Department of Energy
Washington, DC 20585

MAR 22 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:

Enclosed is the U.S. Department of Energy/U.S. Nuclear Regulatory Commission "Level of Detail Agreement and Review Process for Study Plans." If you have any questions, please contact Mr. Chris Einberg of my office at 202-586-8869.

Sincerely,

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

Enclosure:
As Stated

290118

NH03.11
102.8
WM-11

9303290286 930322
PDR WASTE
WM-11 PDR

cc w/enclosure:
C. Gertz, 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
C. Abrams, NRC

1993 DOE/NRC LEVEL OF DETAIL AGREEMENT AND REVIEW PROCESS FOR STUDY PLANS

1. Study plans are documents that present details of the studies and activities from Chapter 8 of the Yucca Mountain Project (YMP) Site Characterization Plan (SCP). Study plans are developed by the YMP participant organizations and are approved by the Yucca Mountain Project Office (YMPO). The content requirements for study plans are presented in Attachment 1. These requirements are not retroactive to study plans that have already been submitted to the YMPO. The DOE will determine if any study plans now approved or in review would benefit from conversion to the revised format. NRC will be provided a list of study plans to be converted or developed under the revised format.

2. Only those study plans transmitted from DOE headquarters, Office of the Associate Director for Systems and Compliance to the Director of NRC's Repository Licensing and Quality Assurance Project Directorate will be considered official transmittals for NRC review. The time allowed for NRC review will only start after the official controlled copy of the study plan is received by the NRC.

3. For study plans that could affect the waste isolation capability of the site, DOE will ordinarily provide NRC with these study plans 90 days prior to the start of any work. The NRC will notify DOE within the 90 days as to whether or not NRC identified any objections to DOE starting work. At the same time DOE will be notified whether or not NRC plans to provide detailed technical comments on the study plan to DOE. If the NRC review for objection-level concerns is not completed within the 90 day time frame, DOE may begin work at its own risk. For studies that involve no surface disturbance or subsurface penetrations or that involve work outside the controlled area, DOE has the option to begin work (again, at its own risk) as soon as the study plan is submitted to the NRC. For studies that are on a critical path, the DOE will notify the NRC of the need for an expedited review. In these cases, if resources permit, the NRC will agree to notify DOE within 30 days whether nor not there are any objections to DOE initiating activities described in the study. Following the notification to DOE of any objection-level concerns, if warranted, NRC will provide detailed comments or questions on selected study plans.

4. Technical procedures for the site characterization activities described in study plans are developed by the YMP participant organizations. A current list of approved technical procedures for each approved study plan will be maintained by the participants and will be submitted to NRC as an attachment to the study plan transmittal letter. The listed procedures will be provided to the NRC staff or on-site representative upon request. Technical procedures are not required to be listed in a study plan if an up-to-date list is provided as stated above. The DOE agrees to notify the NRC staff when any technical changes to procedures result in changes to activities in the study plan.

5. Not-readily-obtainable references (Attachment 2) that have not previously been submitted to the NRC will be made available, upon request, within approximately 10 days of the request, if those references are needed to complete the review of the study plan. Delays of greater than 10 days may impact schedules for completion of the NRC review.

6. If a study plan is revised after the NRC has conducted its review, the DOE letter transmitting the revised study plan will summarize the technical changes and specifically highlight changes to discussions of potential impacts or interferences. Changes to the revised study plan will be marked in the margins.

7. Copies of all transmittals and communications, including enclosures, between DOE and NRC regarding study plans and their review as described in this agreement and its attachments will be provided to the affected state and local governments by the originating organization at the time of original issuance.

Joseph J. Holonich, Director
Repository Licensing and Quality Assurance Project Directorate
Division of High Level Waste Management
U.S. Nuclear Regulatory Commission

Dwight E. Shelor, Associate Director
for Systems and Compliance
Office of Civilian Radioactive Waste Management
U.S. Department of Energy

Carl P. Gertz, Associate Director
for Geologic Disposal
Office of Civilian Radioactive Waste Management
U.S. Department of Energy

ATTACHMENT 1

DOE CONTENT REQUIREMENTS FOR DESCRIPTIONS OF STUDIES IN SCP STUDY PLANS

The test program presented in Chapter 8 of the SCP will be subdivided into a hierarchy of increasing detail. The SCP test program hierarchy will include (in increasing detail); generic program, investigation, study, activity, and test procedures. Details for the studies listed in Chapter 8 of the SCP will be presented in the study plans. Study plans will be separate from the SCP proper and will be issued as required for site characterization. Individual test methods will be discussed in study plans.

The following outline describes the information on studies that will be presented in SCP study plans. A study plan may involve a single activity or a set of activities and corresponding analyses, as appropriate. An activity includes preparation of procedures, test set-up, data acquisition, and data reduction. Analyses include those calculations or other evaluations needed to assess site characteristics and support design activities. All site characterization studies will be completed under a quality assurance program that has been accepted by the NRC.

The items listed in the outline will be addressed for studies and activities, to the extent that each item applies. Not all items will be applicable to all studies.

In some cases, activities may be planned for later stages in the study when detailed plans depend on the results of earlier activities. Under these circumstances, it will not be possible to provide the same level of detail for all activities at the time the study is first issued. In such cases, revision 0 of the study plan will present complete descriptions of activities that occur early in the study and less detailed information for activities that occur later.

I. PURPOSE AND OBJECTIVES

Describe the objectives of the study: what technical issues of importance to the project will be addressed by the study and what aspect of site characterization will be accomplished through the study. Note any changes from activities as described in the SCP (all changes should also be documented in DOE site characterization progress reports).

II. SCOPE OF WORK

Describe the general approach for completing the study, including (as appropriate) an evaluation of existing literature; a description of the key parameters that will be measured or observed and analyzed in the study, and a description of the methods that will be used to complete the study including a discussion of the technical methodology to be used. Provide illustrations such as maps, cross sections, and schematic layouts of tests or other planned activities.

If the study proposes the observation and description of features in the field, provide discussion on:

- The area (and its approximate boundaries) to be studied.
- Aspects of the area that are known or are poorly known.
- Type of data to be collected.
- Approximate location and number of tests.
- Methodology or classification system to be used.
- Product, maps, cross sections, etc., to be produced.

If the study proposes laboratory or field testing, provide discussion on:

- The test methods to be used.
- Approximate location and number of tests.
- The representativeness of the test in terms of spatial and temporal variability of the parameters that will be measured.
- Specific constraints on testing described in the study. Factors to be considered include:

    1. Potential impacts on the site from testing.
    2. Whether the tests needs to simulate repository conditions.
    3. Applicability of tests conducted in the laboratory to the scale of phenomena in the field.
    4. Generic and site specific test to test interference.
    5. Significant interference between tests and design and construction of the Exploratory Studies Facility.
    6. Alternative test methods and a rationale for selecting a specific method, if appropriate.

If the study proposes analyses, provide discussion on:

- The purpose of the analysis. Indicate any sensitivity or uncertainty analyses that will be performed.
- The methods of analysis, including any analytical expressions or statistical methods that will be employed.
- The data input requirements of the analysis.

- The representativeness of the analytical approach (e.g., with respect to spatial and temporal variability of existing conditions and future conditions) and indicate limitations and uncertainties that will apply to the results.

If the study or analyses propose synthesis and modeling, provide discussion on:

- Scope of the data to be included in the study.
- The methods to be used, including computer software, if applicable.
- The objectives or problems that will be addressed by the study.
- The relationship of this study to preexisting models or syntheses.
- The sensitivities of the model to input and calculation methods.
- How the model or synthesis will be tested against data and other models.
- How the model will be updated to incorporate new data.

III. APPLICATION OF RESULTS

Discuss how the results of this study will support performance assessment and design activities and other site characterization studies. Provide specific information about the way data from this study will be used in other studies and/or activities, including performance assessment design and site characterization. Discuss the technical issues that will be addressed by the data collected under this study.

IV. SCHEDULE

Summarize the schedule for the study, including the estimated length of the investigation and any milestones and decision points for the study. Show the interrelationship with other studies, indicating dependencies on data derived from other studies and activities that will affect or be affected by the scheduled completion of this study.

ATTACHMENT 2

REFERENCES THAT DOE WILL SUPPLY UPON REQUEST

1. Contractor and participant reports such as Open-File Reports, Sandia reports, Los Alamos reports, etc.

2. Reports published in foreign national journals and books.

3. State publications.

4. Symposium, meeting, and workshop abstracts and papers.

5. Commercial and trade contract reports (e.g., EPRI).

6. Academic M.S. theses and dissertations.

7. Participant management plans, QA plans, etc.

8. Computer code manuals.

9. Draft, unpublished, or "letter" reports and documents (personal and oral communications are not acceptable references unless documented in letter reports).

10. Manuscripts of "in press" works (manuscripts "in review" or "in preparation" are not acceptable references in study plans).

12. Monograph reports and handbooks from Federal agencies (e.g., local USDA soil reports).