

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

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

**SUBJECT: ENVIRONMENTAL IMPACT
STATEMENT (EIS) PREPARATION
FOR A POTENTIAL YUCCA
MOUNTAIN REPOSITORY**

PRESENTER: WENDY R. DIXON

**PRESENTER'S TITLE
AND ORGANIZATION: ASSISTANT MANAGER FOR ENVIRONMENT, SAFETY & HEALTH
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
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**BEATTY, NEVADA
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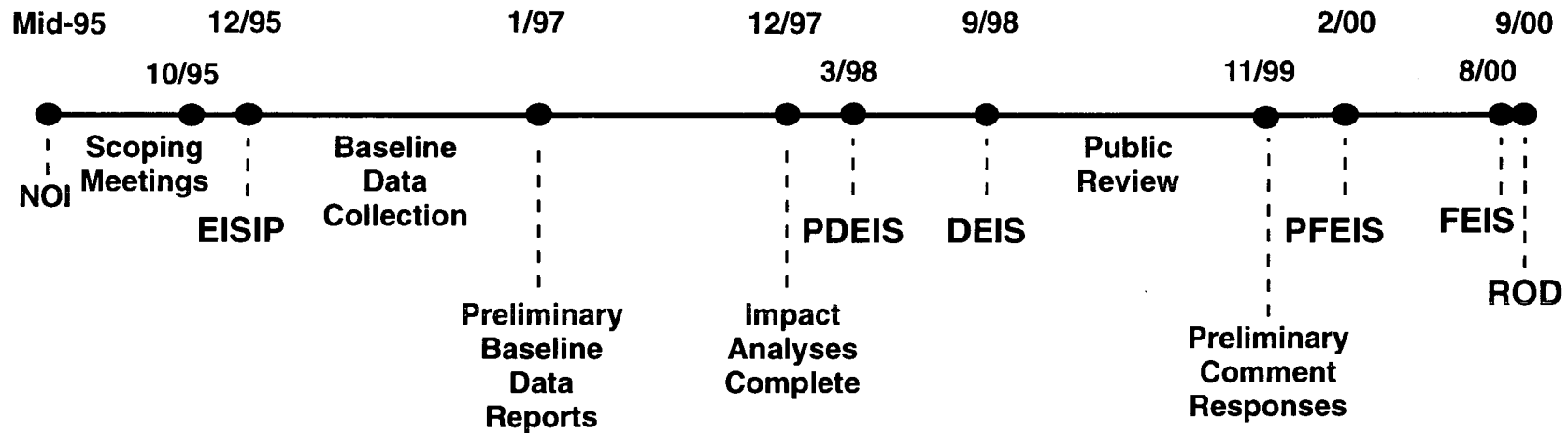
Repository EIS Objectives

- **Prepare an EIS to accompany site recommendation, as required by NWPA**
- **Develop an EIS in compliance with the NWPA, CEQ and DOE regulations, and consistent with NRC regulations**
- **Prepare an EIS that will also satisfy environmentally related Congressional land-withdrawal issues**
- **Prepare an EIS that can be adopted, to the extent practicable, by NRC**
- **Prepare an EIS to provide the technical basis for evaluating the environmental, socioeconomic, and transportation siting guidelines**

Plans for EIS Development

- **Plan to initiate public scoping process by publishing Notice of Intent in mid-1995**
- **An EIS Implementation Plan will be published in late 1995 following completion of Scoping**
 - **Explains scope of the EIS**
 - **Responds to public comments**
 - **Provides annotated outline of the EIS**

PROPOSED REPOSITORY EIS SCHEDULE



Extended timelines allowed for:

- 4 month Public Scoping Period
- Preliminary Baseline Data Report preparation includes environmental, interim site suitability, bounded performance assessment, generic transportation, advanced conceptual design, and system safety and reliability
- 6 month DEIS Public Review Period

Objectives of Scoping

- **Invite Federal, State, Affected Units of Government and other local agencies and Indian Tribes and the public to participate**
- **Determine appropriate scope and significant issues, identifying and eliminating issues determined not to be significant**
- **Determine data gaps in existing databases**
- **Allocate assignments among cooperating agencies**
- **Identify related environmental assessments being prepared**

EIS Public Involvement

- **Public involvement is a critical component of NEPA. The public will be kept informed throughout the process.**
- **The Notice of Intent (NOI) initiates the scoping process wherein affected agencies and interested persons are invited to participate in the process (40 CFR 1501.7 (a))**
- **The draft EIS and associated public hearings are the second stage when an agency requests comments from Federal, State, and local agencies, Indian Tribes, and the public. The agency responds to these comments in the final EIS (40 CFR Part 1503)**

EIS Baseline Data Collection and Impact Analyses

- **Standard EIS categories will be evaluated, e.g. air quality, terrestrial ecosystems, cultural resources, socioeconomics, geology, hydrology, tectonics**
- **One of the unique characteristics of this EIS is the timeframe**

Alternatives to be Considered

- EIS need only consider *reasonable* alternatives, not every possible alternative
- EIS need only provide as much information and detail as is necessary to provide a reasonably thorough discussion of the significant aspects of the probable environmental consequences
- As specified in the NWPA, EIS required for the repository need not consider:
 - Need for the repository
 - Alternatives to geologic disposal
 - Alternative sites to Yucca Mountain

Alternatives to be Considered

(Continued)

- **Various repository operational scenarios that may affect key design features of the repository**
 - **Waste package design**
 - **Surface and subsurface facilities design**
- **Purpose is to assist with meaningful comparison of potential environmental impacts of constructing and operating a repository**
- **Use bounding assumptions to capture a range of reasonable possible effects from different operational scenarios**

Alternatives to be Considered

(Continued)

- **Preliminary planning for EIS alternatives includes:**
 - **Analyze proposed repository construction, operation, and closure operating scenarios for alternatives**
 - **Evaluate design features for alternatives that reduce or avoid adverse environmental impacts**
 - **Evaluate potential rail corridors in Nevada**

EIS - License Application Coordination

- **EIS and License Application teams will coordinate data, design, and analyses**
- **EIS will utilize input to the Advanced Conceptual Design (ACD), which will also eventually support the License Application**
- **A preliminary safety analysis will be needed to bound potential radiological impacts to workers, the public, and the environment**
- **EIS will focus on environmental impacts and will not duplicate the detailed License Application assessment of containment and waste isolation**

EIS - Design Interfaces

- **EIS must include sufficient design both to adequately assess impacts to the environment and the public, and to evaluate and propose mitigation**
- **A description of solid, liquid, and gas effluents and emissions must be listed, including pollution-control technologies**
- **Transportation requirements must be addressed**
- **Design must be sufficiently developed to project construction, operation, and closure impacts including required resources, workforce, and schedules**

Coordination with Nuclear Regulatory Commission

- **NWPA requires NRC to adopt the EIS prepared by DOE, to the extent practicable, in connection with issuance of construction authorization and license (Sec. 114(f)(4))**
- **DOE will involve NRC early in the EIS development stage**
 - **Brief NRC on DOE's approach**
 - **Develop effective DOE/NRC communication with identified points-of-contact**
 - **Obtain NRC input**
 - **Address NRC questions, comments, and issues**
- **NRC will be kept informed and involved throughout the EIS process**

Technical Information Needed

- **Three different drivers exist for generation of site data**
 - **Preparation of Environmental Impact Statement
(40 CFR 1500 and 10 CFR 1021)**
 - **Preparation of a License Application
(10 CFR 60)**
 - **Site Suitability Determination
(10 CFR 960)**

Technical Information Needed

(Continued)

- **NEPA, licensing, and site suitability represent three different sets of requirements**
- **Data required for the EIS is specific to CEQ requirements and will include a smaller subset of the data requirements for licensing and site suitability**
There is an abundance of data available
 - **Ten-plus years of site monitoring and characterization**
 - **Key challenge: ferret-out the appropriate data set**
- **Technical criteria guidelines for EIS data needs will be developed in 1995**
- **The decision on which data is appropriate for use in the EIS will be made as EIS Scoping is conducted**