



DEPARTMENT OF ENERGY

National Nuclear Security Administration

Notice of Intent to Prepare an Environmental Impact Statement for the Surplus Plutonium Disposition Program

AGENCY: National Nuclear Security Administration, Department of Energy.

ACTION: Notice of intent.

SUMMARY: The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the United States (U.S.) Department of Energy (DOE), announces its intent, consistent with the National Environmental Policy Act of 1969 (NEPA), to prepare a Surplus Plutonium Disposition Program (SPDP) Environmental Impact Statement (EIS) to evaluate alternatives for the safe and timely disposition of plutonium surplus to the defense needs of the United States. NNSA will prepare a SPDP EIS to evaluate the dilute and dispose alternative, also known as “plutonium downblending,” and any other identified reasonable alternatives for the disposition of surplus plutonium. The dilute and dispose approach would require new, modified, or existing capabilities at the Savannah River Site (SRS), Los Alamos National Laboratory (LANL), Pantex Plant (Pantex), and the Waste Isolation Pilot Plant (WIPP). The purpose of this Notice is to invite public participation in the process and to encourage public involvement on the scope and alternatives that should be considered.

DATES: The public scoping period begins with the publication of this Notice in the *Federal Register* and continues until [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments received after this date will be considered to the extent practicable.

In light of recent public health concerns, NNSA will be hosting an internet- and telephone-based, virtual public scoping meeting in place of an in-person meeting. The date of the meeting will be provided in a future notice posted on the following website: <https://www.energy.gov/nnsa/nnsa->

nepa-reading-room. NNSA will hold the meeting no earlier than 15 days from the posting of the notice. Public scoping meeting details will also be announced in local media outlets.

ADDRESSES: Written comments on the scope of the SPDP EIS, requests to be placed on the SPDP EIS mailing list, and requests for information related to the SPDP EIS should be sent to: Mr. Jeffrey Galan, NNSA NEPA Document Manager, by regular mail at: Mr. Jeffrey Galan, NEPA Document Manager, NNSA Office of Material Management and Minimization, Savannah River Site, P.O. Box A, Bldg. 730-2B, Rm. 328, Aiken, SC 29802; or sent by email to *SPDP-EIS@NNSA.DOE.GOV* or phone to 803-952-7434.

NNSA invites other Federal and state agencies, state and local governments, Native American tribes, industry, other organizations, and members of the public to submit comments to assist in identifying environmental issues and in determining the appropriate scope of the SPDP EIS. Written and oral comments will be given equal weight and NNSA will consider all comments received or postmarked by the end of the comment period in preparing the Draft SPDP EIS. Comments received or postmarked after the comment period will be considered to the extent practicable. Before including your address, phone number, email address, or other personally identifiable information in your comment, please be advised that your entire comment—including your personally identifiable information—may be made publicly available. If you wish for NNSA to withhold your name and/or other personally identifiable information, please state this prominently at the beginning of your comment. You may also submit comments anonymously.

This Notice of Intent, information related to the online scoping meeting (including internet and telephone access details), and instructions on how to participate will be available at the following website: <https://www.energy.gov/nnsa/nnsa-nepa-reading-room> and announced in local media outlets.

FOR FURTHER INFORMATION CONTACT: For further information about this Notice, please contact Mr. Jeffrey Galan, NNSA NEPA Document Manager, by regular mail at: Mr.

Jeffrey Galan, NEPA Document Manager, NNSA Office of Material Management and Minimization, Savannah River Site, P.O. Box A, Bldg. 730-2B, Rm. 328, Aiken, SC 29802; phone: 803-952-7434; or email to: *SPDP-EIS@NNSA.DOE.GOV*.

Requests for general information concerning the NNSA NEPA process should be directed to Mrs. Amy Miller, NEPA Compliance Officer, NNSA Office of General Counsel, P.O. Box 5400, Albuquerque, NM 87185-5400; or sent by email to *SPDP-EIS@NNSA.DOE.GOV*.

SUPPLEMENTARY INFORMATION:

NNSA will prepare the SPDP EIS in accordance with the previous version of the Council on Environmental Quality regulations (40 CFR parts 1500-1508, 1978 as amended in 1986 and 2005), as this version was controlling at the time the NEPA process for the SPDP was initiated.

Background

The following is a summary of NNSA's previous NEPA reviews and decisions regarding the disposition of surplus plutonium.

Following the end of the Cold War, the United States in 1994 declared 52.5 metric tons of plutonium surplus to the defense needs of the Nation. In 2007, an additional 9 metric tons of plutonium was declared surplus. Since the mid-1990s, NNSA has prepared several NEPA reviews to evaluate alternative means of assuring that the surplus plutonium would no longer be suitable for use in nuclear weapons. In 1996, DOE completed the *Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement* (DOE/EIS-0229). DOE evaluated deep borehole, immobilization, and reactor alternatives, each with sub-alternatives, for dispositioning surplus plutonium. In a subsequent Record of Decision (ROD) (62 FR 304, January 21, 1997), NNSA documented its decision to (1) immobilize some or all surplus plutonium for disposal in a geologic repository, (2) fabricate some surplus plutonium into mixed oxide (MOX) fuel for irradiation in commercial reactors, (3) consolidate storage of pit plutonium at Pantex, and (4) consolidate storage of non-pit plutonium at the SRS.

In 1999, DOE completed the *Surplus Plutonium Disposition Environmental Impact Statement* (SPD EIS, DOE/EIS-0283). In the SPD EIS, DOE evaluated immobilization (ceramic and glass) alternatives and MOX fuel fabrication alternatives, as well as siting alternatives for a Mixed-Oxide Fuel Fabrication Facility (MFFF), a pit disassembly and conversion facility (PDCF), and an immobilization facility. In a subsequent ROD (65 FR 1608, January 11, 2000), NNSA documented its decision to pursue a dual track approach for plutonium disposition by (1) immobilizing about 17 metric tons of surplus weapons-usable plutonium, (2) using 33 metric tons of surplus weapons-usable plutonium to fabricate MOX fuel for irradiation in commercial nuclear reactors, and 3) constructing and operating an immobilization facility, a PDCF, and an MFFF at SRS.

On April 19, 2002 (67 FR 19432) and April 24, 2003 (68 FR 20134), NNSA decided to (1) cancel the immobilization program, (2) immediately consolidate storage of plutonium then stored at the Rocky Flats Environmental Technology Site at SRS, and (3) designate 34 metric tons rather than 33 metric tons of surplus plutonium for fabrication into MOX fuel for irradiation in commercial nuclear reactors. In 2008, NNSA decided to construct and operate a Waste Solidification Building (WSB) at SRS to prepare waste from the MFFF and the PDCF for disposal.

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 MOX Fuel Alternative, the WIPP Alternative (also referred to as “plutonium downblending” or “dilute and dispose”), and two variations on immobilization for disposition of 6 metric tons of non-pit plutonium and 7.1 metric tons of pit plutonium. This 13.1 metric tons of surplus plutonium, for which a disposition path had not previously been assigned, was in addition to the 34 metric tons NNSA decided to disposition using the MOX approach. In addition, NNSA evaluated options for pit disassembly and conversion. In 2015 (80 FR 80348, December 24, 2015), DOE announced its preferred alternative for the 6 metric tons of non-pit plutonium evaluated in the SPD Supplemental EIS. In 2016, NNSA issued a ROD to dispose of the 6 metric tons of non-pit plutonium using the WIPP Alternative (dilute and dispose) (81 FR 19588, April 5, 2016). Using

that approach, NNSA is currently diluting the 6 metric tons of non-pit plutonium with an adulterant using modified or existing facilities, packaging the material as contact-handled TRU waste, and shipping it to WIPP for emplacement.

In addition, in August 2020 NNSA prepared a Supplement Analysis (SA) based on the analysis presented in the 2015 SPD SEIS to evaluate using dilute and dispose for disposition of 7.1 MT of non-pit plutonium that comprises a part of the 34 MT (DOE/EIS-0283-SA-4, August 2020). NNSA subsequently issued an Amended ROD (AROD) to use dilute and dispose to disposition that 7.1 MT of the 34 MT mission (85 FR 53350, August 28, 2020). The SA and AROD are available online at <https://www.energy.gov/nnsa/nnsa-nepa-reading-room>.

This same dilute and dispose process is being proposed to disposition the full 34 MT of surplus plutonium that is the responsibility of the Surplus Plutonium Disposition Program.

Purpose and Need for Agency Action

NNSA's purpose in taking action is to reduce the threat of nuclear weapons proliferation worldwide by dispositioning surplus plutonium in the United States in a safe and secure manner, ensuring that it can never again be readily used in nuclear weapons.

Since the end of the Cold War in the early 1990s and the Presidential declarations of surplus fissile materials, NNSA has been charged with dispositioning surplus plutonium. Over the last two and a half decades, NNSA has studied many alternative technologies and locations for surplus plutonium disposition. There is a need for NNSA to implement a disposition process and strategy that can be safely executed in a reasonable time at a cost consistent with fiscal realities.

Proposed Action and Alternatives

Preferred Alternative. NNSA proposes implementing the dilute and dispose approach to disposition surplus weapons-usable plutonium. The effort would require new, modified, or existing capabilities at SRS, LANL, Pantex, and WIPP. Under the dilute and dispose approach, NNSA

would convert pit and non-pit metal plutonium to oxide, blend surplus plutonium in oxide form with an adulterant, and emplace the resulting CH-TRU waste underground in WIPP. NNSA believes that implementing a proven method is the most efficient way to move forward with the Surplus Plutonium Disposition Program. NNSA evaluated this process in the SPD Supplemental EIS (DOE/EIS-0283-S-2, April 2015) and decided to use it to dispose of 6 MT of non-pit plutonium (81 FR 19588, April 5, 2016). The process was also evaluated in the Supplement Analysis for Disposition of Additional Non-Pit Surplus Plutonium (DOE/EIS-0283-SA-4, August 2020) and NNSA decided to use it to disposition 7.1 MT of non-pit plutonium (85 FR 53350, August 28, 2020). Dilute and dispose is NNSA's preferred alternative for the disposition of the full 34 MT of surplus plutonium that is the responsibility of the Surplus Plutonium Disposition Program.

No Action Alternative. NNSA will evaluate a No Action Alternative in the SPDP EIS. The No Action Alternative will be continued safe storage of surplus pit plutonium at Pantex and disposition of 7.1 MT of non-pit plutonium using the dilute and dispose approach.

If any other reasonable alternatives are identified during the scoping period, NNSA will also evaluate those alternatives in the EIS. Following completion of the SPDP EIS, NNSA will select an alternative for disposition of surplus weapons-usable plutonium, including locations and options for processing capabilities, and the specific quantity of material to be dispositioned.

Potential Environmental Issues for Analysis

NNSA tentatively identified the following environmental issues that will be analyzed in the SPDP EIS. This list is not intended to be comprehensive.

- Impacts to the general population and onsite workers from radiological and non-radiological releases resulting from construction and operation of facilities required to implement the proposed action and alternatives.

- Impacts of transporting plutonium materials from current storage and management locations to facilities required to disassemble pits and dilute plutonium oxide. Analysis of transportation to WIPP may be summarized from existing NEPA analyses, as appropriate.
- Impacts to the general public and onsite workers from postulated accidents.
- Socioeconomic impacts to local communities.
- Disproportionately high and adverse impacts on low-income and minority populations (environmental justice).
- Impacts on air quality, surface water quality, and groundwater quality.
- Impacts to land use, biota, and threatened and endangered species.
- Impacts to cultural resources.
- Impacts to geology and soils, including seismic risks.

EIS Preparation and Schedule

Following the scoping period, and after consideration of comments received during scoping, NNSA will prepare a draft EIS for disposition of surplus plutonium. The U.S. Environmental Protection Agency (EPA) will announce the availability of the draft EIS in the *Federal Register*. NNSA will also publish a Notice of availability in the *Federal Register* and announce the draft EIS in local media outlets. NNSA expects to issue the draft SPDP EIS in calendar year 2021.

Signing Authority

This document of the Department of Energy was signed on December 10, 2020, by William A. Bookless, Acting Under Secretary for Nuclear Security and Administrator, NNSA, 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 December 11, 2020.

Treena V. Garrett,

Federal Register Liaison Officer,

U.S. Department of Energy.

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