Surplus Plutonium Disposition Dilute and Dispose NEPA

April 17, 2019

Paloma Richard, NEPA Document Manager

— PERMANENT THREAT REDUCTION —

MATERIAL MANAGEMENT AND MINIMIZATION

CONVERT, REMOVE, DISPOSE

M3-SR-18-0001

Outline

- Dilute and Dispose Approach
- Relevant history of SPD NEPA
- NEPA Status and Timeline for the 34 MT mission
- Summary and Contact Information

Dilute and Dispose Approach

- The dilute and dispose approach, also referred to as plutonium downblending, uses an inert material to dry blend with plutonium oxide for disposal at a geologic repository.
- Surplus plutonium has been successfully dispositioned as contact handled transuranic waste at the Waste Isolation Pilot Plant (WIPP).
- The U.S. Department of Energy (DOE/NNSA) is currently using dilute and dispose to disposition 6 MT of surplus plutonium under a decision made in 2016 informed by the 2015 Surplus Plutonium Disposition (SPD) Supplemental Environmental Impact Statement (SEIS).
- DOE/NNSA is in the process of finalizing the NEPA strategy, data collection, analysis, and development tasks required for NEPA on the 34 MT mission.

Relevant History of SPD NEPA

- 1999 SPD EIS
  - Evaluated several disposition paths, including fabrication of Mixed-Oxide(MOX) fuel for use in existing domestic commercial reactor(s).
  - In 2000, DOE/NNSA decided to disposition 33 MT of surplus plutonium using the MOX approach. In 2003, DOE/NNSA decided to change the amount of surplus plutonium to be dispositioned using the MOX approach from 33 MT to 34 MT.
- 2015 SPD SEIS
  - Tiered from the 1999 SPD EIS. Analyzed disposition options for 13.1 MT of surplus Pu with no designated disposition path.
  - In April 2016, DOE/NNSA published a Record of Decision (ROD) based on that analysis for 6 MT of surplus non-pit plutonium.
    - Downblending operations at Savannah River Site (SRS) are underway to prepare the 6 MT for disposal at WIPP.
  - DOE/NNSA did not issue a ROD for the remaining 7.1 MT of material that was analyzed.

NEPA Status and timeline for 34 MT mission

- DOE/NNSA has made a determination to initiate an SEIS for the 34 MT mission.
  - After thorough examination of prior SPD NEPA reviews
- DOE/NNSA expects to publish the Notice of Intent (NOI) in the *Federal Register* in the near future.
- The SEIS will analyze the preferred alternative – Dilute and Dispose – in addition to the No Action Alternative; other reasonable alternatives or options may be identified and analyzed.
- There will be a 60-day public comment period on the DRAFT SEIS when it is publicly released.
- DOE/NNSA expects to hold at least three public hearings on the DRAFT SEIS during the public comment period near sites where the majority of activities would occur – near Los Alamos National Laboratory, SRS, and WIPP.
- DOE/NNSA expects the NEPA analysis to be complete in late 2020.

Summary & Contact Information

- DOE/NNSA is actively performing activities required to disposition surplus plutonium (i.e., 6 MT non-pit surplus plutonium) using the dilute and dispose approach and has NEPA coverage for those activities.
- DOE/NNSA is currently finalizing planning, data collection, and performing development activities for the NEPA strategy on the 34 MT mission.
- DOE/NNSA expects to release the NOI in the near future to notify the public that DOE/NNSA will develop an SEIS to evaluate environmental impacts of the Preferred Alternative – Dilute and Dispose – in addition to all other reasonable alternatives and options identified.
- DOE/NNSA welcomes public input and comment on the DRAFT SEIS – to be placed on the DSP SEIS mailing list please email DSP_SupplementalEIS@nnsa.DOE/NNSA.gov