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LANL-YMP-QP-08.1, R2  
PAGE 1 OF 6

# IDENTIFICATION AND CONTROL OF SAMPLES

## APPROVALS

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**Los Alamos**  
Yucca Mountain Site  
Characterization Project

## HISTORY OF REVISIONS

REVISION NO.	EFFECTIVE DATE	PAGES REVISED	DESCRIPTION OF CHANGES
R0		N/A	NOT APPLICABLE.
R1	10/10/89	N/A	NOT APPLICABLE.
R2	2/28/92	ALL	COMPLETE REWRITE.

## IDENTIFICATION AND CONTROL OF SAMPLES

### 1.0 PURPOSE

This procedure states the methods for identifying, tracking, controlling, documenting, handling, storing, and shipping Los Alamos National Laboratory (Los Alamos) Yucca Mountain Site Characterization Project (YMP) samples.

### 2.0 SCOPE

This procedure applies to all Los Alamos YMP personnel and Los Alamos YMP subcontractors who conduct scientific investigations and the samples used for scientific investigations.

### 3.0 REFERENCES

TWS-QAS-QP-03.5, Procedure for Documenting Scientific Investigations  
LANL-YMP-QP-16.3, Deficiency Reports  
AP-6.3Q, Interaction of Participants and Outside Interests with Yucca Mountain Project Sample Management  
AP-6.4Q, Procedure for the Submittal, Review, and Approval of Requests for Yucca Mountain Project Geologic Specimens

### 4.0 DEFINITIONS

#### 4.1 Curation

Curation is the process of safely storing a sample and its associated documentation.

#### 4.2 Sample

A sample is part of a population whose physical properties are studied to gain information about the entire population. Samples are geological or biological materials intended for laboratory studies or analysis as part of YMP site characterization investigations. For Los Alamos purposes sample is synonymous with specimen.

#### 4.3 Sample Management Facility (SMF)

The SMF is a Project Office facility designed to process, control, and preserve collected samples. It is located in Area 25 of the Nevada Test Site.

#### 4.4 Sample Overview Committee (SOC)

The SOC is a committee that evaluates an investigator's request to acquire a sample from the SMF. The SOC consists of representatives from the YMP.

## 5.0 RESPONSIBILITIES

The following employees are responsible for activities identified in Section 6.0 of this procedure

- Los Alamos investigator
- SOC representative

## 6.0 PROCEDURE

### 6.1 Sample Origination

Sample collection and identification must be adequately documented to permit tracking a sample and its derivatives from its original location, through an analytical or other processing, to its present location or final disposition.

#### 6.1.1 Field Collection of Samples

6.1.1.1 The methods for collecting a sample in the field must meet the technical objectives of the study plan and use the appropriate equipment and techniques.

6.1.1.2 The collection of the sample and the original field location must be documented in a Los Alamos YMP notebook or other appropriate documents (e.g. SMF Sample Collection Form).

6.1.1.3 The SMF provides barcode labels for use with collected samples. The investigator acquires and uses these labels according to AP-06.4Q. However, investigators may use their own identifier providing they maintain traceability to the SMF number through a Los Alamos YMP log or notebook according to QP-03.5. Processed derivatives do not need SMF barcodes but must be traceable to the original sample.

#### 6.1.2 Examining and Securing Samples from the SMF

All Los Alamos investigators who examine and/or secure samples from the SMF must be trained to AP-06.3Q and AP-06.4Q.

**NOTE:** Training assistance, copies of the required documentation forms, and guidance concerning sampling issues are available from the EES-13 group office and the Los Alamos SOC representative.

#### 6.1.3 Samples Produced in the Laboratory

A sample synthetically produced in the laboratory is documented in a Los Alamos YMP notebook or log.

#### 6.1.4 Samples Received From Other Investigators

A sample received from another investigator is documented in a Los Alamos YMP notebook or log by the Los Alamos investigator if it will be used for quality affecting work.

### 6.2 Sample Identification

6.2.1 Investigators label a sample by placing a unique identifier on the sample or its container.

6.2.2 The investigators may not use a sample for quality affecting work if sample that has lost its traceability to a unique identifier and traceability can not be reconstructed. If this condition occurs, a deficiency report is filed according to QP-16.3.

### 6.3 Sample Storage

6.3.1 Investigators are responsible for sample curation whenever they collect, produce, or receive a sample.

6.3.2 Investigators may store a sample at Los Alamos or at a Los Alamos subcontractor facility providing they have a Los Alamos procedure for sample curation.

6.3.3 Investigators must store a sample under physical conditions that are appropriate for the sample's intended purpose and expected maximum storage life.

6.3.4 Whenever a sample is stored at Los Alamos or a Los Alamos subcontractor facility, the investigator must document in a log or YMP notebook the analytical history and chain of custody of a sample.

6.3.5 If a sample deteriorates, or is consumed the investigator records that information in a YMP notebook or log.

6.3.6 The investigator identifies as appropriate the methods of cleaning a sample in a Los Alamos procedure or YMP notebook entry.

### 6.4 Sample Handling and Shipping

6.4.1 Investigators identify container requirements, methods of handling, environmental or safety considerations, or other items of concern in a procedure, notebook, or log entry.

6.4.2 When a sample is transferred to another location, the investigator documents the move in a log or YMP notebook.

6.4.3 Investigators determine whether any samples received at Los Alamos are unacceptable for the purpose for which they were requested. Samples that have been damaged or have deteriorated may be returned to the sender with documentation of how the sample was received. Investigators record return of samples to a sender in a YMP notebook or log.

## 6.5 Sample Archives

6.5.1 The investigator determines when archival storage is appropriate for samples that will no longer be used for study on the YMP.

6.5.2 To archive the sample at Los Alamos, the investigator follows a Los Alamos procedure for curation.

6.5.3 To send the sample for archival at the SMF, the investigator follows AP-06.3Q.

## 7.0 RECORDS

The following records result from this procedure.

- Notebook and log entries (controlled by QP-03.5)

## 8.0 ACCEPTANCE CRITERIA

Entries in Los Alamos YMP notebooks and logs documenting identification and chain of custody of samples used at Los Alamos constitutes the acceptance criteria for this procedure.

## 9.0 TRAINING REQUIREMENTS

Employees listed in Section 5.0, who conduct the actions listed in Section 6.0, must train to this procedure.

NOTE: Personnel interacting with the SMF must also be trained to the appropriate YMP Administrative Procedures (e.g., AP-06.3Q, AP-06.4Q).

## 10.0 ATTACHMENTS

None