Department of Energy
Washington, DC 20585

JUN 22 1992

Mr. Joseph J. Holonich, Director
Repository Licensing and Quality
Assurance Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Holonich:

As requested by the U.S. Nuclear Regulatory Commission (NRC) in the U.S. Department of Energy (DOE)/NRC Quality Assurance Bimonthly Meeting of April 30, 1992, enclosed for your information are copies of surveillances of drilling exercises and field activities performed by DOE at the Yucca Mountain site. The surveillance reports are identified as follows:

1. Surveillance Report YMP-SR-92-001, conducted on December 4, 1991, at the neutron-access borehole drilling site, Sample Management Facility (SMF) site, SMF activity site, and SMF, resulting from the Office of Civilian Radioactive Waste Management QA surveillance of the neutron-access borehold drilling activities, the Sample Management Facility (SMF) activity site, and SMF core handling activities.

2. Surveillance Report YMP-SR-92-004, conducted on March 17-27, 1992, at the SMF and the U.S. Geological Survey Hydrological Research Facility at the Nevada Test Site, resulting from the Yucca Mountain QA Division (YMQAD) surveillance of the Yucca Mountain Site Characterization Project.

3. Surveillance Report YMP-SR-92-007, conducted on April 1-15, 1992, at the Nevada Test Site, resulting from the YMQAD surveillance of neutron-access borehole records generated as a result of the implementation of Job Package 91-09.

4. Surveillance Report YMP-SR-92-008, conducted on April 7-9, 1992, at the neutron-access borehole USW UZ N38 at the SMF field trailer and the SMF, resulting from the YMQAD surveillance of the Yucca Mountain Site Characterization Project SMF.

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5. Surveillance Report YMP-SR-92-011, conducted on April 27-May 4, 1992, in Las Vegas, NV, at the Central Records Facility at the Valley Bank Building, resulting from the YMQAD surveillance of records generated as a result of implementation of Administrative Procedure 6.4Q

If you have any questions, please contact Sharon Skuchko of my office at (202) 586-4590.

Sincerely,

John P. Roberts
Acting Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

5 Enclosures: as stated

cc w/Enclosures:
C. Gertz, YMPO
K. Hooks, NRC
R. Loux, State of Nevada
M. Baughman, Lincoln County, NV
J. Bingham, Clark County, NV
B. Raper, Nye County, NV
P. Niedzielski-Eichner, Nye County, NV
G. Derby, Lander County, NV
P. Goicoechea, Eureka, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
E. Wright, Lincoln County, NV
J. Pitts, Lincoln County, NV
R. Williams, Lander County, NV
J. Hayes, Esmeralda County, NV
M. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA

Oric ted by: McFall, SAIC

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Richard L. Bullock, RSN, Las Vegas, NV
Robert F. Pritchett, REECo, Las Vegas, NV
Larry R. Hayes, USGS, Las Vegas, NV
Carl P. Gertz, YMP, NV

ISSUANCE OF SURVEILLANCE REPORT YMP-SR-92-001 RESULTING FROM THE OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT QUALITY ASSURANCE SURVEILLANCE OF THE NEUTRON-ACCESS BOREHOLE DRILLING ACTIVITIES, THE SAMPLE MANAGEMENT FACILITY (SMF) ACTIVITY SITE, AND SMF CORE HANDLING ACTIVITIES

Enclosed is the report of Surveillance YMP-SR-92-001 conducted at the Neutron-Access borehole drilling site, SMF activity site, and SMF on December 4, 1991. This surveillance was conducted to determine the effectiveness of implementation of BTP-SMF-013 and certain nonquality assurance activities.

Based on the surveillance results, it was determined that BTP-SMF-013 is being effectively implemented by SMF personnel at both SMF activity site and at SMF. It was also determined that Reynolds Electrical & Engineering Co., Inc. and Raytheon Services Nevada personnel are performing the drilling and coring operations which are designated nonquality assurance in a modern industry-accepted manner.

There were no Corrective Action Requests issued as a result of this surveillance. There were two recommendations which are covered in the body of the report.

If you have any questions, please contact either James Blaylock at 794-7913 or Kenneth T. McFall of Science Applications International Corporation at 794-7280.

"ORIGINAL SIGNED BY"
R.E. Spence
for Donald G. Horton, Director
Office of Quality Assurance

OQA:JB-1268

Enclosure:
Surveillance Report YMP-SR-92-001

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9112270171 2/1

cc w/encl:
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Frank Sperry, White Pine County Commission, Ely, NV
Robert Campbell, County of Inyo, Bishop, CA
Robert Michener, County of Inyo, Bishop, CA
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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

NEUTRON-ACCESS BOREHOLE DRILLING PROGRAM

AND

SAMPLE HANDLING METHODOLOGY

SURVEILLANCE NUMBER YMP-SR-92-001

CONDUCTED DECEMBER 4, 1991

ACTIVITIES SURVEILLED:

DRILLING AND CORING OF THE NEUTRON-ACCESS BOREHOLES BY REYNOLDS ELECTRICAL AND ENGINEERING COMPANY, INC. AND RAYTHEON SERVICES NEVADA AND THE YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE SAMPLE MANAGEMENT FACILITY HANDLING OF THE NEUTRON-ACCESS BOREHOLE CORE SAMPLES

Prepared by: Kenneth T. McFall Date: 12/12/91
Kenneth T. McFall
Surveillance Team Leader
Quality Assurance Scientist
Yucca Mountain Quality Assurance Division

Approved by: R. C. Kyle For Date: 12/16/91
Donald G. Horton
Director
Office of Quality Assurance

9112270172 7PP

ENCLOSURE 1

1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Managment (OCRWM) Quality Assurance Surveillance No. YMP-SR-92-001 of the neutron-access borehole drilling program conducted by Reynolds Electrical and Engineering Company, Inc. (REECo) and Raytheon Services Nevada (RSN) and the neutron-access borehole sampling handling methods being used by the Sample Management Facility (SMF). The surveillance was conducted at the borehole site of USW-UZ-54, the SMF field trailer, and the SMF on December 4, 1991. The surveillance was conducted by a team form the Verification Group of the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance in accordance with the OCRWM Quality Assurance Administrative Procedure QAAP 18.3, Revision 2, "Surveillance Program."

The surveillance of the drilling program and core handling activities was conducted to verify compliance to pertinent implementing procedures and obtain an outside view of certain non-quality affecting drilling activities. The SMF personnel were found to be complying with the neutron access borehole sample handling procedure, BTP-SMF-013. The RSN and REECo personnel supervising the drilling and coring at the rig were using professionally accepted and good industry techniques to accomplish their assigned tasks. The procedures followed by the drilling rig personnel were not designated as quality-affecting but were still examined for appropriate professional technique.

There were no deficiency documents generated as a result of this surveillance and any recommendations to be made will be included in Section 8.0 of the report.

2.0 SCOPE

The surveillance was intended to examine the adherence to BTP-SMF-013, Revision 0, "Staging, Packaging, and Documenting Neutron-Access Borehole Samples," and investigate certain non-quality assurance designated drilling and coring activities associated with obtaining those samples. The drilling activities, though designated as non-quality affecting, were examined to verify adherence to accepted professional techniques as used in the drilling industry. These professional techniques if properly employed would increase the safety and integrity of the core and cuttings samples and increase the efficiency and cost effectiveness of the drilling rig operation.

3.0 SURVEILLANCE TEAM

The surveillance team consisted of the following personnel:

K. T. McFall, Surveillance Team Leader, Quality Assurance Scientist,
Science Applications International Corporation (SAIC)/YMQAD
C. C. Warren, Surveillance Team Member, Quality Assurance Engineer,
MAC Technical Services Company/YMQAD
A. C. Williams, Observer, U.S. Department of Energy/YMQAD

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

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

C. L. Lugo, SAIC, Deputy Department Manager, SMF
E. L. Wright, RSN, Field Exploration Drilling Section Manager
D. M. Cunningham, RSN, Senior Field Drilling Engineer
M. R. Whitfield, U.S. Geological Survey (USGS), Site Hydrologist
G. Abend, USGS, Quality Assurance Specialist
P. J. Wilson, REECo, Senior Quality Assurance Specialist
H. R. Tuthill, RSN, Quality Control Manager
R. R. Sowards, REECo, Drilling Superintendent
D. R. Williams, DOE/Yucca Mountain Site Characterization Project Office, (YMPO), Field Test Coordinator
A. Flint, USGS, Principal Investigator
J. A. Hartley, SAIC, Field Shift Supervisor
C. Lewis, Harza Engineering Company, SMF Curator
J. H. Davis, SAIC, Field Shift Supervisor

5.0 SURVEILLANCE RESULTS

1. BTP-SMF-013, Revision 0

Handling, videotaping, removing specimens, packaging specimens for storage, determining depth intervals, and record keeping activities were observed for core extracted from Neutron-Access Borehole USW UZ N54. The above activities were evaluated to determine the degree of compliance to YMPO Branch Technical Procedure BTP-SMF-013, Revision 0 and Interim Change Notice No. 1. During the evaluation, processing of extracted core identified as Run 35, Interval 155.6 through 160.6 was observed from its removal at Borehole USW UZ N54 through delivery to SMF personnel, videotaping, marking, and packaging and boxing of specimens for transport to the SMF. All observed activities were found to be in compliance with BTP-SMF-013.

At the SMF, a sample of Field Test Control Department Specimen Logs for core specimens from Neutron-Access Borehole USW UZ N54 were examined and all were found to be completed in accordance with the requirements of BTP-SMF-013. Specimens Logs reviewed were for all logs for the following stored core specimens intervals (depth in feet):

91.0 - 91.5 110.6 - 115.4 120.4 - 127.5 135.2 - 140.5

In addition, a sample of cuttings from Borehole USW UZ N54 was examined at the SMF to verify that identification of containers and storage was in accordance with BTP-SMF-013 requirements. Cuttings containers examined were for the following intervals (depth in feet):

2.8 - 4.8 76.0 - 86.0 95.9 - 105.0

Identification and storage of cuttings was found to be in compliance with BTP-013 requirements.

2. Non-quality Affecting Activities

A list of questions was developed for this surveillance by personnel who are familiar with and technically competent in the field of drilling and coring. The questions were based on an understanding of field operations and were intended to verify that the drilling and coring activities involved with Borehole USW UZ N54 were being conducted in a manner consistent with accepted modern industry techniques. The procedures being followed by REECo and RSN on the borehole site are classified as non-quality affecting and thus not subject to audit by the Quality Assurance Organization. However, it was felt that a check on these activities would be prudent since the end result of this drilling and coring is the core from the borehole which becomes quality-affecting as soon as it is delivered into the possession of the SMF.

Listed below are the questions and the responses to those questions as provided by the REECo, RSN, USGS, and SMF site personnel.

1. What is being done to protect the borehole at night and over the weekends from inclement weather and possible animal incursion?

   A large plastic tarp is spread around the hole and anchored with an earthen burm on the up slope side of the hole to prevent run-off during a rain from entering the hole. Additionally, a clean, empty 5 gallon bucket is placed over the casing stickup and anchored securely.

2. What has been done to prevent a recurrence of the problems encountered on USW UZ N55 caused by deviation of the borehole from the vertical?

   A large steel baseplate is being used to stabilize the top of the drill string and the core bit has been changed to one with larger stones to increase penetration to the maximum while still obtaining the best core results.

3. Who is the delegated site representative for the USGS when the Principal Investigator (PI) is not on site?

A cadre of 5 USGS personnel out of the Denver office rotate site duties. During the surveillance there were 2 individuals present; M. R. Whitfield and G. Abend.

4. What has been done for hole protection when a borehole is completed?

   A steel cap on a chain is welded to the top of the steel casing and placed over the top. A chain link is also welded to the casing in such a manner that a lock can be used.

5. How are depth measurements determined? What backup is used to insure accurate depth determination?

   The depth is calculated by REECo by adding the lengths of machined 5.00 foot drill pipe joints as they go in the hole and a running pipe tally is kept current at all times. The casing is measured to the nearest .01 foot as it is put in the hole. A running pipe tally is also kept on the casing. These two pipe tallies must match. RSN also keeps an independent pipe tally and this tally must match that of REECo. Additionally, The SMF personnel as part of their quality-affecting procedures are required to measure the core from each 5 foot core run. If there is a discrepancy there are provisions in RSN Project Procedure PP-10-01, Revision 0, "Field Drilling Engineer Support Activities," Paragraph 6.5.8.10.1 which describe how to resolve it. The documentation requirements of the resolution of the depth discrepancy are set forth in paragraph 6.5.8.10.4 of that same procedure. An additional check can be made by logging the hole with conventional geophysical tools and comparing the logs with the SMF core examinations.

6. Since depth measurements are made from ground level, what efforts are being made to insure that there is no degradation of the original ground level after repeated tripping in and out of the hole and work on and around the rig over an extended period of time?

   The steel baseplate which is now being used is sufficiently large to provide protection for the continued integrity of the original ground level determination.

7. If the casing joints which were used on borehole USW UZ N55 had to be cut with a welder's torch, what precautions were taken to prevent the hot welding fragments or slag from going down the hole and possibly adding undesirable contamination?

   Not all the casing that was extracted from the borehole required cutting to separate. The casing was removed from the hole until it could be unscrewed and laid out on the ground where it was cut. The casing was not cut over the hole where contamination could occur.

8. How are the cuttings collected while drilling the hole?

   The cuttings are collected through the use of compressed air which lifts the dust and rock fragments to the surface where they are sent through a cyclone and they then drop out onto the ground or into a bucket if a sample is desired.

9. What procedures are in place to control the interfaces between the participants concerning the neutron-access boreholes? RSN, REECo, YMPO, and USGS.

   The Job Package, the Work Planning Package, and the Criteria Letter spell out the necessary interfaces.

10. Who is performing the wellsite lithological logging, if any?

    The preliminary lithological logging is performed as a part of the function of the SMF when the core is examined.

11. Are the procedures to which work is being accomplished available for reference at the location where the work is being done?

    Yes, the USGS is using the job package; RSN has copies of their procedures on site, and REECo keeps a copy of their procedures in the doghouse which adjacent to the location of the rig.

12. It was noted that there was some moisture on the core as well as some contamination of the core with oil from the compressor. What effect are these conditions having on PI's efforts and what is being done to eliminate the oil contamination?

    The PI feel that the water is very small in amount and is mercurial in nature. Its location so far above the saturated zone that it is a function of fracturing which decreases with depth, and is of no real concern.

    The oil found on the core was caused by the compressor blowing oil into the air lines used to cool the bits and lift the cuttings. The PI felt that the impact of the oil on the cuttings was slight in reference to the activities outlined in his study plan. He stated that since the oil contamination was minor in nature, being just a small amount now and then on the core, precautions could be taken to either remove the oil by chipping the oily portions off the core or working around them. A new scrubber has been put on the compressor and the problem of oil spotting the core has been reduced.

6.0 RECOMMENDATIONS

There are no deficiency documents generated as a result of this surveillance, however, there are two recommendations concerning the oil on the core and the REECo and RSN grading packages. The recommendations are as follows:

1. There should be additional efforts made to remove the contamination of the core with oil from the air compressor. While the PI for this particular study may not be overly concerned with the oil on the core, other investigators may find it a sufficient impediment to negate their efforts. Future scientific investigations may not be able to tolerate core contamination of this type.

2. There is some confusion concerning the REECo and RSN grading packages. The REECo grading package indicates that all their activities are designated as "QA/NA" while the grading package for RSN which is providing the overview for the activities are designated "QA." Why does the designation change from "QA/NA" to "QA" depending on who is performing a certain task or overviewing that task being accomplished? This question should be addressed.

Department of Energy
Washington, DC 20585

WBS 1.2.9.3

APR 16 1992

Carl P. Gertz, Project Manager, YMP, NV

ISSUANCE OF SURVEILLANCE REPORT YMP-SR-92-004 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION SURVEILLANCE OF YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

Enclosed is the report of Surveillance YMP-SR-92-004 conducted at the Sample Management Facility (SMF), and the U.S. Geological Survey's Hydrological Research Facility at the Nevada Test Site from March 17-27, 1992. The surveillance was conducted to determine adequacy of implementation of procedures that control allocation of samples and specimens as determined by the Sample Overview Committee, and removal of specimens from samples by the SMF for shipment to a participant.

Based on a review of documentation generated as a result of implementation of Administrative Procedure (AP)-6.4Q, Revision 0, and Branch Technical Procedure BTP-SMF-006, Revision 2, the requirements of these procedures are being effectively implemented. Two remedial conditions were identified during the surveillance with regards to completeness of records, however, both conditions have been corrected.

There were no Corrective Action Requests issued as a result of this surveillance. Two recommendations were made with regards to AP-6.4Q, Revision 0.

If you have any questions, please contact either Robert B. Constable at 794-7913, or Richard L. Weeks at 794-7853.

R.W. Cal

for Donald G. Horton, Director
Office of Quality Assurance

OQA:RBC-2956

Enclosure:
Surveillance Report YMP-SR-92-004

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J. A. Jackson, M&O/TRW, Las Vegas, NV
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R. L. Weeks, SAIC, Las Vegas, NV, 517/T-08
J. D. Stewart, NTSO, Mercury, NV
A. R. Veloso, NTSO, Mercury, NV

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

TRACEABILITY OF WHOLE CORE SAMPLES

SURVEILLANCE NO. YMP-SR-92-004

CONDUCTED MARCH 17 THROUGH MARCH 27, 1992

ACTIVITIES SURVEILLED:

EXAMINED RECORDS GENERATED TO SUPPORT TRACEABILITY OF ALLOCATED WHOLE CORE SAMPLES IN ACCORDANCE WITH ADMINISTRATIVE PROCEDURE AP-6.4Q AND BRANCH TECHNICAL PROCEDURE BTP-SMF-006

Prepared by: Richard L. Weeks Date 4/14/92

Richard L. Weeks
Quality Assurance Scientist
Surveillance Team Leader
Yucca Mountain Quality Assurance Division

Approved by: R.W. Cl for Date 4/16/92

Donald G. Horton
Director
Office Quality Assurance

1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance (QA) Surveillance No. YMP-SR-92-004 of traceability of samples from the Sample Management Facility (SMF) to the U.S. Geological Survey (USGS). The surveillance was conducted at SMF and the USGS Hydrologic Research Facility (HRF) both of which are located at the Nevada Test Site (NTS). 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 OCRWM Quality Assurance Administrative Procedure (QAAP) 18.3, Revision 3.

A review of documentation generated as a result of implementation of Administrative Procedure (AP)-6.4Q, Revision 0, "Procedure for the Submittal, Review and Approval of Requests for Yucca Mountain Project Geologic Specimens" and Sample Management Facility (SMF) Branch Technical Procedure BTP-SMF-006, Revision 2, "Removal of Specimens from Samples by the SMF for Shipment and Remnant Return" was examined.

Based on an examination of records at the SMF and USGS, it is concluded that whole core specimens are traceable and procedures are being implemented properly.

Two problems were discovered with regards to records submittal. A supplemental record package to correct this condition was prepared and submitted to the Local Records Center (LRC) on March 19, 1992.

2.0 SCOPE

The surveillance was conducted to determine the effectiveness of implementation of Yucca Mountain Site Characterization Project (YMP) SMF procedures that describe controls for allocation of samples and specimens as determined by the Sample Overview Committee (SOC), and removal of specimens from samples by the SMF for shipment to a participant.

3.0 THE SURVEILLANCE TEAM CONSISTED OF THE FOLLOWING INDIVIDUALS

Richard L. Weeks, Surveillance Team Leader, Quality Assurance Scientist, Science Applications International Corporation (SAIC)/YMQAD, Las Vegas, Nevada

Cynthia H. Prater, Surveillance Team Member, Quality Assurance Specialist, SAIC/YMQAD, Las Vegas, Nevada

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

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

Alan Flint, USGS/Principal Investigator
Lorraine E. Flint, Raytheon Services Nevada/Hydrologist
Chris Lewis, SAIC/Technical & Management Support Services (T&MSS), SMF Division Curator
David W. Merritt, SAIC/T&MSS, SMF Division Geologist

5.0 SURVEILLANCE RESULTS

5.1 This surveillance was conducted in accordance with checklist questions derived from requirements found in the following procedures:

AP-6.4Q, Revision 0 - Procedure for the Submittal, Review, and Approval of Requests for Yucca Mountain Project Geologic Specimens

BTP-SMF-006, Revision 2 - Removal of Whole and Other Specimens from Samples by the SMF for Shipment and Remnant Return

5.2 Record package NNA.920211.0053 was examined to determine if the requirements of AP-6.4Q, Revision 0 and BTP-SMF-006, Revision 2 were met with regards to the allocation and distribution of samples. Additional record packages, representing requests from other participants, are in-process and were not examined. All examined records and record packages were found to be complete except for those identified in Section 5.3.

The examined record package was generated as a result of requests made by A. Flint of the USGS to conduct tests on whole core specimens. Quality records have been generated and document the following:

1. SOC Specimen Removal Request forms indicated approval for distribution of whole core specimens to A. Flint for boreholes USW UZ N11, N15, N16, N17, N27, N36, N-37, N-38, N53, N54, N55, and N64.

2. A Specimen Removal Log was examined for boreholes N54 and N55 and indicated specific intervals to be distributed.

3. An SMF Specimen Shipment Packaging Log was examined for both boreholes and found to correlate with the Specimen Removal Log.

4. Transfer of Custody Forms were examined and found to be complete.

Mr. Flint stated that he had sent specific specimens, in accordance with USGS procedure NNWSI-USGS-QMP-8.01, Identification and Control of Items, Samples and Data, to D. Vaniman of Los Alamos National Laboratory (Los Alamos). A copy of the memorandum that transfers the samples is attached and lists the specific samples that were transferred. A review of records documenting the transfer of these samples indicates compliance with

USGS requirements and supports traceability. Mr. Vaniman of Los Alamos was called to verify that he received the samples. He indicated that he did receive the samples and that they were being controlled in accordance with Los Alamos procedure TWS-ESS-DP-101,"Sample Collection, Identification, and Control for Mineralogy-Petrology Studies".

5.3 There were no Corrective Action Requests generated as a result of this surveillance however, two violations of requirements requiring remedial action were identified and corrected.

While examining record package NNA.920211.0053, it was determined that several SMF Custody Receipt forms were missing. A supplemental record package, consisting of the missing SMF Custody Receipt forms, was assembled and submitted to the LRC on March 3, 1992.

One SOC Specimen Removal Request form was incomplete. The Yucca Mountain Project Regulatory Site Evaluation Division Director did not indicate approval, disapproval or tabled as required. A corrected supplemental record package is being processed.

6.0 RECOMMENDATIONS

1. AP-6.4Q should provide guidelines for transfer of samples between participants and Principle Investigators (PIs) when prior SOC approval has not been received.

2. AP-6.4Q should provide concise language as to the limitations placed on a PI that receives YMP whole core samples.

Originated by: Heaney, SAIC

WBS 1.2.9.3

MAY 0 6 1992

~~MAY 0 7 1992~~

Carl P. Gertz, Project Manager, YMP, NV

ISSUANCE OF SURVEILLANCE REPORT YMP-SR-92-007 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) SURVEILLANCE OF NEUTRON-ACCESS BOREHOLE RECORDS GENERATED AS A RESULT OF THE IMPLEMENTATION OF JOB PACKAGE (JP) 91-09

Enclosed is the report of Surveillance YMP-SR-92-007 conducted at the Nevada Test Site April 1-15, 1992.

Based on the surveillance results, it was determined that records traceability and retrievability must be improved. The JP and the test planning package for the neutron-access borehole activity must be revised.

There were three Corrective Action Requests (CARs) issued as a result of this surveillance. CARs YM-92-031, YM-92-032, and YM-92-033 were issued under separate cover and are contained in Enclosure 1 of the surveillance report for information. There are five recommendations which are covered in Section 6 of the body of the report.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Gerard Heaney of Science Applications International Corporation at 794-7826.

ORIGINAL SIGNED BY
RICHARD E. SPENCE

for Donald G. Horton, Director
Office of Quality Assurance

OQA:RBC-3149

Enclosure:
Surveillance Report YM-SR-92-007

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CONCURRENCE
RTG. SYMBOL YMP
INITIALS Constable
DATE 5/4/92
RTG. SYMBOL YMP
INITIALS Spence
DATE 5/6/92
RTG. SYMBOL OQA
INITIALS For H. Parker
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K. G. Beall, SAIC, Las Vegas, NV, 517/T-17
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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF NEUTRON-ACCESS BOREHOLE RECORDS GENERATED AS A RESULT OF THE IMPLEMENTATION OF JOB PACKAGE 91-09

SURVEILLANCE NO. YMP-SR-92-007

CONDUCTED APRIL 1 THROUGH 15, 1992

ACTIVITIES SURVEILLED:

REVIEW THE STATUS OF RECORDS GENERATED BY FIELD PARTICIPANTS FOR THE DRILLING OF NEUTRON-ACCESS BOREHOLES. VERIFY PERFORMANCE ASSESSMENTS WERE PERFORMED WHEN FOUR NEUTRON-ACCESS BOREHOLES WERE RELOCATED.

Prepared by: Gerard Heaney Date: 4/23/92
Gerard Heaney
Quality Assurance Engineer
Yucca Mountain Quality Assurance Division

Approved by: R.C. Spence For Date: 5/6/92
Donald G. Horton
Director
Office of Quality Assurance

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1.0 EXECUTIVE SUMMARY

The review of records for the neutron-access boreholes, indicates that a clear concise indexing system has not been put into place to ensure records generated in the field are traceable to the job package (JP) which initiated the work the records support. Participants are submitting records to the Local Records Center (LRC) by borehole number. Personnel in the LRC do not have the knowledge of which boreholes apply to what JPs. Draft Administrative Procedure (AP)-6.22Q, "Job Package Records," is not yet in place to provide participants direction on how to assemble a JP records package. Additionally, the Field Management Plan (FMP) requires field generated records to be sent to the Site Document and Records Center (DRC). Records are presently being submitted to the LRC in the Valley Bank Building. Corrective Action Request (CAR) YM-92-033 has been issued addressing this traceability issue. It is recommended that management issue a directive informing field participants to follow the FMP requirements for the submittal of records to the DRC. Additional recommendations for resolving records traceability and retrieval problems are contained in Section 6.0 of this report.

Two additional CARs (YM-92-031 and YM-92-032) were issued.

CAR YM-92-031 was generated as JP 91-09 requires revision to incorporate Raytheon Services Nevada (RSN) Field Verification Plan (FVP) No. 92-001, Revision 0, into the JP as required by AP-5.16Q. Drilling of neutron-access boreholes began in September 1991. The RSN FVP is dated January 27, 1992. Investigation to assess if inspections from September 1991 to January 27, 1992 were performed although the FVP was not in place is required as part of the corrective action to the CAR.

CAR YM-92-032 addresses the fact that the Test Planning Package No. 91-34 requires revision to incorporate the Sandia National Laboratories (SNL) performance assessment analyses that were performed when four neutron access holes were relocated.

2.0 SCOPE

This surveillance was performed from April 1 through 15, 1992, to review the status of records generated by field participants for the drilling of neutron-access boreholes in association with JP 91-09, "Neutron Access Boreholes," Revision 1.

The surveillance was also conducted to verify performance assessments were performed when four neutron-access boreholes (Nos. N36, N17, N15, and N16 per FCR No. 92-036) were relocated. Performance assessment analyses are required to be performed for all construction, operation, and site characterization activities that may adversely impact the ability of the natural barriers to isolate waste. This analysis is performed because the natural barriers are contained as an attachment to the Q-List.

3.0 SURVEILLANCE TEAM

Gerard Heaney, Quality Assurance (QA) Engineer, Science Applications International Corporation (SAIC), Yucca Mountain Quality Assurance Division (YMQAD), Las Vegas, Nevada

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

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

W. Wilson, U.S. Department of Energy (DOE)/Yucca Mountain Site Characterization Project Office (YMPO) Site Manager
P. Wilson, Reynolds Electrical and Engineering Company (REECo) QA Engineer
K. Grassmeier, DOE Chief, Operations Control Branch
J. Peck, SAIC, Manager, Sample Management Facility
C. Lewis, SAIC, Geologist
E. Mouser, RSN Quality Control Engineer
E. Wright, RSN, Drilling Engineer
J. McDonald, REECo, Drilling Superintendent
A. Girdley, DOE, Field Test Coordinator
D. Rhodes, Desert Research Institute (DRI), Archaeologist
S. Carruth, Records Analyst, Management and Operations (M&O)
L. Tate, Records Analyst, M&O
F. Peters, SAIC, Job Package Coordinator

5.0 SURVEILLANCE RESULTS

1. As a result of the surveillance 3 CARs were issued. A synopsis of each is provided below:

   CAR NO. YM-92-031

   JP 91-09, "Neutron Access Boreholes", Revision 1 requires revision to incorporate RSN Field Verification Plans which are required to be incorporated into a JP per AP-5.16Q. JP 91-09 also requires revision to reference the latest revision of a RSN Work Program and also to list specific records generated as a result of implementation of the JP.

   CAR NO. YM-92-032

   Test Planning Package No. 91-34 requires revision to incorporate the SNL performance assessment analysis results performed when four neutron-access boreholes were relocated.

CAR NO. YM-92-033

Records generated as a result of the implementation of JPs are not traceable to the JP. Participants are submitting records to the LRC in Las Vegas via borehole numbers for the neutron access boreholes. Presently there is no indexing system in place that would enable LRC personnel to know what JP to file the records under. AP-6.22Q is not yet in place to provide participants direction on how to assemble a JP records package. Sample Management personnel work to JP 91-03, "Field Management," and would not necessarily submit field generated records to the DRC under the JP that drilled the borehole (91-09).

The FMP, Revision 1, states that records generated as a result of the performance of field activities will be sent to the DRC. Presently this is not being implemented as evidenced by participants submitting records to the Las Vegas LRC.

Information copies of the CARs are contained in Enclosure 1 of this report.

2. The status of records for the neutron access boreholes for each participant is as follows:

RSN - Drilling records for borehole nos. 54, 55, and 37 have been submitted to the Central Records Facility (CRF) under the borehole number. Inspection records for these boreholes have not yet been processed. RSN is not required to put records into the system until the work within the JP is completed.

REECo - Daily drilling reports have not yet been processed. REECo is not required to put records into the system until the work within the JP is completed.

SMF - Sample records for several boreholes have been sent to the CRF under the borehole number. The Sample Management Facility (SMF) currently operates under JP 91-3, therefore neutron access records they produce would never get into the JP 91-09 records package.

DRI - Survey reports are submitted to the CRF under numbers other than JP or drill hole numbers. Results of surveys are presented within a letter that is included in the JP. The survey reports are supposedly retrievable using this letter number.

EG&G/EM records were not checked.

6.0 RECOMMENDATIONS

JP 91-09 will not be completed for at least another year as current plans are to add 12 more neutron access boreholes to the JP as soon as funding is approved. Records for completed work are not required to be submitted until time the JP is complete. QA recommends the following actions to help ensure records traceability and retrieval:

1. Management initiate a directive for field participants to submit field records generated as a result of the implementation of a JP to the DRC in accordance with the Field Management Plan, Revision 1, paragraph 4.8.

2. Require that JP 91-09 specify that records are required to be submitted a certain timeframe after a borehole is completed.

3. Require that JPs contain a records index or tracking number and the title of the records package. The JP coordinator or the field test coordinator should work this out with the DRC prior to issue of a JP. All participants should be directed to submit records under this index or tracking number and title to ensure records will be sent to the same record package.

4. Institute the traveler system which is presently being trial tested for the construction of the UZ-16 drill pad. The traveler provides a daily index of of the records generated each day by the field participants. The person responsible for compilation of the JP records package will be able to readily compile a JP records package table of contents with the information on the traveler. The traveler provides accountability for the field records generated. The traveler would also provide a status of the work being performed and allow for the inclusion of hold points between the A/E and constructor.

5. Require the SMF personnel to include their procedures utilized and records generated within individual JPs. Revise AP-5.21Q to take exception that the SMF cost data be broken down for each individual JP. A new JP for field management will not be issued. SMF previously used JP 91-03 titled "Field Management," to cover their work due to the decision not break down cost data for each individual JP.

ENCLOSURE 1

INFORMATION COPIES OF CARS

(BLANKS ON CAR FORMS ARE INTENTIONAL)

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

8 CAR NO.: YM-92-031
DATE: 4/16/92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document	2 Related Report No.
AP-5.16Q, Revision 0	YMP-SR-92-007

3 Responsible Organization	4 Discussed With
YMPO	Arch Girdley

5 Requirement:

AP-5.16Q, "Field Technical Compliance," Revision 0, paragraph 5.0, Step 3 states in part, "Include the inspection and test (I&T) material in the collated job package. Note: I&T requirements developed after initial job package approval are incorporated via AP-3.5Q, Field Change Control."

6 Adverse Condition:

Contrary to the above requirement, RSN Field Verification Plan (FVP) 92-001, Revision 0, has not been incorporated into Job Package 91-09, "Neutron Access Boreholes," Revision 1.

RSN FVP 92-001, Revision 0, was approved on January 27, 1992. Drilling of Neutron Access Boreholes began in September 1991. Inspections were not documented as required on FVPs between September 1991 and January 27, 1992.

NOTE 1: RSN Work Program, dated 9/13/91, "USGS Neutron Access Borehole Program, "Revision 1, was added to Revision 1 of JP 91-09. Page one of JP 91-09 still refers to superseded RSN Work Program (RSN-YMP-191, dated 8/23/91).
NOTE 2: Section B.1.C, "Record Turnover Package Requirements," does not adequately list records generated during implementation of JP 91-09. This section currently states, "RSN will provide a record of construction completions, as-built drawings, and map and table showing final locations and elevations to the SM for the Records Turnover Package."

9 Does a significant condition adverse to quality exist? Yes___ No X If Yes, Circle One: A B C	10 Does a stop work condition exist? Yes___ No X ; if Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 15 days from transmittal date

12 Required Actions: [X] Remedial [ ] Extent of Deficiency [ ] Preclude Recurrence [ ] Root Cause Determination

13 Recommended Actions:
1. Revise AP 5.16Q to only require reference to the RSN Field Verification Plan.
2. Investigate to determine status of inspections for the period when an approved FVP was not available.
3. Revise JP 91-09 to reflect current work program and revise JP, Section B.1.C to indicate specific records to be included in the record turnover package.

7 Initiator		14 Issuance Approved by:	
Gerard Heaney Gerard Heaney	Date 4-16-92 4/16/92	QADD R.C. Spence	Date 4/24/92
15 Response Accepted QAR	Date	16 Response Accepted QADD	Date
17 Amended Response Accepted QAR	Date	18 Amended Response Accepted QADD	Date
19 Corrective Actions Verified QAR	Date	20 Closure Approved by: QADD	Date

REV. 08/91

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

8 CAR NO.: YM-92-032
DATE: 4/16/92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document	2 Related Report No.
AP-5.32Q, Revision 2	YMP-SR-92-007

3 Responsible Organization	4 Discussed With
YMPO	Arch Girdley

5 Requirement:

AP-5.32Q, "Test Planning and Implementation," Revision 2, paragraph 5.0, Step 16, states in part, "Compile the test planning package using the test planning package outline. Included as a minimum are: e. documentation of completion of required activities."

AP-6.17Q, "Determination of the Importance of Items and Activities," Revision 0, Exhibit 5, requires an analysis to be performed for all construction, operation, and site characterization activities that may adversely impact the ability of the natural barriers to isolate waste." This analysis is performed because the natural barriers are contained as an attachment to the Q-list.

6 Adverse Condition:

Contrary to the above requirement, the documentation for the analysis performed by SNL (Letter, Costin to Dyer, dated 2/12/92, titled, "PA Assessment of the Relocation of USW UZN 15, 16, 17, and 36), when four neutron access boreholes were relocated per FCR No. 92/036, was not included into Test Planning Package (TPP) No. 91-34, "Evaluation of Natural Infiltration Neutron-Access Boreholes." Note: AP-5.32Q does not presently address how a TPP is revised.

9 Does a significant condition adverse to quality exist? Yes___ No X If Yes, Circle One: A B C	10 Does a stop work condition exist? Yes___ No X ; if Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 15 days from transmittal date

12 Required Actions: [X] Remedial [ ] Extent of Deficiency [ ] Preclude Recurrence [ ] Root Cause Determination

13 Recommended Actions:

7 Initiator		14 Issuance Approved by:	
Gerard Kearney	4-16-92 Date	QADD R C Spence	Date 4/24/92
15 Response Accepted		16 Response Accepted	
QAR	Date	QADD	Date
17 Amended Response Accepted		18 Amended Response Accepted	
QAR	Date	QADD	Date
19 Corrective Actions Verified		20 Closure Approved by:	
QAR	Date	QADD	Date

REV. 08/91

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

8 CAR NO.: YM-92-033
DATE: 4/16/92
SHEET: 1 OF 2
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document	2 Related Report No.
QAPD, Revision 3	YMP-SR-92-007

3 Responsible Organization	4 Discussed With
YMPO	Winn Wilson/Arch Girdley

5 Requirement:

The Quality Assurance Program Description Document, Revision 3, Section 17, "Quality Assurance Records," paragraph 17.5 states, "Records or indexing systems provide sufficient information to permit identification between the record and its applicable items or activities."

AP-5.21Q, "Field Work Activation," is the procedure that generates Job Packages (JPs) which govern construction, drilling, and trenching activities at the site.

6 Adverse Condition:

Contrary to the above, records generated as a result of the implementation of Job Package (JP) 91-09, "Neutron Access Boreholes," have been submitted to the Local Records Center (LRC) and are not traceable to the JP. Records have been submitted for drilling activities associated with Neutron Access Borehole numbers USW UZN 54, 55, and 37. These records do not have the JP number annotated on the transmittal to inform the LRC and Central Records Facility personnel as to where to file the records. Additionally, Sample Management Facility (SMF) personnel work under JP 91-03, "Field Management." Records generated by the SMF personnel would be filed under JP 91-03 and not JP 91-09 which is the JP that governed the activity.

In addition, records generated by the implementation of job packages are not traceable to study plans. Work performed by the implementation of a JP is in direct support of a site characterization activity described within study plans.

9 Does a significant condition adverse to quality exist?	10 Does a stop work condition exist?	11 Response Due Date:
Yes X No ___	Yes ___ No X ; if Yes - Attach copy of SWO	15 Days From Transmittal Date
If Yes, Circle One: A (B) C	If Yes, Circle One: A B C D	

12 Required Actions: [X] Remedial [X] Extent of Deficiency [X] Preclude Recurrence [X] Root Cause Determination

13 Recommended Actions:
Stop the submittal of records generated from field activities until decisions are made firm as to where records are to be transmitted. Do not begin submitting records until:

A) All field procedures are revised to indicate the specific submittal

7 Initiator	14 Issuance Approved by:
Gerard Heaney 4-16-92 Gerard Heaney Date 4/16/92	QADD R.C. Spence Date 4/24/92
15 Response Accepted	16 Response Accepted
QAR Date	QADD Date
17 Amended Response Accepted	18 Amended Response Accepted
QAR Date	QADD Date
19 Corrective Actions Verified	20 Closure Approved by:
QAR Date	QADD Date

REV. 08/91

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

8 CAR NO.: YM-92-033
DATE: 4/16/92
SHEET: 2 OF 2
QA

CORRECTIVE ACTION REQUEST (Continuation Page)

6 Adverse Condition (continued)

DISCUSSION:

The Field Management Plan YMP/CC-0018, Revision 1, paragraph 4.8 states, "The Site Office will establish an LRC (called the Site Documents and Records Center (DRC)) in Area 25 for use by all field participants. Records will be generated as a result of the performance of most field activities. These records will be submitted to this LRC and processed in accordance with the Records Management Plan and its implementing procedures.

Several procedures used by field participants that generate records as a result of field activities are not explicit in ensuring this Field Management Plan (FMP) requirement is implemented. A choice of which LRC to use is given in the records sections of the procedures. Examples are:

BTP SMF-013, "Staging, Packaging, and Documenting Neutron-Access Borehole Samples," Revision 0, Section 8.0, "Records" states, "Records packages of documentation generated as a result of this procedure shall be assembled and submitted to the appropriate Local Records Center in accordance with requirements specified in approved procedures." BTP-SMF-008 "Field Logging, Handling, and Documenting Borehole Samples," Revision 2 also contains this statement. These paragraphs require revision to stipulate the DRC is where records are to be submitted and not "the appropriate LRC" to be consistent with the FMP requirements.

The procedure RSN utilizes for records PP-17-01, "Records Management," Revision 2, does not discuss that field records are to be sent to the DRC.

The procedure that the DRC utilizes to perform its function as an LRC is WI-REC-006, "YMSO Document and Records Services." Paragraph 5.2.2.2 states, "Upon request from the records source, transmit the records along with a transmittal to the CRF or applicable YMP LRC. Since new AP-1.18Q acknowledges the DRC as a LRC (paragraph 1.1 of AP-1.18Q, Revision 0), paragraph 5.2.2.2 requires revision to state "...with a transmittal to the CRF."

13 Recommended Action(s) (continued)

location (either the LRC in Las Vegas or the Site DRC).

B) AP-6.22Q, "Job Package Records," is approved and issued.

C) All field personnel are trained to the record requirements.

Require Job Packages to include a record index number in the "Record Package Turnover Requirements" section to ensure all participants submit records for a particular job to the same record package file.

Develop a records indexing system that will tie field records to a study plan.

Originated by: Weeks, SAIC

WBS 1.2.9.3

MAY 1 3 1992

Carl P. Gertz, Project Manager, YMP, NV

ISSUANCE OF SURVEILLANCE REPORT YMP-SR-92-011 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION SURVEILLANCE OF RECORDS GENERATED AS A RESULT OF IMPLEMENTATION OF ADMINISTRATIVE PROCEDURE (AP) 6.4Q

Enclosed is the report of Surveillance YMP-SR-92-011 conducted in Las Vegas, Nevada, at the Central Records Facility at the Valley Bank Building, April 27-May 4, 1992. The surveillance was conducted to determine completeness of records generated from the implementation of AP 6.4Q, Revision 0.

Based on a review of documentation generated as a result of implementation of AP 6.4Q, Revision 0, it was determined that procedures are being effectively implemented.

There were no Corrective Action Requests issued as a result of this surveillance. One recommendation was made relative to completeness of records.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Richard L. Weeks of Science Applications International Corporation at 794-7853.

ORIGINAL SIGNED BY
RICHARD E. SPENCE

for Donald G. Horton, Director
Office of Quality assurance

OQA:RBC-3414

Enclosure:
Surveillance Report YMP-SR-92-011

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF RECORDS GENERATED AS A RESULT OF IMPLEMENTATION OF ADMINISTRATIVE PROCEDURE AP-6.4Q

SURVEILLANCE NO. YMP-SR-92-011

CONDUCTED APRIL 27 THROUGH MAY 4, 1992

ACTIVITIES SURVEILLED:

EXAMINED SAMPLE OVERVIEW COMMITTEE SPECIMEN REMOVAL REQUEST FORMS GENERATED AS A RESULT OF IMPLEMENTATION OF ADMINISTRATIVE PROCEDURE AP-6.4Q

Prepared by: Richard L. Weeks Date: May 7, 1992
Richard L. Weeks
Quality Assurance Scientist
Surveillance Team Leader
Yucca Mountain Quality Assurance Division

Approved by: R. E. Spence For Date: 5/12/92
Donald G. Horton
Director
Office of Quality Assurance

9205180240 4pp.

1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance (QA) Surveillance No. YMP-SR-92-011 of completeness of records generated as a result of implementation of Administrative Procedure (AP)-6.4Q, Revision 0, "Procedure for the Submittal, Review and Approval of Requests for Yucca Mountain Project Geologic Specimens." The surveillance was conducted in Las Vegas, Nevada at the Valley Bank Building. The surveillance was conducted by a member of the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA) in accordance with OCRWM Quality Assurance Administrative Procedure (QAAP) 18.3, Revision 3.

Based on an examination of microfilmed records at the Central Records Facility, records are complete except for the following condition: The Yucca Mountain Site Characterization Project Office (YMPO) Regulatory and Site Evaluation Division (RSED) Director did not indicate a preference for Approval/Disapproval/Tabled on the Sample Overview Committee Specimen Removal Request (SOC SRR) forms.

There were no Corrective Action Requests (CARs) issued since the identified condition was for records generated for non-quality affecting work. Similar records for quality-affecting work were examined in YMP-SR-92-004.

2.0 SCOPE

The surveillance was conducted to determine if completed SOC SRR forms, which have been submitted to the Central Records Facility, are complete and accurate.

3.0 SURVEILLANCE TEAM

Richard L. Weeks, Surveillance Team Leader, Quality Assurance Scientist, Science Applications International Corporation (SAIC)/YMQAD, Las Vegas, Nevada

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

The following individual was contacted during the course of the surveillance:

Uel S. Clanton, DOE/YMPO, Chief, Site Investigations Branch

5.0 SURVEILLANCE RESULTS

5.1 This surveillance was limited to an examination of SOC SRR forms which are generated as a result of implememtation of AP-6.4Q, Revision 0.

5.2 A total of 26 record packages were examined during the surveillance. All examined record packages were found to be for specimen removal of core that has been determined to be unqualified. The examined SOC SRR forms indicated that scientific work based on analysis of specimens from this unqualified core was for non-quality affecting work only.

All examined records were found to be complete except for the following omission: On the signature page of the SOC SRR form, the YMPO RSED is required to sign, date, and indicate Approved/Disapproved/Tabled. This preference was not indicated on several forms.

The following record packages were examined during the surveillance:

NNA.901213.0033	NNA.901213.0052
NNA.901220.0054	NNA.910109.0092
NNA.910109.0306	NNA.910709.0128
NNA.910716.0057	NNA.910722.0008
NNA.910828.0021	NNA.910828.0022
NNA.910913.0071	NNA.911105.0051
NNA.911106.0016	NNA.911115.0007
NNA.911127.0055	NNA.911127.0056
NNA.911127.0057	NNA.911213.0047
NNA.911213.0048	NNA.911213.0049
NNA.911213.0050	NNA.911213.0051
NNA.911213.0053	NNA.911213.0054
NNA.920211.0050	NNA.920211.0051

5.3 There were no CARs generated as a result of this surveillance because examined record packages were of non-quality affecting records.

6.0 RECOMMENDATION

It is recommended that when AP-6.4Q is implemented, that SOC SRR forms be filled out completely, even for non-quality affecting activities.

Department of Energy
Washington, DC 20585

WBS 1.2.9.3

APR 27 1992

Carl P. Gertz, Project Manager, YMP, NV

ISSUANCE OF SURVEILLANCE REPORT YMP-SR-92-008 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) SURVEILLANCE OF YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT SAMPLE MANAGEMENT FACILITY (SMF)

Enclosed is the report of Surveillance YMP-SR-92-008 conducted at the neutron access Borehole USW UZ N38 at the SMF field trailer and the SMF on April 7-9, 1992. This surveillance was conducted to verify compliance to pertinent implementing procedures.

Based on the surveillance results, it was determined that, in general, Branch Technical Procedure BTP-SMF-003 is being effectively implemented.

There are no Corrective Action Requests issued as a result of this surveillance. There are two recommendations which are covered in the body of the report.

If you have any questions, please contact either Robert B. Constable at 794-7945 or John S. Martin of Science Applications International Corporation at 794-7881.

Donald G. Horton, Director
Office of Quality Assurance

OQA:RBC-3086

Enclosure:
Surveillance Report YM-SR-92-008

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E. H. Petrie, YMP, NV
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R. E. Spence, YMP, NV

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

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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).