



Department of Energy
Washington, DC 20585

DEC 10 1993

Mr. Joseph J. Holonich, Director
Repository Licensing & Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Holonich:

The enclosure indicates the most current list of Yucca Mountain Site Characterization Project (YMP) products and documents intended for delivery to the U.S. Nuclear Regulatory Commission (NRC) during fiscal year 1994. These documents include study plans and revisions thereto, issue resolution documentation, performance assessment documentation, revisions to the annotated outline for potential license application, Site Characterization Progress Reports, and documents from YMP's technical document hierarchy.

Some of these documents do not necessarily require an NRC review, but are supplied for the staff's information.

As the fiscal year progresses, there may be some changes that would affect this list. We find discussion of variances pertaining to schedules quite suited for discussion with NRC's On-Site Representative.

If you have any questions, please contact Chris Einberg of my staff at (202) 586-8869.

Sincerely,

Dwight E. Shelor
Associate Director
Office of Systems and Compliance
Office of Civilian Radioactive
Waste Management

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PDR WASTE
WM-11 PDR

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Enclosure:
FY 1994 Products and
Documents to NRC

cc: w/ enclosure
R. Nelson, YMPO
T. J. Hickey, Nevada Legislative Committee
R. Loux, State of Nevada
D. Bechtel, Las Vegas, NV
Eureka County, NV
Lander County, Battle Mountain, NV
L. Bradshaw, Nye County, NV
P. Niedzielski-Eichner, Nye County, NV
W. Offutt, Nye County, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA

STUDY PLAN TO BE YMPO APPROVED AND SENT TO THE NRC

Early FY 1994:

8.3.1.2.2.4 R2 Characterization of the Yucca Mountain
Unsaturated-Zone in the ESF

8.3.1.2.2.6 R1 Characterization of the Yucca Mountain
Unsaturated-Zone Gaseous-Phase Movement

8.3.1.2.2.8 R1 Fluid Flow in Unsaturated, Fractured Rock

8.3.1.8.1.2 Physical Processes of Magmatism and Effects on the
Potential Repository

8.3.1.8.5.2 Characterization of Igneous Intrusive Features

8.3.1.15.1.4 Laboratory Determination of the Mechanical
Properties of Fractures

8.3.1.15.2.2 Characterization of the Site Ambient Thermal
Conditions

Mid-FY 1994:

8.3.1.3.1.1 Ground-Water Chemistry Model

8.3.1.3.4.1/.3 Batch Sorption Studies and Development of Sorption
Models

8.3.1.3.6.1 Dynamic Transport Column Experiments

8.3.1.5.1.6 Characterization of Future Regional Climates and
Environments

8.3.1.15.1.5 R1 Excavation Investigations

8.3.1.17.3.3 Ground Motion from Regional Earthquakes and UNE's

8.3.4.2.2.4 Engineered Barrier System Field Tests

Late FY 1994:

8.3.1.4.3.2 Three-Dimensional Rock Characteristics Models

8.3.1.5.1.1 Characterization of Modern Regional Climate

8.3.1.15.1.3 R1 Laboratory Determination of the Mechanical
Properties of Intact Rock

8.3.1.15.1.6 In-Situ Thermo-mechanical Properties

8.3.1.15.1.7 In-Situ Mechanical Properties

8.3.1.15.2.1 Characterization of Site Ambient Stress Conditions

8.3.1.17.4.12 Tectonic Models and Synthesis

8.3.4.2.4.1 Characterization of Chemical and Mineralogical
Changes in the Postemplacement Environment

8.3.4.2.4.2 Hydrologic Properties of the Waste Package
Environment

8.3.4.2.4.5 Effects of Man-Made Materials on Water Chemistry

OTHER YMPO PRODUCTS OR DOCUMENTS

PRODUCT/DOCUMENT (Projected dates in FY)

Progress Reports 9 and 10 (mid- and late)

Not-readily-available references from Progress Reports 7 & 8 (early)

Seismic Hazards Topical Report (mid)

Calcite-Silica Working Paper (early)

References cited in Ca-Si WP (early)

AO for additional Seismic Topical Report (mid- to late)

Update of the Waste Package Implementation Plan (mid)

Waste Package Design Status Report (mid)

Total System Performance Assessment II (mid)

MGDS Annotated Outline for the LA Revision 3 (early)

ESF Title I Design Summary Report (early)

ESF Plan (early)

Site Characterization Program Baseline (Revision 11) (mid)

YMPO FY 1994 Annual Plan for Site Characterization Activities (early)

YMPO FY 1994 Annual Plan for Regulatory and Licensing Activities (early)

Proposed Resolutions to 30 SCA Open Items (throughout FY)

Several ESF Title II Design Packages (Exact number TBD)

NEW YMP TECHNICAL DOCUMENT HIERARCHY

ESF Design Requirements Document (early)

Site Design and Test Requirements Document (early)

Repository Design Requirements Document (presumes NRC request)

EBS Design Requirements Document (presumes NRC request)

Surface-Based Testing Facilities Requirements Document (presumes NRC request)

MGDS Requirements Document (presumes NRC request)