

<b>ROCKY FLATS PLANT</b>	<b>Manual No..</b>	<b>5-21000-OPS-GT</b>
<b>EMD OPERATING</b>	<b>Procedure No</b>	<b>Table of Contents, Rev 18</b>
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	<b>Effective Date</b>	<b>04/20/92</b>
	<b>Organization</b>	<b>Environmental Management</b>

**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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 FOR VOLUME III GEOTECHNICAL**

<b><u>Procedure No.</u></b>	<b><u>Title</u></b>	<b><u>Rev No.</u></b>	<b><u>Effective Date</u></b>
GT 01	Logging Alluvial and Bedrock Material	1	08/30/91
DCN 91 01	Recording lithologic descriptions and securing core boxes	1	11/15/91
DCN 91 02	Clarification of log approval for multi-use wells	1	12/03/91
DCN 92 01	Change in criteria for collecting drill cuttings	1	02/24/92
GT 02	Drilling and Sampling Using Hollow Stem Auger Techniques	1	08/30/91
DCN 91 01	Superseded by DCN 92 01	1	01/20/92
DCN 91 02	Correction of well location for low Alluvial thickness	1	11/06/91
DCN 91 03	Ten foot long core barrels	1	11/15/91
DCN 92 01	Clarify unconsolidated core sample requirements	1	01/20/92
GT 03	Isolating Bedrock from Alluvium with Grouted Surface Casing	1	08/30/91
DCN 91 01	Superseded by DCN 91 03	1	12/12/91

**ADMIN RECORD**

A-SW-000358

REVIEWED FOR CLASSIFICATION/UCN  
 By William D. Brown  
 Date 4/22/92

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DCN 91 02	Superseded by DCN 92 01	1	01/20/92
DCN 91 03	Change in criteria for cement grouting	1	12/12/91
DCN 91 04	Depth of casing emplacement	1	12/17/91
DCN 91 05	Addition of Grout Ports	1	12/19/91
DCN 92 01	Grout procedure clarification	1	01/20/92
DCN 92 02	Addition of "1 day" grouting requirements	1	04/20/92
GT 04	Rotary Drilling and Rock Coring	1	08/30/91
DCN 91 01	Superseded by DCN 92 02	1	01/20/92
DCN 91 02	Superseded by DCN 92 01	1	01/20/92
DCN 91 03	Superseded by DCN 91 04	1	12/17/91
DCN 91 04	Clarification of the use of super gel-x	1	12/17/91
DCN 92 01	Clarification of measuring tape decontamination requirements	1	01/20/92
DCN 92 02	Clarification of core barrel decontamination	1	01/20/92
GT 05	Plugging and Abandonment of Boreholes	1	08/30/91
DCN 91 01	Superseded by DCN 92 01	1	01/20/92
DCN 92 01	Surface casing classification	1	01/20/92
GT 06	Monitoring Wells and Piezometer Installation	1	08/30/91
DCN 91 01	Superseded by DCN 92 01	1	01/20/92

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DCN 91 02	Superseded by DCN 92 02	1	01/20/92
DCN 91 03	Superseded by DCN 91 06	1	11/08/91
DCN 91 04	Low Alluvial thickness wells	1	11/06/91
DCN 91 05	Superseded by DCN 91 08	1	11/15/91
DCN 91 06	Change in filter pack guidance	1	11/08/91
DCN 91 07	Decontamination for site-wide geological characterization	1	11/15/91
DCN 91 08	Figure replacement (GT 6-1)	1	11/15/91
DCN 91 09	Sampling with center bit drilling	1	12/03/91
DCN 92 01	Change in penetration depth into bedrock	1	01/20/92
DCN 92 02	Specification of auger size	1	01/20/92
DCN 92 03	Clarification of casing requirements	1	01/31/91
DCN 92 04	Revision of joint sealing requirements	1	02/12/92
GT 07	Logging and Sampling of Test Pits and Trenches	1	08/30/91
GT 08	Surface Soil Sampling	1	08/30/91
DCN 91 01	Clarification supplementation of GT 08 - Surface Soil Sampling	1	11/26/91
DCN 92 01	Soil core sampling revision	1	01/02/92
GT 09	Soil Gas Sampling and Field Analysis	1	08/30/91

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GT 10	Borehole Clearing	1	08/30/91
GT 11	Plugging and Abandonment of Wells	1	08/30/91
DCN 92 01	Clarification of handling of contaminated/ decontaminated surface pad materials	1	01/20/92
GT 15	Geophysical Borehole Logging	1	08/30/91
DCN 91 01	Superseded by DCN 92 01	1	01/20/92
DCN 92 01	Clarification of hole logging requirements	1	01/20/92
GT 17	Land Surveying	1	08/30/91
GT 18	Surface Geophysical Surveys	1	08/30/91
GT 19	Field Gas Chromatographs	1	08/30/91
GT 20	Procedures for Soil Interstitial Water Sampling and Sampler Installation	1	08/30/91
GT 21	Cone Penetrometer Testing	0	12/19/91

**ENVIRONMENTAL MANAGEMENT  
 DOCUMENT CHANGE NOTICE (DCN)**

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Title <b>Isolating Bedrock from Alluvium with Grouted Surface Casing</b>	Date 4-3-92	DCN Number 5-21000-OPS-GT.03, R1 92.02
Expires <u>7-20-92</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	6 of 9	paragraph 2	Add to the end of the paragraph "When very shallow, bedrock boreholes are augered to total depth in uncontaminated areas, surface casing will not be used. Instead, the borehole will be drilled and grouted <del>the same day</del> <u>one</u> "

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

For shallow boreholes that are augered, the borehole would stand open longer if surface casing was installed, therefore increasing the risk of cross contamination, than if the borehole was drilled and grouted the same day. This procedure will only be used in uncontaminated areas

Concurrence	Organization	Req	Date	Concurrence	Organization	Req	Date
<i>[Signature]</i>	QAPM	X	4/20/92	<i>[Signature]</i>	User	X	4/7/92
<i>[Signature]</i>	EOM	X	4-16-92				

Approval of Responsible Manager <i>[Signature]</i>	Date 4/7/92	Is Posting Req'd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, By What Date?	Date Posted
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