

## QUALITY ASSURANCE AUDIT REPORT

### NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE (NWRPO) AUDIT NUMBER NWRPO-01-2007

**Date:** April 11, 2007

**To:** David Swanson, NWRPO Quality Assurance Officer

**From:** Quality Assurance (QA) Audit Team

**SUBJECT:** Audit of Nye County NWRPO QA Program implementation and Early Warning Drilling Program (EWDP)-Well drilling activities.

**PURPOSE:** To verify that the requirements established by the NWRPO QA Program are being effectively implemented for the Nye County testing activities.

**SCOPE:** The audit included the total QA program implementation including the drilling operations and work activities conducted since the last QA Audit conducted March 27-29, 2006. The audit team members interviewed cognizant personnel, examined documentation, reviewed procedures, and evaluated procedure implementation to determine adequacy and effectiveness of compliance with NWRPO QA Program requirements.

**BACKGROUND:** The Nye County Independent Scientific Investigation Program which includes the EWDP, is intended to provide data on in situ permeability's and transport parameters of lithostratigraphic units in the vicinity of the proposed Yucca Mountain Nuclear Waste Repository. The EWDP is planned to be accomplished in phases with over 30 well drilling operations and locations as of this date. Final reports have been issued by Nye County on completed drilling operations. U.S. Department of Energy (DOE) personnel are located at the drilling sites to confirm the drilling process and sample collection. Core and drill cutting samples to be archived are directed to the DOE Sample Management Facility with chain of custody maintained. The QA Program is intended to ensure that scientific activities are conducted in a systematic manner, using documented instructions and procedures to ensure the validity, integrity, preservation, and retrievability of the data generated.

No wells have been drilled since the completion of EWDP-32P, which was finished April 25, 2006. Data is being taken from completed wells and entered into the QA database for analysis. Planning efforts have been focused on a proposed horizontal drilling program to obtain data on fluid flow through a fault zone

**SUMMARY:** The audit team determined that the Nye County QA Program requirements were being effectively implemented for the current scope of activities. No conditions adverse to quality were identified however, several recommendations (listed below) were made for consideration to clarify or enhance the QA program implementation.

**AUDIT TEAM MEMBERS:**

William Belke, QA Contractor Auditor  
Kenneth Hooks, QA Contractor Auditor

**DATE OF AUDIT:** March 19-20, 2007

**PERSONNEL CONTACTED:** D. Swanson, S. Dudley, K. Gilmore, L. Kryder, Judd Sampson, John Klenke, and J. Walker.

**AUDIT SCOPE:** In accordance with the audit plan, the following QA Program Plan (QAPP) sections were reviewed and the corresponding Quality Administrative Procedures (QAPs):

- 3.0 Design Control (Scientific Notebooks, Progress Reports)
- 5.0 Instructions, Procedures, and Drawings
- 6.0 Document Control
- 7.0 Control of Items and Services
- 12.0 Control of Measuring and Test Equipment
- 17.0 Quality Assurance Records

The audit team focused on the organizational responsibilities and QA elements associated with the implementation of the QAPP and related testing activities during this time frame. This included the procedural implementation and the necessary technical and scientific information of the testing activities. The audit team reviewed documentation retrieved from the QA Records Center (QARC).

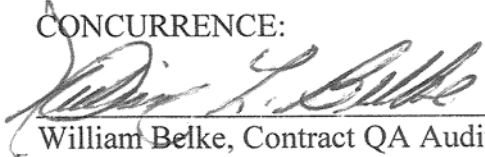
In accordance with the QA audit plan, the audit team developed and used formal checklists based on the applicable QAPP sections and technical procedures identified above, and the implementing QAPs. Checklists associated with this audit will be entered into the QA Records Center as a separate entity.

**OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS:**

1. During the last year's audit, it was noticed that NWRPO has also conducted surveillances during visits to the various drill sites and for work activities. These surveillances are being conducted by personnel independent of those directly responsible for performing the actual work. It is again recommended that consideration be given to posting these documented surveillances in addition to the formal QA audits and surveillances, on the Nye County web site. This would lend additional confidence to users of Nye County data, that independent oversights are being conducted to assure that Nye County is effectively implementing its QA program.
2. The qualifications (resumes) and training records for the two newest NWRPO personnel, John Klenke and Judd Sampson, were reviewed and determined to be satisfactory. The available position descriptions (general written descriptions of roles and responsibilities) were those used in hiring personnel, and did not appear to meet the requirements, in all respects, of Paragraph 1.5, "Personnel Qualifications and Training" of QAPP Rev. 4, June 2003. The auditors suggested that another version be developed for internal use which would be regularly reviewed to include current information.
2. The Field Change Approval Forms (TP-7.0, Paragraph 5.2) for abandonment of NC-EWDP-24PA and its replacement by NC-EWDP-24PB were compared to the appropriate Scientific Notebooks (SNs) to establish a complete time line for the change. Although the form was revised 5/1/06 to include the initiation date, in response to a recommendation from the previous audit, the auditors determined that more information in the SN's about when and by whom the decisions were made would be useful.
4. The Transfer of Custody Form for drill cuttings samples from various depths of NC-EWDP-24PA were reviewed and appeared to meet the requirements of TP-8.0, Rev. 5, Paragraph 5.2.6.3. The transfer system in use appears to be adequate to achieve and demonstrate appropriate control of the chain of custody.
5. The ISIP Monthly Progress Report which is issued to the QA auditors through the E-Mail system, is one of several monthly Progress Reports issued by NWRPO. This report is reviewed and commented upon prior to release, but not signed, dated, approved etc., as are other Progress Reports. The auditors recommend that this useful report is documented or the report title is changed, perhaps to "Activities Report."


**EXIT SUMMARY:** During the exit meeting, the audit team expressed their appreciation for the cooperation and responsiveness from all personnel during the audit. The QA Records Specialist was extremely knowledgeable in retrieving all the requested information in a timely manner to assist the audit effort in a productive manner.

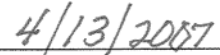
CONCURRENCE:

  
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William Belke, Contract QA Auditor



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DATE

  
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Kenneth Hooks, Contract QA Auditor



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DATE

cc: Nye County Commissioners  
D. Swanson  
S. Dudley  
K. Gilmore  
L. Kryder  
J. Sampson  
J. Klenke  
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