



Department of Energy

Washington, DC 20585

APR 30 1991

→ DCC

Mr. John Linehan, Director
Division of High-Level
Waste Management
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Linehan:

In response to discussions that took place during a U.S. Department of Energy (DOE) and U.S. Nuclear Regulatory Commission (NRC) management meeting on January 24, 1991, we are transmitting uncontrolled copies of three management plans, enclosures (1) - (3), with explanations for each below. Copies of these management plans are also provided to respond to your verbal request of January 3, 1991, that we provide copies of all references in DOE's responses to the Site Characterization Analysis (SCA). Copies of any other references in DOE's responses to the SCA that DOE is providing will be transmitted under separate cover. The following descriptions of the management plans reflect their role in the Yucca Mountain Site Characterization Project Office (YMPO) document hierarchy, enclosure (4), at the time YMPO underwent its qualification audit in October 1990.

TEST AND EVALUATION PLAN (T&EP)

The T&EP, enclosure (1), presents a plan to manage and control site characterization activities at the Yucca Mountain site. The T&EP will direct all geotechnical investigation activities, and address those socioeconomic, environmental, or design-input studies or tests that have a potential for impacting waste isolation capabilities of the Yucca Mountain site or that may interfere with other test activities.

The T&EP applies to surface-based tests (field and laboratory), in situ tests in the Exploratory Shaft Facility (ESF), and tests performed during its construction. The process consists of three phases: (1) test planning and strategy development; (2) test implementation, management, and data development; and (3) data use and evaluation. The evaluation phase of the T&EP may be used to address recommended changes and to determine when enough data are gathered for the needs of the site characterization program.

9105280116 910430
PDR WASTE
WM-11 PDR

102-8
WM-11
NH03 1/1

Technical objectives of the T&EP are to determine whether the Yucca Mountain site possesses characteristics adequate to isolate radioactive waste, and to support activities to develop designs for waste packages and a repository. Study Plans are developed to describe in detail the tests and analyses that will be completed during the site investigations described in the Site Characterization Plan (SCP). Laboratory tests for performance assessment data are controlled by Scientific Investigation Plans.

The information that is developed by the T&EP activities is technical support documentation and may be used to prepare licensing documents (input to sections of the license application) in accordance with the Technical Support Documentation Management Plan.

TECHNICAL SUPPORT DOCUMENTATION MANAGEMENT PLAN (TSDMP)

The TSDMP, enclosure (2), will be used by the YMPO to guide the creation of a comprehensive collection of technical documentation that demonstrates compliance with the regulations of the NRC. The ultimate use of this information is to formulate a license application, if such action is appropriate following site characterization. Although the final content and format of the license application has not been determined (NRC has issued draft guidance), the TSDMP describes the process to be used on assembling the relevant information, and preparing the document in a modular fashion.

The information that is addressed by the TSDMP is developed in accordance with the planning requirements specified in the T&EP, which essentially implements the SCP. The TSDMP adds the constraint of relating all information to be obtained from testing, design analyses, and performance evaluation, to its use in a license application. Test results (acquired information) and technical reports provide the technical basis. From them, licensing documents (a defined term that means documents designed to be used as subsections of a license application) are prepared that present the findings, interpretations, and conclusions indicating compliance with the regulatory requirements.

The TSDMP defines two additional categories of technical support documentation, the Issue Resolution Report and the Working Paper. The Issue Resolution Report will use the same information source described above (acquired information and technical reports) to document the resolution of licensing issues. By these means the DOE will develop a record of the resolution of issues that are described in the SCP. Working Papers are licensing-oriented

technical documents developed to be used in pre-licensing interactions with the NRC or other regulators, overseers, or potential participants in a licensing proceeding. Working Papers are intended to focus discussion and facilitate understanding in an interactive setting. They are not intended to contribute directly to a license application.

WASTE PACKAGE PLAN (WPP)

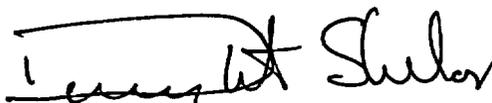
The WPP, enclosure (3), is one of several design and investigation plans (others being Repository Plan, Exploratory Shaft Facility Plan, and Surface-Based Testing Facilities Plan) that are subordinate to the Mined Geologic Disposal System (MGDS) Design Plan (DP). The MGDS DP and the T&EP are subtier plans that, along with the MGDS Performance Assessment Management Plan and the MGDS Environmental Management Plan, implement the MGDS Systems Engineering Management Plan.

The WPP will direct the design of a waste package and associated engineered barrier system components that can meet the regulatory requirements with sufficient margin for uncertainty. The design will evolve as information from site characterization is obtained and as more detailed phases of design are completed. Information from characterization of the site and near-field environment, waste form characterizations, repository design, and near- and far-field interactions will be input to the design process.

Objectives of the WPP that are linked to SCP site investigations are the evaluation of the core from the Topopah Spring Tuff for mechanical properties and vadose water composition. This applies to core samples from both surface-based testing and in situ testing in an ESF.

If you have any questions regarding the enclosures, please contact Linda Desell of my staff at (202) 586-1462.

Sincerely,



Dwight Shelor
Acting Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosures:

- see enclosure on stamp*
- (1) Test and Evaluation Plan
 - (2) Technical Support Documentation Management Plan
 - (3) Waste Package Plan
 - (4) Mined Geologic Disposal System Document Hierarchy

cc: w/enclosures
K. Stablein, NRC
R. Loux, State of Nevada
C. Gertz, DOE/YMPO/NV
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
S. Bradhurst, Nye County, NV
P. Niedzielski-Eichner, Nye County, NV