the shipment of by-product material to LANL. Under this Sub-Alternative, NNSA considers the impacts of dilution and C&P of the diluted plutonium oxide defense-related CH-TRU waste in SRS's K-Area for shipment to and disposal at the WIPP facility.

No Action Alternative

The No Action Alternative is the continued management of 34 MT of surplus plutonium. This includes (1) continued storage of surplus pits at Pantex, (2) continuing the plutonium mission at LANL to process up to 400 kg of actinides (including surplus plutonium) per year, and (3) disposition of up to 7.1 MT of non-pit surplus plutonium for which the disposition decision, using the dilute and dispose strategy, was announced in NNSA's 2020 AROD (85 FR 53350).

Public Involvement

The SPDP EIS is an element of the NEPA strategy related to the disposition of surplus plutonium, which NNSA announced in the Notice of Intent published in the *Federal Register* on December 16, 2020 (85 FR 81460). In that announcement, NNSA provided information regarding NNSA's overall NEPA strategy related to fulfilling the purpose and need to disposition 34 MT of surplus plutonium.

On December 16, 2022, NNSA electronically published the Draft SPDP EIS and published an NOA in the *Federal Register* announcing a 60-day public comment period for the Draft SPDP EIS (87 FR 77096). EPA also published its NOA of the Draft SPDP EIS on December 16, 2022 (87 FR 77106). The comment period was scheduled to end on February 14, 2023. On February 7, 2023, NNSA notified the EPA that it was extending the comment period until March 16, 2023. On February 10, 2023, the EPA published a notice in the *Federal Register* that announced the extension to the public comment period (88 FR 8843). NNSA held three in-person public hearings and one internet-based (with telephone access) virtual public hearing. The in-person public hearings were held on January 19, 2023, in North Augusta, South Carolina, on January 24, 2023, in Carlsbad, New Mexico, and on January 26, 2023, in Los Alamos, New Mexico. The virtual public hearing was held on January 30, 2023. In addition to the public hearings, the public was encouraged to provide comments via U.S. postal mail, by phone, or electronically via email. NNSA received 121 comment documents from individuals, interested groups, and Federal, State, and local agencies during the public comment period on the Draft SPDP EIS.

NNSA considered all comments received before May 2023, on the Draft SPDP EIS in preparing the Final EIS and revised the Draft EIS to incorporate changes as a result of public comments. The Final EIS also includes NNSA's responses to all comments received.

NNSA will consider the environmental impact analysis presented in the Final SPDP EIS, along with other information, when making decisions regarding surplus plutonium disposition. NNSA will then issue a ROD on the proposal no sooner than 30 days following the date that EPA publishes its NOA in the *Federal Register*.

Signing Authority

This document of the Department of Energy was signed on December 19, 2023, by Jill Hruby, Under Secretary for Nuclear Security and Administrator, National Nuclear Security Administration, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on January 12, 2024.

Treena V. Garrett,
Federal Register Liaison Officer,
U.S. Department of Energy.

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