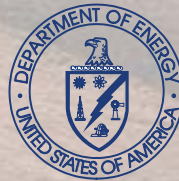


Perspectives on the Yucca Mountain Site Project

Presentation to:
Nuclear Waste Technical Review Board (NWTRB)

Presentation by:
Dr. Stephan J. Brocoum
Assistant Manager
Office of Licensing and Regulatory Compliance
Yucca Mountain Site Characterization Office

Alexandria, VA
September 14-15, 1999



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

Yucca
Mountain
Project

Topics for Discussion



- **YMSCO organizational changes**
- **Fiscal Year 1999 accomplishments and Fiscal Year 2000 priorities**
- **Implementation of EDA II and planned testing**
- **Repository Safety Strategy**
- **Environmental Impact Statement and Site Recommendation Processes**

YMSCO Organization



- **Continuing the implementation to the nuclear culture (culture of excellence), Project Office has proposed organizational changes to enhance project management practices**
- **Project Manager (PM) has proposed two deputy positions**
 - **Acting Deputy PM, Technical - Don Horton**
 - **Acting Deputy PM, Operations - Linda Bauer**
- **In addition, the vacancy for Assistant Manager for the YMSCO Office of Project Execution was filled by Suzane Mellington.**

Major Products for FY 1999

- ✓ Issued the VA - December 1998
- ✓ Completed and released the TSPA-VA Technical Basis Report - December 1998
- ✓ Released the Site Description Document - January 1999
- ✓ Released Draft Environmental Impact Statement (DEIS)- August 1999
- ✓ Selected SR/LA design concept - September 1999

Fiscal Year 2000 Priorities



- **Implement quality initiatives including resolution of deficiencies, qualification of data, and model validation.**
- **Prepare Process Model Reports (PMRs) and System Description Documents (SDDs) to support the Site Recommendation Consideration Report (SRCR)**
- **Implement Enhanced Design Alternatives II design concept as basis to develop SR design**

Fiscal Year 2000 Priorities

(Continued)

- **Conduct testing to address key uncertainties in key performance parameters**
- **Complete TSPA-SR Rev. 00**
- **Prepare draft SRCR for internal review**
- **Conduct public hearings on the Draft Environmental Impact statement**
- **Prepare Final EIS for internal review**
- **Resolve status of DOE siting guidelines for evaluation of suitability and Site Recommendation**

EDA II With Conditions

- **Acting OCRWM Director has approved M&O recommendation to implement the EDA II design concept with conditions specified by DOE**
- **EDA II with conditions will be the basis for the design supporting the SR**
- **EDA II with conditions assures flexibility to accommodate**
 - **closure between 50 and 125 years with an option to keep open for as much as 300 years**
 - **design evolution that affects postclosure thermal conditions**

Planned Testing to Address Key Uncertainties



- **Planned testing based on**
 - input needs for the EDA II design concept
 - input from external oversight groups
 - improved understanding of site conditions
 - elements of the safety case
- **Testing will focus on**
 - flow and transport properties testing and seepage testing in the Topopah Springs Tuff (Tpt) in cross drift
 - hydrologic characterization of the Tpt Lower Lithophysal unit (Cross Drift)


Planned Testing



- **Testing will focus on (Cont'd.)**
 - **Calico Hills flow and transport testing at Busted Butte**
 - **Drift Scale Heater Test**
 - **SZ testing in the 40 Mile Wash area in cooperation with the Nye County Drilling Program**
 - **Waste package materials and waste form testing**
 - **Engineered barrier system pilot-scale testing at the Atlas Facility**
 - **Natural Analogue Studies at Pena Blanca**

Repository Safety Strategy (RSS)

- **Revision 3 of the RSS is in preparation**
- **RSS describes the postclosure safety case and is being revised to**
 - **reflect the updated design concept (EDA II) and improved understanding of the natural system**
 - **enhance understanding of those principal factors most significant to repository performance**
 - **provide approach to adequacy of information and prioritizing future work**
 - **describe implementing methodologies for TSPA and barrier analyses**



**Completion of the Environmental
Impact Statement Process
and
Preparation of the Site
Recommendation Consideration
Report**

Schedule for Final EIS

Feb - May

Jun

Jul

Aug
2000

Sep

Oct

Nov

End of
Public
Comment
Period
09-Feb-00

Deliver Draft CRD
for YMSCO
Review
02-Jun-00

YMSCO Submits
Proposed FEIS
24-Jul-00

OCRWM
Submits PFEIS
for Final DOE
Concurrence
18-Sep-00

Publish NOA
for FEIS
17-Nov-00

Start Initial YMSCO
Review
23-Jun-00

Final DOE
Concurrence on
FEIS
29-Sep-00



Public Availability of DEIS

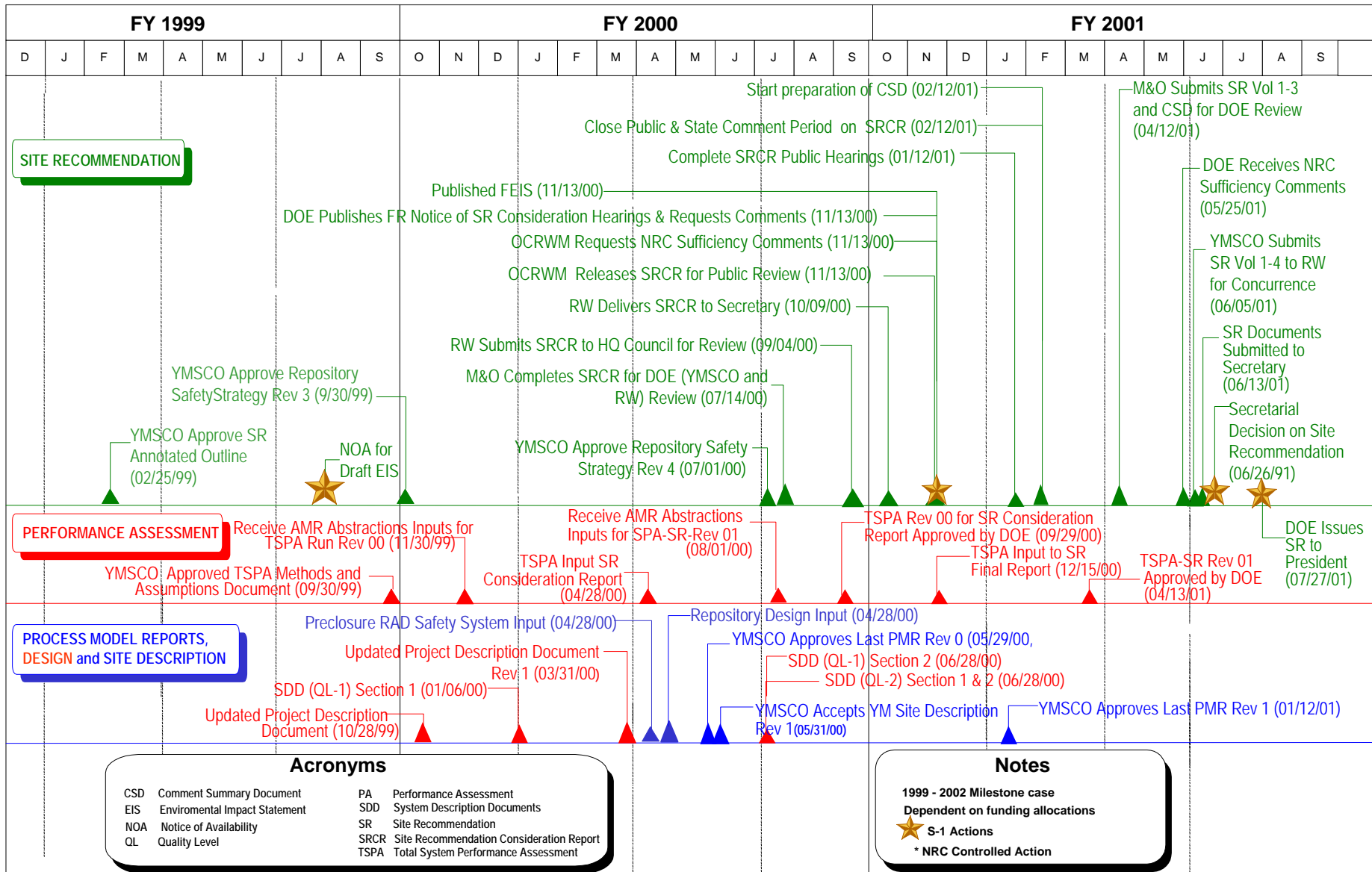
- **Distributed to key government officials, environmental groups, stakeholders and the general public**
 - Hard Copy
 - CD ROM
- **Available through**
 - Internet on the project website at <http://www.ymp.gov>
 - DOE Office of NEPA Policy and Assistance website at <http://tis.eh.doe.gov/nepa>
 - by telephone at 1-800-967-3477
- **References to the Draft EIS are publicly available in four reading rooms**

DEIS Public Hearing Schedule

Amargosa Valley, NV	9/27/99
Pahrump, NV	9/30/99
Goldfield, NV	10/04/99
Boise, ID	10/05/99
Ely, NV	10/19/99
Atlanta, GA	10/21/99
Wahington, DC	10/26/99
Lone Pine, CA	11/04/99

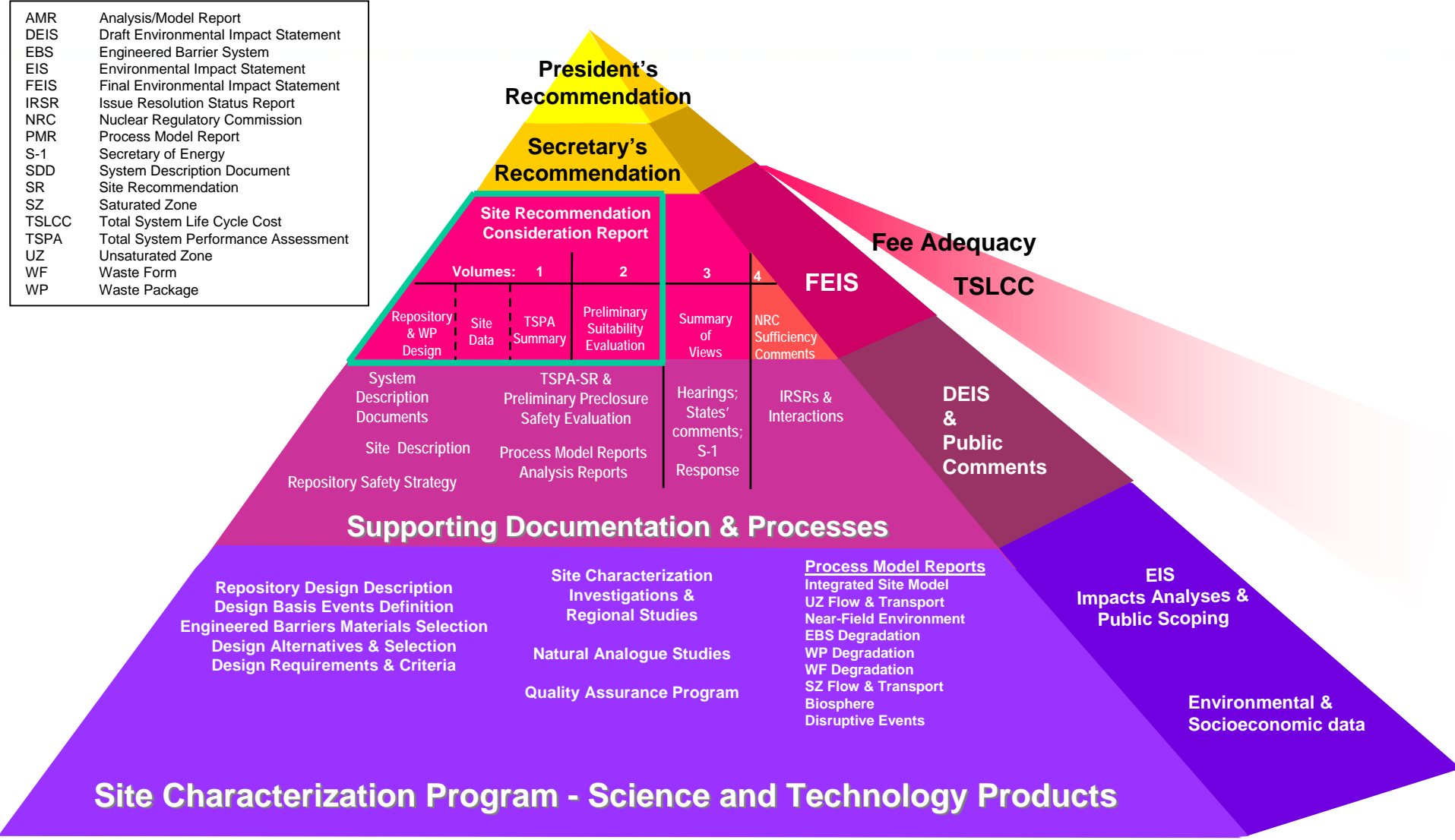
Caliente, NV	11/09/99
Denver, CO	11/16/99
Reno, NV	12/01/99
Austin, NV	12/07/99
Crescent Valley, NV	12/09/99
Las Vegas, NV	01/11/00
Salt Lake City, UT	01/13/00
St. Louis, MO	01/20/00

Site Recommendation Schedule

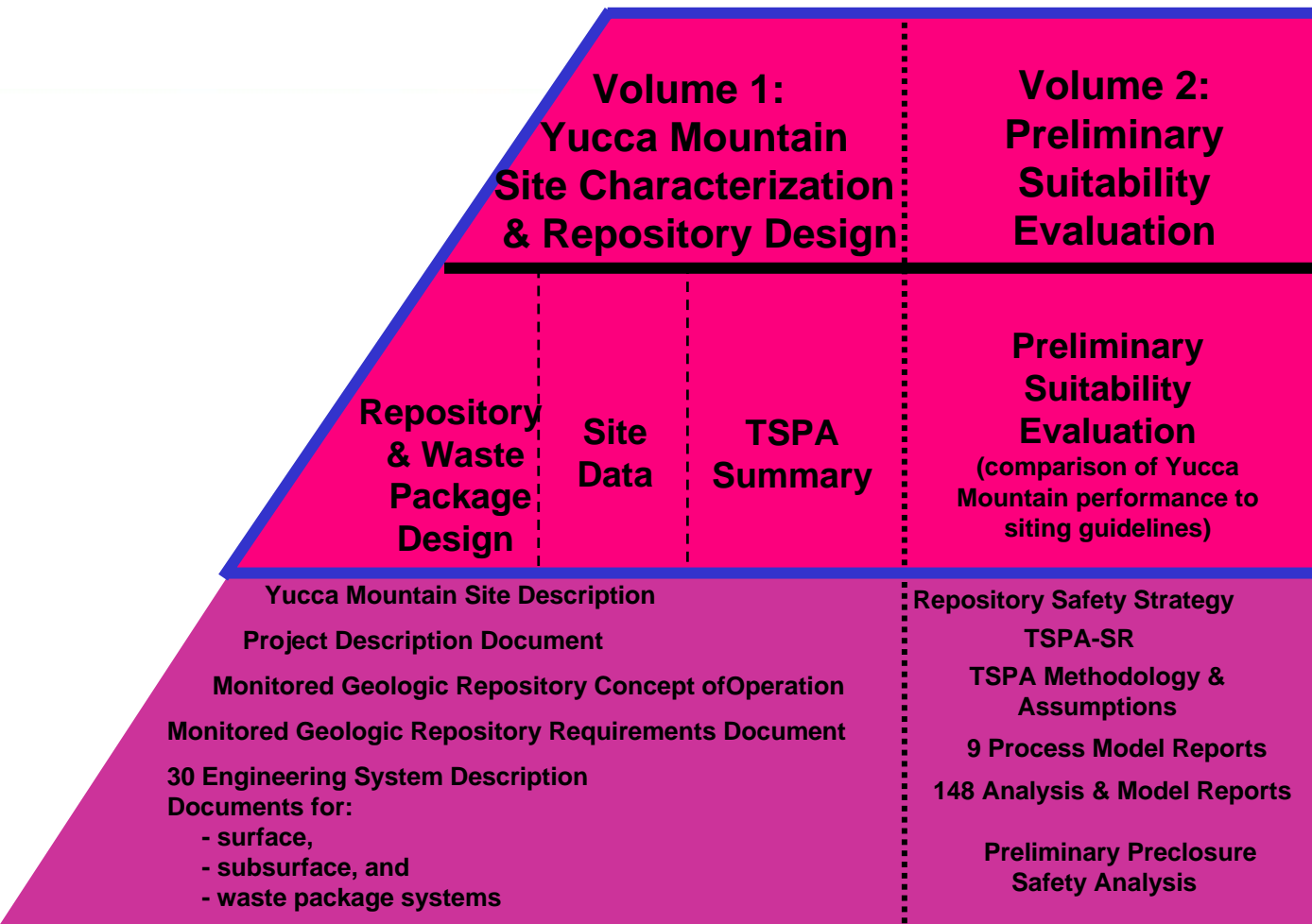


Site Recommendation Structure

AMR	Analysis/Model Report
DEIS	Draft Environmental Impact Statement
EBS	Engineered Barrier System
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
IRSR	Issue Resolution Status Report
NRC	Nuclear Regulatory Commission
PMR	Process Model Report
S-1	Secretary of Energy
SDD	System Description Document
SR	Site Recommendation
SZ	Saturated Zone
TSLCC	Total System Life Cycle Cost
TSPA	Total System Performance Assessment
UZ	Unsaturated Zone
WF	Waste Form
WP	Waste Package



SRCR Contents



Adequacy of Information for SR



- **Planned work is expected to be adequate to demonstrate that**
 - **new data will not significantly change the understanding and basis for conclusions about repository performance**
 - **a defensible compliance position can be presented**

SR Process



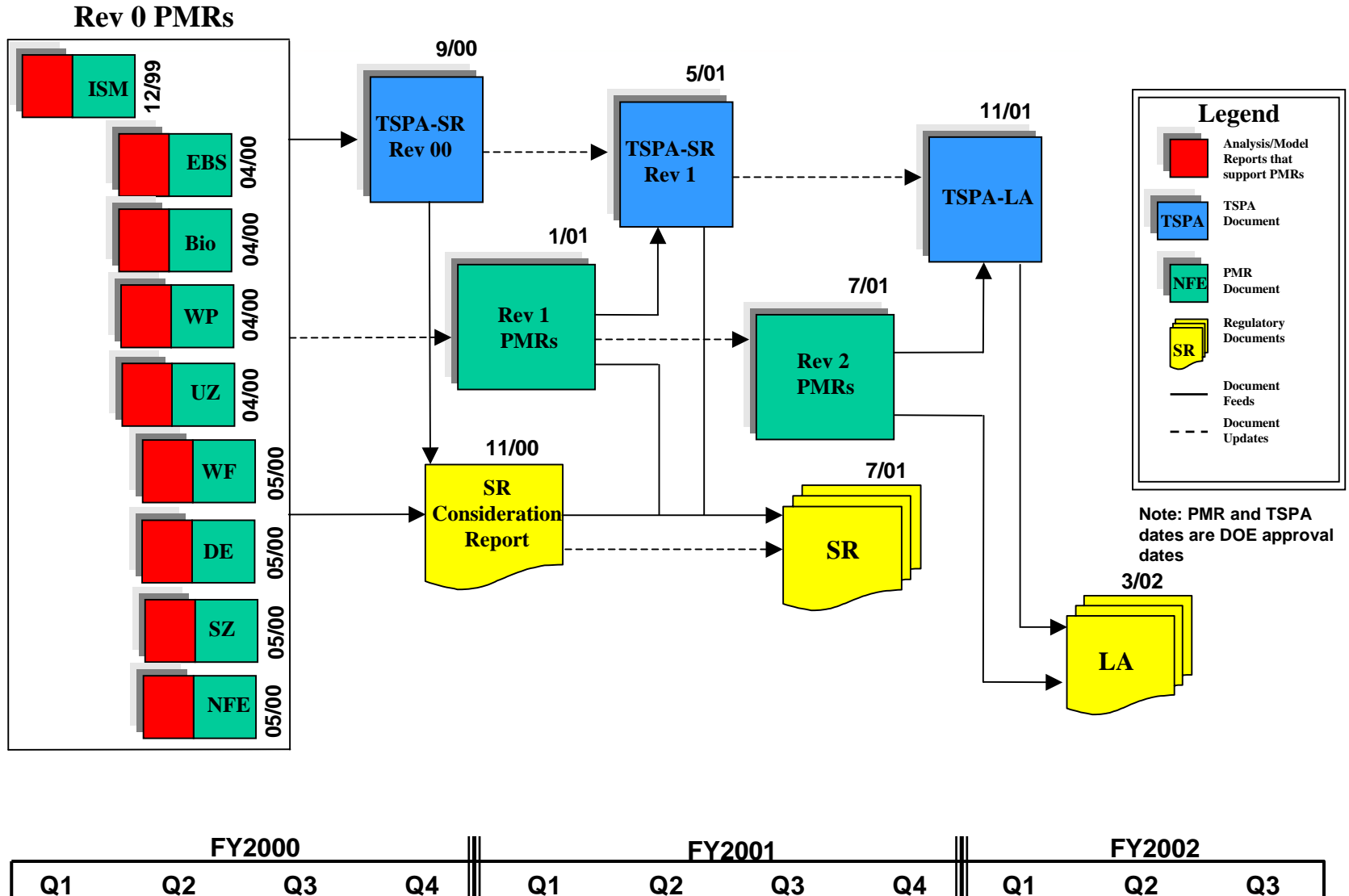
- **SRCR will be supported with extensive documentation**
- **Supporting documentation being developed by multi-discipline technical teams with close DOE involvement and operating under revised work procedures to ensure**
 - **integration**
 - **traceability**
 - **defensibility**

SR Process

(Continued)

- **Key supporting documents are the Process Model Reports (PMRs), Analysis and Model Reports (AMRs), System Description Documents (SDDs), and TSPA-SR**
- **PMRs document the technical basis supporting TSPA-SR and include**
 - **process model descriptions and assumptions**
 - **AMRs that document data used, analyses and abstractions**

Linkage of Major Programmatic SR/LA Milestones



SR Process

(Continued)

- **System Description Documents (SDDs)**
 - document the requirements for the repository design
 - form the basis for the description of the repository
 - provide a demonstration of compliance with repository requirements on a system by system basis for QL-1 and some QL-2 elements
- **Basis for the TSPA-SR are the AMRs**

Summary



- **Project continues its implementation of the culture of excellence**
- **Focus of work in FY 00 is to prepare a final EIS and the SRCR**
- **EDA II design concept with conditions is being implemented as the basis for the SR design**
- **Planned work through FY 00 will lead to evaluation of Yucca Mountain using siting guidelines**

Summary

(Continued)

- **Adequacy of information for an evaluation of suitability consists of**
 - **conclusion that additional information is unlikely to change any conclusions on performance of major systems**
 - **a defensible safety case can be demonstrated**
- **RSS Rev. 3 will describe the postclosure safety case incorporating the EDA II design features**
- **FEIS and SRCR are planned to be released in Nov. 2000**