Office of Integrated Waste Management (IWM) Updates

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Office of Integrated Waste Management

Mission

To implement Federal interim storage for commercial spent nuclear fuel following a consent-based siting process.
Congressional Authorization

• In the Consolidated Appropriations Act, 2021, Congress provided funds for the Department to move forward on establishing a federal interim storage capability. With this funding, DOE can now pursue activities related to the process for identifying an interim storage site.
  • Included $20 million for interim storage
  • FY22 appropriations matched FY21 funding levels
Integrated Waste Management System

- Storage facility(ies)
- Transportation capability
- Disposal facility(ies)
- Interfaces
Deputy Assistant Secretary for Spent Fuel and Waste Disposition, NE-8

NE-8  
DAS for Spent Fuel and Waste Disposition  
Samuel Brinton, Deputy Assistant Secretary  
*Vacant, Associate Deputy Assistant Secretary*  
Derick Ogg, Program Analyst  
Evangeline Chase, Secretary  
Natalia Saraeva, M&O Contractor  
Emily Stein, M&O Contractor

NE-81  
Office of Spent Fuel & Waste Science and Technology  
William Boyle, Director

NE-82  
Office of Integrated Waste Management  
Erica Bickford, Acting Director  
*Vacant, PMF, Engineer/Scientist*

Disposal R&D Team
Tim Gunter, Team Leader  
J. Monroe-Rammsy, General Engineer  
P. Narr, General Engineer

Storage and Transportation R&D Team
Ned Larson, Team Leader  
R. Clark, General Engineer  
J. Orchard, General Engineer

Consent-Based Siting Team
*Vacant, Physical Scientist (Lead)*  
J. Urbe, General Engineer  
M. Manus, Procurement Analyst  
Vincent Ialenti, Social Scientist  
Tran Le, Social Scientist  
Angelica Ghene, Physical Scientist  
*Vacant, Social Scientist*

Cross-Cutting Initiatives Team
E. Bickford, Team Leader  
J. Wheeler, General Engineer  
P. Schwab, General Engineer  
J. Jones, Physical Scientist  
S. Hogen, Physical Scientist  
J. Narvaez, General Engineer  
*Vacant, Security Specialist*
New Staff and Leadership

Sara Hogan
Environmental Scientist

Sam Brinton
Deputy Assistant Secretary for Spent Fuel & Waste Disposition (NE-8)

Natalia Saraeva
Team Leader for Consent-Based Siting

Megan Manis
Procurement Analyst

Angelica Gheen
Health Physicist

Tran Le
Social Scientist

Vincent Ialenti
Social Scientist

Marissa Bell
Social Scientist
Consent-Based Siting
Achievements & FY23 Plans
Request for Information

• Questions on:
  • the consent-based siting process itself
  • removing barriers to meaningful participation—especially for groups and communities who have not historically been well-represented in these conversations
  • interim storage as a component of the nation’s waste management system
• Special focus on ensuring issues of equity and environmental justice are built into the consent-based siting process, as well as the waste management system as a whole

Notice of Request for Information (RFI) on Using a Consent-Based Siting Process To Identify Federal Interim Storage Facilities

A Notice by the Energy Department on 12/01/2021
~225 comments received from the following:

- **Tribes**: 3 from Tribal groups, 3 from Tribes
- **States**: 12 from State government organizations, 3 from State Regional Groups, and 3 from groups representing State governments or their interests
- **Local governments**: 7
- **NGOs**: ~35
- **Environmental Justice organizations**: 2
- **Industry**: ~12
- **Members of Academia**: ~7
- **Labor Union**: 1
- **Private Citizens**: ~132 (including 45 “form” letters)
Common Themes in Comments

• Consent and consent-based siting
• Removing barriers for participation and environmental justice
  • fair process, fair distribution, inter-generational justice
• Interim storage, transportation, need for disposal pathway, and broader comments on integrated waste management system
Funding Opportunity Announcement

- Informed by public feedback
- $16 Million, 6-8 awardees, period of performance 18-24 months
- Not a call for volunteers to host a site
- Reduce barriers for participation
- Increase outreach, enable mutual learning, and start building capacity
  - Learning about spent nuclear fuel and spent nuclear fuel management, consolidated interim storage, consent-based siting, and more.

energy.gov/consent-based-siting
You’re Invited: Funding Opportunity Announcement Q&A Webinar

Consent-Based Siting

3:00pm (EST) Oct. 3, 2022
Public Feedback is Informing Next Steps in Consent-Based Siting

1. Further developing consent-based siting process
2. Implementing funding opportunity for interested groups and communities to learn more
3. Clarifying our broader strategy for an integrated waste management system
Looking Ahead

- Consent-based siting and addressing societal challenges
- Need for a disposal pathway
- Extended storage research
- Foreseeing waste management from advanced reactors deployment
- Knowledge management
More information at energy.gov/consent basedsiting
FY 2023 President’s Budget Request

• $15 million program funding increase
  • Funding increase reflects a ramp-up in activities to develop a consent-based process for siting interim storage facilities and identify one or more sites for an interim storage facility based on that process.
  • Activities:
    • Develop a waste management system that incorporates social equity and environmental justice;
    • Continue funding engagement with State and Tribal partners to cooperatively plan for large-scale SNF transportation, including approaches to emergency response training and safety inspections;
    • Begin acquisition of transportation casks for SNF, which may require moderate lead times to update cask Certificates of Compliance and initiate commercial fabrication capacity; and
    • Begin planning for a full-scale package performance test of a rail-sized SNF cask to aid in building public trust and confidence in the safety of SNF transport.
FY23 Draft Appropriations

House

• Integrated Waste Management System
  – $53 Million

• Committee Report:

  *Integrated Waste Management System.*—The Department is directed to move forward under existing authority to identify a site for a federal interim storage facility. The Department is further directed to use a consent-based approach when undertaking these activities. The Department is reminded that the Nuclear Waste Policy Act provides for a wide variety of activities that may take place prior to the limitation in that Act.

  The Department is directed to continue site preparation activities at stranded sites, to evaluate the re-initiation of regional transport, and to undertake transportation coordination efforts.

Senate

• Integrated Waste Management System
  – $40 Million

• Committee Report:

  *Integrated Waste Management System.*—The Department is directed to move forward under existing authority to identify a site for a Federal interim storage facility. The Department is further directed to use a consent-based approach when undertaking these activities. The Department is reminded that the Nuclear Waste Policy Act provides for a wide variety of activities that may take place prior to the limitation in that act.
IWM FY23
Planned Activities

• **Consent-Based Siting**
  • Ramp-up Public Outreach and Stakeholder Engagement

• **Continue and Expand Transportation Planning**
  • Sara Hogan will present on that next

• **Storage Design and Regulatory Considerations**

• **Systems Analysis**
Transportation Project
Updates and FY23 Plans
Transportation Project Updates

Railcar Development

- **Atlas** (12-axle) railcar: continuing multiple railcar testing—expected to be completed in 2023
- **Buffer railcar**: developed in conjunction with the Atlas railcar and will be part of multiple-railcar testing along with Rail Escort Vehicle (REV)
- **Fortis** (8-axle) railcar: contract signed and design and fabrication kick-off events (Sept 2022)
- Continue developing integrated security & safety monitoring system (ISSMS) for railcars
Transportation Project Updates

• SNF Rail/Routing AHWG
  - Draft Railcar Safety Inspection Protocol: developed through the NTSF Rail/Routing AHWG was shared with State Regional Groups and TRMTC support staff and comments were incorporated. Next steps are to develop a cross-walk of rail and highway regulations and inspection requirements for transporting radioactive materials.

• Section 180(c) AHWG
  - Section 180(c) Historical Summary Report released: IWM published the knowledge management document which summarizes activities conducted between 1983 and 2017 by DOE and various DOE-supported working groups to examine issues related to implementation of Section 180(c) of the Nuclear Waste Policy Act of 1982, as amended (NWPA).
  - Resuming work: At NTSF 2022 annual meeting, members decision to begin work again by re-examining the lessons learned from the Section 180(c) Proposed Policy Implementation Exercise.
Transportation Project Updates

• SNF Management – Communications and Outreach AHWG
  • Formerly the Spent Fuel Transportation Materials Working Group
  • Member comments and feedback from July engagement were incorporated into a working plan, strategy for RFI Summary report, and FOA collateral material. Feedback will also be used to inform future communication materials.

• DOE Order 460.2B Webinar
  • DOE-EM is leading this webinar
  • DOE-NE participated in the Integrated Project Team for Order 460.2B, and helped update and clarify Order language regarding rail transport and safety inspections, and physical protection requirements for spent nuclear fuel transport
  • October Oct 19 at 11am EST
Transportation Project Updates

- Nuclear power plant infrastructure evaluations resumed in person

- Sites completed in 2022 include:
  - Dresden and Morris (IL, May), Indian Point (NY, July), and Palisades (MI, October)

- Potential Spring 2023 evaluations:
  - Duane Arnold (IA) and Three Mile Island (PA)
• De-inventory reports address the tasks, equipment, and interfaces necessary for the complete de-inventory of shutdown nuclear power plant sites to provide information useful for planning options within an integrated nuclear waste management system.

• Reports already publicly available for: Maine Yankee, Connecticut Yankee, Trojan, Kewaunee, Humboldt Bay, and Big Rock Point.

• Upcoming site-specific de-inventory reports expected to be available later this year/early next year include: Zion, Crystal River, La Crosse, Rancho Seco, Yankee Rowe
Transportation Project Updates

- **Stakeholder Tool for Assessing Radioactive Transportation (START)** migrated to a new hosting environment to improve functionality and performance – completed fall 2022
  - start.energy.gov

- Virtual trainings will be available upon request starting December 2022
Transportation Project Updates

- Developing preliminary plans for a **full-sized rail cask package test** (actual testing will depend on funding).
  - DOE will lead, and invite NRC to participate
- US has not tested a current full-sized SNF transportation cask
- Endorsed by National Academy of Sciences and the Blue Ribbon Commission
- Test will include regulatory tests (unyielding surface) and DOE is also considering non-regulatory (e.g., train collision, waterbody retrieval demonstration)
- Goals include building public trust and confidence in the safety of SNF transportation casks and SNF transportation by rail and gathering technical data
Transportation Project Updates

Nuclear Waste Technical Review Board (NWTRB) Winter 2023 meeting focusing on IWM Transportation work

- Timeframe is February/March 2023
- Expect there will be a virtual option

Meeting agenda and virtual connection info to be posted at nwtrb.gov