CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QUALITY ASSURANCE
SURVEILLANCE REPORT

PROJECT NO: 20-5708-461,462	REPORT NO: 97-12	PAGE 1 OF 2

SURVEILLANCE SCOPE: Igneous Activity KTI Activities

REFERENCE DOCUMENTS: HLW Operations Plans, Current PMPR

STARTING DATE: 8/13/97 ENDING DATE: 8/15/97

QA REPRESENTATIVE: R. D. Brient RDB

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: L. McKague, B. Hill, C. Connor, S. Magsino

SATISFACTORY FINDINGS:

Task 1, Technical Assistance

Issue Resolution Status Report Current work is centered on preparation of this report, which summarizes work accomplished to date. No field or lab work is directly associated with this report, but a few probability calculations have been performed that will appear in the deliverable. Some calculations will be documented in the report, while others will be documented in Scientific Notebook #115. The (electronic) notebook will be compiled for QA records after completion of the report.

Database of Volcano Locations and Ages Work continued on a database of volcanic locations and ages, which will be compiled in the Issue Resolution Status Report. Data sources include DOE and the open literature.

Cerro Negro Risk Assessments A letter report was prepared (IM 5708-461-760) which included numerous calculations involving field data and analysis. Scientific Notebook #88, which was last compiled and submitted to QA records in early July, contains several diskettes of spreadsheet files which document the calculations performed in support of this work. However, no technical correctness review criteria (which includes calculation verifications required by QAP-014) were checked-off as applicable for the technical review. (See Unsatisfactory Findings below).

Ground Magnetic Data Processing Field magnetic surveys were conducted in June 1997, using the Global Positioning System (GPS) to establish the data point locations. Currently, the raw data are being processed to (i) convert latitude/longitudes to a coordinate system and format compatible with the ARC INFO database, and (ii) to apply magnetic data corrections. The equations used to translate these data have been checked in the past using ARC INFO, but this verification has not been formally documented (see Recommendations below). An uncontrolled field notebook (and others) documented details of the field measurements, including set-up and operation of the GPS. These notebooks were determined to contain non-essential information, so were not required to be controlled.

Also in support of this task, technical operating procedures are being drafted describing the operations of the GPS and conduct of the magnetic surveys because these activities have been recurring utilizing the same methods.

Task 2, PVHA_view Code Development

A revision to the Software Requirements Description for PVHA_view was determined necessary during the annual QA audit of the CNWRA, however, no time has been available to complete this activity. No other work is on-going in this task.

The Scientific Notebooks reviewed appeared to contain the required information in sufficient detail.

Personnel qualifications and QA indoctrination were verified for the individuals listed above.

UNSATISFACTORY FINDINGS: No technical correctness criteria were specified for the technical review of IM-5708-461-760, the Cerro Negro risk assessment of future eruptions. This report contains data interpretations and is supported by extensive calculations, both which need technical verification. While the review criteria were not required, it was noted in the technical review comments that some calculations were checked.

NONCONFORMANCE REPORT NO: 97-04

ATTACHMENTS: Nonconformance Report 97-04

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RECOMMENDATIONS/ACTIONS: (i) Field procedures for the GPS operation and magnetometer operation need to be developed prior to future field surveys. (ii) Verification of magnetometer data translation calculations needs to be documented in a Scientific Notebook. The notebook should also describe the controls exercised on the software to assure that no changes are made after the equations are verified (see QAP-014). (iii) Field notebooks, regardless of the nonessential nature of their content, should be controlled. The effort necessary to comply with QAP-001 seems insignificant in comparison to the potential value of essential data that may be documented within.

APPROVED: _____
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 8/18/97

DISTRIBUTION:
ORIGINAL - CENTER QA DIRECTOR QA Records
ORIGINATOR - R. Brient
PRINCIPAL INVESTIGATORS - B. Hill, C. Connor
ELEMENT MANAGER - L. McKague
B. Sagar, H. Garcia, EMs