

OFFICE OF
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

QUALITY ASSURANCE SURVEILLANCE RECORD

SURVEILLANCE DATA

¹ORGANIZATION/LOCATION:
Yucca Mountain Site
Characterization Office
(YMSCO), Las Vegas, Nevada

²SUBJECT:
YMSCO acceptance of services performed
by Affected Organizations (AO)

³DATE: 12/4-6/95

⁴SURVEILLANCE OBJECTIVE: To evaluate the adequacy and effectiveness of, and compliance with the YMSCO process relating to the YMSCO acceptance of services based on its determination of the acceptability of deliverables that have been submitted by AOs in response to YMSCO generated Participant Planning Sheets (PPS) assigned tasks.

⁵SURVEILLANCE SCOPE: To review deliverable packages as identified in PPSs invoking applicable requirements of the Quality Assurance Requirements and Description document (QARD), DOE/RW-0333P, current version, to evaluate the adequacy and effectiveness of, and compliance with, Yucca Mountain Administrative Procedure (YAP)-5.1Q, Revision 2, Interim Change Notice (ICN) 0, "Document Development, Change, Review, Approval, and Acceptance Control," as related to the acceptance of services in accordance with the QARD, Revision 5, Subsection 7.2.6 C.5, "Acceptance of Items and Services," requirements.

⁶SURVEILLANCE TEAM:
Team Leader:

Richard A. Kettell

Additional Team Members:

N/A

⁷PREPARED BY: Richard A. Kettell
Richard A. Kettell 12/3/95
Surveillance Team Leader Date

⁸CONCURRENCE:
N/A
QA Division Director Date

SURVEILLANCE RESULTS

⁹BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS:

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¹⁰SURVEILLANCE CONCLUSIONS:

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¹¹COMPLETED BY: Richard A. Kettell 1/12/96
Surveillance Team Leader Date

¹²APPROVED BY: for Davis 1-22-96
QA Division Director Date

Block 9 (continued) BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS:

On December 4 through 6, 1995, a surveillance was performed at the YMSCO in Las Vegas, Nevada, to evaluate the adequacy and effectiveness of, and compliance with YAP-5.1Q, Revision 2, ICN 0, effective date of April 3, 1995, Paragraph 5.2, "Deliverables." This portion of YAP-5.1Q provides the process for the YMSCO acceptance of services performed by AOs based on the YMSCO determination of the acceptability of products generated by/for AOs during their accomplishment of designated Yucca Mountain Site Characterization Project (YMP) related tasks, and subsequently submitted as deliverables to the YMSCO by the AOs.

Deliverables that were reviewed during this surveillance were limited to technical documentation (e.g., reports, letter-reports, analyses, conclusions, etc.) that results from the performance of PPS identified tasks requiring implementation of applicable QARD requirements. A specific objective of this surveillance was to determine if any such deliverable had been developed as a result of the cognizant AO not implementing the appropriate QARD controls that were specified/referenced in the associated PPS.

Background:

During normal work activities Yucca Mountain Quality Assurance Division (YMQAD) personnel had noted the existence of PPSs currently in effect for Fiscal Year (FY)-1995 work requiring tasks to be performed in accordance with applicable QARD requirements while listing deliverables that were not always obtained/developed as a result of tasks performed in accordance with QARD requirements. This anomaly was due to certain documents (e.g., status of activities reports, scoping documents, etc.) being identified as deliverables which were the result of the performance of tasks subordinate to, or associated with the activities specified in the "Statement of Work" section of the PPSs, to which the application of appropriate QARD requirements was never desired by YMSCO, nor implemented by the cognizant AO.

For instance, a PPS would require an AO to perform tasks such as studies, experiments, or tests in accordance with applicable QARD requirements, and to generate a technical report documenting the results of the accomplished tasks. In the "Deliverables" section of the associated PPS, YMSCO would identify the technical report as a deliverable and require that it be submitted to YMSCO by a specific date at the conclusion of the assigned tasks. Additionally, YMSCO may have determined the need for the AO to generate a status report regarding assigned activities on a monthly basis, therefore this activities status report would be identified as a deliverable in the PPS. In such an example, it was the intent of YMSCO that the cognizant AO implement appropriate requirements of the QARD to the tasks associated with the performance of the designated studies, experiments, or tests, and development of the related technical report; not to the tasks associated with the development and control of the activities status reports.

The fact that deliverables resulting from activities to which QARD controls had been applied, and deliverables resulting from activities to which QARD had not been applied were identified in the same manner on a PPS was a cause for concern in the opinion of YMQAD in that the

possibility existed that unless properly delineated, AOs may not implement applicable controls of the QARD due to their misinterpretation as to whether QARD controls did or did not apply to a deliverable. YMQAD felt there was a need for a review of deliverables submitted by AOs to determine if there existed a basis for the concern.

Observations:

No problems were identified during the surveillance which require the generation of deficiency reporting documents. YAP-5.1Q currently provides an adequate and effective method for the YMSCO in regard to implementing the provisions of Subsection 7.2.6 C.5. of the QARD, Revision 5. The review of the deliverables listed below as objective and related documentation that comprised deliverable packages as described in YAP-5.1Q, Paragraph 5.2, did not identify any deliverable to be the result of tasks to which appropriate controls of the QARD had not been applied.

Requirements Source Documents:

- QARD, Revision 5, Subsection 7.2.6 C.5., "Acceptance of Items and Services," (effective date of October 31, 1995:

This section of the QARD specifies that one of the five methods that can be used to accept services furnished by a supplier is the based on the procuring organization's review of supplier provided objective evidence (such as certifications, stress reports, or personnel qualification records, etc.) to determine its conformance to the procurement document requirements.

- YAP-5.1Q, Revision 2, ICN 0, "Document Development, Change, Review, Approval, and Acceptance Control," Paragraph 5.2, "Deliverables," (effective date of April 3, 1995):

This section of YAP-5.1Q provides direction to the organizations:

- submitting deliverables as to specific documents that are to be submitted with the deliverables to YMSCO;
- processing deliverables for YMSCO review and determination of acceptance, tracking the status of deliverables in the YMSCO review and determination of acceptance process, and entering deliverables into the YMP records management system acceptance; and
- reviewing deliverables to determine their acceptability.

Objective Evidence Examined:

The following deliverables were evaluated:

NOTE: These deliverables were submitted by the cognizant AOs to the YMSCO during the period from April 5, 1995, to December 4, 1995. In addition, appropriate requirements of the QARD applied to all tasks identified in the "Statement of Work" sections of the below listed PPSs.

- "Testing and Quantification of Microautoradiography in the Mapping of Actinide Retardation," YMP Milestone Number 4078, as delineated in the PPS (11/18/94) to Los Alamos National Laboratory (LANL) involving Work Breakdown Structure (WBS) Number 1.2.3.2.1.1.1 related tasks;
- "Fiscal Year-1995 Quantitative X-ray Diffraction Results for Samples Used for the Sorption Task," YMP Milestone Number 4055, as delineated in the PPS (11/18/94) to LANL involving WBS Number 1.2.3.2.1.1.1 related tasks;
- "Detection of Basaltic Intrusions," Milestone Number 4050, as delineated in the PPS (11/18/94) to LANL involving WBS Number 1.2.3.2.5.1.1 related tasks;
- "Geometry/Continuity of Sundance Fault," Milestone Number 3GGF510M, as delineated in the PPS (12/2/94) to U.S. Geological Survey (USGS) involving WBS Number 1.2.3.2.2.1.2 related tasks;
- "Kinetics of Smectite to Illite Reaction," Milestone Number 4037, as delineated in the PPS (11/18/94) to LANL involving WBS Number 1.2.3.2.1.2.2 related tasks;
- "Enhancement of Scott & Bonk," Milestone Number 3GGF500M, as delineated in the PPS (12/2/94) to USGS involving WBS Number 1.2.3.2.2.1.2 related tasks;
- "Measuring the Spatial Distribution of Latent Energy Flux Over Complex Terrain Using the Mobile Scanning Water-Vapor Raman Lidar," Milestone Number 4087, as delineated in the PPS (12/8/94) to LANL involving WBS Number 1.2.3.3.1.2.1 related tasks;
- "Use of Stratigraphic Models as Soft Information to Constrain Stochastic Modeling of Rock Properties: Development of the GSLIB-Lynx Integration Module," Milestone Number 32222M71, as delineated in the PPS (5/11/95) to Sandia National Laboratory involving WBS Number 1.2.3.2.2.2.2 related tasks;
- "Initial Waste Package Probabilistic Criticality Analysis: Multi-Purpose Canister (TPV-060-WPD)," Milestone Number TM251, as delineated in the PPS (11/1/94) to the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) involving WBS Number 1.2.2.3.1 related tasks;

- "Precarious Rocks and Seismic Shaking at Yucca Mountain, Nevada;" Milestone Number 3GSM530M, as delineated in the PPS (5/12/95) to USGS involving WBS Number 1.2.3.2.8.4.1 related tasks;
- "Summary of Model Calibration and Sensitivity Studies Using the Lawrence Berkeley National Laboratory (LBNL)/USGS Three-Dimensional Unsaturated Zone Site-Scale Model," Milestone Number 3GLM107M, as delineated in the PPS (6/13/95) to the CRWMS M&O involving WBS Number 1.2.3.3.1.2.9 related tasks.

Personnel Contacted During the Surveillance:

Dennis Williams, YMSCO, Scientific Programs, Deputy Assistant Manager
Maryann Nusbaum, CRWMS M&O, Technical Publications Management, Production Coordinator

Block 10 (continued) SURVEILLANCE CONCLUSIONS:

Based on the review of objective evidence and personnel interviews, it was determined that no conditions adverse to quality existed in regard to the adequacy and effectiveness of, and compliance with the YMSCO process regarding the acceptance of services based on the YMSCO determination of the acceptability of products (i.e., deliverables) resulting from the accomplishment of tasks assigned via PPSs, as delineated in YAP-5.1Q, Paragraph 5.2.

Additionally, there were no areas of concern identified during the review of deliverables for the purpose of determining if any deliverable resulted from the performance of tasks to which the QARD was not applied as a result of misinterpreting the requirements of the associated PPS.

It should be noted that YMSCO has taken steps to preclude the possibility of the AO's misinterpretations of the applicability of appropriate QARD controls to deliverables. YMSCO has had YAP-2.6Q, "Participant Planning Sheets Process," revised to include in YAP-2.6Q, Revision 1, ICN 1, (effective date of 10/16/95), Paragraph 5.1.2.b., the requirement that the preparer of a PPS identify those deliverables to which the QARD does not apply. This requirement to clearly distinguish in the PPS those deliverables to which the QARD did not apply was in effect prior to the preparation of PPSs for FY-1996 assigned work.

Recommendation:

In order to enhance and increase the viability of the current YMSCO process for accepting services performed by AOs when such services resulted in the development of deliverables, the following action is recommended:

- YMQAD personnel should submit Document Action Requests in accordance with YAP-5.1Q requesting the following changes be incorporated into the affected documents:

- 1) **Revise YAP-2.6Q to require the YMSCO to include in the PPSs, as appropriate, if technical data are anticipated as a result of the performance of the assigned tasks; ensure such technical data are identified as deliverables; and ensure, as applicable, deliverables are identified on the PPS as being technical data; and**

- 2) **Revise YAP-5.1Q to require AOs to identify deliverables being submitted to YMSCO for acceptance as technical data, as appropriate; require AOs to submit all technical data developed/obtained/collected during the performance of PPS related tasks to YMSCO for acceptance in accordance with YAP-5.1Q; charge the M&O Technical Publications Management Production Coordinator, or other individual, with the responsibilities of determining if the contents of the deliverable package submitted by an AO is in compliance with YAP-5.1Q, Paragraph 5.2, and initiating action with the cognizant AO to resolve discrepancies; and ensure the instructions for completing a Document Action Request for the purpose of submitting a deliverable to YMSCO for acceptance are clear and sufficiently detailed.**