



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Nuclear Energy

# Program Update: Office of Nuclear Energy's Integrated Waste Management Program

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**Office of Nuclear Energy**

Joint Meeting of the Radioactive Materials  
Transportation Committee and the Transuranic  
Waste Transportation Group

December 7 - 8, 2016

Myrtle Beach, SC



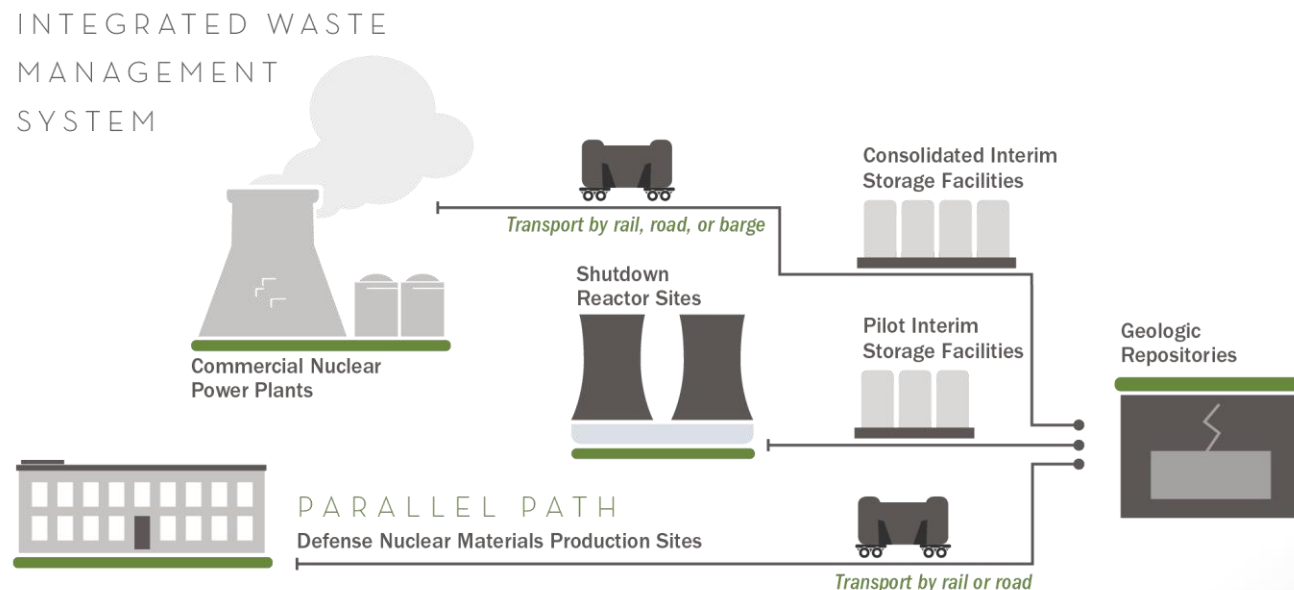
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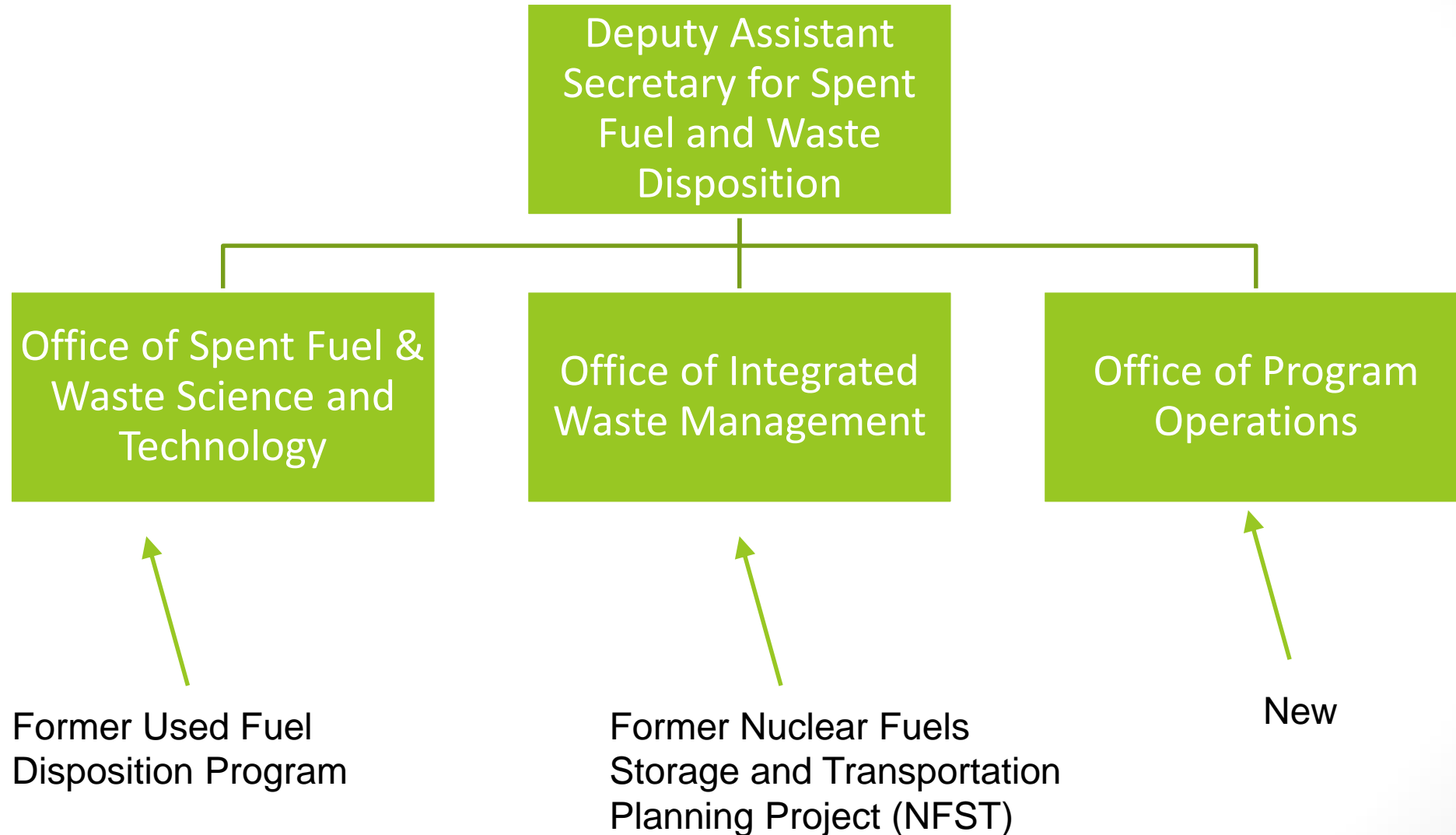


# NE Re-Organization

- Office of Nuclear Energy Re-Organization
  - NFST and Used Fuel Disposition programs combined into a new Office – The Office of Spent Fuel and Waste Disposition
  - Under new organization, storage, transportation and consent-based siting activities will be under the Office of Integrated Waste Management
  - Organization became official in October 2016

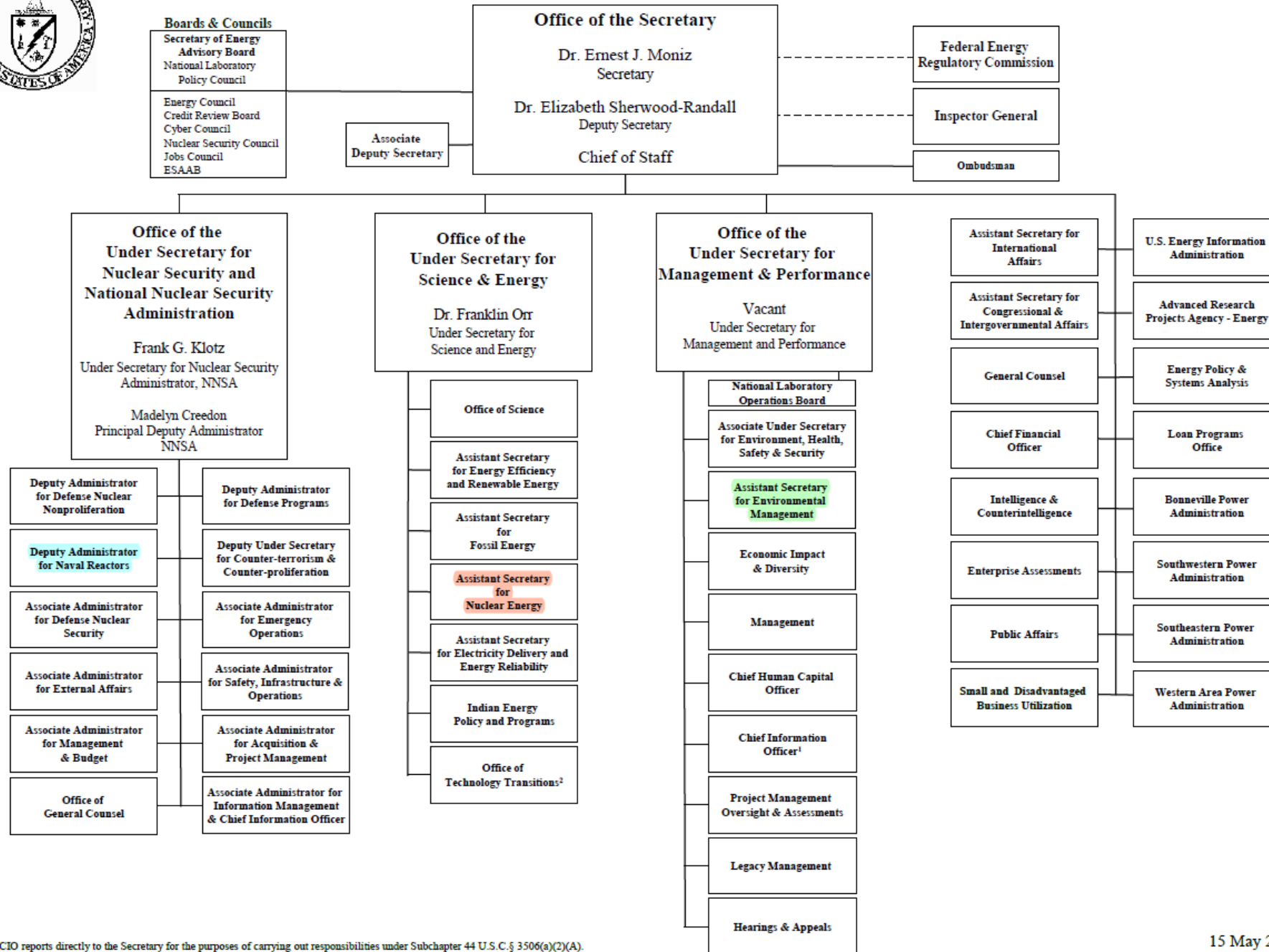


# NE Re-Organization





# DEPARTMENT OF ENERGY



<sup>1</sup> The CIO reports directly to the Secretary for the purposes of carrying out responsibilities under Subchapter 44 U.S.C. § 3506(a)(2)(A).  
<sup>2</sup> The director of the Office of Technology Transitions also serves as DOE's Technology Transfer Coordinator who reports to the Secretary of Energy

# Other Updates

- New detailees working on storage and transportation
  - Steve Reeves – Program Manager for Storage
  - John Orchard – Support for Storage Program
  - Giulia Bisconti – Communications Outreach – Officewide
- Program plans to move away from “laying the groundwork,” toward becoming an “operational program”
  - Dependent on appropriations
  - Not an overnight change
  - Subject to availability of resources

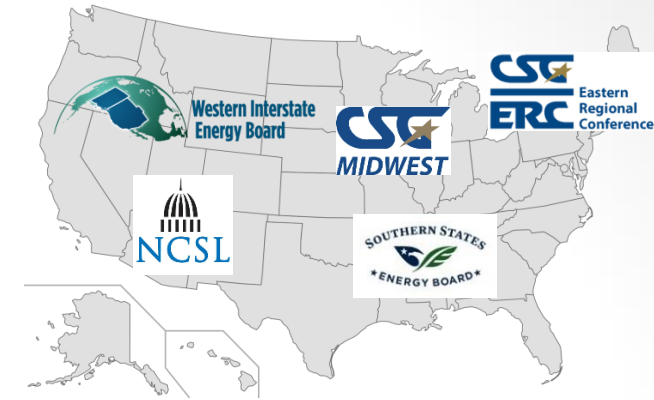


# FY17 Funding

Subprogram	(dollars in thousands)			
	FY 2016 Enacted	FY 2017		
		Request	House Mark	Senate Mark
Used Nuclear Fuel Disp. R&D	62,500	74,338	61,128	57,867
Int. Waste Mgmt. System (IWMS)	22,500	76,300	0	61,050
<b>Total</b>	<b>85,000</b>	<b>150,638</b>	<b>61,128</b>	<b>118,917</b>

# FY17 Program Priorities

- Transportation work
  - Supporting engagement with tribal and state representatives
  - Railcar development
  - Preliminary development of a transportation project plan
- Storage
  - Development of a generic design and topical safety analysis report (TSAR) for a pilot interim storage facility (ISF)
  - Request for Information on Private Initiatives
- Cross-cuts
  - Systems analysis tool development and maintenance
- Consent-based siting
  - Summary report on public input for comment
  - [Proposed] Grants to potentially interested communities
  - Draft siting process
- Communications



# Transportation

- Cooperative Agreements with States and Tribes
  - New 5-year agreements started October 2016
- Continuing efforts through NTSF Ad Hoc Working Groups
  - Section 180(c) AHWG – develop draft grant template, and perform funding formula analysis
  - SNF Rail/Routing AHWG – routing and develop rail inspection protocol
    - Meeting in St. Louis Nov. 29-30, 2016
- Transportation Operations and Infrastructure
  - Shutdown site visits and de-inventory studies
  - Continued Development of the START tool
- Preliminary Development of Transportation Project Plan
  - Systems view
  - Supporting document hierarchy
- Atlas Railcar Development



Fort Calhoun Station (Nebraska)

# Atlas Railcar

## DOE is developing a railcar to comply with the Association of American Railroads Standard S-2043

- Contract with AREVA to design S-2043-compliant cask and buffer railcars, and to fabricate prototypes
- Future contract for prototype testing
- DOE is evaluating several possible contracting options for large-scale fleet fabrication and operations
- The Atlas railcar is being designed to carry a variety of rail-sized transportation casks, including the heaviest cask planned for use in the U.S.: the HI-STAR 190.

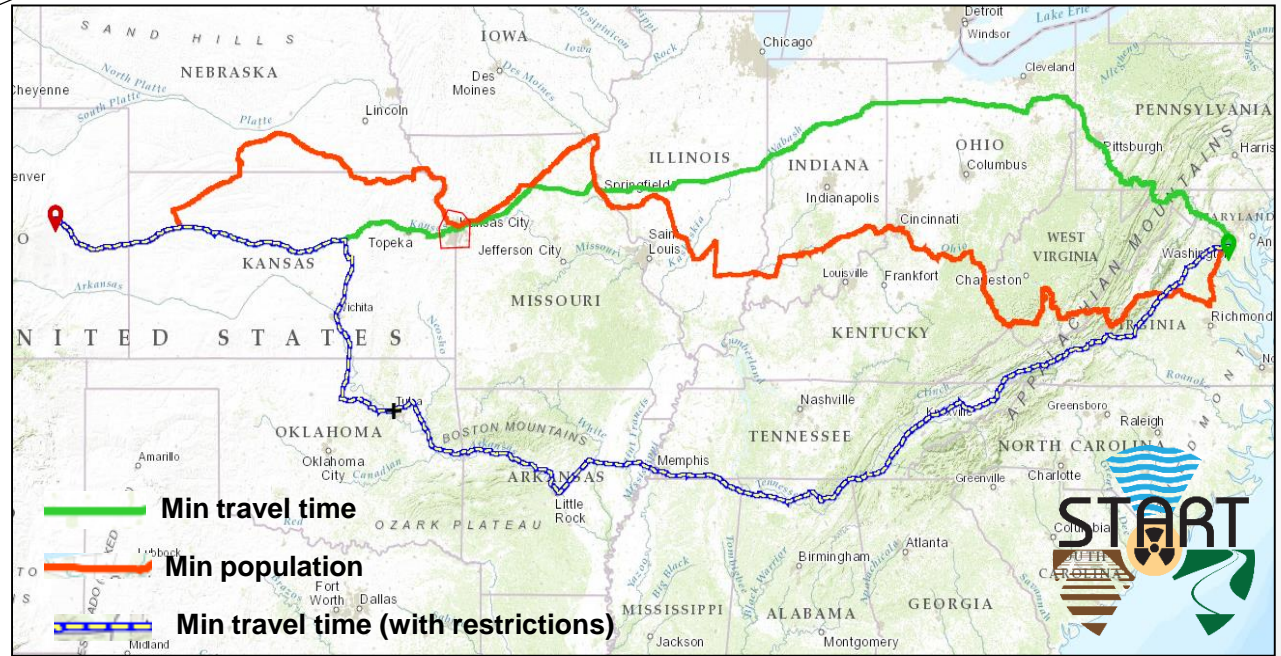
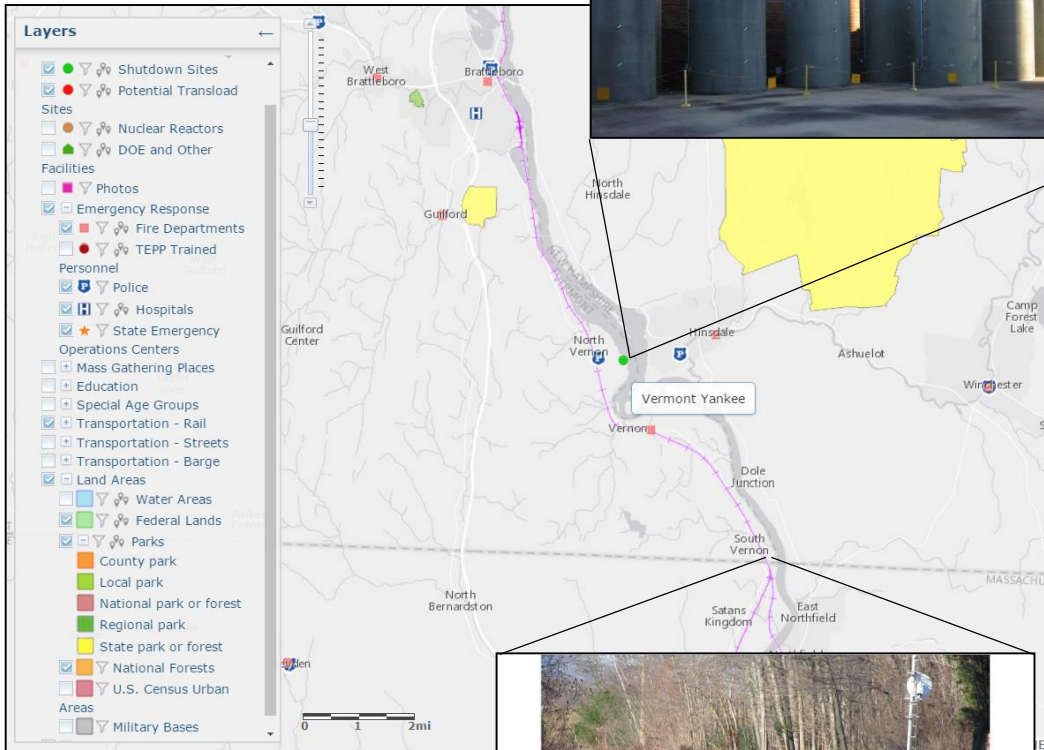


# Atlas Railcar Design Project Schedule



Tasks	2015	2016	2017	2018	2019	2020	2021	2022
Initial Contract Award	◆ 8/21/15							
Phase 1: Mobilization and Conceptual Design		■ 10/31/16						
Phase 2: Preliminary Design		■ 4/1/16						
Notice to Proceed with the Test Phase from AAR			◆ 7/14/17					
Phase 3: Prototype Fabrication and Delivery			■					
Follow-on Contract Award				◆ 3/20/19				
Phase 4: Single-Car Testing					■ 9/30/20			
Acquisition of Escort Railcar for Testing					◆ 12/31/19			
Phase 5: Multiple-Car Testing						■		
Conditional Approval from AAR							◆ 6/30/22	

# Stakeholder Tool for Assessing Radioactive Transportation (START)



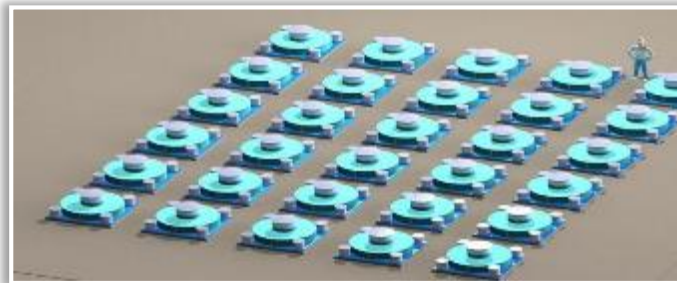
\* Example routes are for illustrative purposes only and do not reflect a selected destination site.

# NE Transportation Core Group

- Small planning group of tribal, state and DOE representatives (25 people)
- Meets twice per year
- DOE communicates items of interest or notifications through this group
- State and Tribal Consultation and Communication Working Group
  - Subgroup formed in 2014 to develop a mutually agreeable approach to “consultation and cooperation” among DOE, Tribes and states, help achieve common goals
  - Lisa Janairo (CSG-MW) and Ken Niles (OR) representing states, Heather Westra (PIIC) and Richard Arnold (CGTO and Pahrump Paiute) representing Tribes, Erica Bickford for DOE
  - Draft paper shared, comments incorporated
  - Anticipate periodic updates

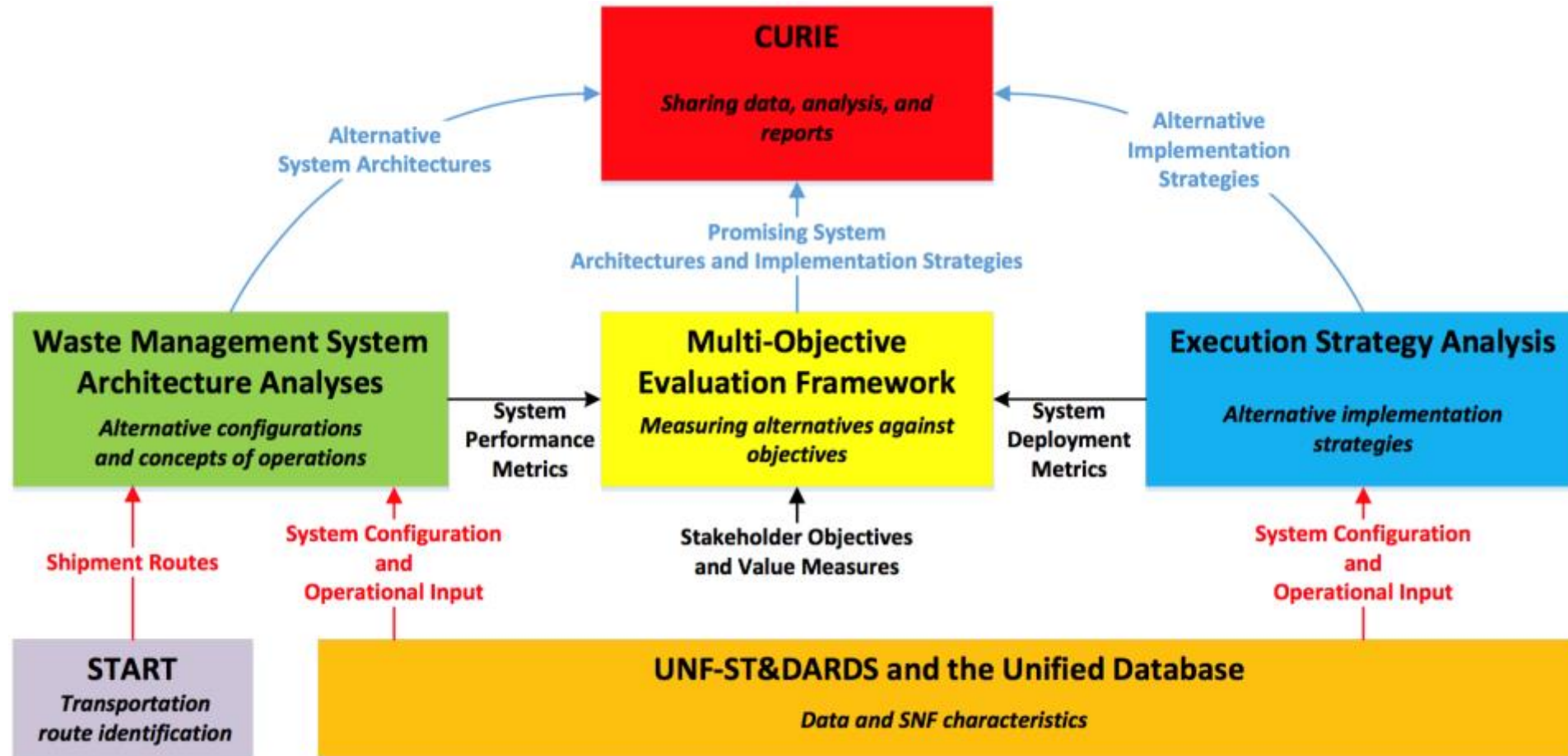
# Storage

- Topical Safety Analysis Report (TSAR) for generic storage facility design
- Evaluate storage facility capability needs and options
  - Canister maintenance facility
  - Rail maintenance facility
  - Lease vs buy options
- Request for Information on Private Initiatives
  - Written comments on or before January 27, 2017 to [privateISF@hq.doe.gov](mailto:privateISF@hq.doe.gov)
  - More information available on the DOE-NE website at <http://www.energy.gov/ne/downloads/private-isf>

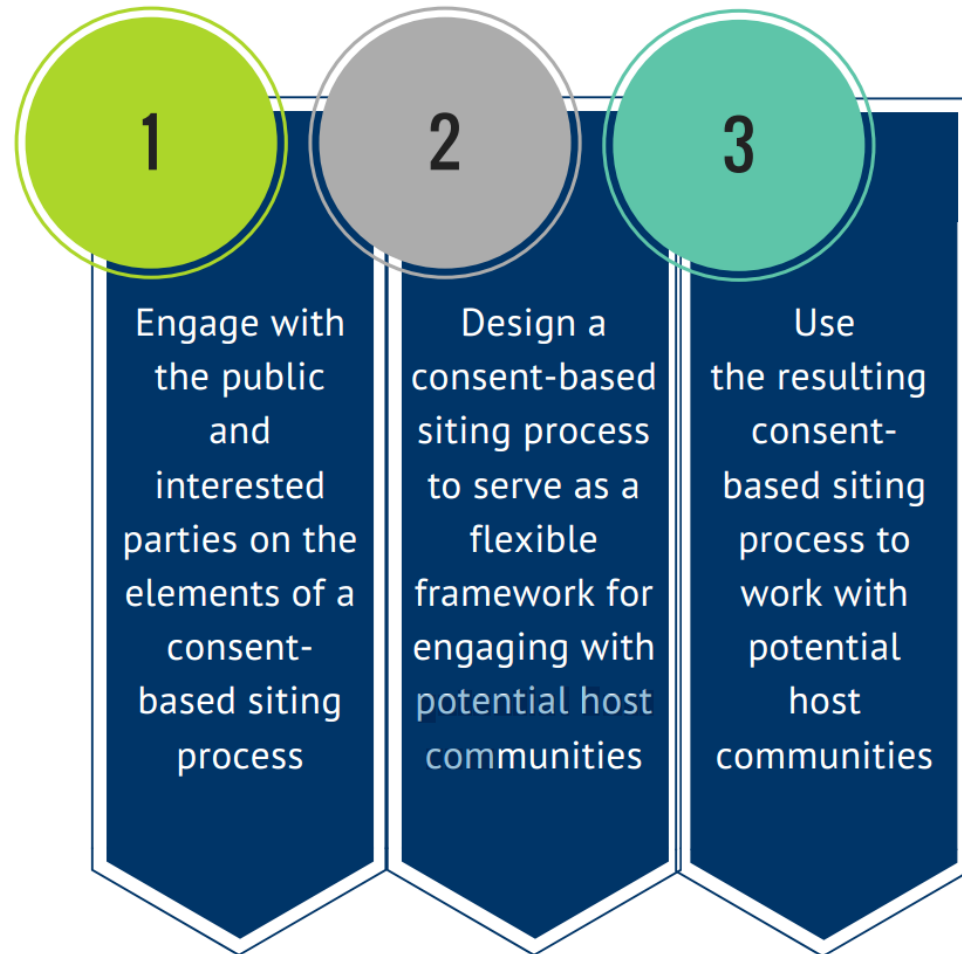


# Cross-Cuts

- Advanced analytical tool development, modeling, data development, and analysis of the integrated system



# Consent-Based Siting



# Consent-Based Siting cont.

- Public Comment Period: 23-Dec-15 to 31-Jul-16
  - Five key questions in Federal Register Notice
    1. How can the Department ensure that the process for selecting a site is fair?
    2. What models and experience should the Department use in designing the process?
    3. Who should be involved in the process for selecting a site, and what is their role?
    4. What information and resources do you think would facilitate your participation?
    5. What else should be considered?
  - Comments submitted to [consentbasedsiting@hq.doe.gov](mailto:consentbasedsiting@hq.doe.gov)
- Eight Public Meetings + Kick-off Meeting and Close-out Meeting
  - Washington, DC, Chicago, Atlanta, Sacramento, Denver, Boston, Tempe, Boise, Minneapolis, Washington, DC
  - 8 keynotes, 40 panel members, small group discussions and meeting summary reports, 80+ public comments, leading to 40 hours of meeting transcripts
- DOE Invited to Meet w/ Stakeholders and Tribes
  - SONGS, WM 2016, Wiscasset, Prairie Island, Shoshone-Bannock, etc.
- Received over 10,000 comments
  - Available at [www.energy.gov/consentbasedsiting](http://www.energy.gov/consentbasedsiting)

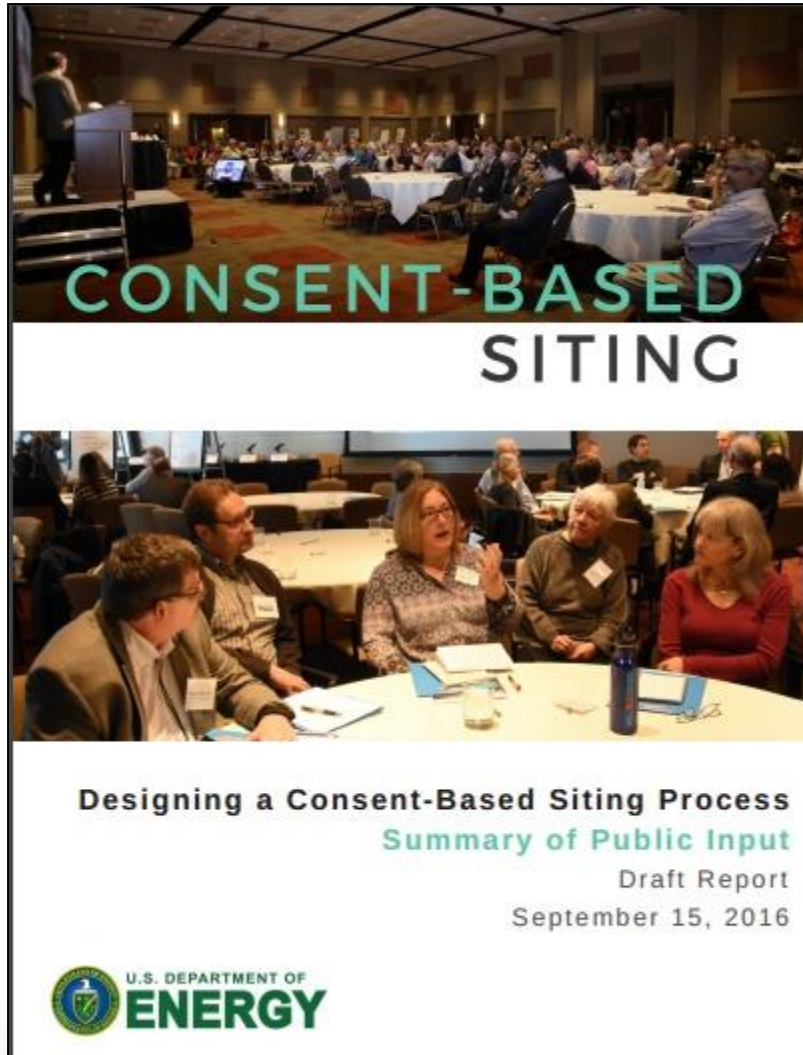


Participants at the consent-based siting public meeting in Chicago.



Participants at the consent-based siting public meeting in Boston.

# Consent-Based Siting Next Steps



Public webinars or conference calls



Opportunities to discuss consent-based siting at recurring, annual, or previously scheduled meetings and conferences



Citizen forums



Draft a consent-based siting process based on public input



Issue preliminary siting considerations (as part of the draft siting process) to provide a baseline for siting discussions



Proposed funding opportunity announcement for interested communities to seek information on consent-based siting

# Consent-Based Siting Cont.

- Defense Repository Plan
- Final Summary of Public Input Report
  - Available in late-December 2016
- Potential Environmental Justice Workshop
  - Many comments received during public meetings on the topic of environmental justice
  - 2017 National Environmental Justice Conference & Training Program
    - Planning to hold a session on Consent-Based Siting



2017 National Environmental Justice Conference  
& Training Program

# Consent-Based Siting Initiative and Transportation

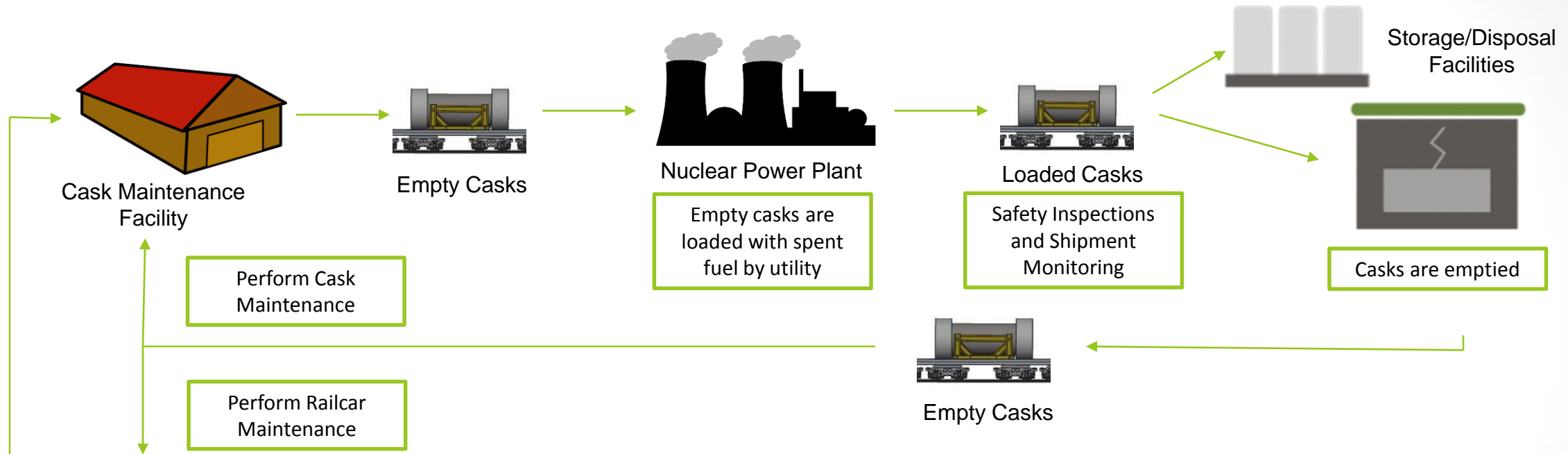
**During the Public Comment Period and Public Meetings, DOE received transportation-related questions and comments:**

- We believe you should only transport the waste once, to disposal
- Facility siting should not be addressed in isolation from transportation
- Shouldn't we be looking at consent for communities along transportation routes?
- DOE must engage communities along transportation routes
- We recognize that consent-based transportation is neither practicable nor legally enforceable
- We do not believe that transportation is safe
- How will DOE ensure transportation safety and security?
- Spent fuel transportation has a strong historical safety record in the US and internationally
- What about crumbling transportation infrastructure in the US?

# Communications

- CBS Public Meetings – many questions about spent fuel transportation
- Starting to develop communication and informational materials to address these comments and questions
- Informational webinar series
  - Summary Overview of SNF Transportation for a public audience (January)
  - Subsequent webinars with more detail on regulation and operations (DOT-FRA, NRC, AAR, past shipping campaigns?)
- Proposed new NTSF ad hoc working group to collaborate on development
- Fact Sheets and web-content
  - Transportation: roles and responsibilities of federal agencies (DOE, DOT, NRC, etc)
  - SNF Transport Basics
  - Crude oil trains

# Example: SNF Transportation System



Railcar Maintenance Facility



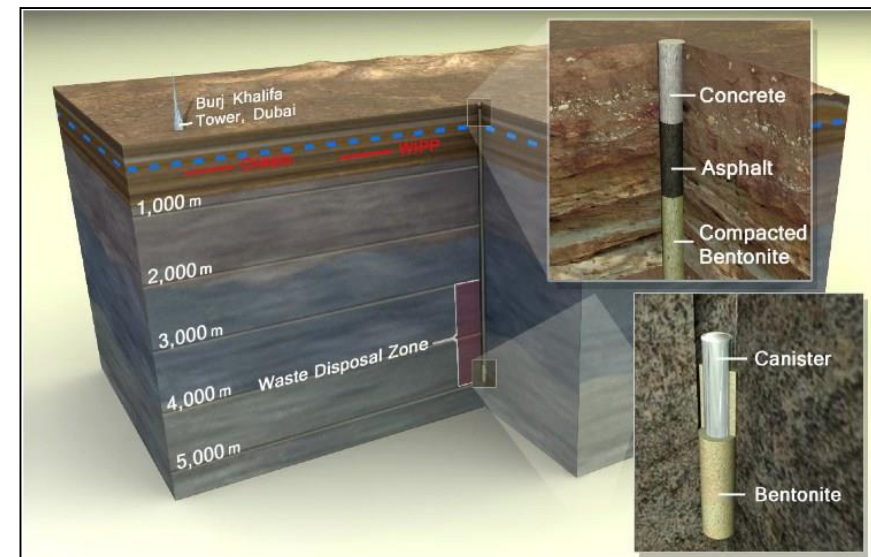
# Program Limitations

- Still Resource Limited
  - Some new staff (now 7½ Feds)
  - Limited travel resources
- Congressional Authorization and Budget
  - FY17 funding level is unknown



# Borehole Field Test

- In October 2016 DOE issued a new Request for Proposals (RFP)
- New RFP incorporated lessons learned from the previous effort
  - Interdisciplinary, scientific research project to evaluate deep drilling technologies and to characterize deep geologic environments over time
  - No radioactive waste will be used in the project
  - Includes multiple awards with a public outreach component before award and throughout contract performance
  - One site will be down-selected in about a year
- Proposals were received Oct. 24<sup>th</sup>
  - Currently under evaluation
- Awards are anticipated in January 2017



# Questions?

