

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

NEUTRON ACCESS BOREHOLE SAMPLE HANDLING

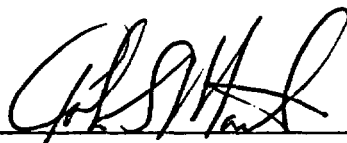
SURVEILLANCE NUMBER YMP-SR-92-008

CONDUCTED APRIL 7 THROUGH 9, 1992

ACTIVITIES SURVEILLED:


STAGING, PACKAGING, AND DOCUMENTING
OF THE NEUTRON-ACCESS
BOREHOLE SAMPLES BY THE
YUCCA MOUNTAIN SITE CHARACTERIZATION
PROJECT SAMPLE MANAGEMENT FACILITY

Prepared by: _____


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Date: 4-27-92

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Date: 4/24/92

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ENCLOSURE

1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Surveillance No. YMP-SR-92-008 of the Sample Management Facility (SMF) staging, packaging and documentation of the neutron-access borehole samples. The surveillance was conducted at neutron-access borehole USW UZ N38, at the SMF field trailer and the SMF on April 7 through 9, 1992. The surveillance was conducted by a team from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA) in accordance with the OCRWM Quality Assurance Administrative Procedure QAAP 18.3, Revision 3, "Surveillance Program."

The surveillance of the core handling activities was conducted to verify compliance to pertinent implementing procedures. In general, the SMF personnel were found to be complying with the neutron-access borehole sample handling procedure, Branch Technical Procedure (BTP)-SMF-013. However, there were three deficiencies identified by the surveillance team during the course of the surveillance which are considered remedial in nature. These deficiencies were corrected during the surveillance and no further action is deemed necessary at this time. Details of the deficiencies and corrective action taken are discussed in Section 5.0 of the report.

There were no deficiency documents generated as a result of this surveillance. Recommendations are included in Section 6 of the report.

2.0 SCOPE

The surveillance was intended to examine the adherence to BTP-SMF-013, "Staging, Packaging, and Documenting Neutron Access Borehole Samples," and instructions for packaging of core samples as specified by the Principle Investigator (PI).

3.0 SURVEILLANCE TEAM

The surveillance team consisted of the following personnel:

John S. Martin, Surveillance Team Leader, Quality Assurance Engineer, Science Applications International Corporation (SAIC)/YMQAD

Richard L. Weeks, Surveillance Team Member, Quality Assurance Scientist, SAIC/YMQAD

Albert C. Williams, Observer, U.S. Department of Energy (DOE)/YMQAD

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

The following personnel were contacted during the course of the surveillance:

F. A. Baird, SAIC, Geologist Drilling Support
U. S. Clanton, DOE, Site Investigations Branch Chief
J. H. Davis, SAIC, Field Shift Supervisor Drilling Support
J. R. Doyle, SAIC, Field Shift Supervisor Drilling Support
L. E. Flint, Raytheon Services Nevada
C. Lewis, SAIC, SMF Curator
M. Mapa, SAIC, Manager Drilling Support
J. L. Moyer, SAIC, Field Shift Supervisor Drilling Support
J. H. Peck, SAIC, Manager SMF/ Drilling Support
N. Stellavato, SAIC, Consultant SMF/Drilling Support

5.0 SURVEILLANCE RESULTS

The surveillance consisted of field observation, personnel interviews and documentation reviews. Field observation consisted of witnessing the transfer of custody of the drive core (material, typically alluvium, collected with a drive sampler using brass sleeves as the inner barrel) and rotary core (material, typically solid rock or fragments thereof, extracted by the wire line method) from Reynolds Electrical and Engineering Company to SMF support personnel, extraction of the core from the barrels, videotaping of the rotary core, reconciliation of core lengths, marking of the core for orientation, processing of the core per the PIs instructions, final packaging for shipment to the SMF and temporary storage at the SMF borehole site trailer.

Drive Core Observed - Borehole USW UZ N38:

DC5-1, DC5-2, DC5-3, DC5-4, DC6-1, DC6-2, DC6-3 and DC6-4

Rotary Core Observed - Borehole USW UZ N38:

2-1, 2-2, 2-3, and 3-1

Personnel interviews were conducted to determine the overall knowledge of SMF's field personnel of the procedural requirements specific to BTP-SMF-013. In general, these interviews provided positive evidence of the field personnels' overall knowledge and comprehension of programmatic requirements.

Documentation review consisted of examination of the following forms/logs to ensure proper completion and for providing an appropriate status:

Field Access Log
Field Test Control Department Specimen Log
Field Photographic Log
Shift Drilling Summary
Daily Activity Log

Overall, the adequacy and effectiveness of implementation of BTP-SMF-013 was found to be acceptable. However, there were three deficiencies identified which were considered remedial in nature and were corrected during the course of the surveillance. The deficiencies corrected are as follows:

1. BTP-SMF-013 requires that upon initial sample handling, the core barrel be marked at the up-hole end. This is accomplished to eliminate confusion as to up-hole and down-hole ends during subsequent handling operations. During observation it was noted that, for Drive Core, this was not being accomplished. Discussions with field personnel indicated that this was not being performed due to the fact that the shoe (a hardened piece of steel utilized for penetration into the alluvium) remained on the core barrel during processing, and as such, indicated the down-hole end. SMF personnel were reminded of procedural requirements and are now marking the up-hole end of the barrel as required.
2. BTP-SMF-013 requires that the Shift Drilling Summary be completed concurrently with the Specimen Log. However, during the surveillance it was noted that the Shift Drilling Summary was being completed at the end of a drilling shift. Based upon discussions and procedural prerequisites, the Shift Drilling Summary is now being completed as work progresses.
3. BTP-SMF-013 states that SMF field support personnel will package specimens in accordance with specifications provided by the PI. Administrative Procedure (AP)-6.4Q states that if special handling is required the PI should attach a letter explaining the requirements to the Specimen Removal Request (SRR) form utilized for requesting samples from the SMF. Review of the specifications attached to the SRR for handling of the neutron-access borehole samples revealed that the methodology employed for handling the samples differed from the method specified by the PI. Discussions conducted with SMF personnel and a representative of the PI indicated that the method being utilized for handling was per verbal direction and was considered acceptable by the PI. Subsequently, letters were issued by the PI to detail the methodology being employed.

Based upon the remedial corrective action taken during the course of the surveillance, no further corrective action is deemed necessary at this time.

6.0 RECOMMENDATIONS

There are no deficiency documents issued as a result of this surveillance. However, there are two recommendations concerning procedural compliance and control of specifications provided by the PI. The recommendations are as follows:

1. During the development and start up of activities, procedures are developed to delineate and document the methodology in which activities affecting quality are to be conducted. Subsequent to this, actual implementation takes place for these activities. As these activities progress a more convenient way of conducting business may develop. When this occurs, it must be recognized and procedures must be revised to delineate this new methodology. It is recommended that BTP-SMF-013 be reviewed by appropriate SMF personnel and revisions made to describe the method in which business is to be conducted (see corrected deficiencies Nos. 1 and 2).
2. In the process of conducting scientific investigation, it is realized that certain latitude must be allowed. However, it is not the intent to allow scientific investigation to occur strictly on verbal orders. Within BTP-SMF-013, it is noted that the PI will provide specifications to the SMF without specifying how these specifications are to be provided. It is recognized that AP-6.4Q states that these specifications should be attached to the SRR. However, the word should does not specifically require that specifications be attached. It is recommended that AP-6.4Q be revised to state that the PI shall attach specifications to the SRR, and submits any revision thereto to the SMF to amend the original specifications provided by the PI (i.e., avoid verbal orders).