



U.S. DEPARTMENT OF  
**ENERGY**

Integrated Waste Management  
Office of Spent Fuel and Waste Disposition  
**Nuclear Energy**

# Spent Fuel and Waste Disposition Update

**Melissa Bates**

Acting Team Lead  
Integrated Waste Management

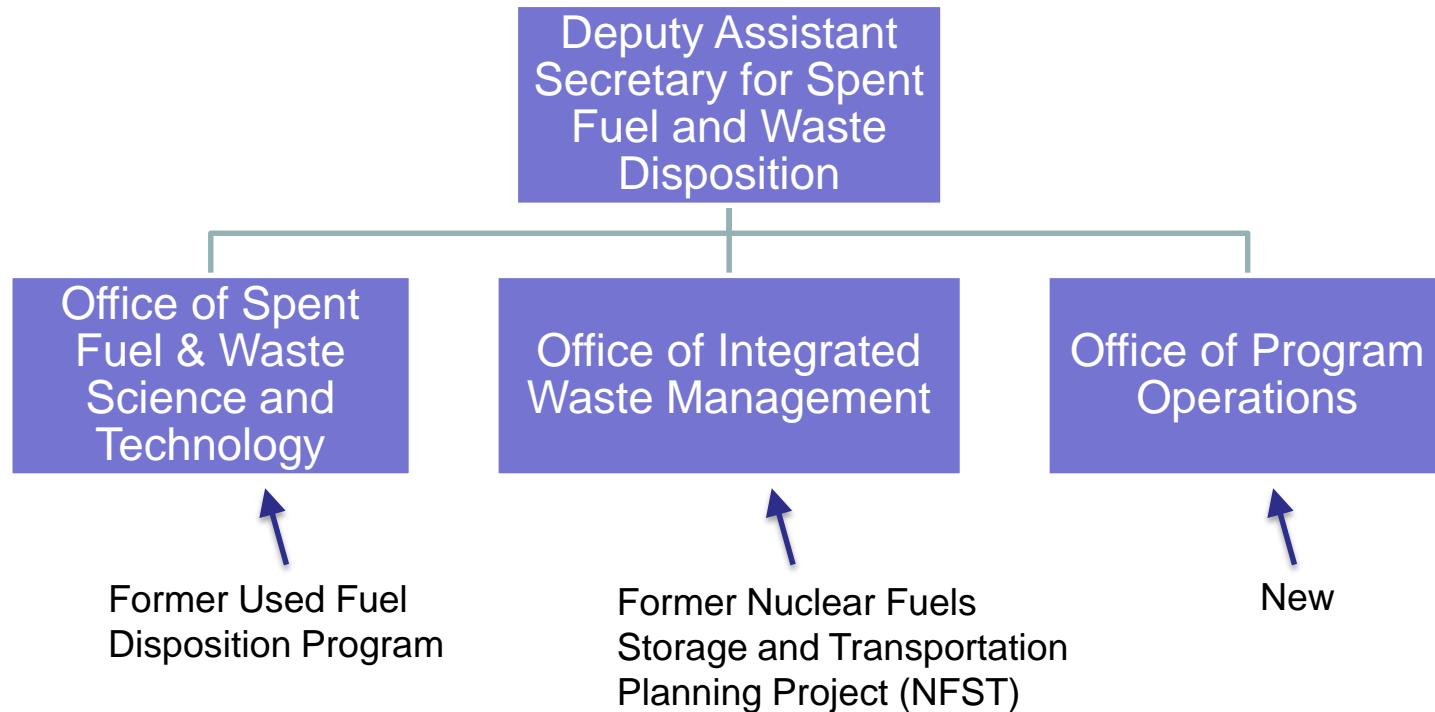
NEAC Meeting  
December 9, 2016  
Washington, DC





# 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**
- **Organization became official in October 2016**





# FY17 Funding

## Nuclear Energy

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	61,040
<b>Total</b>	<b>85,000</b>	<b>150,638</b>	<b>61,128</b>	<b>118,907</b>

\* House mark designated \$150 million for resumption of YM licensing work

## *The Objective*

### Nuclear Energy

---

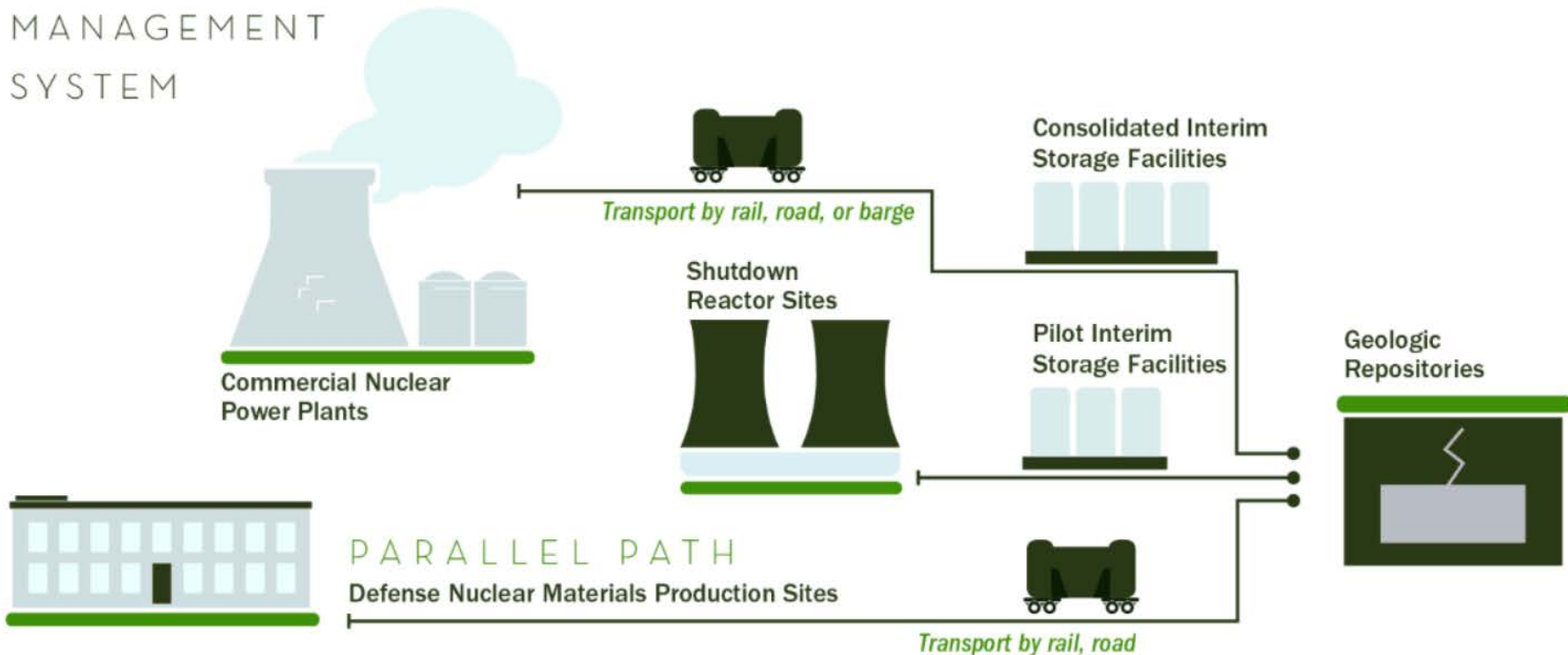
With the appropriate authorizations from Congress, the Department of Energy currently plans to implement a program that:

- Sites, designs and licenses, constructs and begins operations of a **pilot interim storage facility** with an initial focus on accepting used nuclear fuel from shut-down reactor sites;
- Advances toward the siting and licensing of a **larger interim storage facility** that will have sufficient capacity to provide flexibility in the waste management system and allows for acceptance of enough used nuclear fuel to reduce expected government liabilities; and
- Makes demonstrable progress on the siting and characterization of repository sites to facilitate the availability of a geologic repository



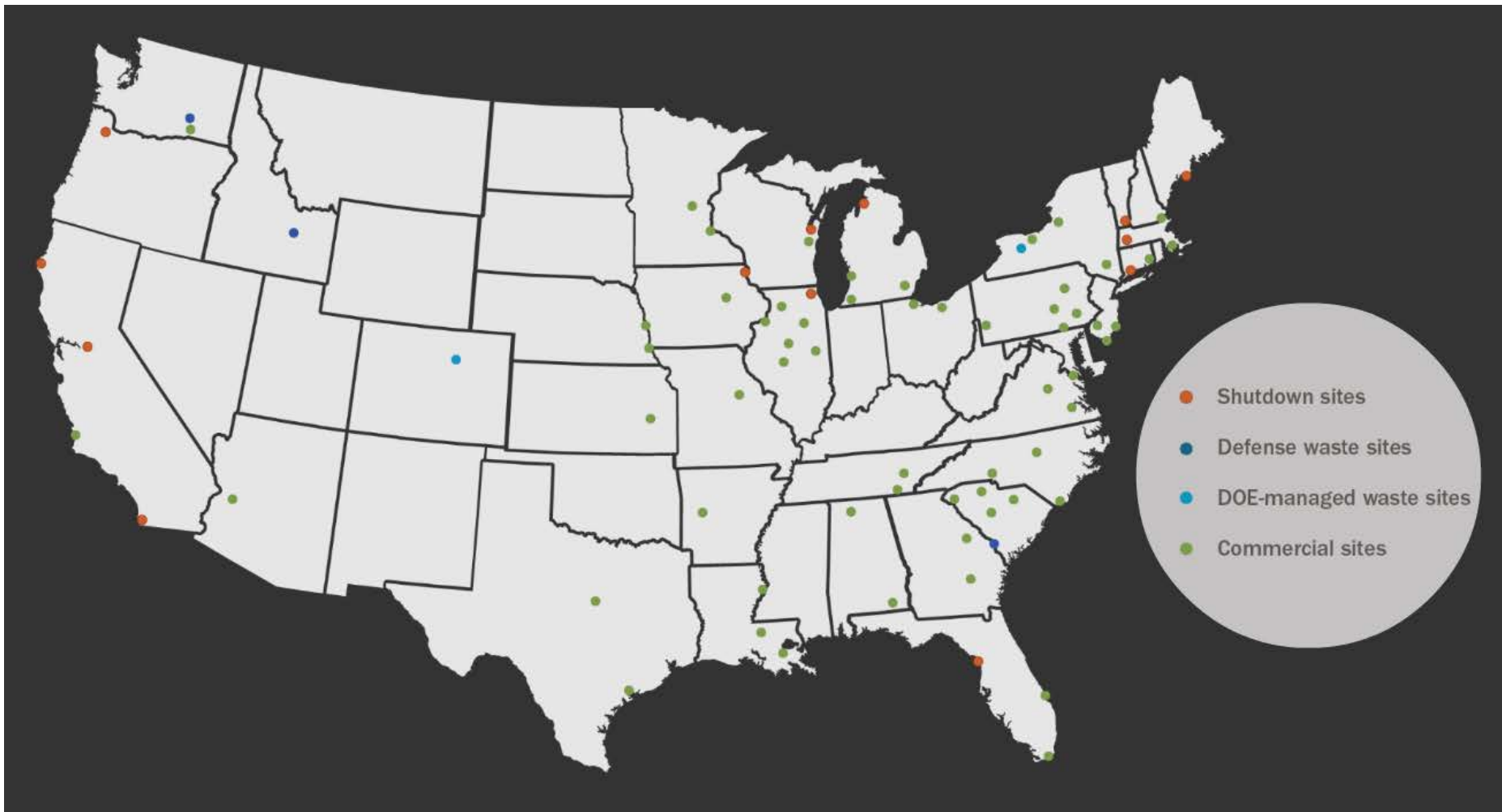
# Integrated Waste Management System

INTEGRATED WASTE MANAGEMENT SYSTEM



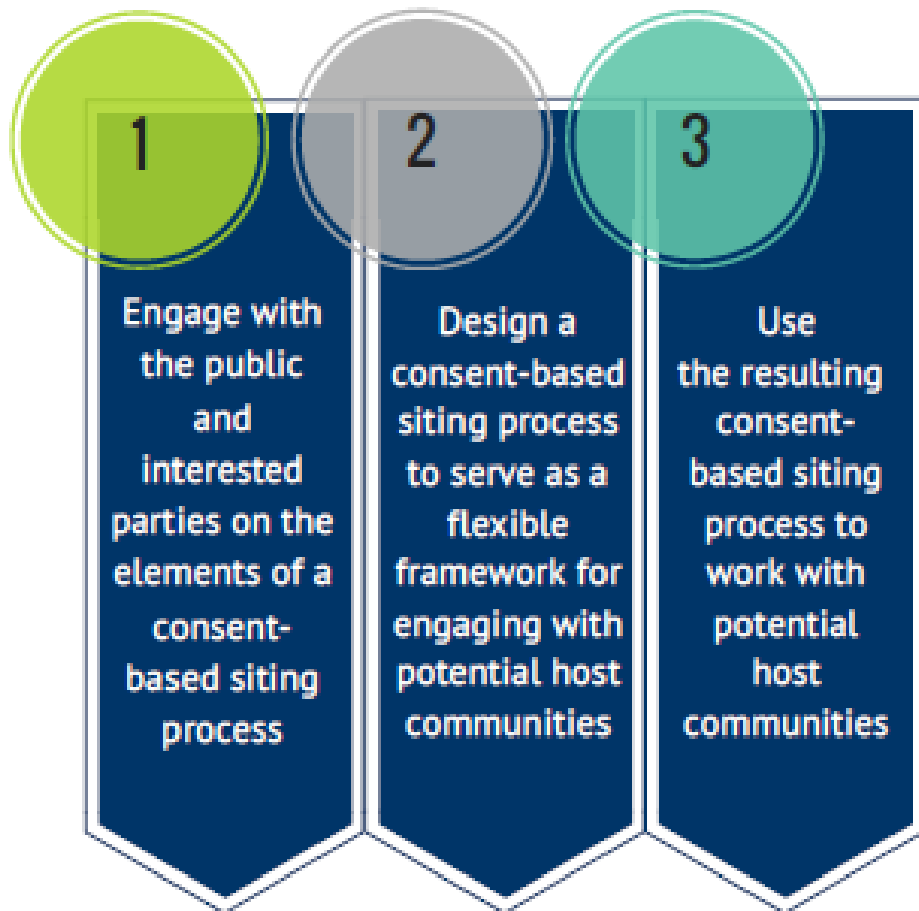


# Where is the Nuclear Waste Stored?





# Steps in Consent-Based Siting



**Ensure Safe and Secure Operations**

**Earn Trust Among Stakeholders**

**Adapt Operations Based on Lessons Learned**



# Consent-Based Siting

## ■ 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)



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

## ■ 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 Boston.



## Major Themes Heard

- Lack of trust in the Department to implement a siting process that builds public confidence.
- A desire for a new agency to be responsible for U.S. nuclear waste management efforts.
- The multidisciplinary nature of the conversations regarding consent-based siting (technical, cultural, socioeconomic, political) and the need to consider a diversity of viewpoints in siting process development and implementation.
- The need to include a wide variety of stakeholders at the local, regional, state, tribal, and federal levels, along with sufficient resources to allow for their effective participation.
- The need for clear siting standards along with a transparent process for developing standards.
- The desire for greater specificity as to how “consent” may be defined, by whom, and the significance of a stakeholder community voicing “non-consent” with respect to siting

“There is a role for non-technical people in technical decision-making, and it should not be underestimated. It’s not easy. It’s not straight-line decision-making, and requires a significant amount of education, commitment and listening.”

## Major Themes Heard

### Nuclear Energy

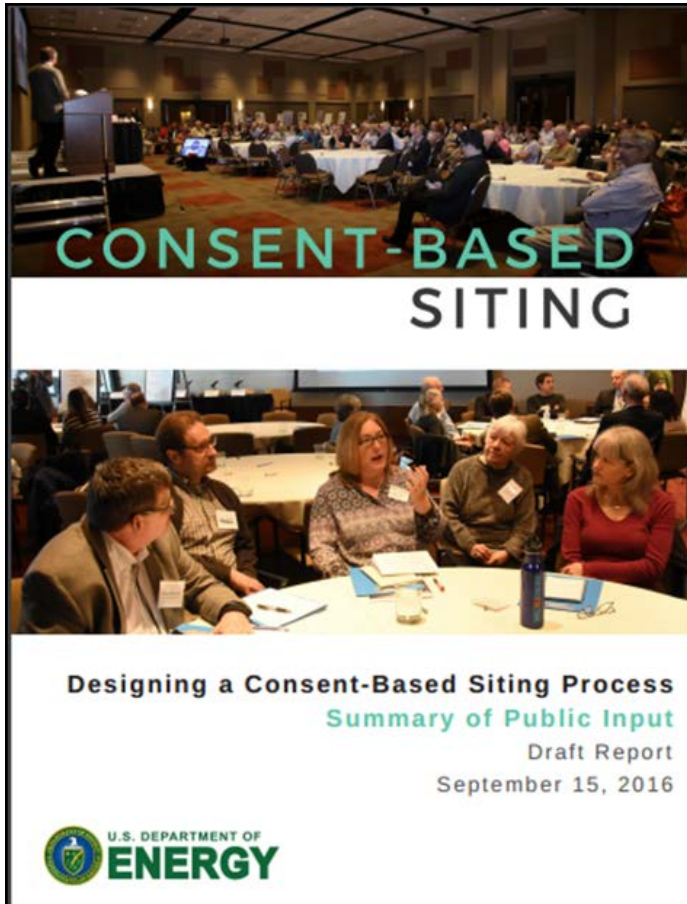
---

- The importance of considering the needs of those communities who presently host nuclear waste from shutdown civilian nuclear reactors who have not agreed to host spent nuclear fuel for the long term.
- Given that nuclear materials remain radioactive of hundreds of thousands of years, the need for the Department to be sensitive to fairness to future generations in the design and implementation of a consent-based siting process.
- The importance of environmental justice considerations.
- The recommendation to include the needs of transportation stakeholders into Departmental decision-making and actions.
- The unique relationship Tribes have with the federal government and the importance of Tribal sovereignty in decisions regarding siting of nuclear waste management facilities.

“We are talking about something that stays toxic and dangerous for generations to come. How can one generation give ‘consent’ for future generations?”



# 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

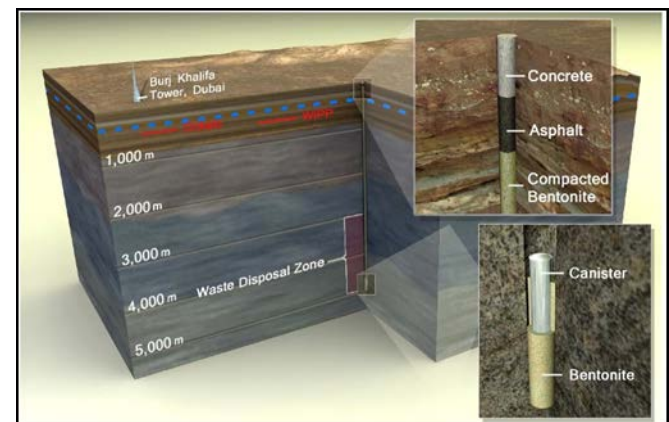


## Other Programmatic Updates

- **Atlas Railcar Contract amended to include the heaviest cask currently planned for use in the U.S.: the Hi-STAR 190**
- **Request for Information (RFI) on Private Initiatives (PIs) for Consolidated Interim Storage Facilities**
  - Goal is to gather input on the role of PIs for private consolidated interim storage facilities services as part of an integrated waste management system.
  - The RFI is available on the DOE-NE Web site at:  
[www.energy.gov/ne/downloads/Private-ISF](http://www.energy.gov/ne/downloads/Private-ISF)
- **Potential Award of a Generic Design and Topical Safety Analysis Report for a Pilot Interim Storage Facility for Spent Nuclear Fuel**
- **Defense Repository Plan**
- **Potential Environmental Justice Workshop**
  - Many comments received during public meetings on the topic of environmental justice
  - 2017 National Environmental Justice Conference & Training Program

## 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. 24th**
  - Currently under evaluation
- **Awards are anticipated in January 2017**





# Questions & Discussion

