

ROCKY FLATS PLANT
EMD OPERATING
PROCEDURES MANUAL

Manual No
Procedure No
Page
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Organization

5-21000-OPS-FO
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1 of 2
10/28/91
Environmental Management

THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES

VOLUME I FIELD OPERATIONS (FO)
VOLUME II GROUNDWATER (GW)
VOLUME III GEOTECHNICAL (GT)
VOLUME IV SURFACE WATER (SW)
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VOLUME VI AIR (AP)

CONTROL

EG&G - ROCKY FLATS PLANT
ENVIRONMENTAL MANAGEMENT DEPARTMENT

This is a RED Stamp

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FOR VOLUME I FIELD OPERATIONS

<u>New Proc No</u>	<u>Old Proc No</u>	<u>Title</u>	<u>Rev No</u>	<u>Effective Date</u>
FO 01	1 1	Air Monitoring and Dust Control	1	8/30/91
FO 02	1 2	Transmittal of Field QA Records	2	9/23/91
FO 03	1 3	General Equipment Decontamination	1	8/30/91
FO 04	1 4	Heavy Equipment Decontamination	1	8/30/91
FO 05	1 5	Handling of Purge and Development Water	1	8/30/91
DCN 91 01		Clarified protected area	1	10/28/91
FO 06	1 6	Handling of Personal Protective Equipment	1	8/30/91
DCN 91 01		Approved practices for disposal of surface water monitoring PPE	1	9/19/91
DCN 91 02		Clarified protected area	1	10/28/91
FO 07	1 7	Handling of Decontamination Water and Wash Water	1	8/30/91
DCN 91 01		Grout mixing equipment wash water	1	10/22/91
DCN 91 02		Clarify work area characteristics	1	10/28/91

REVIEWED FOR CLASSIFICATION/UCM

By [Signature]

Date 11/2/91

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<u>New Proc No</u>	<u>Old Proc No</u>	<u>Title</u>	<u>Rev No</u>	<u>Effective Date</u>
FO 08	1 8	Handling of Drilling Fluids and Cuttings	1	8/30/91
DCN 91 01		Delete locking requirement from drum sealing	1	8/30/91
DCN 91 02		Clarified protected area	1	10/28/91
FO 09	1 9	Handling of Residual Samples	1	8/30/91
FO 10	1 10	Receiving, Labeling, and Handling Environmental Materials Containers	1	8/30/91
DCN 91 01		Delete use of indelible markers	1	9/26/91
DCN 91 02		Clarify environmental liquids generated	1	10/28/91
FO 11	1 11	Field Communications	1	8/30/91
FO 12	1 12	Decontamination Facility Operations	1	8/30/91
FO 13	1 13	Containerization, Preserving, Handling and Shipping of Soil and Water Samples	1	8/30/91
FO 14	1 14	Field Data Management	1	8/30/91
FO 15	1 15	Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)	1	8/30/91
FO 16	1 16	Field Radiological Measurements	1	8/30/91
FO 17	1 17	Determining Out-Of-Specification Analytical Results for Environmental Samples		To Be Added
FO 18	1 18	Environmental Sample Radioactivity Content Screening	1	8/30/91
FO 19	1 19	Base Laboratory Work	1	8/30/91

ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

Procedure Number 5-21000-OPS-F0 5

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Title <u>HANDLING OF PURGE AND DEVELOPMENT WATER</u>	Date <u>10/25/91</u>	DCN Number <u>5-21000-OPS-F0 05</u> <u>91-01</u>
Expires <u>Upon Incorporation</u> <u>1/25/92</u> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>none</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	5 of 8	6 0 Bullets para 2	Change. "Surface water and sediment sampling stations that have not been verified as background locations" To. "Protected Area"

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)

These changes are required to minimize the potential for inadvertant contamination of uncontaminated areas and to minimize solid waste generated by the surface-water monitoring programs

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>[Signature]</i>	OAPM	X	10/25/91	<i>[Signature]</i>	USER	X	10/25/91

Approval of Responsible Manager <i>[Signature]</i>	Date <u>10/24/91</u>	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? ASAP	Date Posted
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ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

Procedure Number 5-21000-OPS-FO 6

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Title Handling of Personal Protective Equipment	Date 10-14-91	DCN Number 5-21000-OPS- FO 06 91-02
Expires <u>Upon Incorporation</u> <i>1/25/92</i> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>none</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	4 of 10	6 0 Bullets	Add *Protected Area (PA) Delete *Surface Water and Sediment sampling stations that have not been verified as background locations

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)

The change is required to bring the revised SOP back to currently approved practices

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>[Signature]</i>	QAPM	X	10/25/91	<i>[Signature]</i>	User	X	10/22/91

Approval of Responsible Manager <i>[Signature]</i>	Date 10/23/91	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? ASAP	Date Posted
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ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

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~~THIS IS A
CONTROLLED DOCUMENT~~

Title <u>HANDLING OF DECONTAMINATION WATER AND WASH WATER</u>	Date <u>10/25/91</u>	DCN Number <u>5-21000-OPS- F0 07</u> <u>91-02</u>
Expires <u>Upon Incorporation 1/25/92</u> <i>line</i> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>none</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	5 of 8	6 0 4th bullet	Delete the fourth bullet <i>'Surface water - - - -' case</i>

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)

This change is required to bring the SOP back to currently approved practices

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>[Signature]</i>	QAPM	X	<u>10/25/91</u>	<i>[Signature]</i>	USER	X	<u>10/25/91</u>

Approval of Responsible Manager <i>[Signature]</i>	Date <u>10/24/91</u>	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? ASAP	Date Posted
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ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

Procedure Number 5-21000-OPS- FO 8

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Title HANDLING OF DRILLING FLUIDS AND CUTTINGS	Date 10/25/91	DCN Number 5-21000-OPS- FO.08 91-02
Expires <u>Upon Incorporation</u> <i>1/25/92</i> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation _____		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	6 of 12	6 0 para 1	Change bullet "Surface water and sediment sampling stations that have not been verified as background locations" To. "Protected Area"

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)
 These changes are required to minimize the potential for inadvertant contamination of un contaminated areas and to minimize solid waste generated by the surface-water monitoring programs

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>Lucy M. King</i>	QAPM	X	10/25/91	<i>Raymond F. ...</i>	USER	X	10/25/91

Approval of Responsible Manager <i>[Signature]</i>	Date 10/24/91	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? ASAP	Date Posted
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ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

Procedure Number 5-21000-OPS- F0 10

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Title RECEIVING, LABELING, AND HANDLING ENVIRONMENTAL MATERIALS CONTAINERS	Date 10/25/91	DCN Number 5-21000-OPS- F0.10 <i>91-02</i>
Expires <u>Upon Incorporation 1/21/92 LMC</u> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>none</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	12 of 20	7 2 1	Change "Environmental liquids generated within the following areas will be characterized as potentially contaminated. Surface water and sediment sampling stations which have not been verified as background locations Work areas where drilling activities are being conducted To "Environmental liquids generated within work areas where drilling activities are being conducted will be characterized as potentially contaminated "
2	15 of 20	7 2 1 second to last para	Change "For surface water field activities characterized as background stations (uncontaminated), " To. "For surface water field activities "

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)

These changes are required in order to minimize the potential for inadvertant contamination of uncontaminated areas and to minimize the amount of effort required to manage solid waste associated with the surface-water monitoring programs

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>Lucy Ming</i>	QAPM	X	10/25/91	<i>Lucy Ming</i>	USER	X	10/25/91

Approval of Responsible Manager <i>Bo Lehn</i>	Date 10/24/91	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? ASAP	Date Posted
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VOLUME VI AIR (AP)

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<u>New Proc No</u>	<u>Old Proc. No.</u>	<u>Title</u>	<u>Rev No.</u>	<u>Effective Date</u>
GT 01	3 1	Logging Alluvial and Bedrock Material	1	8/30/91
GT 02	3 2	Drilling and Sampling Using Hollow Stem Auger Techniques	1	8/30/91
GT 03	3 3	Isolating Bedrock From the Alluvium with Grouted Surface Casing	1	8/30/91
DCN 91 01		Change in criteria for cement grouting	1	10/02/91
DCN 91 02		Grout procedure clarification	1	10/28/91
GT 04	3 4	Rotary Drilling and Rock Coring	1	8/30/91
DCN 91 01		Core barrel decontamination	1	10/22/91
GT 05	3 5	Plugging and Abandonment of Boreholes	1	8/30/91
DCN 91 01		Surface casing classification	1	10/22/91
GT 06	3 6	Monitoring Wells and Piezometer Installation	1	8/30/91
DCN 91 01		Industry Standard is 1 foot into Bedrock	1	10/15/91
DCN 91 02		For the Sitewide Program, Claystone Smearing does not seem to be a problem	1	10/15/91

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<u>New Proc No.</u>	<u>Old Proc No.</u>	<u>Title</u>	<u>Rev No.</u>	<u>Effective Date</u>
GT 07	3 7	Logging and Sampling of Test Pits and Trenches	1	8/30/91
GT 08	3 8	Surface Soil Sampling	1	8/30/91
GT 09	3 9	Soil Gas Sampling and Field Analysis	1	8/30/91
GT 10	3 10	Borehole Clearing	1	8/30/91
GT 11	3 11	Plugging and Abandonment of Wells	1	8/30/91
GT 15	3 15	Geophysical Borehole Logging	1	8/30/91
DCN 91 01		No Hole will be left Unlogged at the end of the day	1	10/15/91
GT 17	3 17	Land Surveying	1	8/30/91
GT 18	3 18	Surface Geophysical Surveys	1	8/30/91
GT 19	3 19	Field Gas Chromatographs	1	8/30/91
GT 20	3 20	Procedures for Soil Interstitial Water Sampling and Sampler Installation	1	8/30/91

ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

Procedure Number 5-21000-OPS-GT 3 Rev 1

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Title <u>Isolating Bedrock from Alluvium with Grouted Surface Casing</u>	Date 10-22-91	DCN Number 5-21000-OPS-GT 03 <u>91-02</u>
Expires <u>11-01-91</u> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>Sitewide</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	6 of 9	5 3 paragraph 1	Replace the first sentence with Surface casing will be installed by placing the casing into the borehole, filling the casing with cement and then forcing the cement from within the casing by pushing a rubber plug down the casing thus displacing the cement out through cement ports at the bottom of the casing
2	8 of 9	5 3 part 2	Delete this section
3	8 of 9	5 3 part 3	Renumber this to part 2
4	8 of 9	5 3 part 4	Renumber this to part 3 Insert "through the augers" at the end of the first sentence
5	8 of 9		Insert as part 4 Remove the augers and pump the cement mixture into the casing using a tremie pipe until undiluted cement is present at the top of the casing
6	8 of 9	5 3 part 5	Remove the first part of the first sentence where it states "Once the casing is at the bottom of the borehole," Change "force it down to the bottom of the casing by using drill rods " to "force it down to the bottom of the casing by using drill rods or water pressure " Add to the end of the paragraph "Enough cement will be used to ensure that cement will rise to ground level when displaced from casing "

Justification (Reason for Change – Provide Numbers To Reference Corresponding Items Above)

Pumping grout down the hole after placing casing ensures that casing is at the bottom of the borehole, and minimizes borehole and casing problems

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>Jerry Myers</i>	QAPM	X	10/25/91	<i>Jw [Signature]</i>	User	X	10/23/91
				<i>AL [Signature]</i>	User		10/23/91

Approval of Responsible Manager <i>[Signature]</i>	Date 10-24-91	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date?	Date Posted
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