

This is a RED Stamp

**ROCKY FLATS PLANT
EMD OPERATING
PROCEDURES MANUAL**

**Manual No.: 5-21000-OPS-GT
Procedure No.: Table of Contents, Rev 33
Page: 1 of 3
Effective Date: 01/18/93
Organization: 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)
VOLUME V: ECOLOGY (EE)
VOLUME VI: AIR (AP)**

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DCN 92.01	Specialized Logging Form	2	11/13/92
*DCN 93.01	Logging	2	01/15/93
GT.02	Drilling and Sampling Using Hollow Stem Auger Techniques	2	05/12/92
DCN 92.01	Superseded by DCN 92.03	2	07/27/92
DCN 92.02	Superseded by DCN 92.03	2	07/27/92
DCN 92.03	Addition of the Drum Characterization	2	07/27/92
DCN 92.04	Prevention of Down Hole Contamination	2	08/26/92
DCN 92.05	Field Modification	2	12/04/92
GT.03	Isolating Bedrock from Alluvium with Grouted Surface Casing	2	05/12/92
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GT.04	Rotary Drilling and Rock Coring	2	05/12/92
GT.05	Plugging and Abandonment of Boreholes	2	05/12/92
DCN 92.01	Field Modification	2	12/09/92

**DOCUMENT CLASSIFICATION REVIEW WAIVER
PER R.B. HOFFMAN, CLASSIFICATION OFFICE
JUNE 11, 1991**

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GT.06	Monitoring Wells and Piezometer Installation	2	05/12/92
DCN 92.05	Schematic Diagram Land Fill Methane Wells	2	06/04/92
DCN 92.06	Field Modification	2	11/12/92
DCN 92.07	Provide Consistency	2	12/17/92
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GT.07	Logging and Sampling of Test Pits and Trenches	2	05/12/92
GT.08	Surface Soil Sampling	2	05/12/92
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DCN 93.01	Work Plan Consistency	2	01/05/93
*DCN 93.02	New Section-Surficial Profiling	2	01/15/93
GT.09	Soil Gas Sampling and Field Analysis	2	05/12/92
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GT.11	Plugging and Abandonment of Wells	2	05/12/92
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DCN 92.03	Modification to Method of Taking Readings	2	10/15/92
GT.19	Field Gas Chromatographs	2	05/12/92
GT.20	Procedures for Soil Interstitial Water Sampling and Sampler Installation	2	05/12/92

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Effective Date: 01/18/93
Organization: Environmental Management**

<u>Procedure No.</u>	<u>Title</u>	<u>Rev. No.</u>	<u>Effective Date</u>
GT.21	Cone Penetrometer Testing	1	05/12/92
*DCN 93.01	CPT Rods	1	01/15/93
GT.24	Approval Process for Construction Activities on or Near Individual Hazardous Substance Sites (IHSSs)	0	05/12/92

3413 1/20/93 This is a #22

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 EG&G - ROCKY FLATS PLANT **DOCUMENT CHANGE NOTICE (DCN)**
 ENVIRONMENTAL MANAGEMENT
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Procedure Number 5-21000-OPS-GT.1, Rev. 2

Page 1 of 1

Title Logging Alluvial and Bedrock Material	Date <u>1-15-93</u> 12-23-92	DCN Number 5-21000-OPS-93.01
Expires <u>1-15-94</u> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation <u>Present Landfill (IHS 114) of OU-7</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	31 of 34	6.2.3 Logging	Add to the end of the paragraph: "For the fill and waste portions of boreholes drilled into the Present Landfill, instead of the procedures outlined in this SOP, a detailed visual examination of the core or cuttings will be conducted. Core and cuttings taken from below the waste and fill will be described as per this SOP."

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

The procedures for core logging in this SOP are not ~~fully~~ ^{ALP} applicable to logging trash and debris.

**DOCUMENT CLASSIFICATION REVIEW WAIVER
 PER R.B. HOFFMAN, CLASSIFICATION OFFICE
 JUNE 11, 1991**

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>[Signature]</i>	QAPM	X	1/12/93	<i>[Signature]</i>	User	X	12/23/92
<i>[Signature]</i>	EOM	X	12/23/92	<i>[Signature]</i>	EQM	✓	1/5/93
				<i>[Signature]</i>	EQS	✓	1/8/93

Approval of Responsible Manager <i>[Signature]</i>	Date 12/23/92	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? upon receipt	Date Posted
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413/120193 This is a #22

ENVIRONMENTAL MANAGEMENT DOCUMENT CHANGE NOTICE (DCN)

CONTROLLED DOCUMENT EG&G - ROCKY FLATS PLANT

ENVIRONMENTAL MANAGEMENT Procedure Number 5-21000-OPS-GT.8, Rev.2 This is a RED Stamp

Title Surface Soil Sampling	Date 1/15/93 10/20/92 M&B	DCN Number 5-21000-OPS-GT.8-92.R2-93.02
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Expires ~~10/20/92~~ 93
1-15-94 ed

Procedure Revision Required Yes No

Scope Limitation: None

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for additional space)
1	4	5.0	Change "3" to "4" in the first line and revise end of first sentence to read: "... (RF) method, (3) the "grab method", and (4) surficial profiling method."
2	5	5.0	Add to the end of second bullet: "Place surficial profiling samples (method 4) in 500 ml polyurethane bottles." GLASS OR PLASTIC
3	5	5.0	Add after 3rd sentence of the last paragraph: "For surficial profiling samples, the sampler will collect representative samples, including plants and coarse material." organic material
4	15	5.2.5	Change numbering of Section 5.2.5 to Section 5.2.6.
5	15	new sect. 5.2.5	Add new text as follows: 5.2.5 Surficial Profiling The surficial profiling method is used to obtain discrete soil samples from depths up to six inches. Each discrete sample represents soil from an interval of two inches depth, i.e., 0 ft (surface) to 2", 2-4", and 4-6". There are three procedures for obtaining these samples: (1) collection from the surface downward, (2) collection from the sidewall of a small excavation, and (3) collection from coring. Use any of the following procedures, depending upon sampling conditions:

Justification (Reason for change - Provide numbers to reference corresponding items above.)

Items 1-5: to include a method not previously addressed in OP-GT.8.

Concurrence	Organization	Req.	Date	Concurrence	Organization	Req.	Date
<i>[Signature]</i>	QAPM	X	1/11/93	<i>[Signature]</i>	User		10/23/92
<i>[Signature]</i>	EOM	X	12/23/92				
<i>[Signature]</i>	ERS		1-12-93				

Approval of Responsible Manager <i>[Signature]</i>	Date 11/2/92	Is Posting required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, by what date? upon receipt	Date posted
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DOCUMENT CHANGE NOTIFICATION REVIEW WAIVER
PER R.B. HOFFMAN, CLASSIFICATION OFFICE
JUNE 11, 1991

JAN 15 1993

Procedure no. 5-21000-OPS-GT.8, Rev. 2	Title Surface Soil Sampling
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Scope Limitation: None

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for additional space)
5 (cont'd)	15	<u>new sect.</u> 5.2.5	<p>5.2.5.1 sampling from surface downward: <i>NOTE: DECONTAMINATE SCOOP BETWEEN STEPS.</i></p> <ol style="list-style-type: none"> 1. Use a stainless scoop/trowel to collect enough soil from top 2" of soil to fill a 500 ml polyurethane sample container; include organic material and coarse sample material. Collect sample uniformly in thickness. 2. Collect next sample from depth interval 2-4" below first sample (0-2"), using method in Step #1 above. 3. Collect last sample from depth interval 4-6" below second sample (2-4"), using method in Step #1 above. <p>5.2.5.2 sidewall sampling (use when large soil components prevent excavation from surface downward): <i>NOTE: DECONTAMINATE SCOOP BETWEEN STEPS.</i></p> <ol style="list-style-type: none"> 1. Dig a small excavation (maximum depth = 12 in.). Stockpile excavated material near excavation. 2. Scrape upper few inches (0-3") of one side of pit with stainless steel scoop/trowel to expose fresh surface and prevent cross-contamination. 3. Collect top 2" (0-2") of soil with stainless steel scoop/trowel from the sidewall to fill a 500 ml polyurethane sample container; include organic material and coarse sample material. Collect sample uniformly in thickness. 4. Scrape next lower few inches (2-5") of side of pit with stainless steel scoop/trowel, below first sample (0-2"). 5. Collect next sidewall sample from depth interval 2-4" below first sample (0-2"), following Step #3 above. 6. Scrape last lower few inches (4-7") of side of pit with stainless steel scoop/trowel, below second sample (2-4").

Justification (Reason for change - Provide numbers to reference corresponding items above.)

Procedure no. 5-21000-OPS-GT.8, Rev. 2	Title Surficial Soil Sampling
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Scope Limitation: None

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for additional space)
5 (cont'd.)	15	<u>new sect.</u> 5.2.5	7. Collect last sidewall sample from depth interval 4-6" below second sample (2-4"), using method in Step #3 above. 8. Backfill excavated material on same day as excavation and sampling. 5.2.5.3 coring: <i>NOTE: DECONTAMINATE HANDLER BETWEEN STEPS.</i> 1. Use a hand-powered, stainless steel "cookie cutter" style corer to collect top 2" of soil to fill a 500 ml polyurethane sample container; include organic material and coarse sample material. Collect sample uniformly from the surface to 2" depth. 2. Collect next core sample from depth interval 2-4" below first sample (0-2"), using method in Step #1 above. 3. Collect last core sample from depth interval 4-6" immediately below second sample (2-4"), using method in Step #1 above.

Justification (Reason for change - Provide numbers to reference corresponding items above.)

1/20/93 This is a #22
CONTROLLED DOCUMENT ENVIRONMENTAL MANAGEMENT
 EG&G - ROCKY FLATS PLANT ENVIRONMENTAL MANAGEMENT **DOCUMENT CHANGE NOTICE (DCN)**
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Procedure Number 5-21000-OPS-GT.21, Rev. 1

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Title	Cone Penetrometer Testing	Date	1-11-93 1-15-93 EMB	DCN Number	5-21000-93.01
Expires	1-11-93 1-15-94	Procedure Revision Required	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Scope Limitation	The scope is limited to landfill investigations within OUs 5 and 7				

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	119 10 of 13	9	Add: As the rods are withdrawn, the hole will be sealed with bentonite pellets. The bentonite pellets will be pumped into the hole through the CPT rods.

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

- CPT rods can be deconned in the field if pellets are used, minimizing the potential for spread of contamination between CPT sites and the Decon Pad.
- Bentonite pellets provide a better seal than grout, further minimizing the potential for cross contamination between strata.
- Field operations will be more efficient.

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<i>[Signature]</i>	QAPM	X	1/13/93	<i>[Signature]</i>	User	X	1/11/93
<i>[Signature]</i>	EOM	X	1-11-93	<i>[Signature]</i>	User		11-Jan-93
				<i>[Signature]</i>	EOM	X	1/11/93
Approval of Responsible Manager	Date	Is Posting Req'd?	If Yes, By What Date?		Date Posted		
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	upon receipt				