

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

GEOLOGICAL MAPPING ACTIVITIES

SURVEILLANCE YMP-SR-93-008

CONDUCTED DECEMBER 3, 1992

ACTIVITIES SURVEILLED:

GEOLOGICAL MAPPING ACTIVITIES AS CONDUCTED BY  
THE UNITED STATES GEOLOGICAL SURVEY FOR  
QUATERNARY FAULTING STUDIES

Prepared by:

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Date

12/18/92

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12/22/92

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## 1.0 EXECUTIVE SUMMARY

This report contains the results of the Office of Civilian Radioactive Waste Management Quality Assurance (QA) surveillance YMP-SR-93-008 which was conducted on December 3, 1992, of the United States Geological Survey (USGS) geological mapping activities, which are being conducted at Crater Flats on the west side of Yucca Mountain, Nevada. The surveillance was performed to verify procedural compliance to implementing procedures which support Quaternary faulting studies as described in Study Plan 8.3.1.17.4.6, conducted by the USGS. Based on the results of this surveillance, the USGS is satisfactorily implementing the surveilled activities. No deficiencies were noted.

## 2.0 SCOPE

This surveillance included an evaluation of documents generated as a result of implementation of USGS GP-07, Revision 1, qualifications of personnel conducting work and verification that current copies of procedures which control this work are maintained by individuals doing work.

## 3.0 SURVEILLANCE TEAM

R. L. Weeks, Quality Assurance Specialist, Surveillance Team Leader, Science Applications International Corporation (SAIC), Yucca Mountain Quality Assurance Division (YMQAD), Las Vegas, Nevada,

F. H. Lofftus, Quality Assurance Engineer, Surveillance Team Member, SAIC, YMQAD, Las Vegas, Nevada

The surveillance team cooperated on all aspects of the surveillance. There was no specialization by team members.

## 4.0 PERSONNEL CONTACTED

A. (Lucky) Johnson, Coordinator, USGS

C. Menges, Geologist, USGS

T. Mendez - Vigo, Lead Quality Assurance Specialist for Geologic Study Programs, SAIC

T. Chaney, Quality Assurance Manager, USGS

A. Ramelli, Research Geologist, State of Nevada

B. Vadurro, Physical Science Aide, USGS

## 5.0 SURVEILLANCE RESULTS

The purpose of this surveillance was to verify procedural compliance to geological mapping activities as part of the Quaternary faulting studies described in Study Plan 8.3.1.17.6. The surveillance team interviewed responsible personnel, examined one trench log, verified that controlled copies of appropriate procedures were being maintained and discussed qualifications of personnel doing the mapping.

At the time of the surveillance, there was no work in progress but rather the geologists were discussing previously completed mapping and the initiation of a field change to lengthen trench SCF T1.

The surveillance team accompanied individuals doing the mapping to trenches SCF T1 and T8 which are located on the west side of Yucca Mountain. The trench log for trench T8 was examined and found to comply with the requirements of USGS GP-07, Revision 1. The trench log for trench SCF T1 will be generated after expansion of the trench and completion of additional mapping. Vandals destroyed various markers that had been placed on the trench walls in trench T8. This vandalism will require restoration of markers in order for work to continue.

The surveillance team verified that controlled copies of procedures appropriate to the work being conducted were being maintained. The following controlled procedures were maintained:

USGS GP-01, Revision 2, "Geologic Mapping"

USGS GP-07, Revision 1, "Conventional Geologic Mapping of Trench Walls"

USGS GP-17, Revision 1, "Describing and Sampling soils in the field"

USGS GP-27, Revision 2, "Trench walls and Natural Outcrop Sampling for Coordinated studies"

Qualifications of personnel conducting field work were discussed with each of the participants but not verified by examination of objective evidence. Based on the results of this surveillance, the USGS is satisfactorily implementing the surveilled activities. No deficiencies were noted. All persons contacted during the surveillance were congenial and cooperative.

**6.0 RECOMMENDATION**

**It is recommended that the qualifications and training of individuals contacted during this surveillance be verified during the next audit.**