TABLE OF CONTENTS
FOR
ENVIRONMENTAL MANAGEMENT DEPARTMENT
ADMINISTRATIVE PROCEDURES MANUAL

Procedure No.	Title	Rev. No.	Effective Date
RPD.04	How to Prepare Statements of Work		
RPD.05	Preparing, Processing and Classification of Documents to be Distributed to Outside Agencies		
RPD.06	Preparation of Closure Plans		
RPD.07	Preparation of Technical Evaluations		
RPD.08	How to Establish ARARs		
RPD.10	How to Prepare and Process Milestones		
RPD.11	Tracking Costs and Schedules		
RPD.12	Processing Procurement Documents		
RPD.13	Uniform Requirements for Submission of Plans and Documents by Contractors		
RPD.14	Coordination of Activities with Field Project Management (FPM) and Field Engineering (FE)		
RPD.15	Checklist for the Startup of New Projects		
RPD.16	Standardized Contractor Cost Reporting		
RPD.17	QA Guidelines for Treatability Studies		
RPD.18	QA Guidelines for Health and Safety Treatability Studies		
RPD.19	Cost Guidelines for Submission of Cost Evaluations and Technical Evaluations		
RPD.20	Checklist for Preparing Project Management Plans		

ENVIRONMENTAL MANAGEMENT DEPARTMENT ADMINISTRATIVE PROCEDURE MANUAL

NOT RELATED TO PLANT SAFETY

Category 1
EFFECTIVE: May 11, 1992

Approved By:

Director, Environmental Management 4/8/92 Date

TABLE OF CONTENTS

1 PURPOSE

This procedure establishes the Environmental Management (EM) Department requirements and methods for identifying and controlling items, samples, and data that affect quality. These methods are used to ensure that only correct and accepted items, samples, and data are collected, used or installed.

2 SCOPE

This procedure applies to all EM Department quality related items, samples, and data.

3 DEFINITIONS

3.1 **Analyte** - Chemical or physical measurement (e.g., chemical concentration, activity, porosity, grain size, pH).

3.2 **Chain-of-Custody (COC)** - A formalized system of creating an accurate written record to track possession of a sample from collection through analysis to final disposition.

3.3 **Data** - Measurements, observations, and the required supporting details. This typically includes hard copy or electronic data sheets, analytical reports, technical logbooks, and identity and qualifications of equipment (e.g., serial numbers, calibrations). Procedurally controlled sampling events produce data regardless of whether measurements or samples were obtained.

3.4 **Field Blank (FB)** - A standard matrix sample, to which no analyte of interest has been added, that is transported to the sampling site and back, to ensure that no contamination is introduced at collection. This sample may be opened near a sampling location or may be unopened, depending on the type of information desired.

3.5 **Field Data Record (FDR)** - A record completed in the field to record data, observations, and completion of an activity (e.g., data sheet).

3.6 **Field Duplicate (DUP)** - A split of one sample from a single site taken in the field and submitted to the same laboratory as a separate sample. The results act as an external check on the precision for sampling.

3.7 **Holding Time** - The maximum time that samples may be held before analysis and still be considered valid.

3.8 **Item** - An all-inclusive term that is used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system unit, and prototype hardware. This term includes magnetic media and other materials that retain or support data. In this procedure, the term "item" refers only to quality affecting items. Samples and data are items.

3.9 **Laboratory Blank** - A blank containing a full aliquot of deionized water processed in the same manner as the samples.

3.10 **Logbook** - A bound notebook that is a quality-related record containing measurements, pertinent information, and data.

3.11 **Matrix Spike (MS)** - See Spiked Sample.

3.12 **Method Blank (MB)** - A standard matrix sample to which no analyte of interest has been added that is processed in the same manner as a collected sample to ensure that the method is valid and no contamination is introduced during the analysis.

3.13 **Preparation Blank** - Water that has been distilled in a tritium distillation apparatus, who activity is known historically and is used to assure that there is no carry-over or cross-contamination during the distillation step of the sample preparation.

3.14 **Quality Control (QC)** - The verification of compliance with a prescribed standard. This differs from quality assurance, which addresses and documents the process of achieving quality.

3.15 **Quality Control Sample** - A sample that is introduced into the process of environmental sampling to monitor the performance of the analytical system.

3.16 **Reagent Blank (RB)** - A reagent blank is processed in the same manner as the sample to ensure that no contamination is introduced by the reagents.

3.17 **Rocky Flats Environmental Database RFEDS** - The database where the EM environmental data is stored.

3.18 **Sample** - Physical evidence collected from a facility or the environment.

3.19 **Sample Tag/Label** - An identification tag/label attached to each sample that records specific and unique information necessary to identify this sample and provides any required information or warnings. Identification labels are not QA Records.

3.20 **Spiked Sample (MS)** - A sample to which a known amount of analyte(s) is added and is carried through the complete analytical method.

3.21 **Split Sample (SPL)** - A representative split of one sample from a single site taken in the field and submitted to different laboratories as separate samples. The results act as an external check on laboratory performance.

3.22 **Trip Blank (TB)** - A sample to which no analyte of interest has been added and which is introduced into the sampling and analyzing process to determine if sample contamination is due only to sample transport from the field to the laboratory.

4 RESPONSIBILITIES

4.1 The Quality Assurance Program Manager (QAPM) is responsible for oversight in implementation of this procedure.

4.2 The Responsible Division Manager controls items, samples and data.

4.3 The RFEDS Database Administrator controls sample number and location naming conventions.

5 INSTRUCTIONS

5.1 Physical Identification

5.1.1 Applicable items shall be uniquely identified and controlled at all times throughout their useful lives. Disposition of items is addressed later in this procedure. Examples of such items include:

- Reagents
- Standard Reference Materials
- Air particulate filter papers
- Any items with shelf lives
- All measurement and test equipment (M&TE)
- Environmental samples
- Environmental analytical data

5.1.2 Work plans or procedures shall require identification of items prior to use.

5.1.3 Sample identification shall be placed directly on the sample or sample container and on records traceable to the samples. Each container shall not have redundant labels.

5.1.4 Information on sample labels must include the unique sample identifier and requested analysis as specified in Appendix A, and may include:

5.1.4.1 Location Number - a unique location code.

5.1.4.2 Indication of whether "physical or chemical treatment" was required and whether or not it was completed (i.e., a "yes" or "no").

5.1.4.3 Date and time - A six-digit number indicating the month, day, and year of collection (e.g., January 13, 1990 is 01-13-90); and a four-digit number indicating the 24-hour time of collection (e.g., 4:29 pm is 1629.

5.1.4.4 Sampler(s) signature or initials.

5.1.4.5 Remarks.

5.1.5 Sample labels for SPLs or DUPs shall have the same sample number with a unique identifier added. The original sample shall be identified as "REAL" and any subsample shall be identified as SPL or DUP.

5.1.6 All data used on the label shall be entered into an electronic format and provided to RFEDS for tracking and storage.

5.1.7 To prevent damage to an item, all methods of identification and/or control shall be compatible with the item to which they are applied. Environmental conditions shall also be taken into account to avoid loss or damage to the label. Special care shall be taken to avoid contamination of instruments and samples when using labels containing adhesives.

5.1.8 Document control shall assign unique logbook identifiers for all logbooks containing quality affecting data.

5.1.9 The individual to whom a logbook is assigned shall ensure the following information is recorded in the logbook prior to initial use:
5.1.9.1 Logbook identifier
5.1.9.2 Assignee's name
5.1.9.3 Initiation date
Leave a space for completion date at the beginning of the logbook.

5.1.10 Photographs taken to enhance field or laboratory work shall be uniquely identified to correlate to logbook entries, Field Data Records (FDRs), or other related documents.

5.2 Inventory

5.2.1 All quality affecting items shall be tracked. Such items include:

5.2.1.1 Items requiring special handling, such as samples requiring controlled temperature.

5.2.1.2 Samples required for compliance reporting.

5.2.1.3 Measurement and test equipment.

5.2.2 Unique item identifiers shall be recorded. Unique sample numbers shall be recorded in the sample collection logbook and/or FDRs and shall be entered into RFEDS.

5.2.3 Measurement data may be recorded directly in logbooks, on FDRs, or other media specified by a procedure.

5.2.4 Tracking records for items with a finite shelf life shall include an expiration date. For working solutions, the expiration date may be indicated on the container rather than in separate tracking records.

5.3 Control and Custody

5.3.1 Custodians and locations of items shall be designated and tracked (i.e., recorded and maintained current) for all items from acquisition of the item through disposition of the item. Custody may be transferred.

5.3.2 A sample is considered to be in an individual's custody if the sample is:

5.3.2.1 In the physical possession of the responsible party, or

5.3.2.2 In one's view after being in one's physical possession, or

5.3.2.3 Secured to either prevent tampering or assure notification of tampering.

5.3.2.4 Laboratory COC procedures shall be reviewed, approved, and verified by the QAPM.

5.3.3 The control of samples shall be documented on a Chain-of-Custody (COC) form from the time of collection through all transfers of custody (including analytical labs) until its final disposition/disposal.

5.3.4 If a sample under COC is split, a new COC form shall be established for this sample, and the splitting of the original sample shall be documented on both the original COC and on the new COCs.

5.3.5 All data used on the field COC must be entered into an electronic format and provided to the RFEDS group for tracking and storage.

5.3.6 Data control systems shall:

5.3.6.1 Provide protection of data against damage, loss, or tampering.
5.3.6.2 Provide retrieval of data with identifying information.
5.3.6.3 Ensure data integrity and preclude overwriting, deletion, or loss of raw data.
5.3.6.4 Provide for the revision of data.

5.3.7 Logbook entries shall be signed and dated at least once on every page. Entries should be made using permanent waterproof ink.

5.3.8 If a logbook is typically used by only one person, then any other individual making an entry into this logbook shall clearly identify their entries.

5.3.9 When the logbook or the work is completed, the assignee shall make a final entry into the logbook indicating that this is the final entry, and should reference other related logbooks.

5.3.10 Data records acquired under the control of QA procedures are QA records and shall be transmitted to the records center. FDRs shall be transmitted per 5-21000-OPS-FO.02, Transmission of Field QA Records.

5.4 Disposition

5.4.1 Procedures or instructions shall be prepared for the disposal of expired items. **If an item becomes hazardous after its shelf life has expired (e.g., ether), the procedure shall specify positive safety controls.**

5.4.2 Data shall be identified and authenticated in accordance with 3-21000-ADM-17.01, Quality Assurance Records Management, prior to distribution to persons other than plant employees.

6 RECORDS

This procedure does not create records in and of itself. Rather the records are created in other procedures.

7 REFERENCES

7.1 Environmental Management Department Quality Assurance Program Description, 21000-QAPD.

7.2 EMD Administrative Procedure 3-21000-ADM-17.01, Records Management.

7.3 EMD Operations Procedure 5-21000-OPS-FO.02, Transmission of Field QA Records.

APPENDIX A

CONVENTION FOR UNIQUE SAMPLE IDENTIFIERS

Unique sample identifiers shall consist of the following fields and allowed values. If there is no applicable code, contact the RFEDS Database Administrator to obtain the appropriate code.

Sample number: XXYYZZZZZCC

XX = sample type

AR - air monitoring	SW - surface water
BI - biological/biota	SS - surficial soil
BH - borehole	ST - Storm event
GW - groundwater	TR - soil trench
SD - sediment	YW - surveillance surface water

YY = last two digits of year

ZZZZZ = consecutive number

CC = contract identifier

EB - EBASCO	ST - Stoller
CH - CH2MHill	WC - Woodward Clyde
IT - International Technologies	WS - Weston
RE - Riedel	

Analysis method: AAAA

AAAA - method code or bottle identifier
(Obtain this code from the applicable procedure or datasheet, your supervisor, the Project Manager, or contact RFEDS Database Administrator.)

Field QC code: QQQQ

QQQQ - field quality control code
- REAL - actual sample
- NONE - no sample taken
- DUP - duplicate
- ER - equipment rinse
- FB - field blank
- LR - Lab rinse
- MS - matrix spike
- MSD - matrix spike duplicate
- RNS - rinse
- SPL - split
- TB - trip blank