



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 98608
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SEP 14 1995

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Site Characterization Project
TRW Environmental Safety Systems, Inc.
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ISSUANCE OF SURVEILLANCE RECORD YMP-SR-95-040 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) SURVEILLANCE OF THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING CONTRACTOR (CRWMS M&O) & SAMPLE MANAGEMENT FACILITY (SMF) (SCPB: N/A)

Enclosed is the record of Surveillance YMP-SR-95-040, of the SMF and Borehole SD-12, conducted by the YMQAD at the CRWMS M&O facilities at the Nevada Test Site, August 7-18, 1995.

The purpose of the surveillance was to verify that borehole samples are controlled in accordance with applicable procedures and Principal Investigator instructions. One Performance Report (PR) was issued as a result of this surveillance. Response to the PR, which was transmitted via separate letter, is due by the date indicated on the PR.

This surveillance is considered completed and closed as of the date of this letter. A response to this surveillance record and any documented recommendations is not required.

If you have any questions, please contact either Mario R. Diaz at 794-7974 or Patout H. Cotter at 794-7706.

YMQAD:MRD-4518

for *Mario Diaz*

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

Enclosure:
Surveillance Record
YMP-SR-95-040

YMP-5

9509200206 950914
PDR WASTE
WM-11 PDR

102.7
WM-11
MAD3

cc w/encl:

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cc w/o encl:

P. H. Cotter, YMOAD/QATSS, Las Vegas, NV
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R. L. Craun, YMSCO, NV
J. R. Dyer, YMSCO, NV

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

QUALITY ASSURANCE SURVEILLANCE RECORD

SURVEILLANCE DATA

¹ORGANIZATION/LOCATION:
 Management & Operating (M&O)
 Contractor & Sample
 Management Facility (SMF) &
 Borehole SD-12

²SUBJECT:
 Control of Borehole Samples

³DATE:
 August 7, through August 18, 1995

⁴SURVEILLANCE OBJECTIVE:
 To verify borehole samples are controlled in accordance with applicable procedures and Principal Investigator (PI) instructions

⁵SURVEILLANCE SCOPE:
 Review of control of borehole samples processes in accordance with the recently issued Nevada Work Instructions (NWI) by Drilling Support and SMF organizations.

⁶SURVEILLANCE TEAM:
 Team Leader:

P. H. Cotter
 Additional Team Members:
J. R. Doyle

⁷PREPARED BY:
P. H. Cotter 8/7/95
 Surveillance Team Leader Date

⁸CONCURRENCE:
P/A
 QA Division Director Date

SURVEILLANCE RESULTS

⁹BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS:
 See Page(s) 2 through 5

¹⁰SURVEILLANCE CONCLUSIONS:
 See Page(s) 6

¹¹COMPLETED BY:
P. H. Cotter 9/6/95
 Surveillance Team Leader Date

¹²APPROVED BY:
for [Signature] 9-13-95
 QA Division Director Date

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

During August 7, 1995 through August 18, 1995, 8 man-days were expended performing a surveillance to determine the effectiveness of implementation of the new NWIs effective 7/17/95 by the Drilling Support and Sample Management (DS&SM) Organizations. The review was conducted at the Yucca Mountain Site, Borehole SD-12, and the SMF. This surveillance verified the following procedural requirements were being met:

1. **NWI-DS-001Q, Rev 0, "FIELD LOGGING, HANDLING & DOCUMENTING BOREHOLE SAMPLES'**
 - Packaging of samples per PI instructions, para. 3.5
 - Weighing of samples, para. 3.5
 - Field sample/specimen removal, para. 3.6
 - Preparation of samples for shipment, para. 3.7
 - Reporting of sampling activities, para. 3.11

2. **NWI-SMF-001Q, REV. 0, "REMOVAL OF WHOLE AND OTHER SPECIMEN SAMPLES BY THE SMF FOR SHIPMENT AND REMNANT RETURN"**
 - Specimen removal, para. 3.2
 - Packaging, para. 3.4
 - Remnant return, para. 3.6

3. **NWI-SMF-002Q, REV. 0, "TRANSPORT, RECEIPT, ADMITTANCE, AND PROCESSING OF BOREHOLE SAMPLES FOR THE SAMPLE MANAGEMENT FACILITY"**
 - Admittance of samples by SMF, para. 3.2
 - Core processing, para. 3.4

4. **NWI-SMF-003Q, REV. 0, "EXAMINATION OF BOREHOLE SAMPLES CURATED AT THE SAMPLE MANAGEMENT FACILITY"**
 - Sample examination, para. 3.2 and 3.3

5. **NWI-SMF-005Q, REV. 0, "CONTROL OF DS&SM MEASURING AND TEST EQUIPMENT"**
 - Calibration of Measuring and Test Equipment/Operating Equipment (M&TE/OE), para. 3.3
 - Tagging of M&TE, para. 3.2
 - M&TE history file, para. 3.2
 - M&TE vendor manuals, para. 3.3

6. NWI-SMF-006, REV. 0, "CALIBRATION OF TEMPERATURE RECORDS"
 - Documentation of calibration of temperature records, para. 3.2
7. NWI-SMF-007, REV. 0, "BALANCE CALIBRATION"
 - Documentation of calibration of balances, Section 3
8. STANDARD PRACTICE PROCEDURE, SPI.73, REV. 0, ICN 0, "CONTROL OF VENDOR TECHNICAL MANUALS AND INFORMATION"
 - Completeness of information for operation and maintenance of equipment, para. 4.22,b
9. M&O, QAP 2.1, REV. 5, ICN 0, "INDOCTRINATION AND TRAINING," para. 5.2.3
 - Complete Reading/Self Study Records or attend classroom training prior to performing work, para. 5.2.3.

The following documents were reviewed to verify that the activities performed by DS&SM personnel were in compliance with the requirements identified above:

1. FIELD CONTAINER SUMMARY AND TRANSMITTAL for Al Yang
 - Core samples, Borehole USW SD-12:
 - dated 7/28/95 (depth 1706.2 to 1720.6)
 - dated 7/28/95 (depth 1759.6 to 1762.8)
 - dated 8/3/95 (depth 1808.1 to 1813.9)
2. DRILLING SUPPORT SECTION SAMPLE WEIGHT/TIME LOG, SD-12, dated 8/2/95 - 8/10/95
3. CORE PROCESSING CHECKLISTS:
 - Box 013625 #210 Borehole 275 USW SD-12, dtd. 8/9/95
 - Box 013626 #211 Borehole 275 USW SD-12, dtd. 8/9/95
 - Box 013627 #212 Borehole 275 USW SD-12, dtd. 8/9/95
 - Box 013633 #213 Borehole 275 USW SD-12, dtd. 8/9/95
4. PEN TYPE THERMOGRAPH RECORDING THERMOMETER CHARTS FOR INSTRUMENT NO. 41598, dtd. 8/2/95, and 301837, dtd. 7/28/95, for Borehole USW SD-12.

5. CALIBRATION DATA SHEETS:

Mettler, PM 4000, SN 1114232442, dtd. 7/20/95
Mettler, PM 4000, SN M27210, dtd. 7/5/95
Mettler, PM 4000, SN 000784, dtd. 6/30/95
Mettler, PM 4000, SN 000784, dtd. 6/28/95
Mettler, PM 4000, SN, 000784, dtd. 5/23/94
Mettler, PM 4000, SN, 000784, dtd. 5/11/94
Mettler, PM 4000, SN, 000784, dtd. 3/7/94
Pacific Transducer Corp., 615, SN 41594, dtd. 10/27/94
Pacific Transducer Corp., 615, SN 41591, dtd. 10/27/94

6. M&TE VENDOR MANUALS:

VM/OE-94/001, Rev. 1, PCT-Model 615, Dry Stylus Recording Thermometer
VM/OR-94/002, Rev. 1, Mettler, AM/PM-balances
VM/OE-94/005, Rev. 0, Pen-type Thermo-Hygrometer

7. M&TE/OE STORAGE DATA SHEET, Mettler PM 4000 Balance, SN M27210, 3/31-7/5/95

8. M&TE/OE AND STANDARDS USAGE LOG, Mettler, PM 4000 Balance, SN M27210

9. COMPUTER LISTING OF ALL M&TE/OE as of 8/8/95

10. TRAINING RECORDS (READING/SELF-STUDY RECORDS) for the following personnel pertaining to the following procedures:

NWI-SMF001Q, NWI-SMF-002Q and NWI-SMF-003Q:

Brian Harrison, David Merrit, Robert Wilcoxon, Steve Hopkins, Chris Hermes, Russ Henson, Clare Chandler, Chris Lewis, Danny Sanchez, Terry Liebe

NWI-DS-001Q:

Chris Mermes, Steve Hopkings, Russ Henson, James R. Wilcoxon

NWI-SMF-006Q and NWI-SMF-007Q:

Greg Hakkula, Robert Spencer

11. CONFIRMATION/VERIFICATION CHECKLIST FOR USW SD-12 CORE BOXES Nos. 011850, 011853, and 011815, dtd. 8/4/95

The following items were examined to verify that the control of samples were in compliance with the requirements identified above:

Sample Boxes:

1. Sample Management Facility
Field Containers (FCT): 0012649, 0012648, 0012644, and 0012642
Research Containers (RCT): 0011815, 0011819, 0011846, 0011847, 0011850 and 0011853
2. SD-12, Trailer
FCTs: 0013693, 0013694 and 0013695; 011850, 011853, 011815
3. Warehouse #2

Remnant Return Container #	Specimen Identification
0271	0000702
0272	0000713
0273	0000737
0274	0000728
0275	0000721 & 0000733
0276	0000752
0277	0000761 & 0000775

Measuring and Test Equipment:

1. Mettler Balance, PM 4000, SN 114232442
2. Troemner two kilogram weight, SN 64446
3. Troemner one kilogram weight, SN 64446
4. Troemner 500 gram weight, SN 23508
5. PTC, Model 615, Recording Thermometer, SN 30187
6. PTC, Model 615, Recording Thermometer, SN 41598

Personnel contacted during the course of the surveillance:

Susan Jones, Assistant Manager, Scientific Programs
Chris Lewis, Curator, SMF, M&O/Science Applications International Corp. (SAIC)
Robert Spencer, M&TE Custodian, M&O/SAIC
Al Yang, Principal Investigator, U. S. Geological Survey
James R. Wilcoxon, Senior Geologist, M&O/SAIC
Steve Hopkins, Senior Geologist, M&O/SAIC
J. Nick Stellavatto, Nye County Site Representative
Jack L'Homme, Geo-Technician, M&O/SAIC

Block 10 (continued) SURVEILLANCE CONCLUSIONS:

As a result of this surveillance, it was determined that the Sample Management and Drilling Support organizations are overall effective in implementing their quality program for the M&O scope of work as prescribed by the procedures listed in block 9. One Performance Report (PR) and one recommendation were generated as a result of this surveillance and are summarized below.

Performance Report No. YMQAD-95-P-013

A review of the controlled vendor manual for use of the Mettler AM/PM-Balance at USW SD-12 disclosed that the manual did not contain all the information contained in the actual manufacturers manual located at the M&TE office nor could evidence of training be provided to this controlled vendor manual. Conversations with personnel that operate and control the balance indicate and review of documentation reveals that there is no impact on the quality of the data obtained, but the control manual is out of procedural compliance with SP 1.73 Para. 4.2.2.

Recommendation:

The following recommendation resulted from the surveillance and is presented for consideration by management and requires no response:

Copies generated at the drilling support trailer at USW SD-12 for sample transfers and for other daily operations are very dark and of borderline acceptability due to their poor legibility. Suggest changing the copier out to improve legibility quality.