

**Quality Assurance Audit Report**  
**Nye County NWRPO Audit Number NWRPO-2009-01**



**To:** Darrell Lacy, Director

**Cc:** Levi Kryder, Geoscience Manager

**From:** Kathy Gilmore, Quality Assurance Officer/ Auditor

**Subject:** Audit Report

**Purpose:** To verify compliance with QA program elements.

**Scope:** The audit included an evaluation of the Quality Administrative Procedures (QAPs) that were developed to implement requirements established in the QA Program Plan (QAPP). Various tasks specified under specific Work Plans (WPs) and Technical Procedures (TPs) were also evaluated.

QAPs, WPs, and TPs scheduled for evaluation during the audit included:

- QAP-3.1 Independent Technical Review
- QAP-3.2 Documentation of Technical Investigations
- QAP-5.2 Preparation of Work Plans, Test Plans, and Technical Procedures
- QAP-6.1 Issue and Control of Quality Assurance Documents
- QAP-12.1 Control of Measurement and Test Equipment
- QAP-15.1 Control of Nonconforming Items or Activities
- QAP-17.1 Records Management
- WP-10 Groundwater Level Monitoring and Evaluation
- TP-8.1 Field Collection and Handling of Water Samples
- TP-9.8 Development of GPS Data using the Trimble GeoXH GPS
- TP-9.9 Measurement of Groundwater Levels Using Electric Well Sounders

**Summary:** As a result of the audit, it was determined that all QA program elements are in conformance with internal requirements with the exception of a few discrepancies that are described in the Audit Findings and Observations sections below.

**Auditor:** Kathy Gilmore, QA Officer

**Dates of Audit:** 8/4/09 – 8/6/09

**Persons Contacted During the Audit:** Darrell Lacy, Levi Kryder, Sherry Dudley, Celeste Sandoval, John Klenke, Roger McRae, Bill Howard, Craig Latronico, Bob Wilcoxon, Ryan Lee, Jim Foster, and Beth McGee

**Effectiveness of QA Program Elements Audited:** The QA Program is being conducted in an effective manor in accordance with the QAPP and QAPs, however certain elements are not being followed that may possibly affect quality of future work if not addressed. Those elements are presented in the following.

**Audit Findings:**

**Finding 1:**

QAP-3.1 Rev 2, *Independent Technical Review*, states the required technical review process in Section 5.1.3. It was found that two of the technical report RID packages reviewed during the audit did not include the technical review forms as specified in QAP-3.1.

**Root Cause:**

The QAO did not review the technical report packages before submittal to the QARC as specified in Section 5.1.3.

**Suggested Corrective Action:**

The QAO and Geoscience Manager should make more of an effort to require PIs to submit the complete review packages to the QARC. It is recognized that the review packages are always requested from the PIs by the QARS and Geoscience Manager, however the QAO will make more of an effort to require the PIs to submit the entire review package to the QARC. The QAO with the help of the QARS will review technical report RID packages before submittal to the QARC.

**Finding 2:**

QAP 6.1 Rev 2, *Issue and Control of Quality Assurance Documents*, states the responsibilities of NWRPO personnel who are issued controlled QA documents. These responsibilities include keeping QA manuals up to date.

After reviewing staff QA manuals it was found that one manual included archived out-dated procedures and was missing one change notice form.

**Suggested Corrective Action:**

It is recommended that staff review carefully the requirements detailed on each Document Receipt Form. While this was not a major infraction, it is noted in the audit due to the

importance of referencing the most current plans and procedures. The subject manual was updated during the audit and no further action is required.

## **Audit Observations:**

### **Observation 1:**

QAP-3.2 Rev 3, *Documentation of Technical Investigations*, states scientific notebook guidelines in Section 5.2.

Several entries in scientific notebooks reviewed during the audit appeared incomplete, incorrect, or lacking sufficient detail. Specific notebook entries flagged during the audit were discussed with staff during the post-audit meeting. Flagged entries included:

- Incorrect flowrate calculations
- Incorrect times recorded for purposes of calculating flowrates
- Water level measurements were recorded without the sounder number, measurement location, and units (ft).
- Units missing from pressure readings and length measurements
- Missing meter calibration documentation when taking water parameter readings
- Unclear documentation of purging and total volumes purged

**Recommendation:** It is recommended that all staff review QAP-3.2 Section 5.2 and previous scientific notebook entries for guidance. Corrections should be made to the flagged entries. It is also recommended that when possible, data from a site activity should only be recorded in one notebook assigned to the specific type of activity or location (i.e. tracer testing SNB or Site 4PD SNB).

### **Observation 2:**

QAP-5.2 Rev 3, *Preparation of Work Plans, Test Plans, and Technical Procedures*, states in Section 4.0:

“NWRPO personnel shall possess the appropriate level of training required to implement WPs, TPNs, or TPs. Training shall be completed before implementation of the plan or procedure and documented on the Training Form (Attachment 1) depending on the level of training determined by the QAO.”

While it was stated by staff that training for various technical activities had been completed, no documentation for those activities was found in the QARC.

**Recommendation:** It is recommended that documentation of staff training be submitted to the QARC before performing tasks specified in technical procedures and work plans. Suggested

training forms for specific personnel that were not found during the audit are detailed in the audit checklist form.

#### **General Audit Comments and Recommendations:**

Several additional plans were scheduled for audit, however were not evaluated during this audit. TP -9.9, *Measurement of Groundwater Levels Using Electric Well Sounders*, and WP-10, *Groundwater Level Monitoring and Evaluation*, were scheduled for audit, however TP-9.9 was being revised and the QAO did not feel that it would be productive to audit until the revised procedure is in place. It is also recognized that WP-10 needs to be updated to reflect changes in TP-9.9 and other programmatic changes, so WP-10 was not audited. QAP-12.1 was also not audited completely because of the slip in audit schedule resulting in the Equipment Custodian being unavailable for the revised audit schedule. Lastly, the closure documentation of Nonconformance #2008-01 was not available for audit because the associated RID packages have not been submitted to the QARC. It is recommended that a follow-up surveillance be scheduled to allow for review of the subject plans and procedures.

The NWRPO is currently scanning QARC files with the goal being a complete set of electronic QA files. During the audit, approximately ten scanned files were compared to the associated hard copy files. One scanned file was missing one page from the document. It is recognized that hundreds of files have been scanned, and this might have been the only occurrence of a missing page. Although, it is recommended that a formal review process be implemented and documented to assure that all scanned documents are complete.

**Required Actions:** The Director or designee needs respond to the findings and observations within 30 days of receipt per QAP-18.1, *Audits and Surveillances*.