

This is a RED Stamp

**ROCKY FLATS PLANT
EMD OPERATING
PROCEDURES MANUAL**

**Manual No.: 5-21000-OPS-GT
Procedure No.: Table of Contents, Rev 34
Page: 1 of 3
Effective Date: 02/01/93
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)
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GT.01	Logging Alluvial and Bedrock Material	2	05/12/92
DCN 92.01	Specialized Logging Form	2	11/13/92
DCN 93.01	Logging	2	01/15/93
*DCN 93.02	Logging Deliverables Standard Practices	2	01/25/93
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DCN 92.01	Superseded by DCN 92.03	2	07/27/92
DCN 92.02	Superseded by DCN 92.03	2	07/27/92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
*DCN 93.01	Analytical Samples	2	01/25/93
GT.03	Isolating Bedrock from Alluvium with Grouted Surface Casing	2	05/12/92
DCN 92.03	Expired	2	09/03/92
GT.04	Rotary Drilling and Rock Coring	2	05/12/92

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

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GT.05	Plugging and Abandonment of Boreholes	2	05/12/92
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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	EXPIRED (replaced with DCN 93.01)		
DCN 92.07	Provide Consistency	2	12/17/92
DCN 93.01	Borehole Advancement	2	01/04/93
*DCN 93.02	Well Point Installation	2	01/28/93
GT.07	Logging and Sampling of Test Pits and Trenches	2	05/12/92
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*DCN 93.03	CDH Compliance	2	01/25/93
GT.09	Soil Gas Sampling and Field Analysis	2	05/12/92
GT.10	Borehole Clearing	2	05/12/92
GT.11	Plugging and Abandonment of Wells	2	05/12/92
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DCN 92.01	Surface Magnetic Surveys Procedure	2	09/30/92
DCN 92.02	Modification to Stacking Requirements	2	10/15/92
DCN 92.03	Modification to Method of Taking Readings	2	10/15/92
*DCN 93.01	5.4 Field Procedure Revisions	2	01/25/93

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GT.19	Field Gas Chromatographs	2	05/12/92
GT.20	Procedures for Soil Interstitial Water Sampling and Sampler Installation	2	05/12/92
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

2/4/93 This is a #22

CONTROLLED DOCUMENT
 EG&G - ROCKY FLATS PLANT
 ENVIRONMENTAL MANAGEMENT **ENVIRONMENTAL MANAGEMENT**
DOCUMENT CHANGE NOTICE (DCN)
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DCN to SOPGT.18

Procedure Number 5-21000-OPS-GT.18, Revision 2

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Title Surface Geophysical Surveys	Date <u>1-25-93</u> <u>12/18/92 MCB</u>	DCN Number 5-21000-OPS-GT.18 DCN 92-01-93.01
Expires <u>12/18/93 MCB</u> <u>1-25-94</u>	Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Scope Limitation <u>OU4</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for Additional Space)
1	DCN 92-01	Scope Limitation	Add OU4 to Scope Limitation for DCN of 92-01, described in DCN 92-01, 1/17/92
1	24	5.4	Adopt Section 5.4 Magnetics attached to DCN of 9/17/92, with following exceptions:
1a			-Section 5.4.2.2. Add sixth bullet that states "Initiate the magnetic survey after a radiation survey has been completed in the Solar Ponds area."
1b			-Section 5.4.2.2 - Second bullet in second set. Add "...and in the Solar Ponds area."
1c			-Section 5.4.2.2 - Add bullet in second set: "Spacing between adjacent grid - traverse lines will be 10 feet in Solar Ponds area."
1d			Sect. 5.4.2.2 - Add to end of third bullet in first set: ".... or other metallic objects. The site should be cleared with a portable magnetometer."
1e			Sect. 5.4.2.2 - Insert in bullet 4 of first set: "including watches, belt buckles,"

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

The OU4 work plan requires a magnetic survey (Surface Geophysics) in the Immediate Solar Ponds area, but magnetic surveys are not addressed in the surface geophysics SOP. The DCN prepared for OU5 is applicable, with only minor modifications as noted above.

additions and modifications are shown on attachment.

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
	QAPM	X		RT Ogy	User	X	12/18/92
<i>M. C. Brown</i>	EOM	X	1/29/93	A. L. Proctor	User	X	12/24/92
				<i>Donna Sinks</i>	EOM	X	1/5/93

Approval of Responsible Manager <i>Randy T. Osg</i>	Date 12/18/92	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date? Receipt	Date Posted
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5.4.2.2 Field Procedures

A standard field procedure is described below. Prior to magnetic data collection, five preliminary procedures must be conducted. These are:

- * Design the appropriate field survey parameters given the purpose of coverage, contained areas of magnetic interference, grid-traverse spacing, direction of traverse, magnetometer reading interval.
- * The surface geophysical survey grid-traverse lines will ^{be} controlled from the surveyed baseline provided by RFP plant personnel. The provided baseline will be staked each 25 feet. At these stakes grid-traverse line endpoints will be marked with flagged lath. The baseline and grid-traverse line stations of the magnetic survey will be transferred to the appropriate base map.
- * The magnetic base station location will be selected, after consulting site utility maps, to assure minimal magnetic interference due to electric power lines, railroad, fencing, vehicular traffic, subsurface utilities, and air monitoring stations, ~~or other metallic objects~~. The site should also be cleared with a portable magnetometer.
- * The geophysical field instrument operator will check that personal clothing including watches, and boots, do not contain interfering ferromagnetic materials.
- * ^{belt buckles} Initiate the magnetic survey only after an in situ gamma radiation survey has been completed by RFP plant personnel at each IHSS 115 and 133 groups.
- * ~~Initiate the magnetic survey after a radiation survey has been completed in the Solar Ponds area.~~

Design of appropriate field parameters must consider the following:

- * The roving magnetometer will be suspended on a staff 8 feet above ground surface at each station on the IHSS 115 survey area.
- * The roving magnetometer will be suspended on a staff 4 feet above ground surface at each station on the IHSS 133 group survey area ~~and in the Solar Ponds area.~~
- * Spacing between stations along each grid-traverse line stations will be 10 feet.
- * Spacing between adjacent grid-traverse lines will be 25 feet at the IHSS 115 survey area.
- * Spacing between adjacent grid-traverse lines will be 12 1/2 feet at the IHSS 133 group survey area.
- * ~~Spacing between adjacent grid-traverse lines will be 10 feet in the Solar Ponds area.~~
- * Grid-traverse line will be extended an additional 50 feet along significant anomaly indications. Where such anomalies are attributed directly to known pipeline, fences, or other visible and mapped anthropogenic ferromagnetic structures, the survey need not be extended.