



U.S. Department of Energy
Office of Civilian Radioactive Waste Management

Process for Completing the Site Recommendation Report

Presented to:
**NRC/DOE Technical Exchange
on Yucca Mountain Pre-Licensing Issues**

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**YUCCA
MOUNTAIN
PROJECT**

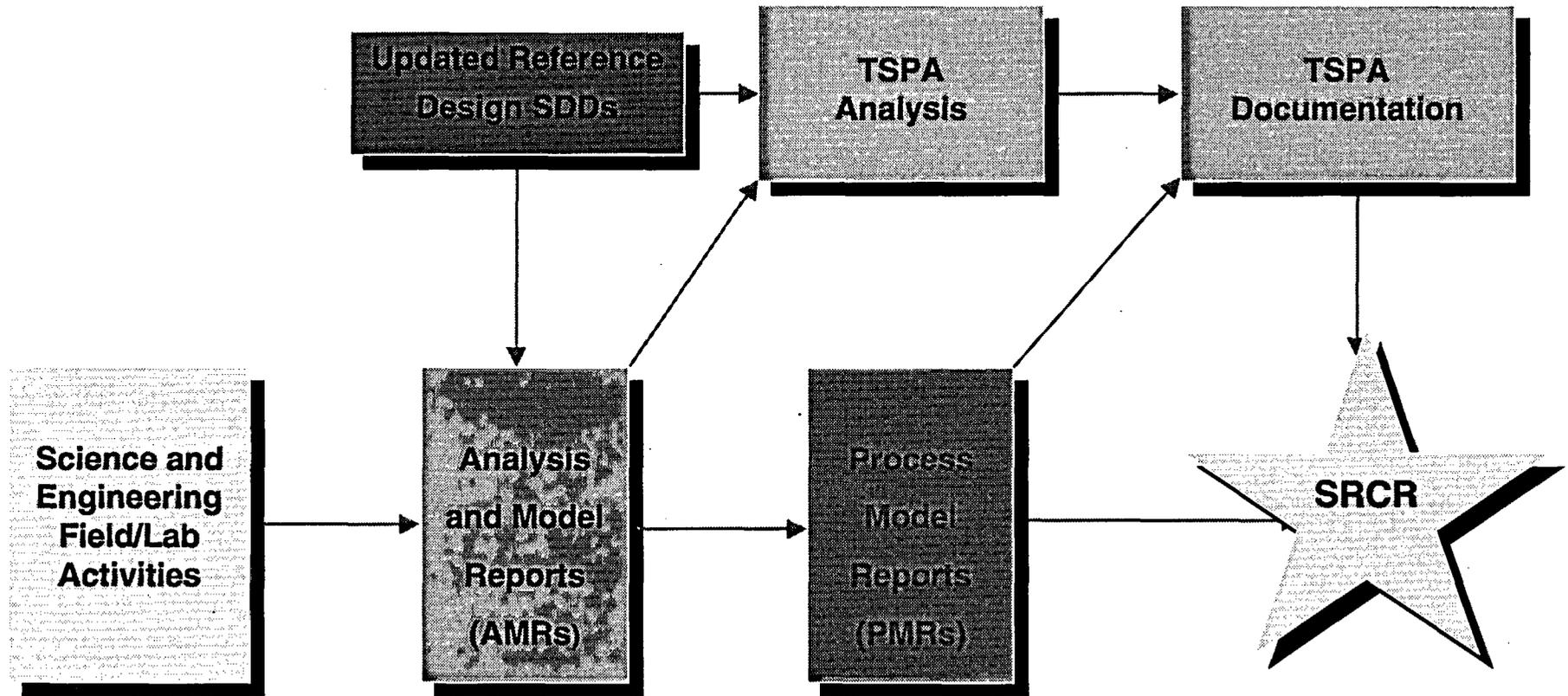
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Overview

- **Technical basis for the Site Recommendation Consideration Report (SRCR)**
- **NRC Sufficiency Review and DOE actions to support review**
- **DOE's review of NRC's Issue Resolution Status Reports (IRSRs)**

Technical Basis for the SRCR

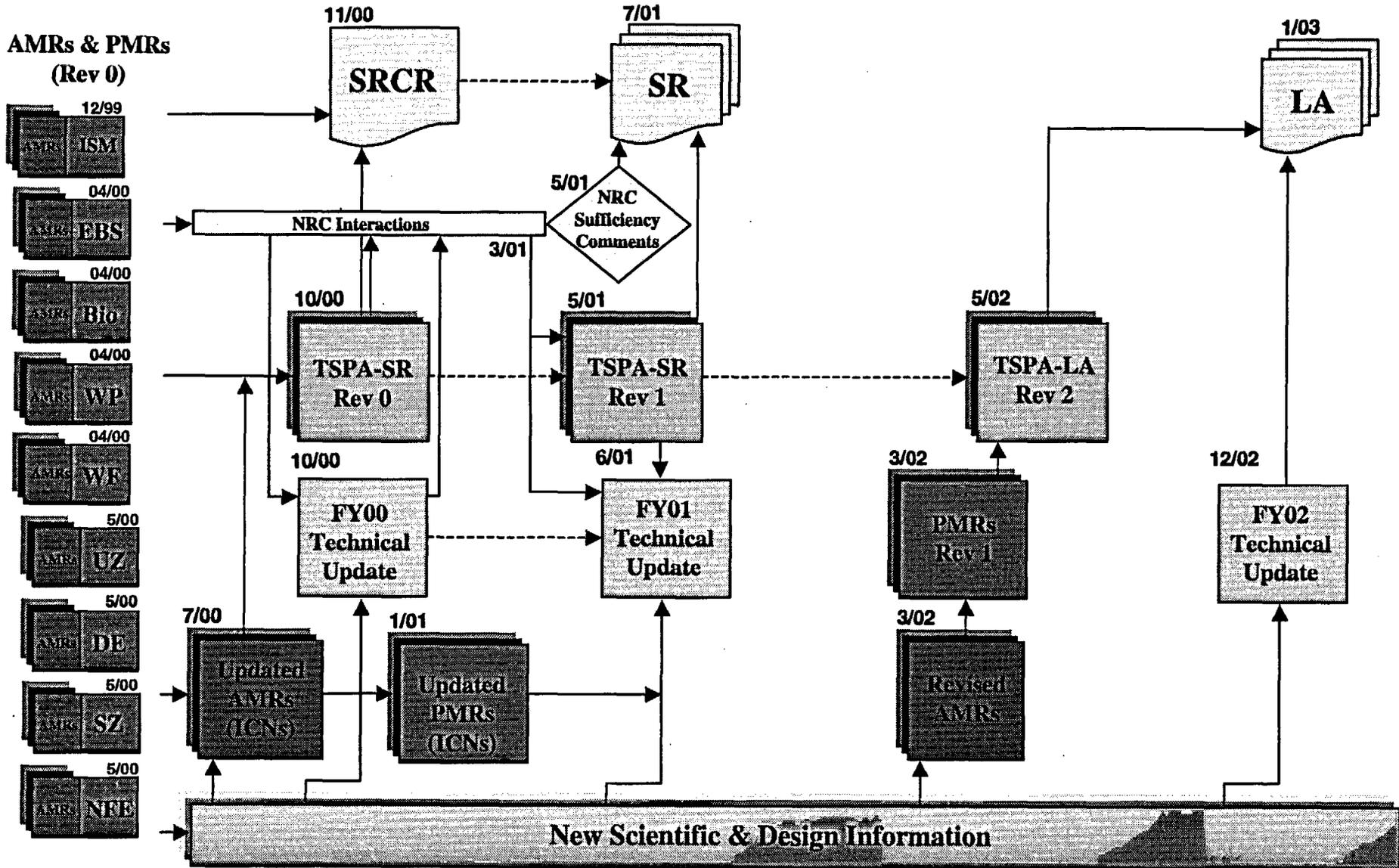
Analyses and Documentation for the Site Recommendation Consideration Report



Technical Basis for SRCR

- DOE letter of November 24, 1999 specified the documentation that will be available for the SRCR technical basis
- Technical basis includes:
 - Process Model Reports (PMRs)
 - Analysis Model Reports (AMRs)
 - System Description Documents (SDDs)
 - Total System Performance Assessment - Site Recommendation (TSPA-SR)
 - Site Description Document
 - Preliminary Preclosure Safety Analysis
 - Technical Update Reports *new*

Technical Basis Documents



Technical Basis for SRCR

(Continued)

- **Rev 0 AMRs and PMRs will be updated through Interim Change Notices (ICNs) to reflect new data and analyses, and design evolution**
 - **If substantial changes are made in supporting AMRs that affect TSPA-SR results, affected Rev 0 PMRs may be revised for SR**
- **DOE will prepare Technical Update reports to accompany the SRCR and SR**
 - **Technical Update reports will provide access to the most current information and an assessment of its relevance to the technical basis for SRCR and SR**
- **PMRs and AMRs will be revised as necessary to support the License Application (LA)**

NRC Sufficiency Review and DOE Actions to Support Review

Basis for NRC Sufficiency Review

- **Nuclear Waste Policy Act Section 114(a)(i)(E) requires that the Secretary include with the basis for a SR**
 - **“preliminary comments of the Commission concerning the extent to which the at-depth site characterization analysis and the waste form proposal for such site seem to be sufficient for inclusion in any application to be submitted by the secretary”**

DOE Understanding of NRC Approach

- **NRC's sufficiency review will result in a report on DOE progress toward sufficiency of data, design, and analyses for LA; it is not a licensing review**
- **In its review, NRC will:**
 - **Consider both current information and DOE's plans**
 - **Focus on the foundations for the safety case and performance estimates (i.e., data and models)**
 - **Consider the status of Key Technical Issue (KTI) resolution**
 - **Assess DOE progress toward qualifying data and codes, and validating models for use in licensing**
- **Sufficiency will be evaluated in context of NRC's risk-informed, performance-based approach to licensing**

DOE Understanding of NRC Approach

(Continued)

- **NRC will provide preliminary comments on:**
 - **Where data and analyses appear sufficient/insufficient**
 - **What additional data or analyses are needed and when they are needed**
 - **Whether conceptual models are supported**
 - **Status of DOE's quality assurance efforts (data, software, models)**
- **NRC will not take a position on DOE's dose calculation or evaluate compliance with 10 CFR Part 963**
- **NRC/DOE prelicensing consultations will continue and focus on issue resolution**

DOE Comments on NRC Approach

- **The technical documents supporting the SRCR provide the data, design, and analysis information necessary for NRC to complete its sufficiency review and meet the intent of the Nuclear Waste Policy Act**
 - **Consistent with process proposed in DOE letter of November 24, 1999**
- **NRC comments on the need for additional data or analyses will be considered by DOE in its planning for LA**
- **DOE efforts to qualify data and software, and validate models focus on completion for LA**

DOE Comments on NRC Approach

(Continued)

- *** The Yucca Mountain Review Plan establishes the basis for NRC review of the LA; its role, if any, in NRC's sufficiency review is not clear**
- **DOE will continue to interact with NRC to:**
 - **Understand the role of KTIs in the sufficiency review**
 - **Provide an understanding of the relative importance of KTIs in the context of DOE's postclosure safety case**
- **DOE recognizes that NRC must have adequate confidence to make a "preliminary" assessment that the technical basis for SRCR and the work to be completed prior to LA submittal "seems to be sufficient for inclusion in" a LA**

DOE's Review of NRC's Issue Resolution Status Reports (IRSRs)

General Comments on IRSRs

- **DOE has formally responded to NRCs most recent IRSR revisions in 8 letters (March 22, 2000)**
 - **Review of IRSR on TSPA and Integration Rev 2 is not complete**
MAY 15 → DOE
June 1 → NRC
- **DOE agrees that some subissues are not fully addressed by information available to NRC**
 - **Technical basis documents being developed for SRCR should resolve many of these issues**
- **DOE supports the risk-informed performance-based approach reflected in NRC's proposed rule and the flexibility given DOE for demonstrating compliance with the overall performance objectives for the system**

General Comments on IRSRs

(Continued)

- **The IRSRs do not always seem to be consistent with the intent of the proposed approach and may not provide DOE the flexibility as applicant that was intended under the proposed rule**
 - **In some cases IRSRs contain implicit or explicit requirements that appear to go beyond the scope of acceptance criteria**
 - **Some requirements and acceptance criteria appear to be more prescriptive than would be consistent with the proposed approach**
 - **In some cases there is no clear link between the subissues or acceptance criteria and their importance to performance**

General Comments on IRSRs

(Continued)

- PMRs contain tables indicating where discussions related to KTIs and subissues can be found in PMRs and supporting AMRs, and how KTI criteria are being addressed
- DOE is currently in the process of verifying the factors relevant to its postclosure safety case and finalizing the identification of the principal factors for evaluating repository performance
- The documented basis for the postclosure safety case will be presented in Revision 4 of the Repository Safety Strategy (RSS) *Summer*

REV 3 -> Jan

General Comments on IRSRs

(Continued)

- **The status of the RSS and postclosure safety case are discussed in the next presentation**
 - Shows how the information in the technical basis for SRCR relates to the DOE's postclosure safety case
 - Sets the stage for understanding how DOE views the relative importance of the NRC's KTI subissues in the context of the principal factors
- **The presentations that follow will provide DOE's current view of each of the KTIs and subissues and will provide more information regarding DOE's approach to resolution of the subissues**

Summary

- **DOE's primary focus for CY 2000 is on completing the SRCR and its technical basis**
- **The technical basis documents will be made available to NRC after acceptance by DOE**
 - **NRC will be advised of any subsequent modifications to the technical basis documents**
- **DOE agrees with NRC's overall risk-informed, performance-based approach, and the general approach to NRC's sufficiency review**
- **Future NRC/DOE interactions will focus on the technical basis documents as a means to provide information to NRC for its sufficiency review**