



# **U.S. Nuclear Regulatory Commission Activities Related to U.S. Department of Energy Waste Determinations**

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# Background

- Upon request, NRC historically assessed DOE WIR determinations for soundness of technical assumptions, analysis, and conclusions
- National Defense Authorization Act for FY05 (NDAA) passed in October 2004
- SECY-05-0073 (April 2005) described staff's plans for implementing the NDAA



# Commission Direction

- The Commission approved the staff's plans in June 2005 and directed staff to "take the time necessary to complete its reviews.." and "ensure that the technical basis for our decisions are transparent, traceable, complete, and as open to the public...as possible"



# Clarification of Commission Direction

- June 2006 SRM clarification directed staff to “ensure that the basis for our decisions are ... as open to the public and interested stakeholders as practicable”
- Commission recognized that “there may be a practical need for conducting a limited number of closed meetings”



# NDAA Consultation

- NRC reviews focus on those aspects of waste management that are risk significant
- Two reviews completed thus far:
  - Technical Evaluation Report (TER) for Salt Waste Disposal at the Savannah River Site (Dec 2005)
  - TER for Idaho National Laboratory Tank Farm Facility (Oct 2006)



# Standard Review Plan

- Purpose is to provide guidance to NRC staff and to ensure consistency among reviews
- Based on existing NRC guidance and staff experience with waste determination reviews
- Describes the types of information that may be assessed by NRC staff
- Draft SRP was published on May 31, 2006 and was open for public comment until July 31, 2006



# NDAA Monitoring

- NRC must, in coordination with the State, monitor DOE's disposal actions to assess compliance with 10 CFR Part 61, Subpart C, and report any noncompliance
- Monitoring implementation will be addressed in:
  - Specific monitoring plans for individual sites
  - Internal operating procedures for staff
  - Overall monitoring approach in the SRP



# Key Aspects of Monitoring

- Risk-informed and performance-based
- Consists of both technical reviews and on-site observations
- NRC plans to develop an annual report





# Other Activities

- Established new Low-Level Waste Branch
- Developed Communication Plan
- Met with states to discuss roles and responsibilities
- Provided briefings to NAS, NRC's Advisory Committee on Nuclear Waste, and other stakeholders
- Held numerous public meetings
- Examined lessons learned from initial reviews



# Ongoing/Future Efforts

- Technical exchanges to support future waste determinations at SRS
- Resolution of generic technical/policy issues
- Prepare draft final SRP for interim use
- Finalize monitoring plans for SRS and INL and begin implementation



# Conclusions

- NRC fulfilling responsibilities under NDAA
- Two reviews successfully completed, monitoring to begin soon
- Earlier interactions and resolution of generic technical/policy issues key to improving efficiency



# Background



# National Defense Authorization Act for FY 2005

- DOE must consult with NRC on non-HLW determinations for South Carolina and Idaho
- The Act sets the criteria to be used in waste determinations, which are:
  - (1) The waste does not require disposal in a deep geologic repository
  - (2) The waste has had highly radioactive radionuclides removed to the maximum extent practical, and
  - (3A) If the waste is Class C or less, its disposal must meet 10 CFR 61 Subpart C, or
  - (3B) If the waste exceeds Class C, its disposal must meet 10 CFR 61 Subpart C and DOE must consult with NRC on development of its disposal plans



# Generic Technical Issues

- **Point of compliance location**
- **Long-term performance grout**
- **Model support**
- **Basis/criteria for terminating waste removal activities**
- **Concentration averaging**
- **Sensitivity and uncertainty analyses**
- **Estimating waste inventory and waste tank characterization**
- **Long-term engineered cap performance**
- **Grouping tanks for submittal**
- **Submission of waste determination prior to waste removal**
- **Cumulative impacts**