

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

THE RAYTHEON SERVICES NEVADA MATERIALS TEST LAB

SURVEILLANCE YMP-SR-93-006

CONDUCTED NOVEMBER 17-30, 1992

ACTIVITIES SURVEILLED:

MATERIALS TEST LAB ACTIVITIES FOR INITIAL
SUPPORT OF EXPLORATORY SHAFT FACILITIES
NORTH PORTAL CONSTRUCTION ACTIVITIES

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Date: 12-8-92

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Date: 12/9/92

Approved by:

R.C. Spence For
Donald G. Horton
Director
Office of Quality Assurance

Date: 12/9/92

1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Management Quality Assurance surveillance YMP-SR-93-006 of Raytheon Services Nevada (RSN) Materials Test Lab (MTL), located in Mercury, Nevada, at the Nevada Test Site. The surveillance was performed to assess the MTL's ability to support the Exploratory Studies Facility (ESF) soils and concrete testing, as referenced in ESF Design Package 1A specifications and drawings for the construction of the ESF booster pump pad, the electrical switchgear pad, and the North Portal pad. These items are classified non-quality affecting. The RSN MTL Supervisor indicated that the laboratory is capable of providing concrete and soils testing support for those standards listed within the specifications. However, certification and training records reviewed for the MTL personnel require modification prior to performing quality-affecting work. Five out of eight files reviewed did not have objective evidence of any American Society for Testing and Materials (ASTM) standards training. The remaining three MTL personnel did contain objective evidence of being trained to ASTM standards; however, four standards within the sample reviewed were not included. Although training to 24 ASTM standards was available for these three employees, their certifications are restricted to only five ASTM standards.

Prior to performing quality-affecting work that may require use of the RSN MTL, RSN should perform the following actions:

1. Review all MTL personnel certification and training files to assure documented evidence of certification and training to appropriate ASTM standards.
2. Review all ESF construction specifications to ensure that the MTL is capable of supporting all ASTM standards referenced within the specifications.

2.0 SCOPE

Surveillance YMP-SR-93-006 was performed from November 17 through 30, 1992, to assess the RSN MTL's ability to support the ESF construction soils and concrete testing, as referenced in ESF Design Package 1A specifications and drawings.

3.0 SURVEILLANCE TEAM

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

Stephen R. Dana, Quality Assurance Engineer, Surveillance Team Member, SAIC, YMQAD, Las Vegas, Nevada

4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

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

Lee Watson, RSN Site Manager
Dale Herrington, RSN MTL Supervisor
Venkatrao Thummala, RSN MTL Supervisor
Joseph Rue, RSN Training Coordinator

5.0 SURVEILLANCE RESULTS

Results of the surveillance indicate a need to review MTL personnel certification and training files and provide documented training to ASTM standards prior to performing quality-affecting work. Implementing procedures are not used to perform tests. The standards themselves are used to perform testing activities. Five out of eight files reviewed did not have objective evidence of any ASTM standards training. The remaining three MTL personnel did contain objective evidence of being trained to ASTM standards; however, four standards within the sample reviewed were not included. Although training to 24 ASTM standards was available for these three employees, their certifications are restricted to only five ASTM standards.

Specifications for construction of the booster pump pad, North Portal pad, and the electrical switchgear pad reviewed during the surveillance were:

1. Section 02220, Revision 0, "Excavation, Trenching and Backfill"
2. Section 02505, Revision 0, "Gravel Surfacing"
3. Section 02230, Revision 0, "Aggregate Base Course"
4. Section 02210, Revision 0, "Site Grading"
5. Section 02510, Revision 0, "Asphalt Concrete Surface Course"
6. Section 03300, Revision 0, "Cast-in-place Concrete"

Standards (including applicable year) referenced within those specifications were:

ASTM C 33-90	ASTM C 39-86	ASTM C 88-90	ASTM C 109-90
ASTM C 117-90	ASTM C 131-89	ASTM C 136-84A	ASTM C 138-81
ASTM C 143-90A	ASTM C 172-90	ASTM C 173-78	ASTM C 231-91
ASTM C 494-90	ASTM D 75-87	ASTM D 242-85	ASTM D 422-63
ASTM D 1140-54	ASTM D 1556-90	ASTM D 1557-78	ASTM D1559-89
ASTM D 1664-80	ASTM D 2922-81	ASTM D 2950-91	ASTM D 3017-88
ASTM D 4253-83	ASTM D 4254-83	ASTM D 4318-84	

6.0 RECOMMENDATIONS

Prior to performing quality-affecting work that may require use of the RSN MTL, RSN should:

- 1. Review all MTL personnel certification and training files to assure documented evidence of certification and training to appropriate ASTM standards.**
- 2. Review all ESF construction specifications to ensure that the MTL is capable of supporting all ASTM standards referenced within the specifications.**