

U.S. DEPARTMENT OF
ENERGY

Office of
NUCLEAR ENERGY

Office of Integrated Waste Management (IWM) Updates

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US Department of Energy

Office of Integrated Waste Management

Mission

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

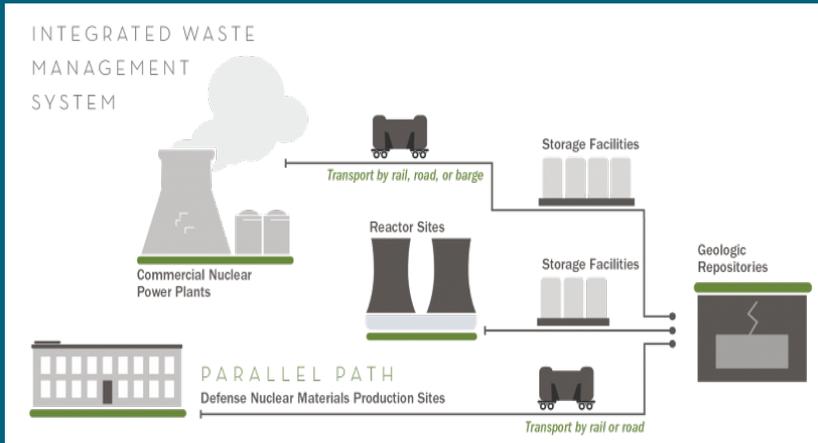


Congressional Authorization

- 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



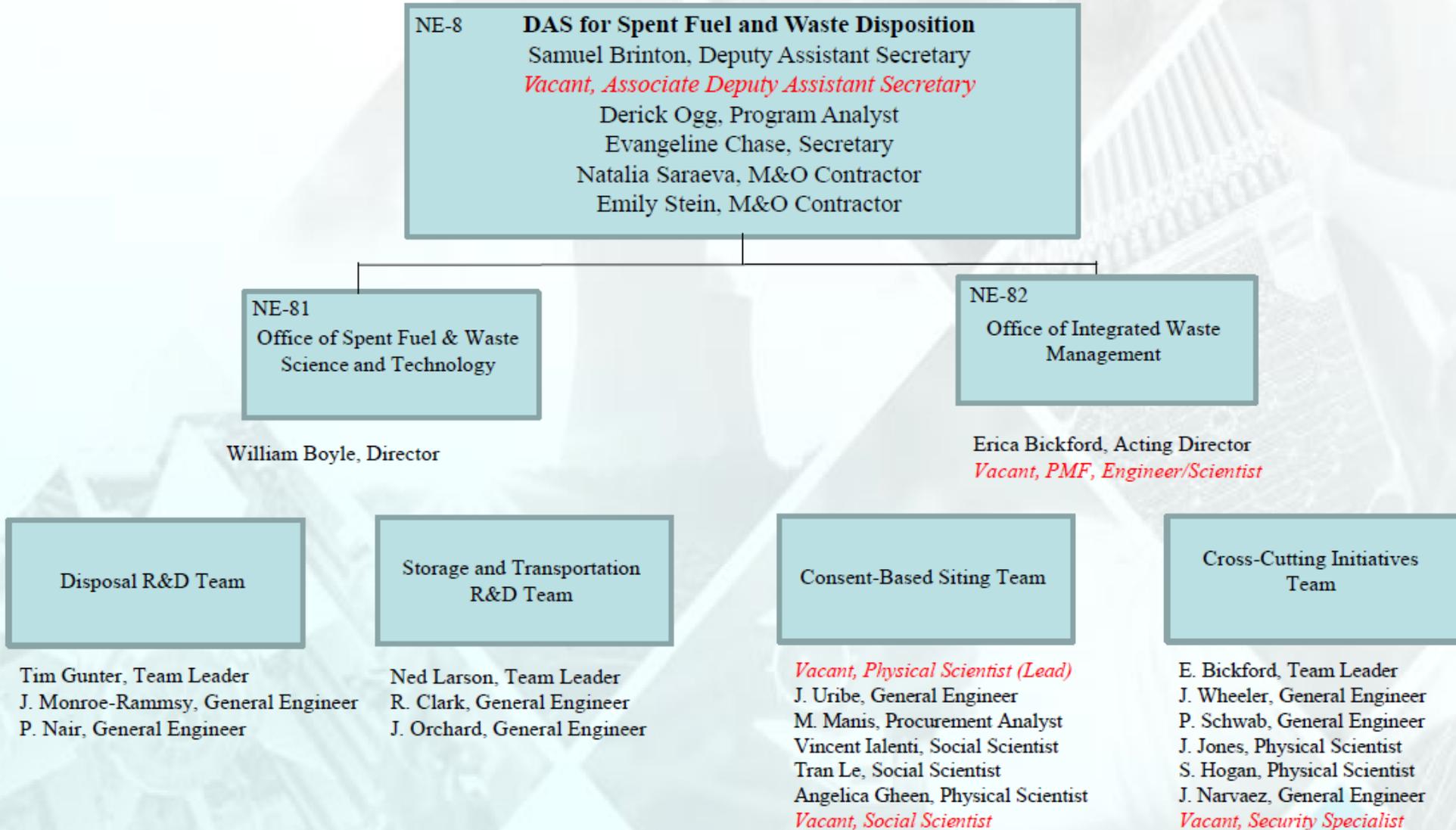
Integrated Waste Management System



- **Storage facility(ies)**
- **Transportation capability**
- **Disposal facility(ies)**
- **Interfaces**

Staff Resources

Deputy Assistant Secretary for Spent Fuel and Waste Disposition, NE-8



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

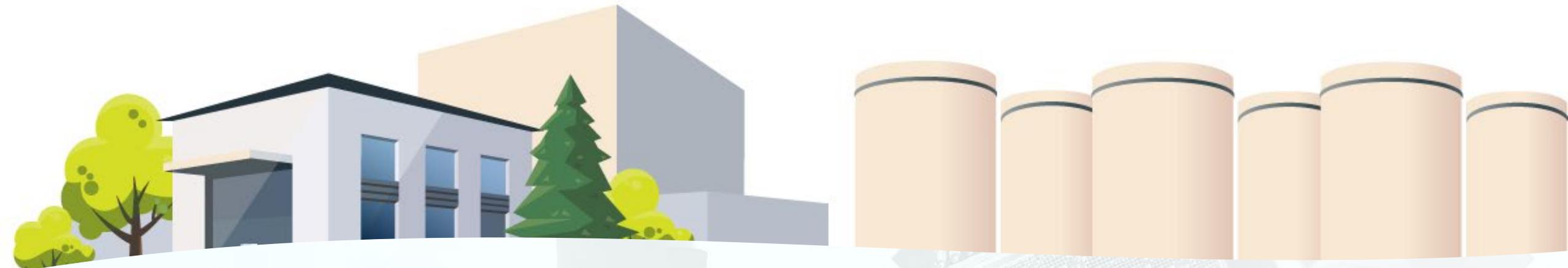


Vincent Ialenti
Social Scientist



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



FEDERAL REGISTER

The Daily Journal of the United States Government



N Notice

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



PUBLISHED DOCUMENT



AGENCY:

Office of Spent Fuel and Waste Disposition, Office of Nuclear Energy,
Department of Energy.



ACTION:

Request for information.



SUMMARY:

The Office of Nuclear Energy (NE), U.S. Department of Energy (DOE), requests information on how to site Federal facilities for the temporary, consolidated storage of spent nuclear fuel using a consent-based approach. DOE anticipates that communities; governments at the local, State, and Tribal levels; members of



DOCUMENT DETAILS

Printed version:

[PDF](#)

Publication Date:

12/01/2021

Agency:

[Department of Energy](#)

Dates:

Responses to the RFI must be received by March 4, 2022 by 5:00 p.m. (ET).

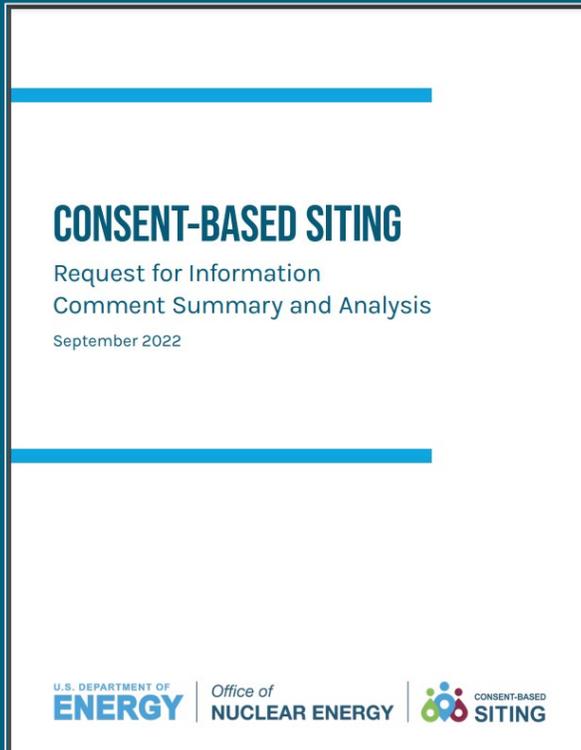
Document Type:

Notice

Document Citation:

88 FR 68244

Summary of RFI Feedback



~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

The screenshot displays the Energy.gov website's navigation bar with links for Newsroom, Leadership, Energy.gov Offices, National Labs, and a search function. Below the navigation is the Office of Nuclear Energy logo and a menu with links for ABOUT US, REACTOR TECHNOLOGIES, INITIATIVES, and INFORMATION RESOURCES. The main content area features a large green header with the title "Funding Opportunity Announcement: Community Engagement on Consent-Based Siting" and the Office of Nuclear Energy logo. Below this is a white box containing the sub-header "Office of Nuclear Energy » Funding Opportunity Announcement: Community Engagement on Consent-Based Siting" and the main title "Funding to Support Community Engagement on Consent-Based Siting". The text below the title states: "The Department of Energy (DOE) issued a \$16 million funding opportunity announcement (FOA) to provide resources for communities interested in learning more about consent-based siting, management of spent nuclear fuel, and interim storage facility siting considerations. Award recipients will promote dialogue that helps foster the development of innovative community ideas, incorporates principles of equity and environmental justice into community engagement strategies, and captures feedback related to the interim storage of spent nuclear fuel and high-level radioactive waste."

FOA Q&A Webinar

Recorded webinar available at:
energy.gov/consentbasedsiting

U.S. DEPARTMENT OF
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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



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**More information at
[energy.gov/consent
basedsiting](https://energy.gov/consentbasedsiting)**

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 Railcar with Light Mock-up Load, October 2019



- **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

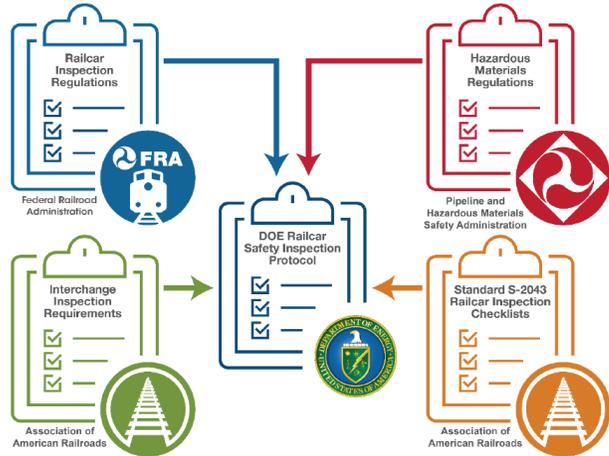


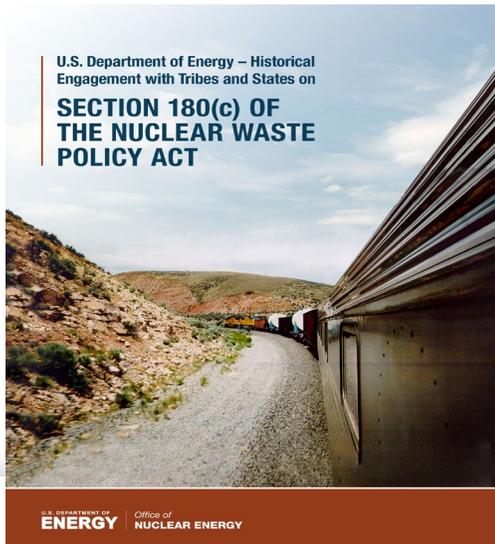
Figure S-1. Components of DOE Railcar Safety Inspection Protocol

- **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

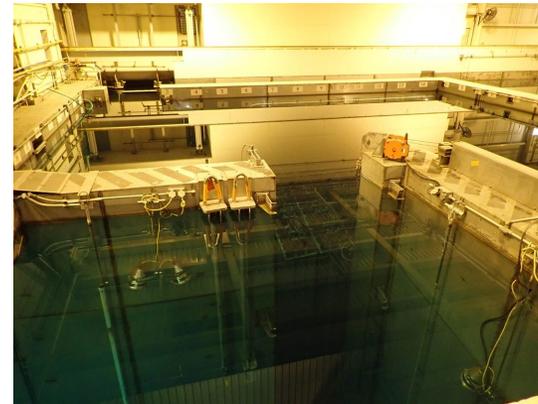
NE NTSF Activities

- **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.

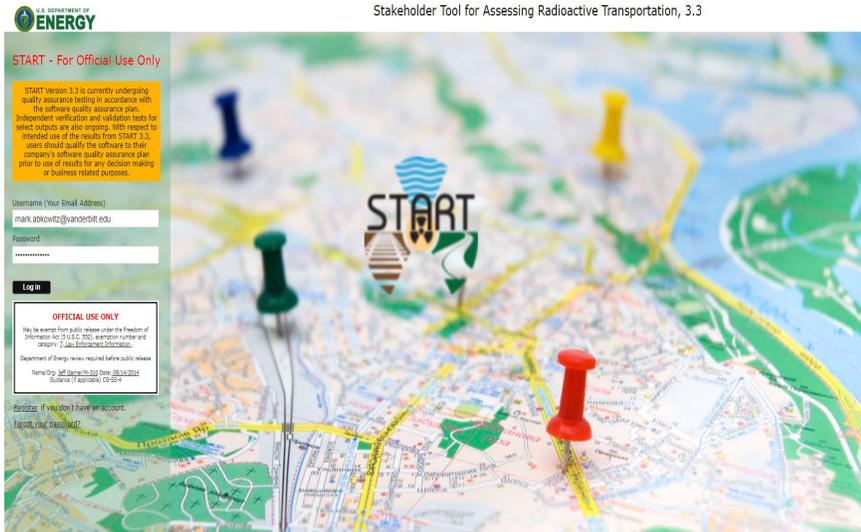
- **DOE Order 460.2B Webinar**
 - DOE-EM is leading this webinar
 - DOE-NE participated in the Integrated Project Team for Order 460.2B, and helped update and clarify Order language regarding rail transport and safety inspections, and physical protection requirements for spent nuclear fuel transport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



- 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**



- **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

- 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

NWTRB Winter Meeting

- 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





Thank you

Questions?

