



Department of Energy
Washington, DC 20585

SEP 20 1988

Mr. B. J. Youngblood, Chief
Operations Branch
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

As requested by Mr. Joseph Holonich of your office, enclosed are the Observations and Recommendations From Audit 88-4, USGS-Denver.

Please let me know if you need any additional information on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Ralph Stein".

Ralph Stein
Acting Associate Director for Systems
Integration and Regulations
Office of Civilian Radioactive
Waste Management

Enclosure

cc: Joseph Holonich, NRC
Lake Barrett, RW-3
Jay Jones

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Department of Energy

Nevada Operations Office
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WBS #1.2.9.3
QA Level N/A

SEP 1 1988

NN1.880901.0070

Ralph Stein, Associate Director, Systems Integration & Regulations, HQ
(RW-30) FORS

SYNOPSIS OF THE OBSERVATIONS AND RECOMMENDATIONS GENERATED DURING THE U.S.
GEOLOGICAL SURVEY (USGS)/DENVER AUDIT (88-4)

Per verbal request from Joseph Holonich of the U.S. Nuclear Regulatory
Commission to Henry H. Caldwell of Science Applications International
Corporation, for the synopses of the observations and recommendations
generated during the USGS Denver Audit (88-4). Enclosed is the synopses of
the observations and recommendations for transmittal to Joseph Holonich.

Should you have any questions, please contact me on FTS 544-7913.

James Blaylock
Project Quality Manager
Yucca Mountain Project Office

YMP:JB-3478

Enclosure:
Synopses of USGS/Denver Audit

cc w/encl:
Lake Barrett, HQ (RW-40) FORS
M. E. Spaeth, SAIC, Las Vegas, NV
S. H. Klein, SAIC, Las Vegas, NV
Stephen Metta, SAIC, Las Vegas, NV
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C. E. Hampton, YMP, NV
A. C. Williams, YMP, NV



OBSERVATIONS & RECOMMENDATIONS FROM
AUDIT 88-4 USGS-DENVER

OBSERVATION 1

Certifications for individuals are not being renewed annually as required. This was documented on ASKS NCR 88-05. No response required.

OBSERVATION 2

SIP activities are being initiated prior to development and approval of the SIP. This was identified by the USGS and documented in an NCR. No response is required.

OBSERVATION 3

For the calcite and opaline silica (hydrogenic) deposit activities, there is no procedure for thin section preparation that would ensure sample traceability.

OBSERVATION 4

For the Strontium isotope analysis, it was observed that individuals not involved in the NNWSI Project were handling samples. Sample traceability could be jeopardized. Additionally, entries made in the daily log book revealed anomalies.

OBSERVATION 5

Analytical balances and other instruments for the study of ostracodes and microfossils did not include appropriate calibration stickers. Deficiency identified by SDR #139 on Audit 88-3, USGS/Menlo Park.

OBSERVATION 6

The USGS is developing real time data acquisition. [Software obtained through contract with Martin Marrietta without formal review design controls do not apply to development of software.] No established requirement exists to cover this situation and approval is required.

OBSERVATION 7

Technical procedures have vastly improved. Key references cited by the technical procedures must be attached to the procedure when it provides instructions for related activities.

OBSERVATION 8

Activities for SIP 3310G-01, data sheets for the Crest-Stage measurement, are incomplete.

ENCLOSURE

OBSERVATION 9

There is no data management procedure in place. The concern exists regarding loss or damage to existing data. There is no log or index of data collected.

OBSERVATION 10

Many SIPs specify activities that are not covered by technical procedures, or that will be conducted by subcontractors. The concern exists that activities are not conducted by controlled procedures. Procedures must be in place prior to activities being conducted.

OBSERVATION 11

Copies of Level I procurements are not being transmitted to the WMPO. This was identified by the USGS on CAR-88-01. No response required.

OBSERVATION 12

Review comments for technical procedures shall be treated as QA Records. Contrary to this, some comments are not controlled as such. This was identified by USGS NCR 88-27. No response is required.

OBSERVATION 13

The distribution list for controlled documents is not maintained and controlled as required. This is documented by USGS NCR 88-27. No response required.

OBSERVATION 14

Requirement that QA review all documents to check for compliance in accordance with checklists could not be verified. This was identified by the USGS on NCR 88-27. No response required.

OBSERVATION 15

No bid evaluations have been performed and documented for contracts at USGS/ Denver. This was identified at Menlo Park by WMPO SDR #136.

OBSERVATION 16

No evidence of compliance with QMP 12.01 regarding tracking of instruments to be calibrated. This was identified on SDR No. 139 at Menlo Park by the WMPO. No response required.

OBSERVATION 17

Records are required to be sent to the USGS Records Processing Center (RPC). This was identified by USGS Audit Finding 87-01-01. Proposed Corrective Action was to revise QMP 17.01, which has not been issued.

RECOMMENDATION 1

It is recommended that field notebooks and laboratory notebooks be reproduced and submitted to the NWSI Project file approximately every six months to prevent inadvertent loss of information.

RECOMMENDATION 2

It is recommended that the daily log book used in Strontium isotope work be incorporated into project files on a periodic basis. Additionally, raw data sheets should be initialed with explanations as to why they are incomplete.

RECOMMENDATION 3

It is recommended that slides and photographs, and data used for sample location and identifications (and in some cases to back up the trench log maps) be stored in a limited access area (fireproof) and/or copied and placed in an NWSI Project file.

RECOMMENDATION 4

It is recommended that the procedures for tracking samples identify the physical location of the sample on the sample or sub-sample form.

RECOMMENDATION 5

An internal standard is being used for the calibration of the mass spectrometer for the Strontium isotope studies. Although the use of an internal standard is normal for this type of work, it is recommended that the rationale and justification for using this and other standards involving non-NBS traceable standards be placed in the Project files.

RECOMMENDATION 6

It is recommended that notes and request forms be included in the documentation of the sample preparation processes for the isotopic analysis. The notes should include the process being performed and the sample identification number.

RECOMMENDATION 7

It is recommended that individual seismic monitoring stations be uniquely identified on the exterior for traceability for maps, logs, etc.

RECOMMENDATION 8

For SIP 3310G-01, streamflow measurement, it is recommended that the direct method of measurement be used rather than the indirect method.

RECOMMENDATION 9

For SIP-3310G-01 for the crest-stage gage, the results measured from two different methods would improve the level of data. The calibration and comparison of standard rain gage and plastic pipe gage is also recommended to improve results.

RECOMMENDATION 10

It is recommended that activities that state "no calibration necessary" in technical procedure be evaluated for accuracy.

RECOMMENDATION 11

It is recommended that USGS QMP 4.01, Rev. 1, be modified so as not to require all QA Level I and II procurements to require documented non-conformances related to the procurement requirements.

RECOMMENDATION 12

It is recommended that a log book of surveillances be maintained and updated for tracking surveillance results.

RECOMMENDATION 13

It is recommended that the USGS eliminate the surveillance activities from the inspection function and identify them under Element 18. Additionally, the USGS should refrain from using the NCR for non-engineered items.

RECOMMENDATION 14

It is recommended that the technical staff assist in the preparation of the FY internal audit schedule.