



Department of Energy

Washington, DC 20585

NOV 25 1991

Mr. John J. Linehan, Acting Director
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Linehan:

Enclosed for your information are three copies of the U.S. Department of Energy's Title I Design Summary Report for the Exploratory Studies Facility (ESF), Revision 1. This report is a necessary precursor to initiation of Title II design activities; the concepts and general arrangement drawings developed will serve as the basis to proceed with Title II design. This Design Summary Report has been accepted by the Director, Office of Civilian Radioactive Waste Management (DOE memorandum from Bartlett to Associate Directors for Geologic Disposal, Systems and Compliance, Program and Resources Management; and Office Director for Quality Assurance; dated September 27, 1991, re: Acceptance of Revised Title I Design Summary Report for the Exploratory Studies Facility). Authorization to proceed with the ESF Title II design on the basis described in the Title I Design Summary Report is anticipated pending approval from DOE's Energy Systems Acquisitions Advisory Board.

The enclosed report should be viewed as an internal DOE document prepared to comply with the Project Management Systems requirements of DOE Order 4700.1 as noted in Section 1.1. The report addresses changes in the previous Title I design (two-shaft concept) included in the Site Characterization Plan. The level of detail included is sufficient to support the intended twofold purpose of this report:

1. To provide summary design information for obtaining internal DOE approval to initiate Title II design.
2. To provide the necessary project information to assist in program planning, policy improvement, and criteria guidance for future DOE activities.

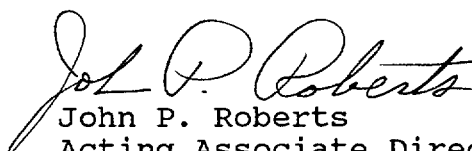
The report should be viewed as one of the first of a number of changes to the ESF design activities necessary to meet the commitments DOE has made regarding ESF Title II design. The report is not intended to serve as the mechanism for closure of Objection 1 of the U.S. Nuclear Regulatory Commission's (NRC)

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Site Characterization Analysis, even though Chapter 7 of the report provides some information pertaining to that objection. As we discussed at the DOE-NRC ESF Design Control Technical Exchange on September 16, 1991, DOE is transmitting, under separate cover, a letter specifically addressing the objection. Also, as we have discussed previously, DOE is committed to considering all applicable 10 CFR 60 requirements in the ESF design. The Title I design thus far has focused on those requirements that directly lend themselves to development of detailed design criteria. Section 7.4 of the report indicates that the other requirements will be addressed in more detail during Title II design, as the design and performance assessment activities further mature, and as more site information is available from the surface-based testing program. DOE considers the Title I design described in the enclosed report to be flexible enough to not preclude the ability of the site and the potential repository to meet all applicable requirements.

In addition, it should be noted that some requirements that are not specifically addressed in the enclosed report have been addressed in activities supporting the revised Title I design. Specifically, 10 CFR 60.21(c)(1)(ii)(D) was a primary consideration in the ESF Alternatives Study, which documented the selection of the concept addressed in the Title I Design Summary Report, and which will be addressed in the Title II design. This study has been the subject of several interactions between our staffs over the last year.

If you have any questions on the enclosed report, please contact Priscilla Bunton at (202) 586-8365.



John P. Roberts
Acting Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosure:

Title I Design Summary Report for the ESF, Revision 1, September 1991

see enclosures in the pkg.

cc: w/o enclosure:

C. Gertz, YMPO
R. Loux, State of Nevada
K. Whipple, Lincoln County, NV
M. Baughman, Lincoln County, NV
J. Bingham, Clark County, NV
D. Bechtel, Clark County, NV
S. Bradhurst, Nye County, NV
B. Raper, Nye County, NV
P. Niedzielski-Eichner, Nye County, NV
R. Campbell, Inyo County, CA
R. Michener, Inyo County, CA
G. Derby, Lander County, NV
P. Goicoechea, Eureka, NV
C. Schank, Churchill County, NV
C. Jackson, Mineral County, NV
F. Sperry, White Pine County, NV
L. Vaughan, Esmeralda County, NV
K. Hooks, NRC