



**GEOSCIENCES AND ENGINEERING DIVISION  
QUALITY ASSURANCE  
SURVEILLANCE REPORT**

PROJECT NO.:  
.06002.01.292,302,312.314

REPORT No.: 2006-08

Page 1 of 2

**SURVEILLANCE SCOPE:** Geology and Geophysics

**REFERENCE DOCUMENTS:** AP-001, Evaluation of Potential for Conflict of Interest; QAP-001, Scientific Notebook Control; QAP-002, Review of Documents, Reports, and Papers; QAP-004, Surveillance Control; QAP-005, Quality Indoctrination and Training; QAP-007, Professional Personnel Qualification; QAP-013, Quality Planning; QAP-016, Procurement; QAP-019, Control of Measuring and Test Equipment; and TOP-012, Identification and Control of Samples and Chemical Reagents and Standards

**START DATE:** 04/13/2006

**END DATE:** 04/28/2006

**QA REPRESENTATIVE:**  
Mark R. Ehnstrom

**PERSONS CONDUCTING ACTIVITY:** J. Stamatakos, D. Hooper, N. Franklin, and D. Waiting

**SATISFACTORY FINDINGS:** Quality Requirements Application Matrices developed for the three integrated subissues managed by Geology and Geophysics appeared to be complete and accurate. The Professional Personnel Qualification files for the following staff members and consultants were reviewed for completeness and accuracy and were found to be satisfactory: J. Stamatakos, D. Hooper, N. Franklin, R. Benke, M. Necsoiu, D. Waiting, A. Woods, T. Menand, K. Ridgway, and M. Gutenkunst

**General Information ISI**

A literature search was performed on tectonics and tectonic models and helped in the development of a summary report titled, "Tectonic Model Report for the Yucca Mountain Region." Work continues on the development of the field guide notebook. No scientific notebooks were required to document these activities and no consultants or contractors were used.

**Volcanic Disruption of Waste Packages ISI**

Work continues on the open Igneous Activity Agreement Items 2.19 and 2.20, which includes review of the DOE responses.

Review of the University of Bristol draft report on gas bubble interaction with magma flow uncovered an error in the experimental work and activity is underway to correct the error. The university is an approved subcontractor to the CNWRA and was last evaluated in May 2005 for organizational and individual Conflict of Interest. Work at the university is expected to be completed in the near future. The CNWRA manager for this work is scheduled to visit the university in May and will determine, at that time, if additional work activities will be conducted.

No current experimentation is being performed, although experiments to show the interactions of magma entering the repository are being explored.

**Airborne Transport of Radionuclides**

Current work includes using TEPHRA V 1.0 to model and evaluate volcanic eruption plumes. Output from TEPHRA was modified to create a look up table. The resulting script files are documented in Scientific Notebook 755E.

Spectral and chemical analysis of samples obtained at Sunset Crater will be performed. Divisions 01 and 18 are currently being evaluated and may perform these testing activities. This activity will be documented in scientific notebook 747E. This notebook was reviewed during surveillance and at this time only contains information recorded during site activities at Sunset Crater when the samples were obtained.

UNSATISFACTORY FINDINGS: None	
NCR NO.: N/A	CAR NO.: N/A
ATTACHMENTS: None	
RECOMMENDATIONS/ACTIONS: None	
APPROVED: <u><i>[Signature]</i></u>	DISTRIBUTION: ORIGINAL—QA RECORDS DIRECTOR, QA ASSISTANT DIRECTOR: G. Wittmeyer MANAGER J. Stamatakos PRINCIPAL INVESTIGATOR: D. Hooper, N. Franklin
DATE: <u>5/4/06</u>	