NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

QUALITY ADMINISTRATIVE PROCEDURE

TITLE: **Documentation of Technical Investigations**	REVISION: **2** DATE: **3-31-04** PAGE: **1 of 7**
PROCEDURE NUMBER **QAP-3.2**	SUPERSEDES **Revision 1, 6-15-01**
APPROVAL 4-5-04 Project Manager Date	CONCURRENCE 3/31/04 On-Site Geotechnical Representative Date 3/28/04 Quality Assurance Officer Date

1.0 PURPOSE

This quality administrative procedure (QAP) describes Nye County Nuclear Waste Repository Project Office (NWRPO) requirements and responsibilities for the documentation of quality-affecting technical investigations.

2.0 APPLICABILITY

This QAP applies to all field or laboratory data collection conducted in support of NWRPO technical programs.

3.0 DEFINITIONS

3.1 ***Progress report***—a report prepared on a regular basis for all quality-affecting technical investigations (e.g., the monthly report submitted by a contractor).

3.2 ***Quality administrative procedure***—a procedure developed to implement the quality assurance (QA) requirements described in the QA Program Plan (QAPP).

3.3 ***Quality Assurance Program Plan***—the controlled plan that outlines the NWRPO QA requirements, which are based principally on the applicable portions of the requirements set forth by the U.S. Nuclear Regulatory Commission and the American National Standards Institute for nuclear power plants, as adapted for a nuclear waste repository.

3.4 ***Scientific form***—a controlled form used to manually record data and selected supporting information during routine technical activities. All scientific forms are defined and contained in QA documents.

3.5 ***Scientific notebook***—a controlled notebook used to record activities in the field or laboratory. In most cases scientific notebooks are used to record data or tasks not easily recorded on forms (e.g., environmental conditions or equipment issues).

3.6 ***Technical report***—a report presenting the methods and results of an NWRPO technical activity prepared at the conclusion of an investigation or phase, annually, or when an ongoing investigation produces observations that need to be made available quickly to others such as the U.S. Department of Energy or the technical community.

4.0 RESPONSIBILITIES

The Project Manager (PM) or designee, On-Site Geotechnical Representative (OSGR), and QA Officer (QAO) are responsible for approving technical and progress reports.

4.1 Project Manager

The PM or designee is responsible for specifying the frequency and distribution of contractor progress reports.

4.2 Quality Assurance Officer

The QAO is responsible for the ensuring the following:

- Scientific forms and notebooks, progress reports, and technical reports are prepared according to the requirements of this QAP.
- Independent technical reviews are conducted in accordance with QAP-3.1, *Independent Technical Review*.
- Appropriate records packages from independent technical reviews are submitted to the QA records center (QARC).

4.3 On-Site Geotechnical Representative

The OSGR is responsible for the following:

- Assigning technical reports and delivery dates to the Principal Investigator (PI).

- Supervising and participating in the independent review of technical reports.
- Determining whether a scientific notebook requires an independent technical review and participating in any subsequent review.
- Approving the content of a technical report for outside publication, such as a peer-reviewed journal.

4.4 Principal Investigator

The PI is responsible for the following:

- Ensuring that activities are documented in scientific forms and notebooks as required by this QAP.
- Ensuring that custody is maintained for all information until scientific forms notebooks and other supporting material are submitted to the QARC.
- Completing assigned progress and technical reports for project activities on schedule using NWRPO technical report format.
- Ensuring that progress and technical reports are clear, concise, and technically defensible.
- Ensuring that independent internal reviews directed by the OSGR are completed according to QAP-3.1.

5.0 PROCESS

5.1 Scientific Forms

Scientific forms shall facilitate the manual recording of repetitive measurements and/or observations in the field or laboratory and, if applicable, the subsequent transfer of these records to electronic media (i.e., a spreadsheet or database). Scientific forms shall be assigned a unique identification number that includes the date, a reference to the NWRPO QA plan or procedure in which the form is defined, and a revision number.

A scientific form may be revised independently of the QA document to which it applies. All current scientific forms shall be stored in a controlled binder in the QARC; previous versions of the forms shall be archived in the QARC.

Data and supporting information shall be recorded according to instructions on the scientific form and/or the appropriate QA document. At a minimum, scientific forms shall contain the following information:

- Descriptive title and unique identification number.
- Name or initials of technical personnel recording the form information.
- Date and time, as required, of the activity.

Custody shall be maintained for all scientific forms during data-collection activities and completed forms shall be transferred to a holding file at the QARC weekly or at the end of the activity, whichever occurs first. Forms in the holding file shall be reviewed and checked by the PI or designee before being formally submitted to the QARC.

5.3 Scientific Notebooks

Scientific notebook shall be bound or consist of consecutively numbered pages in loose-leaf binders. Notebooks shall generally be used for a single activity (e.g., groundwater sampling) and may include associated electronic records. NWRPO personnel shall request and obtain a notebook for an intended field activity before the activity is initiated. The title of the notebook shall reflect the activity for which it applies.

Scientific notebooks shall include the following types of data:

- A chronology of drilling, logging, well completion, aquifer testing, groundwater sampling, and manual water-level monitoring.
- A description of the downloading of electronic water-level monitoring data (i.e., Westbay® instrumentation) and equipment installation, maintenance, and field calibration.

At a minimum, scientific notebooks shall include the following information:

- A unique identification number issued by the QARC and written on the notebook with indelible ink.
- A table of contents for the major sections within the notebook, usually on the first page. The table of contents shall note the date, title of the specific task being performed, and page number for each entry.
- The name of the individual recording the entry, the date, the title of the activity, applicable test plans and procedures(s), and a description of the work.

All supplemental material (e.g., maps, photographs, videotapes, charts, graphs, or electronic files) relevant to a scientific notebook shall be fully referenced and display the notebook identification number and title.

Entries in scientific notebooks shall be recorded according to the following requirements:

- Information shall apply solely to the activity for which the notebook is intended.
- Entries shall be made in reproducible, preferably black, indelible ink, and signed and dated at the end of each task or workday.
- When two or more individuals record entries in the same notebook, they shall date and sign their own entry.
- Each notebook page shall be filled completely, unless space must be reserved for future entries; such spaces shall be clearly labeled and filled before the notebook is submitted to the QARC.

- When the notebook is deemed complete, personnel shall void blank spaces by drawing a diagonal line through the space and signing and dating the line.
- Entries shall be recorded in sufficient detail for qualified individuals to repeat the work and achieve comparable results or use the data without access to the original investigator.
- Data that could impact the health, safety, environment, or overall well-being of Nye County residents shall be identified, where possible.

Scientific notebook corrections shall be made in the following manner:

- For minor changes, the section to be revised shall be crossed out with a single line and the revision inserted on the same page, with arrows pointing to the insertion.
- For more extensive changes, revisions shall be made elsewhere in the notebook and the reader shall be directed to the revised text by page number.
- All revisions shall be initialed and dated in the margins.

A scientific notebook shall be submitted to the QARC when filled or the activity for which it was issued has been completed.

5.2 Progress Reports

NWRPO progress reports shall be written clearly and logically enough so that a qualified individual can review and understand the report without access to the author. Monthly progress reports, which facilitate NWRPO project tracking, shall include the following:

- Headers on each page that clearly identify the project title, author, responsible PI, and reporting period. Each page shall also contain the report completion date, page number, and total number of pages for the report.
- A summary statement that provides the status of the overall project and notes any variances from approved plans or anticipated changes in the completion of project tasks.
- A description of activities completed during the reporting period.
- An identification of problems or anticipated problems, especially those affecting the quality or timeliness of the work or those that require management support.
- A list of activities to be undertaken during the next reporting period.
- Signatures of the report author, PI, OSGR, QAO, and PM or designee, indicating approval and/or acceptance of the report.

5.4 Technical Reports

NWRPO technical reports shall be written clearly and logically so that a qualified individual can review and understand the report without access to the author.

Draft reports shall conform to NWRPO technical report format, with the word "draft" on each page. Draft reports shall be informally reviewed and revised as necessary before submittal for the independent technical review specified in QAP-3.1.

At a minimum, technical reports shall include the following:

- A table of contents.
- An introduction, summarizing background information, citing relevant documents, and including the purpose and scope of the report.
- Data and data-collection approach and methods.
- Data analyses and results.
- Conclusions and recommendations.
- References.
- Figures and tables.
- Suitably referenced calculations used as input data.

All drawings, illustrations, tables, and calculations shall be numbered, referenced, and sufficiently captioned to be understood if removed from the context of the report. Backup information shall be readily available in the QARC or accessible from original sources, using the citation provided in the references section of the report. Sources shall be limited to published technical and QA documents or documented personal communications.

Potential sources of error in data and analyses, including data accuracy and precision, shall be included where possible. In addition, the impact of these errors on results and conclusions shall be discussed. The author shall identify assumptions, scientific judgments, or data that are expected to be verified in future by anticipated additional data or methods of analysis as they become available.

6.0 RECORDS

Documents generated by this QAP are QA records and shall be submitted to the QARC by the PI and QAO. Prior to submittal, the QAO shall ensure that each document is complete, legible, and adequately identifiable, as specified in QAP-17.1, *Records Management*.

The QA records generated by this QAP include the following:

- Reviewed and approved scientific notebooks and forms, technical reports, and monthly progress reports.
- Supporting source material (e.g., references) for technical and progress reports and scientific notebooks not readily available from the original source.
- When appropriate, documentation of the review process, as described in QAP-3.1.

7.0 REFERENCES

QAP-3.1, *Independent Technical Review*.

QAP-17.1, *Records Management*.

QAPP, *Nye County Nuclear Waste Repository Project Office Quality Assurance Program Plan.*

8.0 ATTACHMENTS

Not applicable.