

Report of Weston Observation of
 WMPO QA Audit No. 88-3 of the USGS
4/26-28/88

Introduction

At the request of DOE-HQ, two Weston representatives participated as observers on the Waste Management Project Office (WMPO) audit No. 88-3 of U.S. Geological Survey (USGS). This report documents the Weston observer's assessment of the effectiveness of the WMPO Audit Program with respect to this audit and also, to some extent, documents an assessment of the adequacy of the USGS Quality Assurance (QA) Program and related technical activities.

The purpose of audit No. 88-3 was to evaluate the effectiveness of the USGS Quality Assurance Program Plan (QAPP), Revision 4, with respect to NNWSI NVO-196-17, Revision 5, and to verify the implementation of the QA Program on the NNWSI Project activities at the Menlo Park, California facility.

The scope of the audit focused on the following:

- QA Programmatic activities (as described in the following USGS Quality Assurance Procedures):

QMP-3.01	Revision 1	Procedure for Identification of Research/Experimental Activities
QMP-3.03	Revision 0	Scientific and Engineering Software
QMP-4.01	Revision 1	Procurement Document Control
QMP-5.01	Revision 1	Preparation of Technical Procedures
QMP-5.02	Revision 0	Preparation and Control of Drawings and Sketches
QMP-6.01	Revision 1	Document Control
QMP-7.01	Revision 0	Supplier Evaluation, Selection and Control
QMP-7.02	Revision 0	Receiving Inspection
QMP-7.03	Revision 0	Acceptance of Materials, Equipment and Services
QMP-8.01	Revision 2	Identification and Control of Samples
QMP-11.01	Revision 1	Preparation and Issuance of Tentative Technical Procedures
QMP-12.01	Revision 1	Instrument Calibration
QMP-13.01	Revision 1	Handling, Storage, and Shipping of Instruments

- Technical Activities:

SIP No. 3221G-01	Revision 0	Geophysical Investigations: Gravity and Magnetic Methods
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Technical Procedures:

NWM-USGS-GPP-01	Revision 0	Gravity Measurement and Data Reduction
NWM-USGS-GPP-16	Revision 0	Absolute Measurement of Gravity

SIP No. 3222G-01

Revision 0

Seismic Reflection and Refraction
Surveys

Technical Procedures:

~~NWM-USGS-SP-08~~

~~Revision 0~~

~~Seismic Study of the Tectonic
Environment~~

~~NWM-USGS-SP-09~~

~~Revision 0~~

~~Calibration of Seismic Refraction
Equipment~~

NWM-USGS-SP-10

Revision 0

Deep Seismic Reflection Study of the
Tectonic Environment

Based on the purpose and scope of this audit, the Weston observers believe that from both a QA programmatic and technical standpoint, the audit team did, in general, accomplish their goal of evaluating the effectiveness of and verifying implementation of the USGS QA Program. However, the Weston observers have identified concerns, both with respect to the WMPO audit performance and with the adequacy of the USGS Program (refer to paragraph F of the next section of this report).

Observations of the conduct of the audit

WMPO audit No. 88-3 was conducted at the USGS, Menlo Park, California facility, 4/26-28/88. This report is based on observations of the pre-audit team meeting, pre-audit conference, actual auditing activities, daily team caucuses, and the post-audit conference.

A. Audit Team Preparation

Based on the type of questions asked by the audit team and the method in which certain areas were pursued, the Weston observers believe that the audit team had a thorough knowledge of the USGS organization's scope of work, procedures, and policies. However, it is felt that improvement could have been made in the audit preparation (refer to paragraph F of this section, WMPO related concerns 1 and 2).

Audit checklists were developed by the audit team (based on the requirements of the USGS QAPP, QA Procedures, SIPs, and Technical Procedures). These checklists along with the audit plan and related documents were provided to the observers well in advance of the audit. This facilitated the observers' audit preparation.

B. Pre-Audit Team Meeting

On April 26, 1988 a pre-audit meeting was held by the team members (including observers). The purpose of this meeting was to brief the team and observers (Weston, NRC, WMPO, and State of Nevada) on the objectives of the audit, clarify the audit schedule, and distribute revised audit plan, checklists, and team assignments (no significant changes were made).

C. Pre-Audit Conference

At the close of the pre-audit team meeting, appropriate USGS personnel

were invited to the pre-audit conference. At this meeting, the audit team and observers were introduced to the USGS personnel and, based on the areas of activity, USGS contacts were established. The audit team leader requested of the USGS that a description of the USGS organization be provided to the audit team. This presentation was quite helpful to the ~~audit team in understanding the USGS ANWSI support, since there are~~ several USGS locations supporting the NNWSI project. This meeting also ~~provided a forum for questions and answers between audit team members,~~ observers, and USGS personnel, with respect to the purpose, objective, and scope of the audit.

D. Audit Activities

The Weston observers believe that their presence and the presence of other observers (State of Nevada, NRC, WMPO) in no way hindered the audit team in its performance. The observers were allowed to ask questions, state opinions, and offer recommendations. The Weston observers identified, to the audit team, three concerns with respect to USGS program. For example, the Weston technical observer offered two recommendations to the audit team as methods to improve deficiencies in technical procedure NWM-USGS-GPP-01. Both of these recommendations were included by the audit team as audit observations. Also, the Weston QA observer identified a concern, based on his observation of the audit in the area of procurement document control, that USGS procurement documents (purchase requisitions) are not traceable to the NNWSI project (refer to paragraph F of this Section, USGS related concern No. 1). This was identified to the audit team, by the Weston QA observer, during the team caucus on 4/27/88. This concern was also included by the audit team as an audit observation.

This audit resulted in the generation of 9 draft deficiencies (formerly called findings) and 9 observations:

- 4 deficiencies and 2 observations for computer software control activities
- 1 deficiency and 2 observations for procurement document control activities
- 3 deficiencies for control of purchased items and services activities
- 1 deficiency and 1 observation for control of M&TE activities
- 1 observation for document control activities
- 3 observations for gravity and magnetic investigation activities

E. Post-Audit Conference

The post-audit conference was held on 4/25/88. At this meeting, the audit team leader provided to USGS management the draft deficiencies and observations. These deficiencies and observations were communicated to USGS during this meeting and USGS was provided the opportunity to question, comment, or request clarifications. Although objection was

taken, by USGS representatives, to one of the computer software control related deficiencies, they appeared to be responsive to them and indicated a commitment to provide timely responses. At the close of this meeting, the Weston observers verbally communicated to the audit team leader that there were some concerns with respect to both the WMPO conduct of the audit and the USGS organization.

F. Concerns

Concerns with respect to the WMPO audit preparation/conduct:

1. It was apparent that the audit team could have used more time to effectively complete their respective audit assignments. In the planning stage of this audit sixty (60) pages of checklists were generated and only fourteen (14) hours of actual auditing activities scheduled. It is the opinion of the Weston observers that more actual auditing time should have been allocated, based on the amount of areas to be covered and the number of auditors on the team. It was observed that on 4/28/88, just prior to the post-audit conference, some of the auditors were arduously attempting to complete the checklists and deficiency reports. Although all was completed, there was no time for a team caucus to exchange information and discuss newly identified deficiencies and observations. Also, this precluded the audit team leader from giving USGS management advance notice of those problems discovered on this last day of auditing. It was obvious, at the post-audit conference, that USGS representatives were hearing some of these deficiencies for the first time. In the past, it has been WMPO's policy, during audits, to meet frequently with the auditee's management and keep them informed of any problems that are discovered.
2. The USGS QAPP sections 3.1-3.1.3 identifies requirements for SIP development, assignment of quality levels, and the SIP review and approval process. This activity was not investigated during this audit. It is the opinion of the Weston observers that, since the development of the SIPs was a prerequisite to starting new work and the fact that the Stop Work has been lifted, this process should have been included within the scope of this audit.

Concerns with respect to the USGS organization:

1. During the audit team caucus on 4/27/88, the Weston QA observer identified a concern to the audit team leader that it was observed that USGS procurement documents (specifically purchase requisitions; 9380-1017, 9380-1018, and 9380-1053) are not traceable to the NNWSI project. Procedure NNWSI-USGS-QMP-4.01, rev.1, paragraph 5 requires that "records associated with this procedure shall be submitted to the USGS Records Processing Center in accordance with QMP 17.01." However, since the requisitions do not reference that they are NNWSI related, there is every possibility that they may not be entered into the NNWSI records system. The audit team included this as an audit observation, which is required to be formally responded to by the USGS.

2. It was observed that the USGS does not appear to be responsive to complying with the identified requirements for computer software control. Based on observations of the interaction between the audit team and USGS representatives, it appears that the USGS personnel are well aware of the requirements but contend that much of them may not ~~be applicable to USGS applications. The audit team identified four~~ (4) deficiencies and two (2) observations in this area. It is the ~~opinion of the Weston observers that these requirements be complied~~ with prior to the start of any major new work activities. Results obtained through the use of Scientific and Engineering Software (SES) may prove to be unusable if at a later date the software proves to be invalid.
3. It was observed that in some areas the USGS was not adequately prepared for this audit, as a result of inadequate internal USGS coordination. For example, procurement documents requested by an auditor were not readily retrievable. The USGS representative informed the audit team member that she was not aware that the audit was scheduled and that documentation in her area would be requested.
4. While establishing contacts during the pre-audit conference, the audit team was informed that several key people would not be available to interview during the course of the audit. Since the audit notification was transmitted well in advance, USGS should have made arrangements for all required personnel to be available. The result was a burden for those USGS personnel that were available and a disruption in the flow of the audit. For example, some of the audit areas overlapped and audit team members from one area had to wait for USGS personnel to become free from their discussions with audit team members from other areas.