

**ROCKY FLATS ENVIRONMENTAL
TECHNOLOGY SITE
ERPD OPERATING
PROCEDURES MANUAL
VOL I: FIELD OPERATIONS**

**Manual No.: 5-21000-OPS-FO
Procedure No.: Table of Contents, Rev 89
Page: 1 of 2
Effective Date: 12/06/96
Organization: Environmental Restoration**

THIS IS ONE VOLUME OF A FIVE VOLUME SET WHICH INCLUDES:

VOLUME I: FIELD OPERATIONS (FO)

VOLUME II: GROUNDWATER (GW)

VOLUME III: GEOTECHNICAL (GT)

VOLUME IV: SURFACE WATER (SW)

VOLUME V: ECOLOGY (EE)

TABLE OF CONTENTS FOR VOLUME I: FIELD OPERATIONS

Procedure No.	Title	Rev. No.	Effective Date
•FO.01	Air Monitoring and Dust Control	2	05/12/92
96-DMR-RMRS-0105	Make procedure current to the RFETS Management, better define how work is conducted in the field	2	12/6/96
FO.02	94-DMR-000563 - Cancellation of Transmittal of QA Records	3	04/15/94
FO.03	Field Decontamination Operations	2	05/12/92
94-DMR-001021	Section FO.03 Text Addition	2	05/26/94
94-DMR-001224	Equipment Decontamination Location Adjustment	2	07/15/94
95-DMR-000096	Quality Control Samples	2	02/16/95
4-S02-ENV-OPS-FO.04	Decontamination of Equipment at Decontamination Facilities	3	04/20/95
4-H66-ER-OPS-FO.05	Handling of Purge and Development Water	3	06/30/95
FO.06	Handling of Personal Protective Equipment	2	05/12/92
FO.07	Handling of Decontamination Water and Wash Water	2	05/12/92
4-K56-ENV-OPS-FO.08	Monitoring and Containerizing Drilling Fluids and Cuttings	3	04/17/95
95-DMR-000331	Text Modification	3	05/22/95
FO.09	Handling of Residual Samples	2	05/12/92
96-DMR-RMRS-0116		2	12/6/96
4-K55-ENV-OPS-FO.10	Receiving, Marking, and Labeling Environmental Materials Containers	3	04/17/95
95-DMR-000330	Text Modification	3	05/22/95
•FO.11	Field Communications	2	05/12/92
96-DMR-RMRS-0106	Make procedure current to the RFETS Management	2	12/6/96
FO.12	Decontamination Facility Operations	2	05/12/92
94-DMR-002244	Change of Decontamination Site for Field Equipment	2	12/22/94

**ROCKY FLATS ENVIRONMENTAL
TECHNOLOGY SITE
ERP OPERATING
PROCEDURES MANUAL
VOL I: FIELD OPERATIONS**

**Manual No.: 5-21000-OPS-FO
Procedure No.: Table of Contents, Rev 89
Page: 2 of 2
Effective Date: 12/06/96
Organization: Environmental Restoration**

Procedure No.	Title	Rev. No.	Effective Date
FO.13	Containerization, Preserving, Handling and Shipping of Soil and Water Samples	2	05/12/92
93-DMR-000530	Section FO.13 Modification	2	11/04/93
93-DMR-000667	Section FO.13 Modification	2	11/20/93
94-DMR-000143	Composite Sampling Clarification	2	02/11/94
94-DMR-001670	New Statement of Work	2	09/15/94
4-B29-ER-OPS-FO.14	Field Data Management	3	09/09/94
95-DMR-000097	Revision of Form FO.14L	3	02/16/95
FO.15	Photoionization Detectors and Flame Ionization Detectors	2	05/12/92
95-DMR-000098	Change to Form FO.15A	2	02/16/95
FO.16	Field Radiological Measurements	2	05/12/92
95-DMR-000099	Editorial Correction to Form FO.16B	2	02/16/95
FO.17	Main DECON Facility Normal Operations	0	
FO.18	Environmental Sample Radioactivity Content Screening	1	05/12/92
95-DMR-000100	Change to necessary forms for FO.18A & FO.18B	1	02/16/95
FO.19	Base Laboratory Work	2	05/12/92
4-Q68-ENV-OPS-FO.20	Sampling Environmental Media Containers	0	09/23/96
4-F99-ENV-OPS-FO.23	Management of Soil and Sediment Investigative Derived Materials (IDM)	1	09/11/95
4-B11-ER-OPS-FO.25	Shipment of Radioactive Materials Samples	0	12/01/93
4-BO1-ER-OPS-FO.27	Collection of Floor/Equipment Hot Water Rinsate Samples	0	07/26/93
4-H46-ENV-OPS-FO.29	Disposition of Soil and Sediment Investigation-Derived Materials	0	06/24/94
94-DMR-001226	Allowance of Procedural Use for Waste Piles	0	07/15/94
94-DMR-001741	Permission of Use of Computer-Generated Forms and Other Minor Corrections	0	10/07/94
4-I11-ER-OPS-FO.30	Environmental Restoration Program Division Equipment Operation	0	10/07/94
4-J39-ENV-OPS-FO.47	Disposal of Residual Accuvac™ Reagent Ampules	0	02/14/95

FO.31-FO.39 have been incorporated into the OU1 Specific Operating Procedures Manual.
FO.43 has been incorporated into the OU2 Specific Operating Procedures Manual.

SUPERSEDED DOCUMENT

AIR MONITORING AND DUST CONTROL

RFETS

EG&G ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP

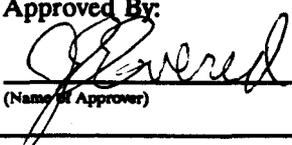
Manual:
Procedure No.:
Page:
Effective Date:
Organization:

5-21000-OPS
FO.1, Rev. 2
1 of 7
March 1, 1992
Environmental Management

Category 2

TITLE:
AIR MONITORING AND
DUST CONTROL

Approved By:


(Name of Approver)

5/19/92
(Date)

1.0 TABLE OF CONTENTS

1.0	TABLE OF CONTENTS	1
2.0	PURPOSE AND SCOPE	2
3.0	RESPONSIBILITIES AND QUALIFICATIONS	2
4.0	REFERENCES	2
4.1	SOURCE REFERENCES	2
5.0	PREREQUISITES	3
6.0	PROJECT MANAGER RESPONSIBILITIES	5
6.1	MEASURE WIND SPEED	5
6.2	MEASURE SOIL MOISTURE CONTENT	5
6.3	MEASURE AIRBORNE DUST CONCENTRATIONS	6
6.4	COLLECTION OF HI-VOL SAMPLES	6

AIR MONITORING AND DUST CONTROL

RFETS

~~EG&G~~ ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP

Manual:
Procedure No.:
Page:
Effective Date:
Organization:

5-21000-OPS
FO.1, Rev. 2
2 of 7
March 1, 1992
Environmental Management

Category 2

2.0 PURPOSE AND SCOPE

This standard operating procedure (SOP) contains instructions for air monitoring and dust control and is applicable to the intrusive activities at the 16 Operable Units (OU) at the Rocky Flats Plant (RFP). OUs are defined under the Resource Conservation Recovery Act (RCRA) Facilities Investigation/Remedial Investigation (RFI/RI) activities described in the interagency agreement (IAG). Intrusive activities that fall within the scope of this procedure are those with the potential for producing appreciable quantities of suspended particles that contain potentially hazardous substances (i.e., earth moving and drilling).

3.0 RESPONSIBILITIES AND QUALIFICATIONS

All construction personnel must complete 40-hours of Occupational Safety and Health Administration (OSHA)/Superfund Amendment and Reauthorization Act (SARA) training, 24-hours of on-the-job training (OJT), and 8-hours supervisor training (for supervisors only). Personnel are also required to attend any refresher courses.

All personnel are required to have a baseline physical. This physical must be in compliance with RFP standard 29 CFR 1910.120 and the site-specific Health and Safety Plan (H&SP).

4.0 REFERENCES

4.1 SOURCE REFERENCES

Hazardous Waste Operations and Emergency Response. CR Title 29, Part 1910.170.

DOE Order 5400.1, General Environmental Protection Program. November 9, 1988. Revision 1, June 29, 1990.

AIR MONITORING AND DUST CONTROL

RFETS

EG&G ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP

Manual:
Procedure No.:
Page:
Effective Date:
Organization:

5-21000-OPS
FO.1, Rev. 2
3 of 7
March 1, 1992
Environmental Management

Category 2

Reference Method for the Termination of Suspended Particulate Matter in the Atmosphere (High Volume Method). CFR Title 40, Part 50, Appendix B.

Ambient Air Specific Methods. U.S. Environmental Protection Systems, Volume II.
EPA-600/4-77-027a.

Fugitive Particles. Colorado Air Quality Control Commissions (AQCC) Regulation, Section III.

5.0 PREREQUISITES

If site-specific anemometers are required in the OU area, they should be set up prior to the start of any work.

The following equipment is required where applicable according to the H&SP:

- Hard hats
- Safety shoes or protectors
- Coveralls
- Gloves
- Monitoring equipment (i.e., H-Nu and Ludlum Test equipment)
- Electrical safety gear
- Safety harness for high work
- Eye/Ear protection
- Organic vapor meter with assorted calibration tubes
- 4-Gas monitor (i.e., O₂/H₂O/CO/comb)
- Low volume (Lo-Vol)/high volume (Hi-Vol) air samplers (i.e., personal and stationary)
- Air sample scaler counter

AIR MONITORING AND DUST CONTROL

RFETS

EG&G, ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP

Manual:
Procedure No.:
Page:
Effective Date:
Organization:

5-21000-OPS
FO.1, Rev. 2
4 of 7
March 1, 1992
Environmental Management

Category 2

- Portable radiation monitoring equipment
- Explosivity indicator/alarm
- Digital dosimetry
- Radiologic metering source calibration set
- Respirator and cartridges
- Soil moisture measuring device

The following documents are required where applicable according to the site specific work plan:

- Weekly Work Permit
- Excavation Permit(s)
- Subcontractor's Health & Safety Plan
- Approved Construction Schedule
- OSHA and Orientation Training Records
- Records of Physical Examination and Respirator Examination
- Health & Safety Plan (i.e., Project and Site-Specific)
- Welding Permits
- Land Use Permits
- Detailed Statement of Work and Project Work Plan

96-DHR-RMR-0106

Hi-Vol and Lo-Vol air samplers are operational and calibrated in accordance with the manufacturer's recommendations prior to start of work. ^{At a minimum,} Health & safety plans are approved by the ~~the~~ ^{project manager, the health + safety supervisor, and the} Director of Environmental Management ~~(EMD)~~ prior to start of work. ~~the~~ ^{radiological controls integrator}

All equipment used for intrusive activities (i.e., drill rigs, support vehicles, and tools) will be inspected for functional operability and safety prior to start of work. Documentation and permits will also be in place at this time. Personal protective equipment (PPE) will be used and air monitoring will be performed in accordance with drilling site H&SP as well as this SOP.

AIR MONITORING AND DUST CONTROL

RFETS

~~EG&G~~ ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP

Manual:
Procedure No.:
Page:
Effective Date:
Organization:

5-21000-OPS
FO.1, Rev. 2
5 of 7
March 1, 1992
Environmental Management

Category 2

6.0 PROJECT MANAGER RESPONSIBILITIES

It is the responsibility of the project manager to verify that all prerequisites are completed before beginning the intrusive activities at the OU. This includes verification that Hi-Vol and Lo-Vol air samplers are operational and calibrated before work begins.

6.1 MEASURE WIND SPEED

Anemometers will be placed in a representative area relative to the work site and in a location that does not interfere with site activities.

If the 15-minute average wind speed exceeds 15 mph, as measured by the site-specific anemometer, for two consecutive 15-minute periods for earth moving or other dust generation operations, terminate operations until 15-minute average wind speed is below 15 mph for two consecutive 15-minute periods.

Drilling operations and related investigative activities will be measured by an anemometer located in the construction yard at 881 Hillside. If the 15-minute average wind speed measures above 35 mph, terminate operations until the 15-minute average wind speed is below 35 mph.

Wind speed data will be collected and archived by Air Programs Group personnel. This data will be reported to the project manager on a monthly basis. Due to the nature of the testing, it is important to verify that anemometers are operational prior to start of work.

6.2 MEASURE SOIL MOISTURE CONTENT

If required by the industrial hygienist or radiological engineer, or if deemed necessary by the project manager, soil moisture content will be measured with a moisture meter for earth moving or dust generation operations (this excludes drilling). If surface soil moisture content measures below

96-DMR-RMR5-0105

AIR MONITORING AND DUST CONTROL

RFETS

**EG&G ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP**

**Manual:
Procedure No.:
Page:
Effective Date:
Organization:**

**5-21000-OPS
FO.1, Rev. 2
6 of 7
March 1, 1992
Environmental Management**

Category 2

seven percent, wet (with water only) the top six inches of soil to prevent dust generation. Then, measure the soil moisture content again. Soil wetting will be performed in the vicinity of excavation activities and only when analytical soil samples are not affected.

The results of soil moisture tests, date, time, and reason for conducting the test will be documented in the project manager's log book.

6.3 MEASURE AIRBORNE DUST CONCENTRATIONS

The project manager will measure airborne dust concentrations as deemed necessary during dust generating activities. At a minimum, airborne dust concentrations will be measured prior to dust generating activities and when there is visible dust during operations.

Dust concentrations will be measured using a TSI "Piezoblance" Model 3500 Respirable Aerosol Mass Monitor (Lo-Vol air sampler) real-time instrument (or equivalent).

The results of dust concentration measurements, date, time, and reason for conducting the test will be documented in the project manager's log book. Industrial Hygiene may require and will perform additional testing with personal dust monitoring equipment.

6.4 COLLECTION OF HI-VOL SAMPLES

The project manager may request that Hi-Vol filters be collected off-schedule to respond to health & safety issues. If this occurs, the project manager must contact the Radioactive Ambient Air Monitoring Program (RAAMP) manager to have filters collected off-schedule.

Date, time, and reason for filters collected off-scheduled will be documented in the project manager's log book. Date and time of contact with the RAAMP manager must also be

AIR MONITORING AND DUST CONTROL

RFETS

**EG&G ROCKY FLATS PLANT
EMD MANUAL OPERATION SOP**

**Manual:
Procedure No.:
Page:
Effective Date:
Organization:**

**5-21000-OPS
FO.1, Rev. 2
7 of 7
March 1, 1992
Environmental Management**

Category 2

96-DMR-RNRS-0105

documented. Hi-Vol air samplers will be operated continuously, 24 hours a day, seven days a week, according to appropriate site procedures.