

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**NUCLEAR WASTE TECHNICAL REVIEW BOARD  
FULL BOARD MEETING**

**SUBJECT: THE DOE PROCESS FOR  
RESOLVING DIFFICULT ISSUES**

**PRESENTER: MAXWELL B. BLANCHARD**

**PRESENTER'S TITLE  
AND ORGANIZATION: DEPUTY PROJECT MANAGER  
U.S. DEPARTMENT OF ENERGY  
LAS VEGAS, NEVADA**

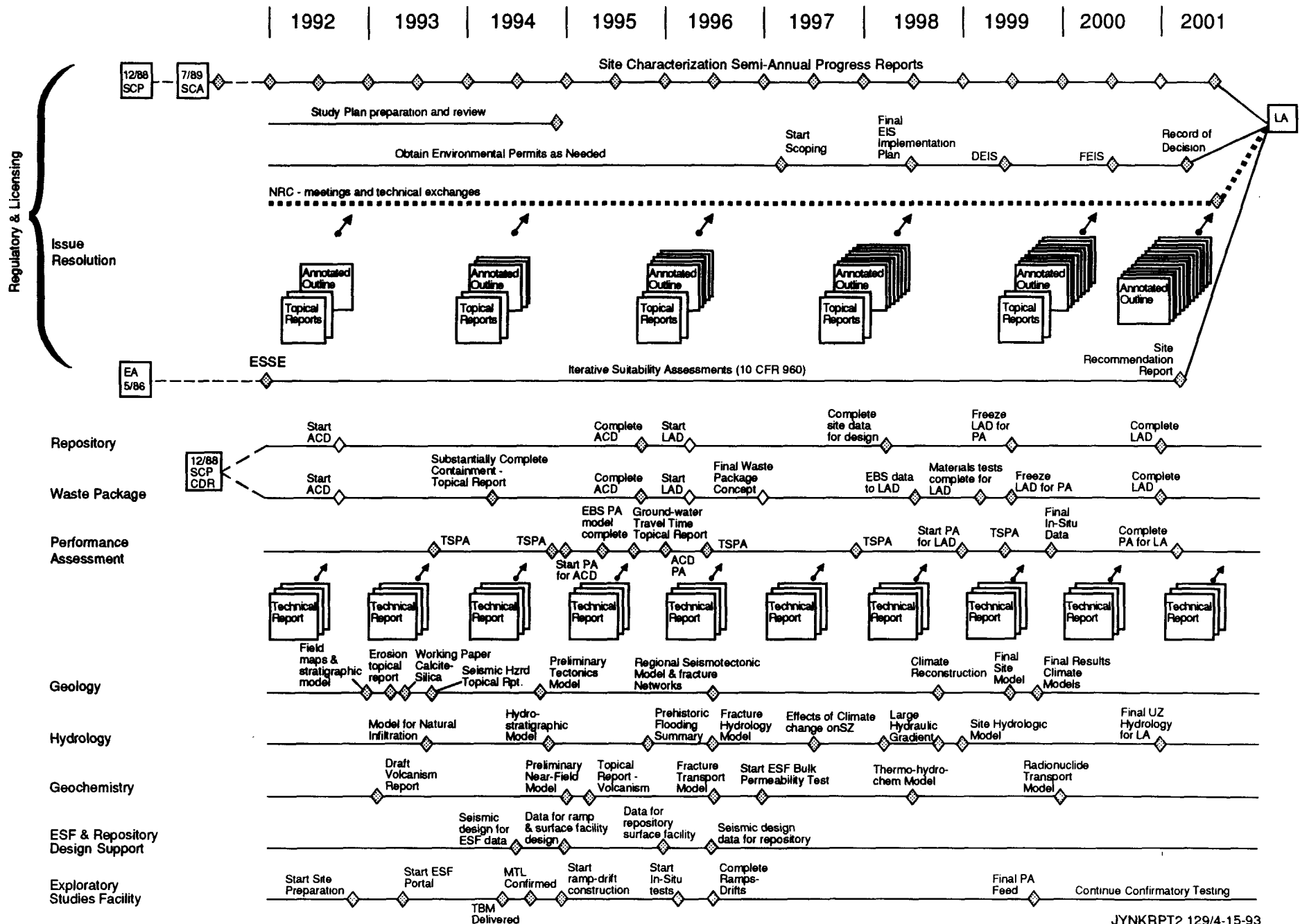
**PRESENTER'S  
TELEPHONE NUMBER: (702) 794-7939**

**RENO, NEVADA  
APRIL 21-22, 1993**

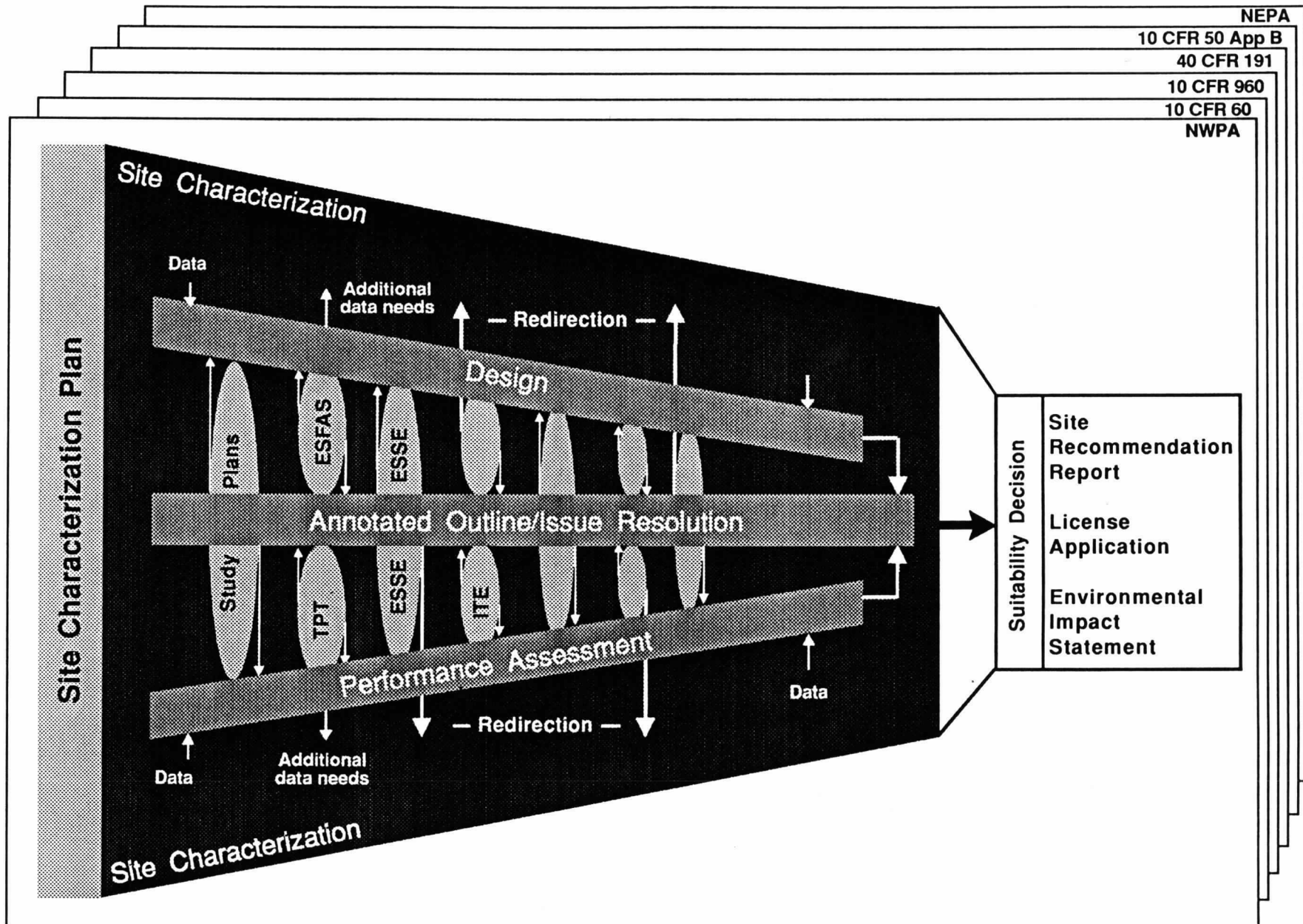
# Overview

- **What is the overall concept for managing the Site Characterization Technical Programs?**
- **What are the applicable requirements?**
- **What parts of the Program need to be controlled and what is the Technical Baseline?**
- **How important is quality assurance at this phase of site characterization?**
- **What process is being used to plan, implement, and evaluate site characterization testing?**

# Site Characterization Phase of Mined Geologic Disposal System Program



# Approach to Resolution of Issues



# What are the Applicable Requirements?

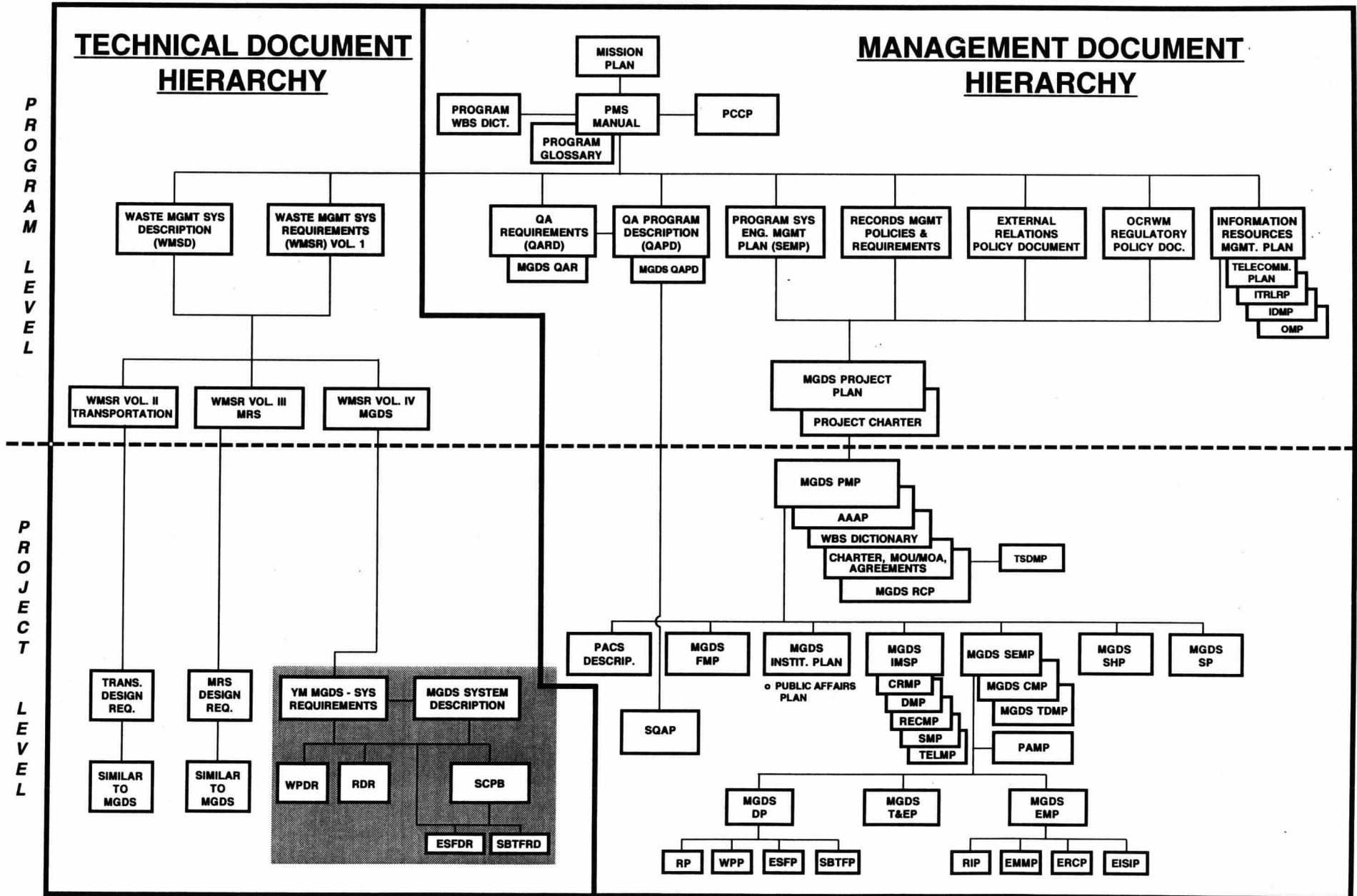
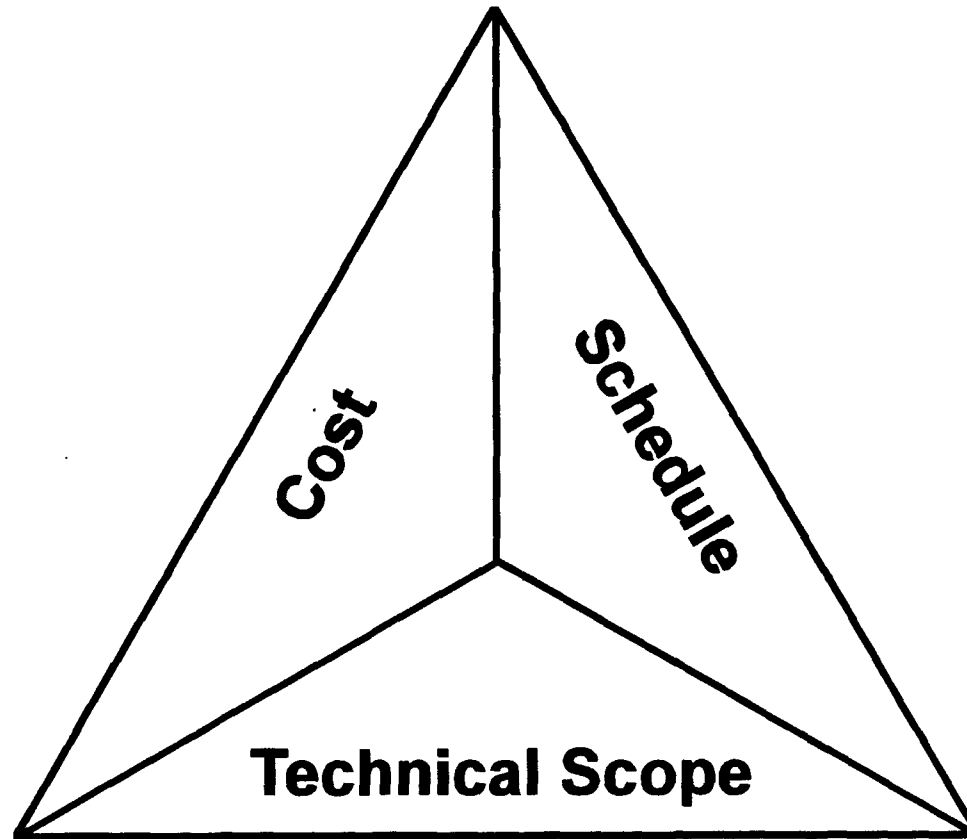


Figure 3-2. Yucca Mountain Project Document Hierarchy.

*pb8 script*

**What parts of the Program need to be controlled and what is the Technical Baseline?**

# Elements of the Baseline



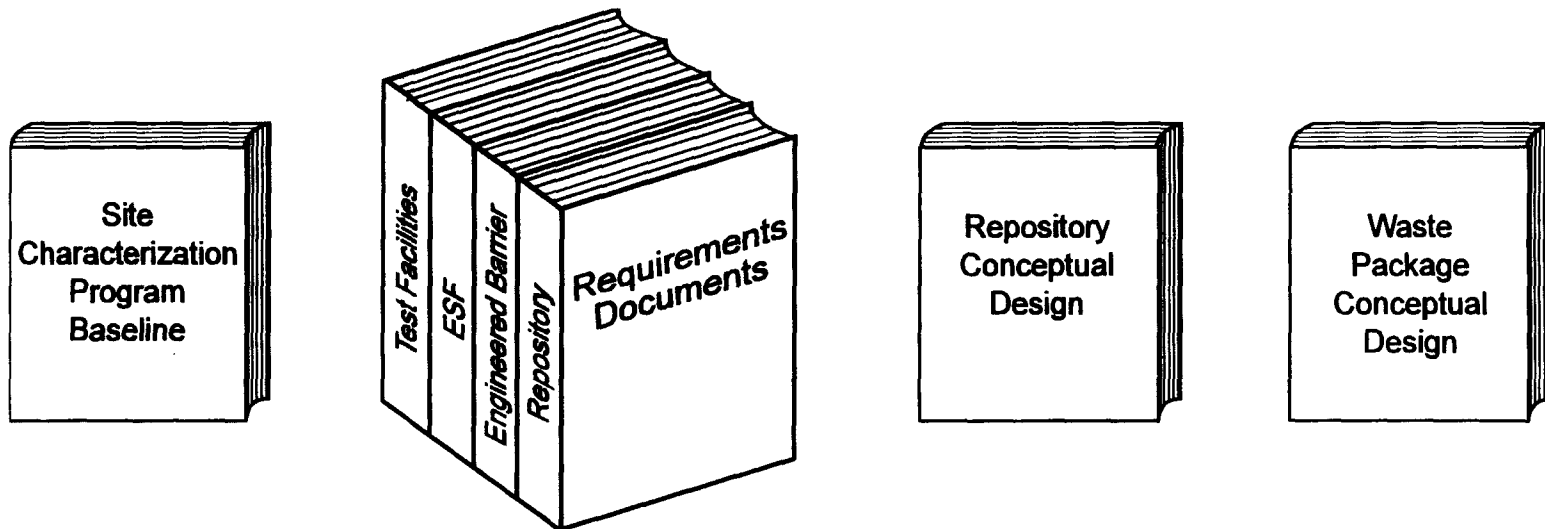
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# What is the Technical Baseline?

The set of documents systematically developed and formally approved that contain the

- Objectives of the site characterization program
- Descriptions of the engineered system designs
- Requirements placed on the engineered and natural systems

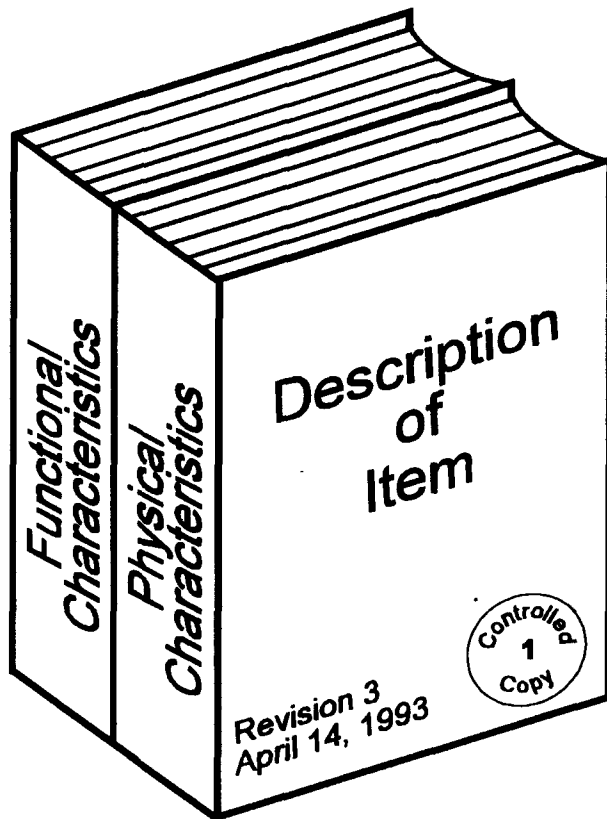
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# How is the Technical Baseline Controlled?

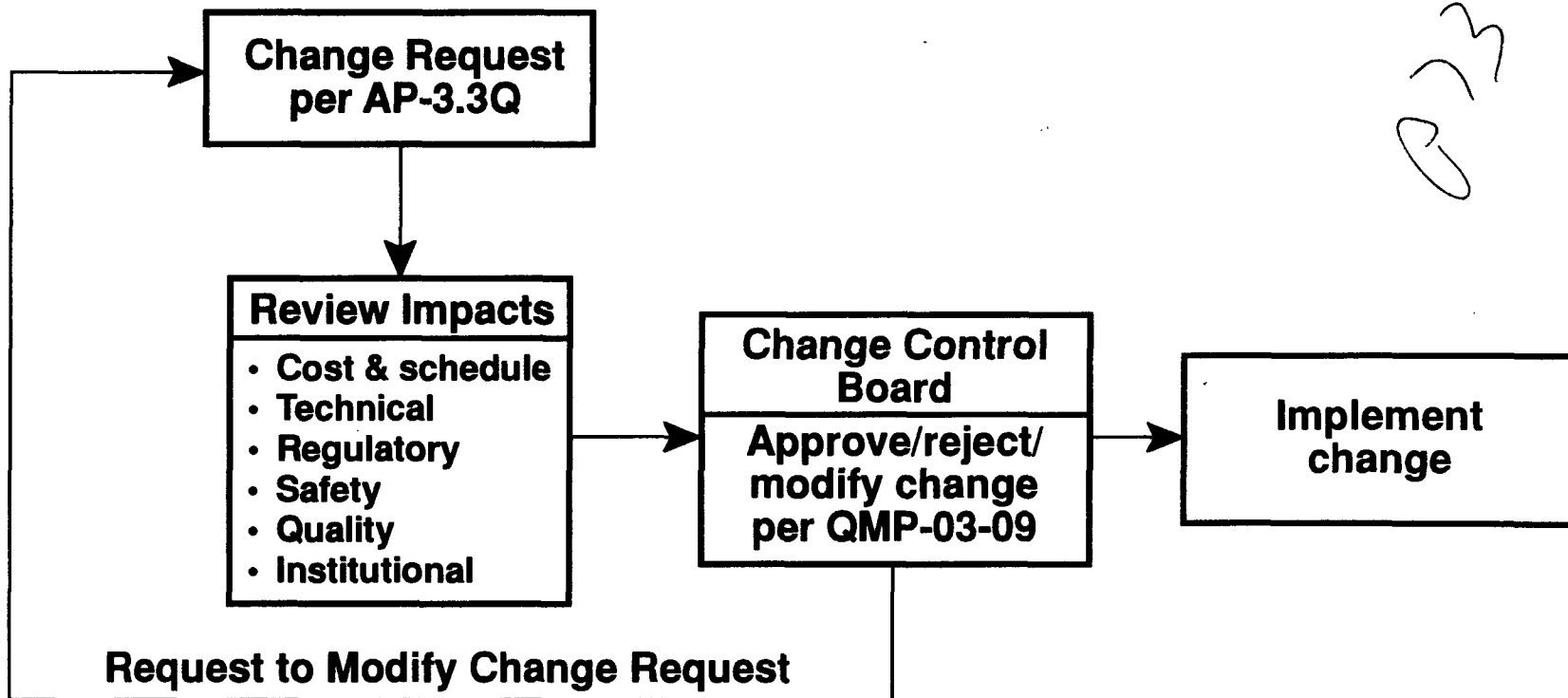
## Configuration Management and Change Control



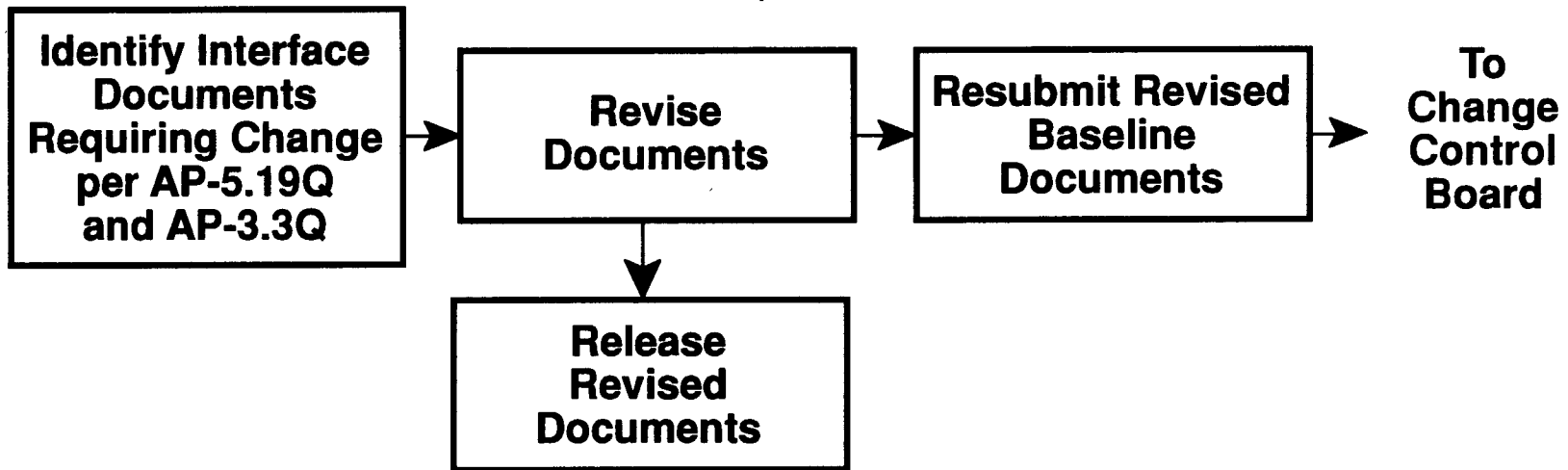
- Identify and document the functional and physical characteristics of the item to be controlled
- Make changes only through a controlled review-and-approval process
- Record and report status of changes

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# Change Control Process

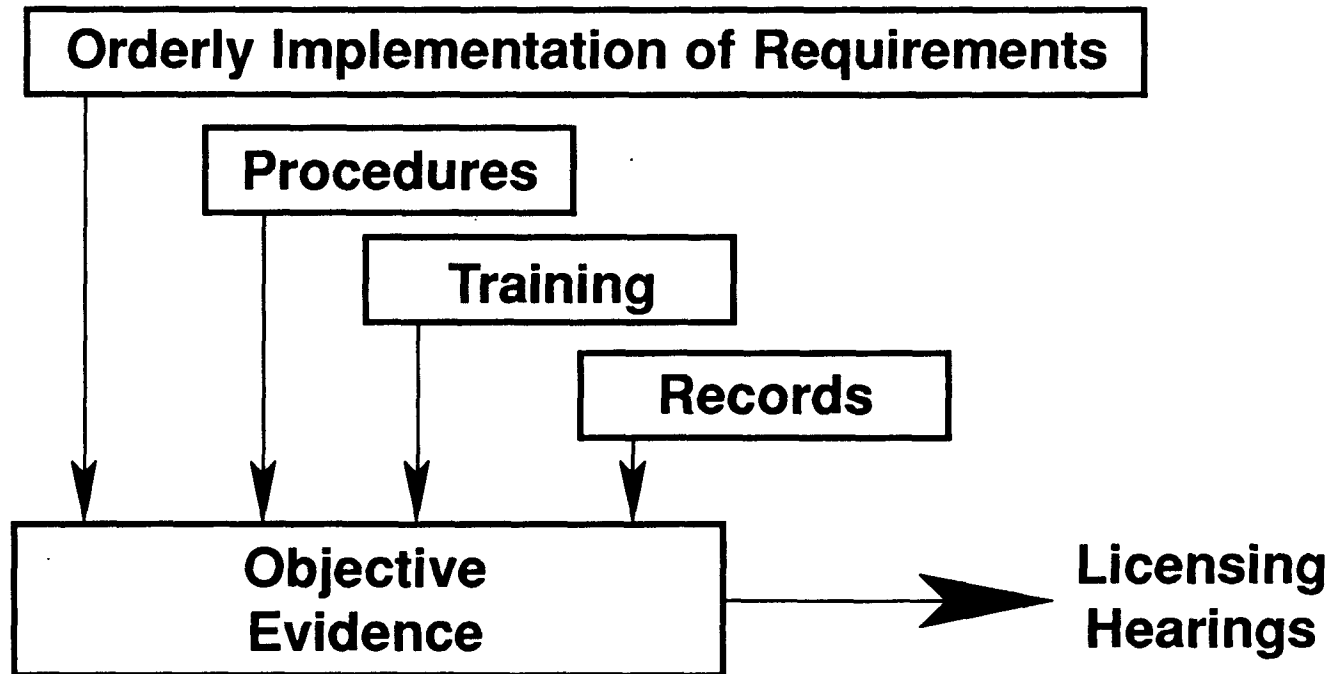


# Implementing the Change



# How Important is QA at this Phase of Site Characterization?

**NRC requires a nuclear QA program be in place during the site characterization phase of the repository program**

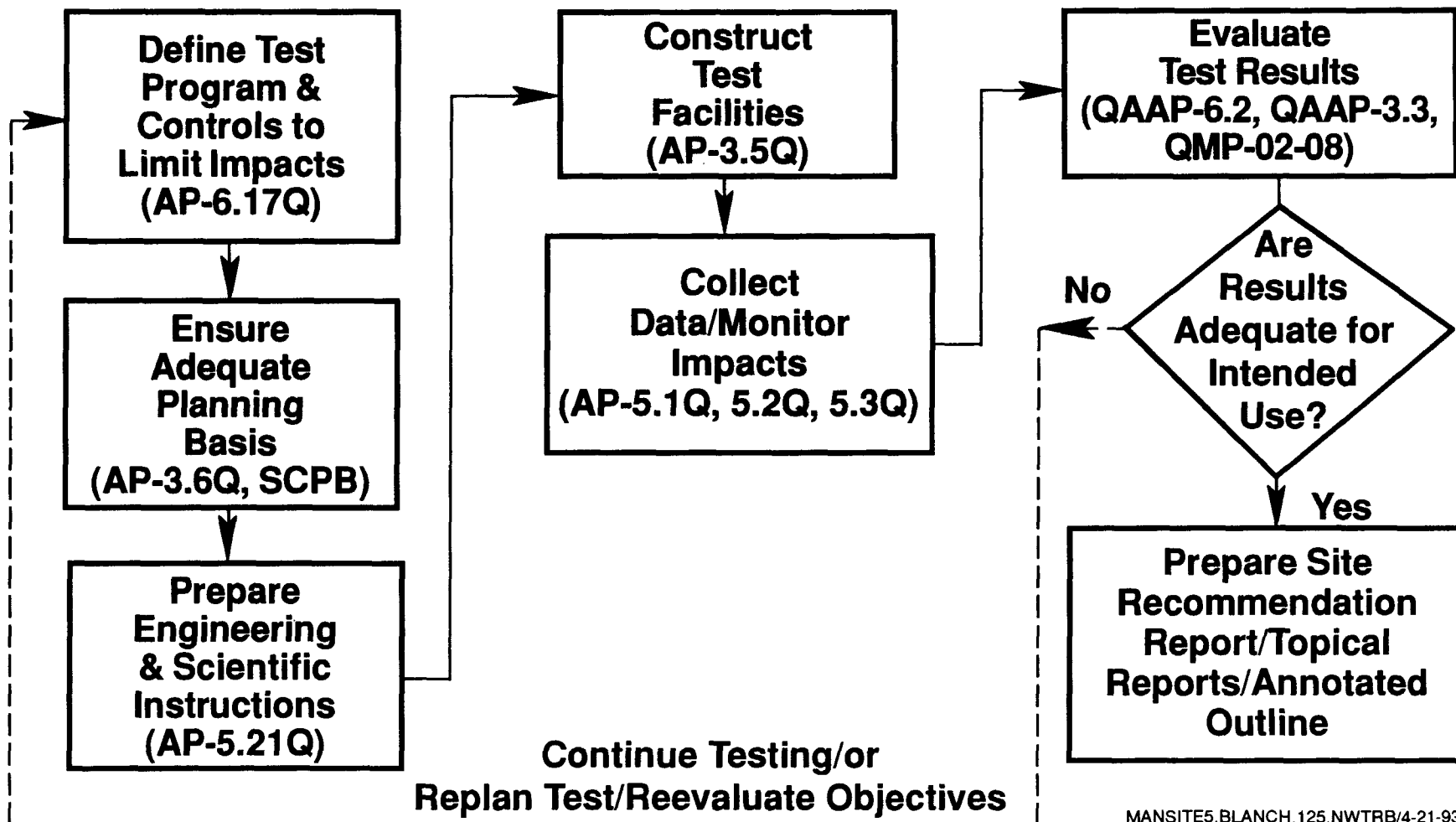


# What Process is Being used to Plan, Implement, and Evaluate Testing?

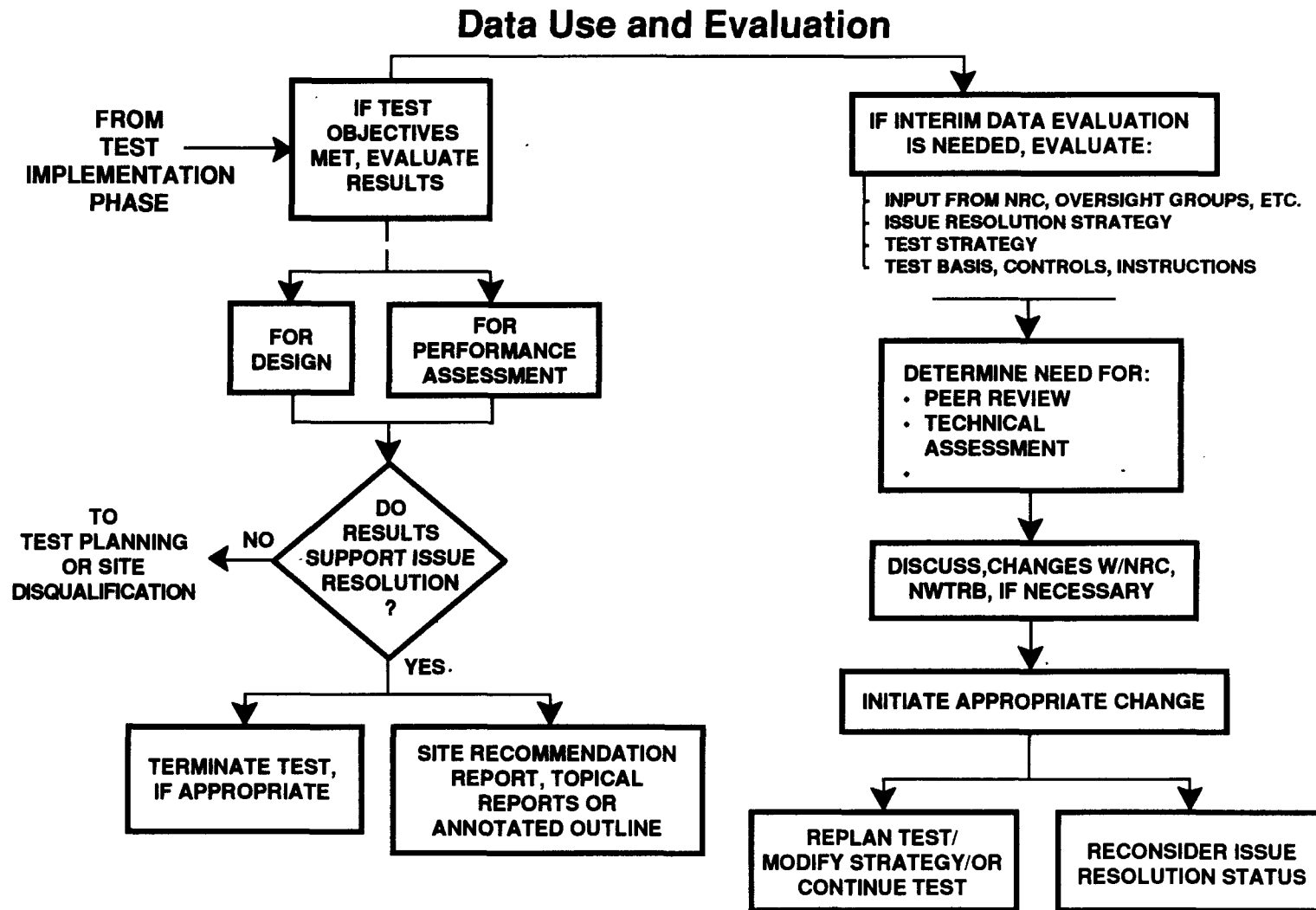
## Test Planning (AP-1.10Q, 5.32Q)

## Test Implementation

## Data Use and Evaluation



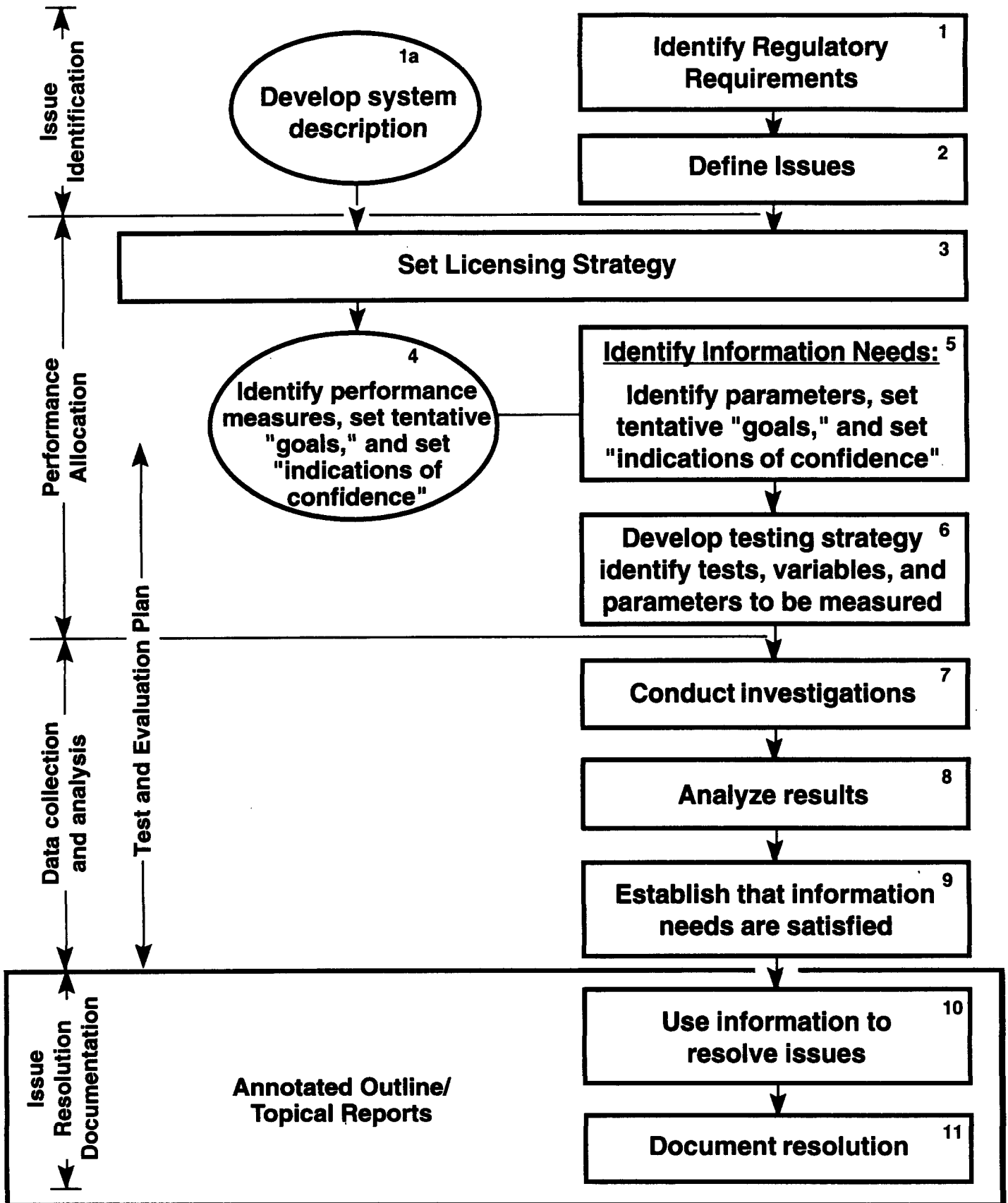
# Evaluation Phase of Site Characterization



# Examples of Evaluation Phase Activities

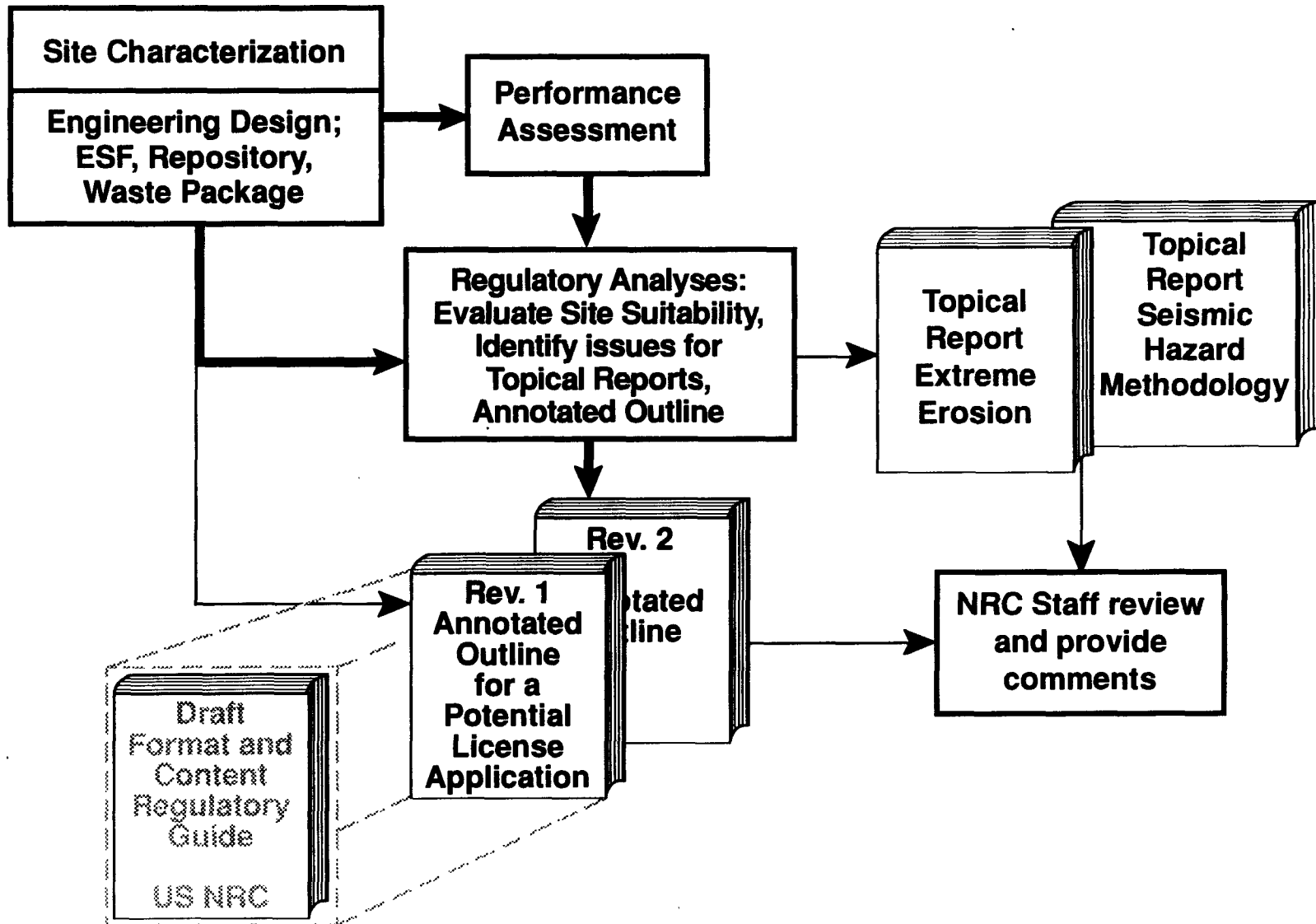
- **Peer Review of Plans for Characterization of the Unsaturated Zone**
- **Test Prioritization Task**
  - **Calico Hills Risk-Benefit Analysis**
    - **Peer Review and National Academy Review of Szymanski Hypothesis**
    - **Exploratory Shaft Facility Alternative Study**
    - **Early Site Suitability Evaluation**
    - **Integrated Test Evaluation**
      - **Future Topical Reports/Annotated Outline**

# Issue Resolution Strategy as Defined in SCP, 1987





# Current Issue Resolution Process



# Overview of DOE Process

- **Issue resolution strategy presented in SCP**
- **Program must be executed in a controlled environment**
  - **Quality Assurance**
  - **Configuration Management**
  - **Change Control**
- **Management process in place to plan, implement and evaluate site characterization testing program**
- **Numerous internal and external audits and reviews demonstrate the process works**