



Viability Assessment and Transition to Site Recommendation

Presented to:

Nuclear Waste Technical Review Board

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Department of Energy



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Viability Assessment

- Congress Directed the Department of Energy (DOE) in the Energy Appropriations Act of 1997 to prepare a report in 1998 to assess the feasibility developing a repository at Yucca Mountain
- The Viability Assessment (VA) provides information on the progress of site characterization through 1997, and identifies the key issues that must be addressed before the DOE can proceed with site recommendation

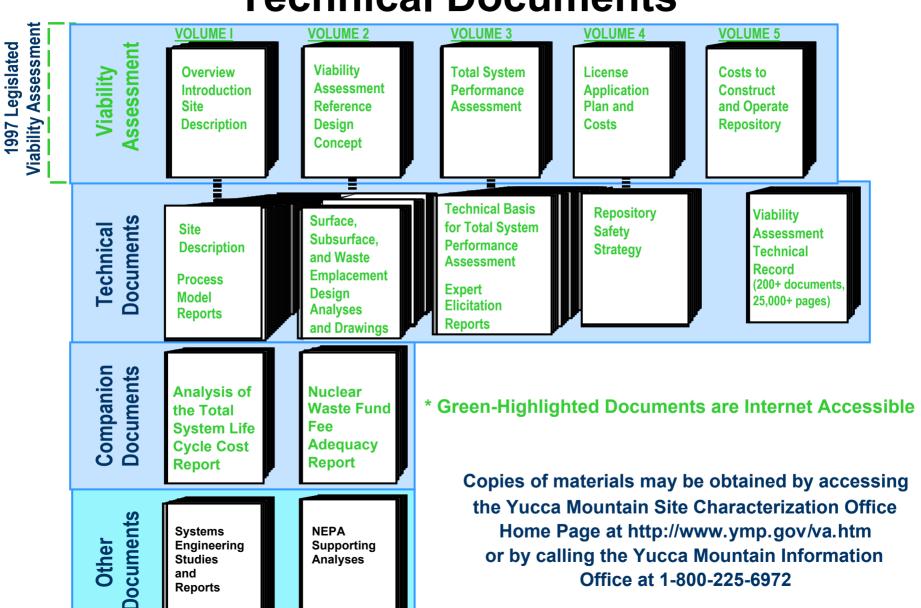
Viability Assessment

- The Viability Assessment (VA) is composed of an Overview and five volumes
 - Overview written for the general reader
 - Volume 1 is an introduction and summary description of the Yucca Mountain site
 - Volume 2 is a description of a preliminary repository and waste package design concept that will perform in concert with the natural system to protect public heath and safety
 - Volume 3 is a total system performance assessment that utilizes available data and analyses

Viability Assessment

- Volume 4 is the Plan for completing necessary work to evaluate the suitability of the site and prepare a defensible license application, if the site recommendation (SR) proceeds.
- Volume 5 is an estimate of the costs to construct and operate the repository in accordance with the design concept
- In addition, there are over 300 referenced or supporting documents available on the Internet

Viability Assessment and Supporting Technical Documents*

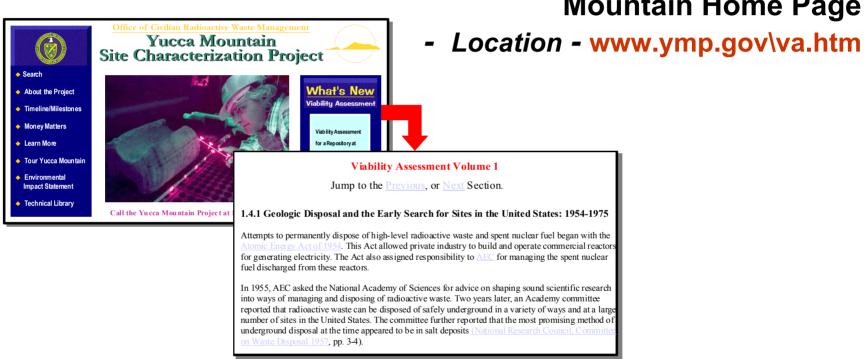


Availability of the VA

- The VA was transmitted to Congress on December 18, 1998; and made available to the public on CD Rom and the Internet at the same time
- Supporting documentation was also put on the Internet
- Direct hypertext links from the VA to the references will be made available the end of January 1999

Internet Home Page Access to the VA

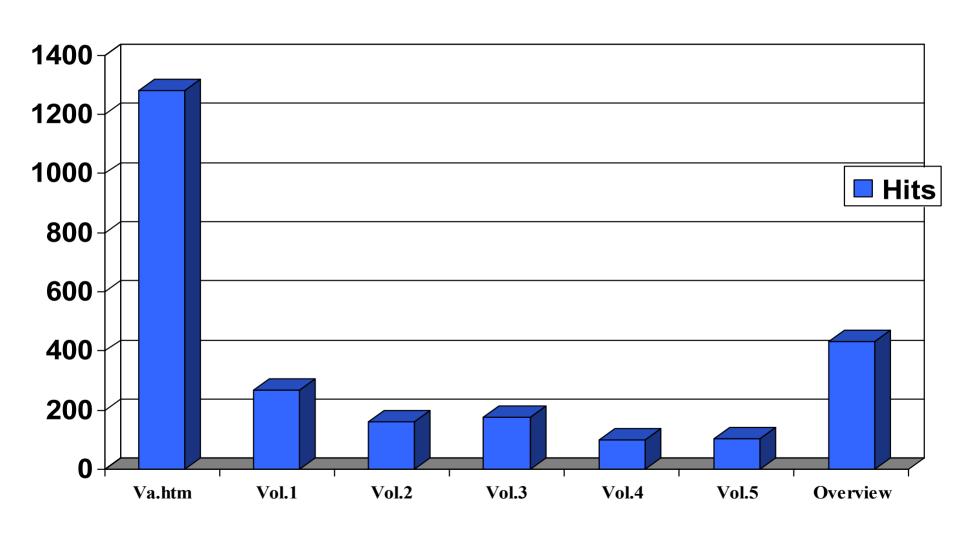
☐ Access the VA and supporting documents through the Yucca Mountain Home Page



□ Or call for information 1-800-225-6972

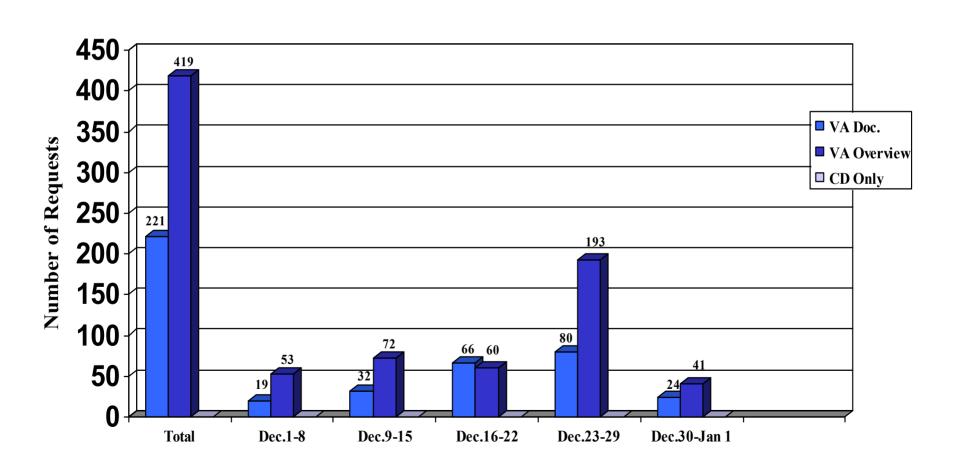
Viability Assessment Internet Hits

(For the Period December 18, 1998 - January 5, 1999)



800 Number Requests for Viability Assessment Document, Overview and Compact Disc (CD)

(For the Period of December 1, 1998 - January 15, 1999)



Planning for Site Recommendation

- A general work plan for acquiring necessary information to evaluate the suitability of the site for site recommendation (SR) and to prepare a defensible license application is presented in Volume 4 of the VA
- DOE's comprehensive Multi-Year Plan uses Volume 4 as a basis for its development
- Conducting detailed planning for SR
- Preparing an annotated outline for the SR

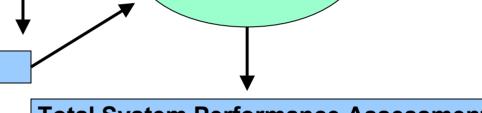
Technical Work Leading to SR

Continue Site Testing

- Drift-scale heater test
- Unsaturated zone flow and transport tests
- Saturated zone flow and transport tests
- Rock mechanics/hydrologic laboratory tests
- Cross Drift and Busted Butte

Continue Design

- Conduct EBS materials and waste form laboratory testing
- Evaluate design alternatives and select design
- Develop repository design for SR
- Complete details of operational concept
- Complete waste package fabrication development



Update

Process Models

Total System Performance Assessment

- Address peer review and oversight comments
- Incorporate updated data/process models
- Conduct analyses





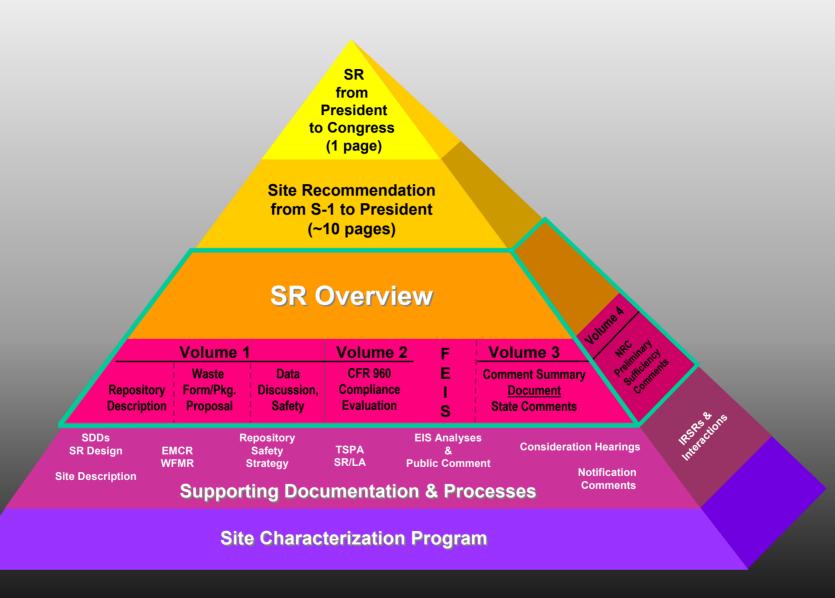
Environmental Impact Statement



Site Recommendation



Site Recommendation Documentation Structure



Site Recommendation

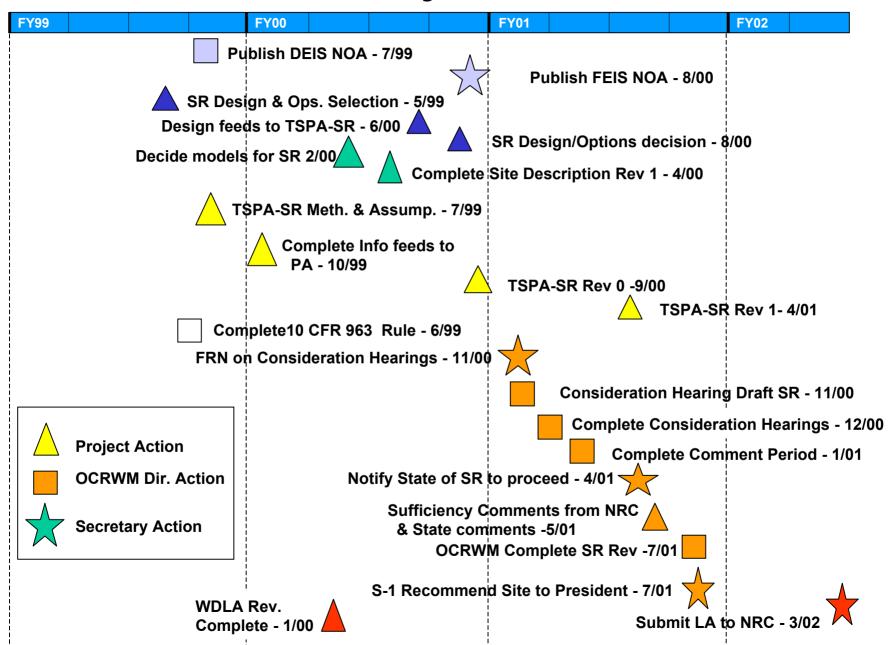
- Volume 1: Summary of technical information required by Section 114 of the NWPA
 - Description of the proposed repository and design (Section 114(a)(1)(A))
 - Description of the proposed waste form or packaging (Section 114(a)(1)(B))
 - Discussion of data obtained in site characterization ...
 relating to the safety of the site (Section 114(a)(1)(C))
- Volume 2: Compliance analysis with respect to the DOE siting guidelines based on TSPA-SR
 - Represents site suitability analysis

Site Recommendation

(Continued)

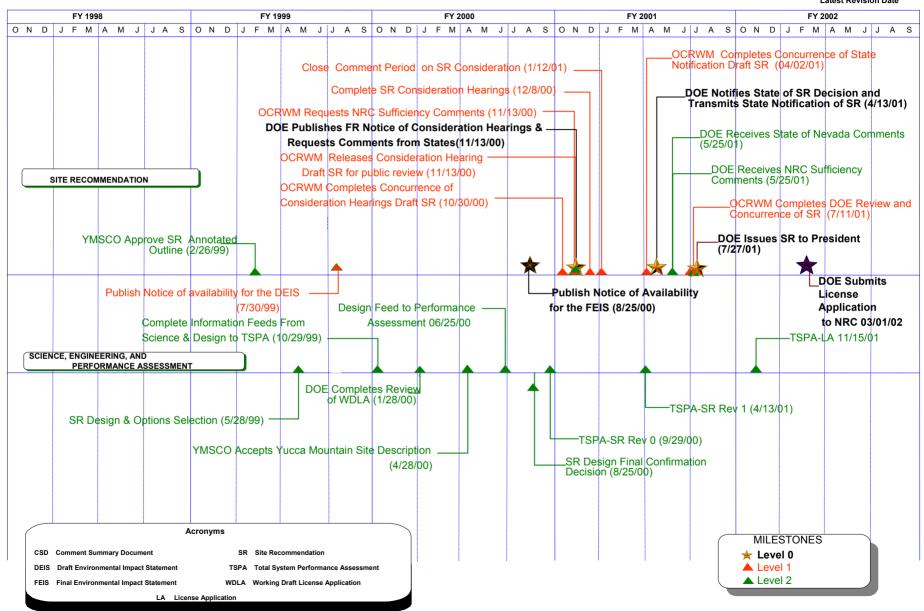
- Volume 3: Other information required by Section 114 of the NWPA
 - Views and comments of the Governor and legislature of any State, or affected Indian Tribe, together with the Secretary's response (Section 114(a)(1)(F))
 - Other information the Secretary considers appropriate (Section 114(a)(1)(G)); and
 - Any impact report submitted under Section 116(c)(2)(B) by the State of Nevada (Section 114(a)(1)(F))
- Volume 4: The Commission's preliminary comments on sufficiency (Section 114(a)(1)(E))
- The Final EIS will accompany the SRR (Section 114(a)(1)(D))

Planned Major Milestones



YMP Strategy Decision Plan

Friday, January 22, 1999 Latest Revision Date



Major Products for FY 1999

- Issued the VA Dec. 1998
- Complete an Annotated outline for the Site Recommendation Volumes 1 and 2 - March 1999
- Complete design alternatives activity and select SR design concept May 1999
- Complete 10 CFR 963 Rule June 1999
- Publish NOA for Draft Environmental Impact Statement - July 1999
- Prepare Working Draft LA August 1999

Summary

- Project has shifted from focusing on the VA to focusing on the EIS and SR
- We are finalizing a comprehensive plan that will:
 - Provide sufficient information for a defensible evaluation of suitability in 2001, and if suitable;
 - Recommend to the President that DOE proceed with submitting a license application to the NRC for construction of a geologic repository