

NRC Review Activities for the Proposed High-level Radioactive Waste Repository at Yucca Mountain, Nevada



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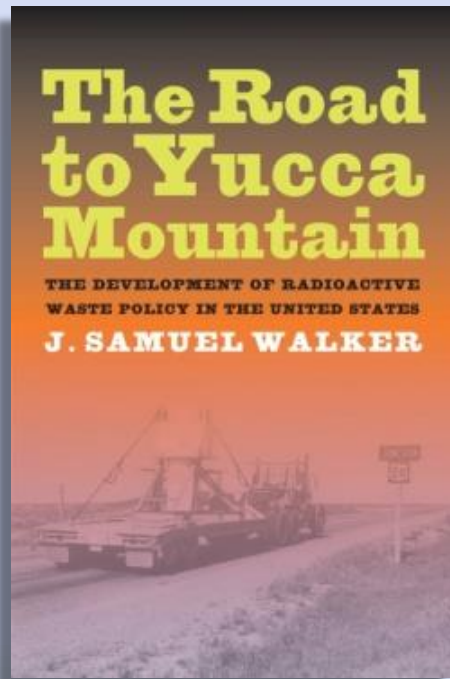
**JAMES RUBENSTONE
YUCCA MOUNTAIN DIRECTORATE
OFFICE OF NUCLEAR MATERIAL SAFETY
AND SAFEGUARDS**

Overview

- Background
- NRC Yucca Mountain Review Activities
 - Safety Evaluation Report
 - Supplement to the Environmental Impact Statement
 - Licensing Support Network Document Collections
- Conclusions

Background: NWPA

- The U.S. Nuclear Waste Policy Act (NWPA) of 1982 established permanent geological disposal as the national policy for spent nuclear fuel and high-level radioactive waste.



- Assigned responsibilities to Department of Energy (DOE), Environmental Protection Agency (EPA), and Nuclear Regulatory Commission (NRC).
 - DOE: repository design and operation
 - EPA: setting protection standards
 - NRC: regulatory licensing and oversight
- Established a Nuclear Waste Fund (NWF).
- Amendments in 1987 focused only on Yucca Mountain, Nevada, for further site activities.

Background: Regulations

- Disposal of High-Level Radioactive Wastes in Geologic Repositories
 - EPA : 40 CFR Part 191 (1985*)
 - NRC: 10 CFR Part 60** (1981*)
- Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada
 - EPA : 40 CFR Part 197 (2001*)
 - NRC: 10 CFR Part 63 (2001*)



* with subsequent revisions

** NRC has recognized that its generic Part 60 requirements will need updating if applied to sites other than Yucca Mountain, Nevada.

<http://www.nrc.gov/reading-rm/doc-collections/cfr>

License Application Review

- June 2008 – DOE files its license application for a geologic repository at Yucca Mountain, Nevada.
- September 2008 – NRC staff docket DOE's license application and adopts DOE's Environmental Impact Statements (EIS), with further supplementation needed as identified in the NRC staff's Adoption Determination Report.
- September 2011 – NRC staff review stopped and adjudication suspended.
- November 2013 – NRC staff review resumes; adjudication remains suspended.
- January 2015 – NRC staff completes the Safety Evaluation Report (SER).

DOE License Application,
Environmental Impact
Statements, and
supporting documents
June 2008



Safety Evaluation Report

- NRC staff evaluation of DOE application
- Completed in January 2015
- Vol. 1: General Information
- Vol. 2: Repository Safety Before Permanent Closure
- Vol. 3: Repository Safety After Permanent Closure
- Vol. 4: Administrative and Programmatic Requirements
- Vol. 5: Proposed Conditions on the Construction Authorization and Probable Subjects of License Specifications



Conclusions of the SER

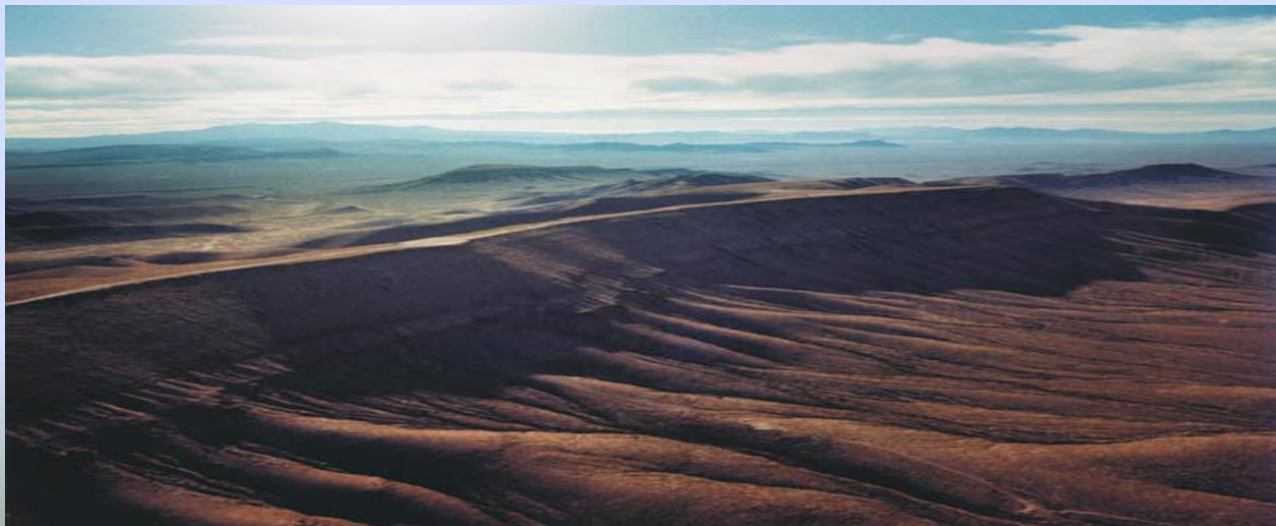
- NRC staff finds that DOE's application meets most, but not all, of the applicable NRC regulatory requirements.
 - Requirements not met are related to certain conditions of land ownership and water rights.
- NRC staff therefore does not recommend issuance of a construction authorization at this time.

<http://www.nrc.gov/waste/hlw-disposal/key-documents.html>

NRC Decision on Construction Authorization

Remaining Steps for a Decision

- Complete the supplement to DOE's Environmental Impact Statements.
- Conduct hearing on contested issues.
- Commission completes its review of contested and uncontested issues.



Supplement to DOE's EIS

- NRC staff identified specific areas for supplementation of DOE's EIS in its 2008 Adoption Determination Report.
- Scope of the current EIS supplement:
 - Impacts on groundwater beyond the regulatory compliance point
 - Impacts from surface discharge of groundwater beyond the regulatory compliance point
 - Including impacts from radiological and nonradiological contaminants
- Draft supplement issued for public comment in August 2015; comments closed on November 20, 2015.
- Staff currently reviewing and developing responses to comments.
- Final supplement expected in first half of 2016.

Licensing Support Network

- Licensing Support Network (LSN) established to support document discovery for high-level waste repository adjudication proceedings.
 - Distributed document management system
 - All parties maintained their own collections
- System shut down in 2011.
 - All parties provided electronic copies of their collections to NRC
 - Collections include many millions of documents, mostly from DOE
- Work now underway to make all collections public through NRC ADAMS.
 - Expected completion in summer 2016

What's Next?

- NRC staff will complete the EIS supplement and some minor “wrap-up” activities in first half of 2016.
- Current activities (supplement, LSN collections, wrap-up) will expend substantially all of NRC’s Nuclear Waste Fund resources remaining from previous appropriations.
 - No further work anticipated without further appropriations
 - NRC has received no NWF appropriations since Fiscal Year 2011
 - No NWF appropriations or specific direction for Fiscal Year 2016
- Adjudication remains suspended.
- Changes in spent fuel and high-level waste inventories, management, and proposed policies since DOE’s 2008 license application may impact future steps.

Conclusions

- NRC's review of the proposed geologic repository at Yucca Mountain, Nevada, has moved forward since 2013.
 - Safety Evaluation Report completed
 - Supplement to DOE's EIS on track for completion
 - Public availability of LSN document collections in process
- Further progress of the review and licensing activities requires further appropriations.
- New approaches for waste management and disposal have been proposed, but require dedicated funding and (in some cases) changes to existing law.