OCRWM-HQ QUALITY ASSURANCE SURVEILLANCE REPORT: SURVEILLANCE OF PROGRAM READINESS TO INITIATE EXPLORATORY SHAFT FACILITY (ESF) TITLE II DESIGN

SURVEILLANCE NUMBER OCRWM-HQ-SR-89-002

Conducted: OCRWM-HQ - March 1-2, 1989
YMPO - March 6-9, 1989

Prepared by: L. Wright E. Shultz 3-31-89
Surveillance Team Leader Date

Approved by: Lake H. Barrett 3-31-89
Director, OQA Date

8904110380 890331
PDR WASTE PDR
WM-11

INTRODUCTION

A surveillance to assess program readiness to initiate ESF Title II design was performed by the OCRWM Office of Quality Assurance at OCRWM-HQ and the Yucca Mountain Project Office (YMP).

The subject surveillance was performed both at OCRWM-HQ on March 1-2, 1989 and at the YMP on March 6-9, 1989.

Refer to Attachment 1 for a listing of surveillance team members and personnel contacted.

SURVEILLANCE SCOPE

The scope of this surveillance focused on an evaluation of the status of the QA program development and implementation activities to support the initiation of the Exploratory Shaft Facility (ESF) Title II design phase, with particular emphasis on (1) establishment of the Program MGDS technical baseline and control system, and (2) the applicable portions of the QA program to support initiation of the ESF Title II design phase. The applicable portions of the QA program evaluated included the following programmatic elements:

I	-	Organization
II	-	QA Program
III	-	Design Control
V	-	Instructions, Procedures and Drawings
VI	-	Document Control
XVI	-	Corrective Action
XVII	-	QA Records
XVIII	-	Audits

REQUIREMENTS SURVEILLED

1. OGR/B-7 - Systems Engineering Management Plan for the OGR, Rev. 1
2. OGR/B-1 - Program Baseline Procedures Notebook, Rev. 7.1
3. OGR/B-2 - Generic Requirements for a Mineral Geologic Disposal System, Rev. 3
4. OGR/B-3 - OGR QA Plan, Rev. 1
5. NNWSI/88-3 - NNWSI Project Systems Engineering Management Plan, Rev. 0
6. YMP ESF Subsystems Design Requirements Document, (Draft-Benchmark 4)
7. NNWSI/88-1 - YMP QA Program Plan, Rev. 0
8. ANSI/ASME NQA-1 - Applicable Basic Requirements and Supplements

RESULTS OF SURVEILLANCE

OCRWM-HQ Summary:

OCRWM has established the OGR/B-7 Systems Engineering Management Plan (SEMP), which establishes a structured, formal approach for technical management of the Program based on systems engineering. The SEMP requires the establishment of management procedures to control the activities necessary to establish and control the requirements for a mined geologic disposal system (MGDS) and to control the development of the MGDS. The management procedures established to date, include: (1) the OGR/B-1 Program Baseline Procedures Notebook, which establishes a baseline management system to control the set of Program documents used by OCRWM to direct and control the development of the MGDS and technical activities of the program, and (2) the OGR/B-3 QA Plan for HLRW Repositories, which sets forth the geologic repository Program-wide QA requirements and the quality implementing procedures used by OCRWM to implement the applicable QA requirements at OCRWM-HQ.

Due to the evolutionary development of the OGR/B-7, Systems Engineering Management Plan (SEMP) and the OGR/B-2, Generic Requirements for a Mined Geologic Disposal System (MGDS) document, objective evidence of compliance with all the current requirements of OGR/B-7 was not available in all cases. OCRWM-HQ did perform technical reviews of the OGR/B-2 document with respect to 10CFR60 and non-10CFR60 requirements applicable to the ESF, to verify and document inclusion of appropriate 10CFR60 and non-10CFR60 requirements. Required changes to OGR/B-2 identified by these technical reviews have been approved and baselined in accordance with OGR/B-1, Program Baseline Procedures Notebook. However, based on the surveillance activities, QA program deficiencies were identified in the area of control of the MGDS technical baseline. The deficiencies identified have been reported on one (1) Corrective Action Report (CAR) and four (4) Deficiency Reports (DRs). Deficiencies identified by OCRWM-HQ are qualified by significance. It is required that significant deficiencies be reported on a CAR. The following provides a synopsis of the CAR and DRs that were generated during the Headquarters' portion of the surveillance. These were considered to be significant based upon QAAP 16.1, para. 5.5.3: "A breakdown in a QA program (i.e., failure of an organization to establish and implement prescribed QA and technical requirements, plans, and procedures)". These are not considered deficiencies that could seriously affect safety or waste isolation (QAAP 16.1, para. 3.2.10, definition of a significant deficiency). In the next version of QAAP 16.1, para. 3.2.10 will be clarified.

CAR-89-001 - Control of the MGDS technical baseline.

- Control of the preparation of technical documents including identification of applicable design inputs (reference GR, Appendix E).

- Adequate review criteria to assure conformance with applicable design inputs required to establish the design requirements for ESF Title II design and assure required level of detail in the document.

- o Deviation from the existing MGDS baseline document hierarchy. A key element of the document hierarchy is missing (site specific SR and SD); the purpose of which was to provide a complete definition of all MGDS subsystems, major components of those subsystems, interfaces between the subsystems, definition of all functions that MGDS must perform, establish performance criteria and identify all applicable codes and regulations and their assignment to subsystems of the MGDS. Based on this element not being in place, there is insufficient documentary evidence to establish the basis used by HQ for review and approval of the YMP SDRD.

DR-89-001 - Deficiencies related to the OGR/B-1 document and the lack of a formalized QA records management system at OCRWM-HQ for the collection and maintenance of the QA records initiated during the OGR/B-1 implementation process, prior to forwarding the complete records package to the OCRWM-HQ records file.

DR-89-002 - Specific deficiencies with respect to controlling the preparation of technical documents as noted in CAR 89-001.

DR-89-003 - Establishment of required records management controls.

DR-89-004 - Training of applicable personnel to the OGR/B-7 and OGR/B-1 documents.

YMP SUMMARY

The Yucca Mountain Project Office, in accordance with OGR/B-7, has established NNWSI/88-3, NNWSI Project Systems Engineering Management Plan (SEMP), which will implement systems engineering to manage, integrate, interface, and document the technical activities of the Project and to develop and manage the technical element of the Project baseline.

This portion of the surveillance not only investigated the technical baseline control system described in NNWSI/88-3, it also investigated those applicable portions of the QA program which support initiation of ESF Title II. The YMP Quality Assurance Program Plan, NNWSI/88-1, provides a description of how the YMP will implement applicable QA program requirements.

The NNWSI QA Program Plan, NNWSI/88-9, Rev. 2, has been accepted by the NRC for compliance with the 10CFR60, Subpart G, QA Requirements. This Project document will be used by the YMP and the Project participants as the baseline set of Project QA requirements. YMP and the Project participants are in the process of revising their individual QA Program Plan(s) (QAPP(s)) to conform to NNWSI/88-9, Rev. 2. The current plan is to have these QAPP(s) revised and submitted to the NRC for review, prior to the scheduled QA program qualification audits. As part of the YMP activities to assure the establishment of a fully qualified QA program prior to new site characterization activities, an extensive surveillance plan and schedule has been developed to verify implementation of the YMP and Project participants QA programs.

In support of the initiation of the ESF Title II design phase, the YMP QA office issued a memo dated January 31, 1989, which identified the QA

ATTACHMENT 1

Surveillance Team Members

OCRWM-HQ Protion

Dwight Shelor, OCRWM-Team Leader
Alan Brownstein, OCRWM
Edward Regnier, OCRWM
Gary Faust, Weston
Robert Clark, Weston

YMP Portion

Dwight Shelor, OCRWM-Team Leader
Alan Brownstein, OCRWM
Dean Stucker, OCRWM
Edward Regnier, OCRWM
Robert Clark, Weston
Gary Faust, Weston
W.R. Marchand, Weston
Arthur Spooner, Weston
Jim Grubb, Observer (St. of NV)

Personnel Contacted

OCRWM-HQ Portion

Ram Lahoti, OCRWM
Manny Comar, OCRWM
Charles Brooks, OCRWM
Jerry Hyde, OCRWM
Mark Frei, OCRWM
Bill Danker, OCRWM
Dean Stucker, OCRWM
Bob Jackson, Weston
Pete Bolton, Weston

YMP Portion

Ed Petrie, YMP
John Estella, SAIC
Pete Karnowski, SAIC
Bob Klemens, SAIC
Henry Caldwell, SAIC
Martha Mitchell, SAIC
John Waddell, SAIC
Rick Bahorich, Westinghouse
Jerry Heaney, SAIC
Steve Dana, SAIC
Steve Noland, SAIC
Bill Camp, SAIC
Ed Ripley, SAIC
Elaine Cotten, Westinghouse
Steve Metta, SAIC
Jim Blaylock, YMP
John Therian, SAIC
Mae Cotter, SAIC
Terri Lezcano-Kirsch, SAIC

recommendations on prerequisite activities prior to the start of ESF Title II design activities. The YMP developed an action plan in response to these QA recommendations on prerequisite activities and concerns. The OCRWM-HQ surveillance scope was expanded to review the YMP verification activities conducted to closeout the noted QA recommendations. Based on the surveillance activities at YMP, some of these QA recommendations had not been completed and/or verified and were documented as deficiencies as part of this surveillance.

With respect to investigations of the technical baseline control system, QA program deficiencies were identified at the Project Office. Related deficiencies were reported on one (1) CAR and one (1) DR. Also, with respect to investigation of the Project quality assurance elements, one (1) deficiency (DR) and several concerns were noted. The following is a synopsis of the CAR, DRs and concerns that were generated during the Project Office portion of this surveillance.

CAR-89-002 - Control of the MGDS technical baseline.

- Control of the preparation of technical documents including identification of applicable design inputs (SDRD in particular).

- Adequate review criteria to assure conformance with applicable design inputs required to establish the requirements for ESF Title II design

- Deviation from existing MGDS baseline document hierarchy.

- The Project organizational responsibilities, with respect to development of the ESF design requirements, test requirements, and associated design and testing interfaces, are not adequately identified and documented to establish the responsible ESF design organization or control the design interfaces.

DR-89-005 - Specific deficiency with respect to controlling the preparation of technical documents as noted in CAR 89-002.

DR-89-006 - Training of applicable personnel to NNWSI/88-3 and Project technical baseline control system procedures.

CONCERNS

Quality Assurance

- AP-1.1Q should provide instructions to authors to consider addressing the applicability of quantitative or qualitative acceptance criteria in the administrative procedures. Although QMP-06-03 implies that for quality related APs these attributes are considered in the review process, the responsibility for determining if these criteria apply should clearly be with the procedure author.

- Periodic analyses to identify quality trends have not been performed. The first and last trend analysis was performed in July of 1987.

- Approximately 100 boxes of quality assurance records have been

transferred from the Central Records Facility to the test site to satisfy dual storage requirements. However, no index or transmittal was available to identify the specific records transferred to the test site records facitlity.

- Due to the extreme workloads SDRs not being closed in a timely manner.

Verification Activities for Closeout of Title II Design Prerequisites as Identified in the J. Blaylock to C. Gertz Memo, dated January 29, 1989

- It appears that there are some items which cannot be completely verified (e.g., status report item 9d).

- A review by YMP QA of the participant's response to the August 1988 Project Office Management Readiness Assessment Review was not evident.

- Many items identified in the subject memo are statused as "unresolved" or "in review".

Surveillance and Surveillance Task Force Activities

- The YMP surveillance program (excluding task force surveillance activity) does not appear to support YMP ongoing activities. This is evidenced in review of the surveillance log entries for the previous five (5) months.

- Surveillance reports, in some cases, do not provide evidence that applicable participant implementing procedures were reviewed to verify compliance with AP5.18Q (reference EH Petrie to CP Gertz memo, dated February 23, 1989, item 1.a.).

- The surveillance of participant training, in some cases, appears to have been limited to a review of completed training records. Rather than a review to determine whether the assigned training was adequate (i.e., was the training assignment specific to the individual's job/position description).

- The method of surveilling participant procedures for compliance with NNWSI/88-9 and the parallel effort of reviewing the participant QAPPs for compliance with NNWSI/88-9 may not identify discrepancies between the two participant documents.

It should be noted that the concerns identified here do not require a response by the Project Office, however, it is recommended that appropriate YMP management consider them and take the necessary measures for correction.

REQUIRED ACTION

The two (2) CARs and six (6) DRs reported as a result of this surveillance have previously been transmitted to the responsible organizations, to allow the immediate initiation of responses. Copies of these reports are attached for information (Attachment 2). A written response to this surveillance report is required within fifteen (15) working days of receipt, which shall include proposed corrective action

(and anticipated completion dates) for the identified deficiencies.

7F-C8C

MAR 31 1989

RECORD OF CORRESPONDENCE, CONCURRENCE AND DISTRIBUTION

SUBJECT: Transmittal of Surveillance Report OCRWM-HQ-SR-89-002

FROM: L. Barrett, RW-3

TO: Distribution

PC CODE: I1B

ORIGINATOR: D. Shelor, 6-1238

DISTRIBUTION

QA FILE #428
ORIGINATOR'S CHRON: Shelor
QA READING FILE

DISTRIBUTION

S. Rousso, RW-1
F. Peters, RW-2
L. Barrett, RW-3
J. Jones, RW-3
T. Gutmann, RW-3
S. Skuchko, RW-3
K. Sommer, RW-3
M. Mozumder, RW-3
J. Bresee, RW-10
A. Brownstein, RW-13
J. Saltzman, RW-20
R. Stein, RW-30
T. Isaacs, RW-40
S. Kale, RW-20
D. Stucker, RW-221
E. Regnier, RW-331
C. Gertz, YMP
J. Blaylock, YMP
D. Siefken, Weston
G. Faust, Weston
R. Clark, Weston
J. Marchand, Weston
A. Spooner, Weston

CONCURRENCE

D. Shelor, RW-3 5-5-89

Lake H. Barrett, RW-3

FULL TEXT ASCII SCAN