

U. S. NUCLEAR REGULATORY COMMISSION  
OBSERVATION SURVEILLANCE REPORT NO. 93-S1  
FOR THE OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT  
SURVEILLANCE NO. YMP-SR-93-11 OF U.S. GEOLOGICAL SURVEY

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### 1.0 INTRODUCTION

From January 13-15, 1993, the U.S. Department of Energy Office of Civilian Radioactive Waste Management (OCRWM) conducted Quality Assurance (QA) Surveillance No. YMP-SR-93-11 of the U.S. Geological Survey (USGS) QA program in Lakewood, CO.

### 2.0 PURPOSE

The U.S. Nuclear Regulatory Commission staff observed and evaluated the OCRWM QA surveillance to gain confidence that OCRWM and USGS are properly implementing the requirements of their QA programs by assessing the effectiveness of the OCRWM surveillance and determining the adequacy of the USGS QA program in the areas observed. The staff's evaluation is based on direct observations of the surveillance process, discussions with the Yucca Mountain Site Characterization Project (YMP) Surveillance Team Leader (STL) and technical specialist, and reviews of pertinent USGS records.

### 3.0 SCOPE

The scope of this surveillance was limited to evaluating the verification and closure of Corrective Action Request (CAR) YM-92-04. CAR YM-92-04, which was issued by the USGS, documents the same deficiencies involving failure to follow procedures in field data gathering activities that were identified as a result of YMP Audit No. YMP-92-13. During that audit it was determined that implementation of Quality Program Element 20.0, "Scientific Investigation Control" was unsatisfactory.

### 4.0 SURVEILLANCE PARTICIPANTS

#### 4.1 NRC

John Buckley            Observer

#### 4.2 OCRWM

James Blaylock	STL	YMP
Keith M. Kersch	Technical Specialist	Science Applications International Corp.

### 5.0 SURVEILLANCE SUMMARY RESULTS

As stated in Section 3.0 above, the scope of the surveillance was to evaluate the verification and closure of CAR YM-92-04. This CAR was issued by USGS prior to the conduct of audit YMP-92-13 on April 1-10, 1992. The audit substantiated the presence of the adverse conditions presented in CAR YM-92-04. Further, it was determined that implementation of Quality Program Element 20.0 "Scientific Investigation Control" was unsatisfactory due to a number of conditions which could have adversely affected the results of Technical

Activity 8.3.1.2.2.6.1, "Gaseous-Phase Circulation Study." However, since the condition had already been documented, the Yucca Mountain Quality Assurance Division committed to performing this surveillance upon closure of the CAR to verify the adequacy and effectiveness of USGS's investigation and corrective actions.

During the surveillance, the surveillance team examined the following evidence: (1) training and qualification records for individuals working on Technical Activity 8.3.1.2.2.6.1, (2) Management Agreements for consultants working on Technical Activity 8.3.1.2.2.6.1, and (3) Technical Data Information Forms (TDIFs).

Examination of the qualification and training files indicated that the investigators working on Technical Activity 8.3.1.2.2.6.1 were technically qualified to perform work. However, only two of the four investigators appear to have received all of the training appropriate for work under this activity. Training records for E. Weeks and H. Haas indicate that they have not yet been trained to Administrative Procedure (AP) 6.3Q, "Interaction of Participant and Outside Interests with YMP Sample Management Facility," or AP-6.26Q, "Submission and Documentation of Non-Borehole Samples to the Sample Management Facility." It was stated that all required training will be completed by these individuals prior to the March 1993 restart of Carbon 14 sampling. The surveillance team recommended that USGS evaluate the training needs of investigators and consider re-training in some areas to ensure that investigators are sufficiently trained.

The surveillance team evaluated several TDIFs to verify that USGS completed the required corrective actions to close CAR YM-92-04. TDIFs must be submitted with each Data Transmittal Package as required by YMP Procedure AP-5.1Q. USGS determined, as documented on TDIFs, that much of the data collected under Technical Activity 8.3.1.2.2.6.1 is not usable for site characterization. These TDIFs were submitted to the USGS data coordinator as required. The surveillance team recommended that Yucca Mountain Site Characterization Project Office provide additional guidance to the USGS regarding the use, qualification, and co-mingling of unqualified data.

## 6.0 PERSONS CONTACTED DURING THE SURVEILLANCE

M. Mustard	(USGS)
L. Hayes	(USGS)
A. Whiteside	Science Applications International Corp. (SAIC)
E. Chornack	(USGS)
J. Woolverton	(USGS)
D. Appel	(USGS)

## 7.0 NRC CONCLUSIONS

The NRC staff has determined that the DOE/OCRWM surveillance of the USGS QA program was useful and effective. The STL and technical specialist were very familiar with the USGS QA procedures in the areas being surveilled. The NRC staff agrees with the OCRWM surveillance team's preliminary conclusion that USGS is now adequately implementing its QA program requirements in the area of Quality Program Element 20.0.

Although USGS has committed to complete the required training for investigators prior to collecting Carbon 14 samples in March 1993, the NRC staff is concerned that USGS did not place a higher priority to date on training the investigator most responsible for CAR YM-92-04. The NRC staff concurs with the surveillance team's recommendations and believes that implementation of these recommendations will serve to improve the USGS QA program.