



**NYE COUNTY NUCLEAR WASTE
REPOSITORY PROJECT OFFICE**

QUALITY ADMINISTRATIVE PROCEDURE

TITLE: Sample Management		REVISION: 1 DATE: 3-31-04 PAGE: 1 of 4
PROCEDURE NUMBER: QAP-8.1	SUPERSEDES: Revision 0, 9-30-95	
APPROVAL <i>Dino Swann</i> 4-5-04 Project Manager Date	CONCURRENCE <i>Dale Hammermeister</i> 3/31/04 On-Site Geotechnical Representative Date <i>Bill Murray</i> 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 ensuring that samples collected for NWRPO technical programs are properly identified, handled, packaged, stored, and preserved and that the data produced from the samples are of the highest quality and accepted as such by the technical community and the public.

2.0 APPLICABILITY

This QAP applies to the management of samples collected for NWRPO technical programs.

3.0 DEFINITIONS

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

- 3.2** *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.
- 3.3** *Sample management*—a documented method to ensure that samples are appropriately handled to preclude damage or loss, identified, preserved, transferred with traceable documentation, stored, and disposed of, when appropriate.
- 3.4** *Sample*—Water, soil, rock, gas, or any other material collected for geologic, hydrologic, or water quality investigations.

4.0 **RESPONSIBILITIES**

4.1 **Project Manager**

The Project Manager (PM) or designee is responsible for approving sample management requirements for NWRPO technical programs.

4.2 **Quality Assurance Officer**

The QA Officer (QAO) is responsible for ensuring, through surveillances and audits, that sample management activities are conducted in compliance with this QAP.

4.3 **On-Site Geotechnical Representative**

The On-Site Geotechnical Representative (OSGR) is responsible for reviewing and concurring on sample management requirements and implementing them in NWRPO technical programs.

4.4 **Principal Investigator**

The Principal Investigator (PI) is responsible for defining sample management methods in appropriate work plans (WPs), test plans (TPNs), and technical procedures (TPs) and ensuring that the requirements specified in these QA documents are implemented in NWRPO technical programs.

5.0 **PROCESS**

Samples collected by NWRPO personnel shall be identified and managed throughout their life cycle as specified in applicable WPs, TPNs, and TPs. These QA documents shall define the responsibilities, interface between organizations, methods, and procedures for the following:

- Sample collection and preservation.
- Sample identification and traceability.

- Distribution of sub-samples for archiving and analyses by the NWRPO or other agencies.
- Sample transport and storage.
- Disposition of NWRPO sub-samples at the end of their life cycle.
- The generation of associated records.

5.1 Sample Collection, Handling, Transport, and Storage

WPs, TPNs, and TPs shall include, as appropriate, measures to be taken during sample collection, handling, and transport to preclude damage or loss and minimize deterioration of the sample during storage. Samples collected for NWRPO technical programs generally fall into the following categories:

- Water sample: groundwater sample collected from boreholes or surface water sample.
- Soil sample: loose (i.e., unconsolidated), near-surface solid material consisting mainly of weathered mineral matter and decomposed organic matter.
- Rock sample: solid geologic material obtained from the ground surface or by drilling and/or coring into subsurface geologic formations.
- Gas sample: gas associated with the soil, rock or water in the subsurface.

WPs, TPNs, and TPs shall also describe appropriate time constraints for perishable samples and other environmental or safety considerations for the materials. In addition, measures shall be specified to avoid cross-contamination during handling and storage (e.g., storing analyzed samples separately from unanalyzed ones). Special storage environments (e.g., relative humidity and temperature levels) shall be consistent with planned sample use and the maximum life expectancy of the sample.

5.2 Sample Identification and Chain of Custody

Identification systems shall be specified in applicable WPs, TPNs, and TPs to ensure the traceability of samples from initial acquisition through final disposition and correct sample identification. Identification data shall include the sampling date, exact location of origin, and intended use of the sample.

Custody is defined as the current possession and control of a sample. Chain of custody denotes the procedural steps that ensure that a sample has remained in the custody of one individual and/or organization from initial collection to final disposition. There are two types of custody, which are defined in the following:

- Personal custody: The sample is always in the possession of a trained individual (e.g., an NWRPO contractor). The individual is responsible for preserving and transporting the sample, as required, and ensuring that the sample is not tampered with and is secured until it is transferred with chain-of-custody documentation.

- **Organizational custody:** Organization custody is similar to personal custody, except that when the sample is transferred to a staff member of a sample management and control facility, the responsibility for and custody of the sample are transferred to that organization. This type of custody requires an organization that is operated by a trained staff, with secured facilities and controlled access. The staff member who accepts custody of a sample is not required to be the one who releases custody of that sample.

Chain of custody shall be maintained and unidentified samples shall be disposed of, as specified in applicable WPs, TPNs, and TPs. If multiple organizations are involved with NWRPO samples, the appropriate QA document shall describe interface and custody responsibilities. Sample identification shall be verified and maintained when the samples are transferred via chain of custody.

6.0 RECORDS

Sample management records are generated by applicable WPs, TPNs, and TPs; no records are directly generated for this QAP.

7.0 REFERENCES

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

8.0 ATTACHMENTS

Not applicable.