

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

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

**SUBJECT: BACKGROUND AND OVERVIEW  
FOR DEVELOPMENT OF  
PROPOSED SITE SUITABILITY  
EVALUATION PROCESS**

**PRESENTER: DR. STEPHAN J. BROCOUM**

**PRESENTER'S TITLE  
AND ORGANIZATION: ASSISTANT MANAGER FOR SUITABILITY AND LICENSING  
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE**

**PRESENTER'S  
TELEPHONE NUMBER: (702) 794-7971**

**LAS VEGAS, NEVADA  
OCTOBER 12, 1994**

# Historical Perspective - Overview

- **In 1982, NWPA directed DOE to develop siting guidelines to assist in the siting process and provide criteria for qualifying and disqualifying sites under consideration for development as repositories**
  - **The guidelines were developed following the consultation process required by NWPA, including the concurrence of the NRC**
  - **DOE issued its guidelines for the recommendation of sites for repositories (10 CFR Part 960) in December 1984**

# **APPLICATION OF THE DOE GUIDELINES**

# **Application of the DOE Guidelines Environmental Assessments**

(CONTINUED)

- **In May 1986, the President approved the 3 sites recommended for characterization, including the Yucca Mountain site**

# **Application of the DOE Guidelines Site Characterization Plan**

- **DOE prepared an SCP in accordance with NWPA, as amended**
- **The siting guidelines were identified as the criteria required by NWPA for use in determining the suitability of the site**
  - **The SCP described how DOE proposed to address the guidelines that fall within the scope of site characterization, as defined in the NWPA**
  - **Guidelines that address environmental quality, socioeconomic impacts, and transportation, and that generally require non-geologic data gathering, were not covered in the SCP, consistent with the NWPA definition of site characterization**

# **Application of the DOE Guidelines Site Characterization Plan**

(CONTINUED)

- **The SCP identified the guideline conditions for which specific findings would be made in evaluating the suitability of the Yucca Mountain site for development as a repository**
- **The implementation guidelines provide that before a DOE decision is made that the site is suitable and can be recommended for development as a repository, the evidence should support findings by DOE that:**
  - **None of the disqualifying conditions are present,**
  - **All qualifying conditions are met, and**
  - **These conclusions are not likely to change**

# **Application of the DOE Guidelines Early Site Suitability Evaluation**

- **In December 1990, as a step in implementing the Secretary's 1989 commitment to Congress to focus on site suitability, OCRWM directed that an early assessment of the Yucca Mountain site be performed under the 10 CFR Part 960, based on the available data**
- **This assessment was intended to**
  - **Determine if information collected since the EA in 1986 indicates that the site should be disqualified**
  - **Help focus and prioritize data acquisition activities**
- **The results of the assessment and an external peer review were published in January 1992 as contractor reports and issued by DOE for public comment**

# **Background for Program Approach**

- **The Yucca Mountain site characterization program, as described in the SCP and reflected in the approved baseline, could not be accomplished with projected funding level**
- **Congressional expectations were for DOE to streamline the program to show measurable progress at reduced cost**

# Program Approach

- **DOE has begun to implement a program approach that explicitly recognizes the statutory and regulatory framework for the repository program and the major objectives during the site characterization phase:**
  - **Determine whether the site is suitable (10 CFR Part 960);**
  - **If suitable, prepare an environmental impact statement (NEPA, 10 CFR Part 1021);**
  - **Recommend the site for development of a repository (NWPA); and**
  - **If the recommendation is approved, submit a license application to the NRC for authorization to construct the repository (10 CFR Part 60)**

# **Program Approach**

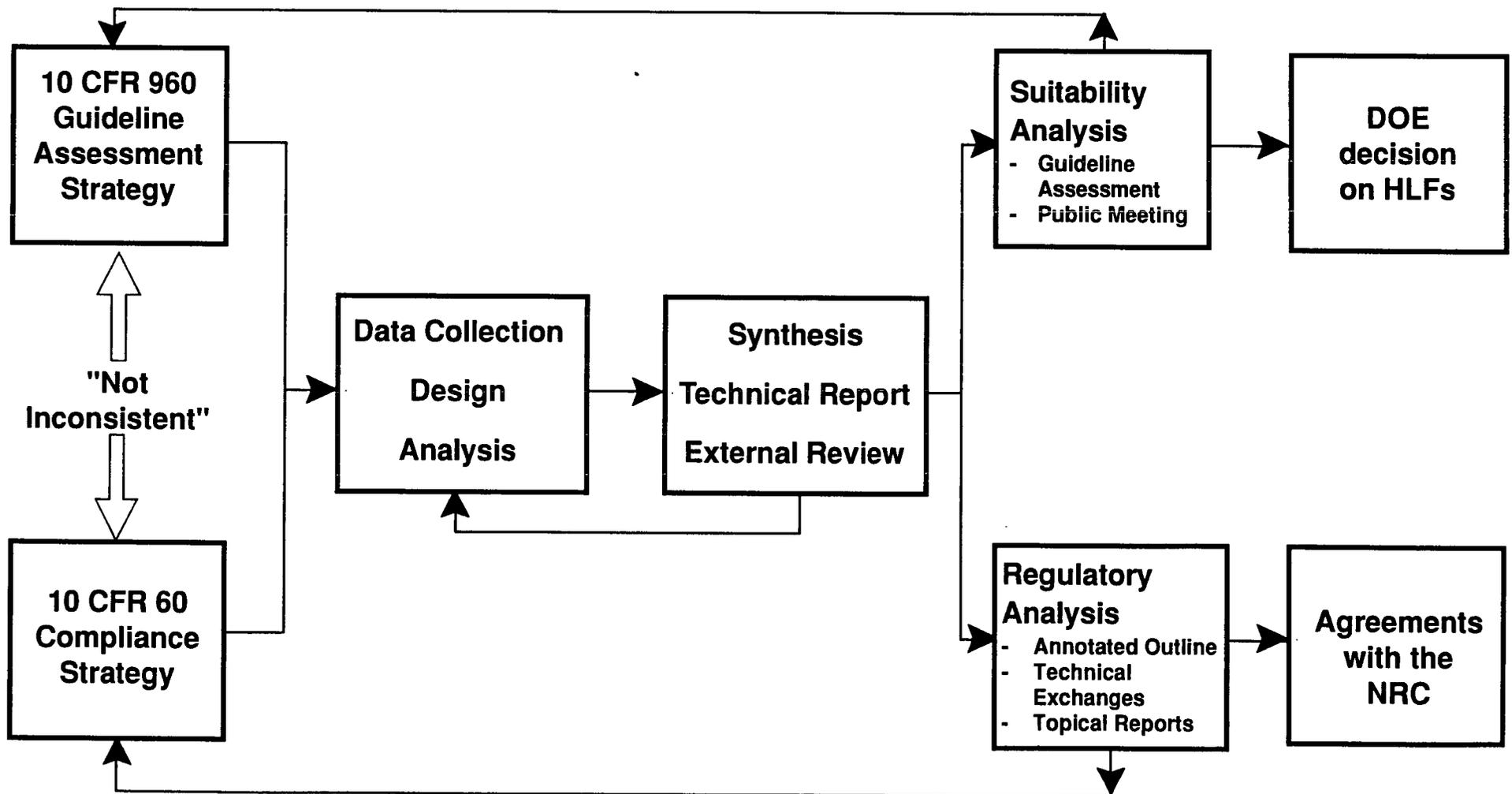
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- **Emphasis is on investigations and engineering activities deemed necessary and sufficient to support a technical site suitability determination in 1998**
  - **Technical evaluations will be based on data, calculations, and models intended to provide reasonably conservative estimates of the range of site conditions and system performance characteristics**
  - **DOE's decision on technical site suitability will be based on the technical input and evaluations of compliance with the guidelines addressed in the SCP (postclosure waste isolation, preclosure radiological safety, and technical feasibility)**

# **Relationship Between Site Suitability and Licensing Activities**

- **A single technical program provides the information needed for technical site suitability determination and compliance with licensing requirements**
- **The program approach initially focuses on the DOE's decision on technical site suitability, with evaluations performed in a stepwise manner leading to a decision in 1998**
  - **The DOE decision on overall site suitability will consider additional information related to environmental quality, socioeconomic impacts, and transportation, which will be evaluated in parallel with the NEPA process**

# Single Technical Program Supports Program Approach for Suitability and Licensing



# **Relationship Between Site Suitability and EIS**

(CONTINUED)

- **The overall site suitability determination will rely on**
  - **The technical site suitability determination**
  - **Evaluations of compliance with guidelines related to environmental quality, socioeconomic impacts, and transportation, based on information developed to support the NEPA process**