Update on National Environmental Policy Act (NEPA) Documents

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DOE-SR/EM will present to the CAB a list of recent NEPA documents effecting the Savannah River Site EM Nuclear Material Programs.

The SRS EM Program consists of:

- Nuclear Materials Management and Disposition
  - H-Canyon, HB-Line, K-Area, L-Area and F-Area
- High Level Waste Program
  - Tank Farms, DWPF, Saltstone, SWPF
- Environmental Restoration and Cleanup
- Waste Management
  - Sanitary, hazardous, LLW, MW, and TRU
- Security
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Al –clad</td>
<td>Aluminum clad</td>
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<tr>
<td>AROD</td>
<td>Amended Record of Decision</td>
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<tr>
<td>CNSC</td>
<td>Canada Nuclear Safety Commission</td>
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<tr>
<td>DRR</td>
<td>Domestic Research Reactor</td>
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<tr>
<td>DWPF</td>
<td>Defense Waste Processing Facility</td>
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<tr>
<td>EA</td>
<td>Environmental Assessment</td>
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<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
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<td>EM</td>
<td>Environmental Management</td>
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<td>FRR</td>
<td>Foreign Research Reactor</td>
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<tr>
<td>HEU</td>
<td>Highly Enriched Uranium</td>
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<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<tr>
<td>ISO</td>
<td>International Standards Organization</td>
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<tr>
<td>LWT</td>
<td>Legal Weight Truck</td>
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<tr>
<td>MTR</td>
<td>Material Test Reactor</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<tr>
<td>NNSA</td>
<td>National Nuclear Security Administration</td>
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<td>SNF</td>
<td>Spent Nuclear Fuel</td>
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<td>SPD</td>
<td>Surplus Plutonium Disposition</td>
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<td>SWPF</td>
<td>Salt Waste Processing Facility</td>
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<td>ULTB</td>
<td>Uranium Lease Take Back</td>
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Savannah River Site
Waste and Material Flow Path

This depiction of SRS activities shows only the general scope of the major facilities and missions. It does not represent all processes or all materials flow.

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**Off-Site Treatment & Disposal Facilities**

- LLW
- TRU Waste
- HW/MW

**Area Completion Projects**

- Soil and Groundwater D&D
- In-Situ

**Off SRS Disposition**

- LLW & HW

**NM Facilities**

- Off-Site Disposal e.g., Clive, Utah, Three Rivers Landfill

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**MOX Product**

- KAMS / KIS
- LLW/TRU Waste

**E/N-Area**

- LLW Storage/Disposal
- MOX Storage
- TRU Waste Storage

**Liquid Waste**

- Failed Equipment

**F-Tank Farm (HLW)**

- LLW
- Salt
- Sludge

**H-Tank Farm (HLW)**

- LLW
- Salt
- Sludge

**ETP**

- Tank 50

**Saltstone**

- SDU Future

**SWPF (future)**

- Recycle Waste

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**ACRONYMS**

- AI - Aluminum
- ARD - Actinide Removal Device
- C&D - Construction and Demolition
- D&D - Decommissioning and Demolition
- DHE - Defense Programs
- DHPF - Defense Herrington Processing Facility
- ETP - Effluent Treatment Project
- SWPF - Serum Waste Processing Facility
- KAMS - K-Area Material Storage Facility Project
- KRS - K-Area Reprocessing Surveillance
- LLW - Low Level Waste
- HEU - Highly Enriched Uranium
- HLW - High Level Waste
- HW - Hazardous Waste
- NRC - Nuclear Regulatory Commission
- FGF - Fuel Fitting Facility
- EBI - Enriched Uranium Recovery Facility
- ETO - Excess Uranium Exploitation Facility
- SWC - Savannah River Tritium Control Facility
- SWF - Serpentinite Waste Facility
- SRNL - Savannah River National Laboratory
- JPO - Savannah River Joint Project Office
- TRU - Transuranic
- WFP - Waste Form Production Facility
- WSB - Waste Solidification Building

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**Legend**

- Product Leaching Site
- Waste Leaching Site
- Waste Disposal On Site
- Process Materials Input
- On-Site Flow of Materials and Waste

- HLW Tank
- Active Tank Closure
- Closed Tank
- EM Facilities
- NSIF Facilities

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What does NEPA do?

- The National Environmental Policy Act establishes a process for decision makers to use in considering the potential environmental impacts (both positive and negative) of major actions before making decisions.

- It requires a Federal agency to consider the potential environmental, human health, and socioeconomic effects of a proposed action and a range of reasonable alternatives for implementing the action, including the option of taking no action at all.

- And in certain situations, seek public input on proposed actions.
Recent NEPA Documents

• **DOE/EIS-0283-S2** Surplus Plutonium Disposition Supplemental EIS (SPD SEIS)
  • Final Issued in May 2015
  • Preferred Alternative for 6 MT of surplus non-pit plutonium issued in December 2015
  • Record of Decision has not been issued

• **DOE/EA-2024** Gap Material Plutonium- Transport, Receipt, and Processing
  • Final Issued in December 2015
  • Finding of No Significant Impact Issued December 28, 2015
Recent NEPA Documents continued

• **DOE/EA-1977** Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany
  • Notice of Intent issued in June 2014
  • Draft Environmental Assessment released January 15, 2016
  • Public Meeting to be held February 4, 2016, 6:30 – 9 p.m., North Augusta Community Center

• **DOE/EIS-0279-SA-03; DOE/EIS-0387-SA-01** Supplemental Analysis for the Uranium Lease and Take Back Program for Production of Molybdenum-99 for Medical use (ULTB Program)
  • Supplemental analysis issued in December 2015

• **DOE/EIS-0218-SA-07** Supplement Analysis for the Foreign Research Reactor Spent Nuclear Fuel Acceptance Program: Highly Enriched Uranium Target Residue Material Transportation
  • Issued November 2015
What do the NEPA documents mean to SRS EM Programs?

- **DOE/EIS-0283-S2** Surplus Plutonium Disposition Supplemental EIS (SPD SEIS)
  - A preferred Alternative has been identified but no Record of Decision has been made at this time
  - Would allow for 6 metric tons of surplus non-pit plutonium to be down-blended for shipment to WIPP

- **DOE/EA-2024** Gap Material Plutonium - Transport, Receipt, and Processing
  - A Finding of No Significant Impacts (FONSI) was issued.
  - Allows transport of up to 900 Kg of gap material plutonium to SRS, storage in approved SRS facility, de-clading and stabilization of some of the plutonium
Photos of the containers that would transport the Gap Material Plutonium

Model 9975 Shipping Package

Model 9977 Shipping Package with two DOE-STD-3013 Containers

9975 Shipping Package
ISO containers Secured within the Hold of a Ship

K Area Storage
• **DOE/EA-1977** Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany
  
  • Would allow the technology maturation to continue to a pilot scale process and if proven successful would allow the Department to make a decision on acceptance of the German material if a Finding of No Significant Impact is determined.

• **DOE/EIS-0279-SA-03; DOE/EIS-0387-SA-01** Supplemental Analysis for the Uranium Lease and Take Back Program for Production of Molybdenum-99 for Medical use (ULTB Program)
  
  • If SA is determined to support previous Departmental decisions then SRS would be responsible for receipt of SNF (all will be LEU) from the Molybdenum-99 vendors, that was no longer useable for Mo-99 production.
• **DOE/EIS-0218-SA-07** Supplement Analysis for the Foreign Research Reactor Spent Nuclear Fuel Acceptance Program: Highly Enriched Uranium Target Residue Material Transportation

  • This SA provides a detailed review of:
    • the process for transport package certification in the United States and Canada,
    • the DOE program to train and familiarize first responders about the proposed shipments, and
    • an analysis prepared by the Canadian Nuclear Safety Commission (CNSC) of the potential impacts of transporting the target residue material within Canada

  • SA supports previous determination in that the transport of HEU solutions would represent neither:
    • substantial changes to the actions evaluated in previous NEPA analysis,
    • nor represent significant new circumstances or information relevant to environmental concerns.

  • This SA reaffirms that the potential environmental impacts from this activity would be very low and not significantly different from the impacts reported in the *FRR SNF EIS* (DOE 1996a). There would be no expected radiological or non-radiological fatalities.

What do the NEPA documents mean to SRS EM Programs? (continued)
Photos of the Legal Weight Truck (LWT) Cask

Inner container for HEU Target Residue Material

LWT Cask within the ISO container
Summary

• NEPA is important to the Department

• Impacts to the environment and public are being considered in Departmental decisions

• SRS is vital to Departmental Missions

• All DOE NEPA documents are available on: http://energy.gov/nepa/nepa-documents