

READINESS REVIEW PLAN
 FOR
 DEPARTMENT OF ENERGY
 YUCCA MOUNTAIN PROJECT OFFICE
 CONSTRUCTION START
 OF
 EXPLORATORY STUDIES FACILITY

SEPTEMBER 4, 1992



SEP 4, 1992

Approved
 Readiness Review Team Leader



9/4/92

Approved
 Readiness Review Chairman

1. INTRODUCTION AND OVERVIEW

This Readiness Review Plan has been prepared on behalf of the Director, Engineering and Development Division, Office of Geologic Disposal, Yucca Mountain Project Office (YMPO). The Director is acting under the authority of the Manager, Yucca Mountain Site Characterization Project, to conduct this assessment of the readiness review of the preparation to begin ESF construction. All contractors participating in this review have been previously cleared to commence Quality Affecting Work within their respective functional areas. Participants to be evaluated during this review are:

- Management and Operating Contractor - Construction Management Support to YMPO
- Reynolds Electrical & Engineering Co., Inc. - Constructor
- Technical and Management Support Services - Environmental Support
- Raytheon Services Nevada - Title I Design and Title II Design for Package IA

Therefore, this review is limited to work to be performed under the OCRWM program in accordance with tasking received from Yucca Mountain Project Office (YMPO), Office of Civilian Radioactive Waste Management (OCRWM), Department of Energy in the activities to be reviewed. The OCRWM Management System Improvement Strategy (MSIS) included a complete review of the hierarchy of management control documents as well as the relationship of OCRWM and M&O documents. The resulting structure is displayed as Attachment I. Although the structure is now defined, there are two additional primary documents that should provide criteria for the review, i.e., the OCRWM Program Management System Manual (PMSM) and the joint OCRWM/M&O Systems Engineering Management Plan (SEMP), both of which are still in the development and/or approval process. This review will therefore use draft versions of those documents if the approval process is still not complete by the time of the review.

2. SCOPE

The scope of this review is to evaluate the readiness of all project participants to begin construction of the Exploratory Studies Facility, and to accomplish assigned work tasks required to be performed under the OCRWM Program.

The scope of work is as assigned by OCRWM in accordance with DOE Order 5700.7B.

Work Authorization System, and in support of the Yucca Mountain Project Office. OCRWM participation will include observers with the Readiness Review Team.

Although the activities being reviewed may or may not be quality affecting, this review will utilize the successful model from previous M&O QA Readiness Reviews. Therefore, this review will verify the readiness to perform tasks which are within the scope of the following DOE Quality Assurance Requirements Document (QARD) basic requirements:

Requirement 1	-	Organization
Requirement 2	-	Quality Assurance Program
Requirement 3	-	Design Control
Requirement 4	-	Procurement Document Control
Requirement 5	-	Instructions, Procedures and Drawings
Requirement 6	-	Document Control
Requirement 7	-	Control of Purchased Services
Requirement 8	-	Identification and Control of Items
Requirement 9	-	Control of Special Processes
Requirement 10	-	Inspections
Requirement 11	-	Test Control
Requirement 12	-	Control of Measuring & Test Equipment
Requirement 13	-	Handling, Storage & Shipping
Requirement 14	-	Inspections, Test and Operating Status
Requirement 15	-	Nonconformances
Requirement 16	-	Corrective Action
Requirement 17	-	Quality Assurance Records
Requirement 18	-	Audits
Requirement 19	-	Computer Software

The Attribute Lists for these areas will be based, at a minimum, on the requirements derived from the scope of work utilizing OCRWM QARD criteria, the OCRWM Systems Engineering Management Plan (SEMP) (Draft) and the OCRWM Program Management System Manual (PMSM) (Draft).

2.1 TASK ASSIGNMENTS

The tasks assigned by OCRWM are defined in accordance with the Program Work Breakdown Structure (Attachment II), the respective scopes of work, and applicable Task Directives as promulgated to the participants by the YMPO.

3. OBJECTIVES

The following objectives are established for this review:

- Verify readiness to accomplish tasks to be performed under the OCRWM program considering the following readiness review criteria:
 - Work activity prerequisites have been satisfied
 - Detailed implementing documents are available and approved
 - Adequate numbers of personnel have been suitably trained and qualified.

4. REFERENCE DOCUMENTS

The following references will provide the basis for this review:

- Participants' current Contract Statements of Work.
- Letter, William B. Simecka, Director, Engineering and Development Division, YMPO to L. Dale Foust, M&O, dated July 23, 1992
- ASME, NQA-1-1989 Edition, Quality Assurance Program Requirements for Nuclear Facilities.
- Yucca Mountain Project, Project Management Plan, Revision 2.
- Quality Assurance Requirements Document for the Civilian Radioactive Waste Management Program. (QARD), DOE/RW-0214, Revision 4.
- CRWMS/M&O Quality Assurance Program Description (QAPD), Revision 2.
- OCRWM Quality Assurance Administrative Procedure, QAAP-2-6, Readiness Review, Revision 2.
- DOE Order 4700.1, Change 1, Project Management System.
- DOE Order 5700.7B, Work Authorization System.
- OCRWM Program Management System Manual (PMSM) (DRAFT)

- **OCRWM/M&O Systems Engineering Management Plan (SEMP) (DRAFT)**

5. READINESS REVIEW GUIDELINES

The OCRWM Director, Engineering & Development, Office of Geologic Disposal, directed this review on July 23, 1992 and provided guidelines for conducting the review (Attachment III). The Director requested a description of the approach to be utilized and a milestone chart which were provided (Attachment IV). The review is scheduled for September 14-16, 1992. As noted in his direction, this Readiness Review must support a construction start date in mid to late November, 1992.

6. READINESS REVIEW BASELINE

System requirements, technical studies, and design work are in support of the YMPO and are a subset of, and work to, YMPO management plans, baselines and Technical Directives. The following are the applicable baseline documents for this review:

- **OCRWM PMSM (DRAFT)**
- **OCRWM/M&O SEMP (DRAFT)**
- **YMPO Technical Directives**
- **Participants' Statements of Work**

7. READINESS REVIEW SCHEDULE, PARTICIPANTS AND PROCESS

7.1 SCHEDULE

- 7.1.1 • **Activate and Train Readiness Review Team - August 3-17**
- **Publish Readiness Review Plan - September 4**
- **Develop Attributes Lists - August 20 - September 4**
- **Conduct Readiness Review - September 14-16**
- **Present Summary of Open Items and Hold Points to Director - September 25**
- **Complete Readiness Review Report - October 26**
- **Present Readiness Review Report to Director - October 27**

- Director's Decision - November 4

7.2.1 The Director has appointed Thomas I. Fortner, as the Readiness Review Team Chairman who has, in turn appointed Arthur S. Kubo as the Readiness Review Team Leader. The following individuals have been appointed to the Readiness Review Team with responsibilities as indicated:

- T. Faries - Team Coordinator
- R. Morgan - Team Consultant
- D. Evans - ADP; Facilities and Equipment; Procurement
- J. Tierney - QA
- S. Blackley - Design Controls
- W. Houston - Design Controls
- R. Parker - Construction Management
- M. Stern - Regulatory and Licensing
- H. Sindt - Project Management
- C. Tankersley - Environmental Activities

The qualifications and training of the M&O team members are documented in accordance with QMP-02-01, Project Office Indoctrination and Qualification Training.

7.2.2 The responsibility for the adequacy of the Team to fulfill the objectives of the review and the requirements of QAAP-2-6, has been delegated to the CRWMS M&O Contractor by the Director (see Attachment III).. OCRWM will designate observers of the Readiness Review Team to facilitate authorization for participants to commence work at the completion of the review.

7.3 PROCESS

The review will be conducted in accordance with the process defined in QAAP-2-6, Readiness Review, utilizing the flow chart included herein as Attachment V.

7.3.1 Upon approval of this plan by the Readiness Review Chairman, the Readiness Review Team will develop the Attribute Lists using:

- Requirements Lists prepared by each respective Design function utilizing the form shown as Attachment VI
- The scope of work as defined by the Work Authorization System

- 7.3.10 Day 3 - Continuation day, if required.
- 7.3.11 Observers shall only interact with members of the Readiness Review Team. Any questions, other than minor clarifications, shall be presented to a team member utilizing the Observer Question Form (Attachment VII). Documents, files and procedures may be reviewed in conjunction with a team member during the review; however, copies will not be provided.
- 7.3.12 Upon completion of the Attribute Lists, the Review Team will prepare a summary presentation of Open Items and Hold Points for delivery by the Readiness Review Team Leader to the Director and Readiness Review Chairman on September 25, 1992.
- 7.3.13 The final report will be presented by the Readiness Review Team Leader to the Director and Readiness Review Chairman on October 27, 1992. The report will include a review of any Open Item Reports and Hold Points generated during the review, actions required to close the Open Item Reports and Hold Points and their impact on readiness. The report will conclude with an overall recommendation for the Director's consideration regarding readiness to proceed within the defined scope of work.
- 7.3.14 The Director will be requested to accept the report as written or direct changes to incorporate his determination of the adequacy of the Review. The Director will consider the report and recommendations of the Readiness Review Team and announce his decision relative to continuation of work by November 4, 1992

8. ATTACHMENTS

- 8.1 ATTACHMENT I - CRWMS Document Hierarchy
- 8.2 ATTACHMENT II - Program Work Breakdown Structure
- 8.3 ATTACHMENT III - DOE Readiness Review letter dated July 23, 1992
- 8.4 ATTACHMENT IV - Readiness Review Approach & Milestone Chart
- 8.5 ATTACHMENT V - Readiness Review Process Flow Chart

- The criteria contained in the OCRWM QARD, the OCRWM/M&O SEMP and the OCRWM PMSM.

7.3.2 The Readiness Review Chairman will approve the Attribute List.

7.3.3 Prior to the beginning of the review, individual members of the team will complete the review of documents and procedures in support of the objectives of the review.

7.3.4 Day 1 - The review will commence with an introduction by the Readiness Review Team Leader. This presentation will address the following:

- Readiness requirements
- Readiness strategy
- Assumptions of the review
- Roles and responsibilities of the review participants.

7.3.5 The M&O ESF Construction Manager will then present the following information:

- Organization
- Scope of Work Plan
- List of activities to be performed under the OCRWM program
- Requirements List, with emphasis on incomplete elements, if any
- Process used to identify requirements
- Implementation Plan or the OCRWM scope of work
- Determination of staffing requirements and qualifications of personnel

7.3.6 The REECO Construction Manager will then offer a presentation utilizing the format outlined in 7.3.5 above.

7.3.7 The RSN Manager will then offer a presentation utilizing the format outlined in 7.3.5 above.

7.3.8 Day 2 - The Technical & Management Support Services (T&MSS) Manager will offer a presentation utilizing the format outlined in 7.3.5 above.

7.3.9 Daily, upon completion of the site presentations, the review team will conduct the Readiness Review and complete the Attribute Lists through reference to presentations, referring to previously reviewed documents and records, and by individual or group discussions with participants' personnel. The sample matrix shown in Attachment VII will be completed to identify the tasks to be performed under the OCRWM program and to verify the prerequisites for these tasks.