

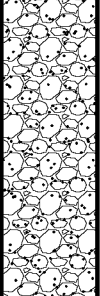
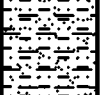
**BOREHOLE LOG**BOREHOLE
NO.:PAGE: 1 OF 3DATE: 3/27/08Tt-1**PROJECT INFORMATION**PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATIONPROJECT NO.: 181750CLIENT: S. M. STOLLEROWNER: DOELOCATION: ROCKY FLATS**BOREHOLE LOCATION**

SEE FIGURE 2

FIELD INFORMATIONDATE & TIME ARRIVED: 3/27/08 - 8:00AMBOREHOLE LOGGED BY: JOE REEDVISITORS: NONEWEATHER: CLOUDY, SNOW SHOWERS**DRILLING INFORMATION**DRILLING COMPANY: BOART LONGYEARSTART TIME: 8:00AMBORING DEPTH: 29.5' BORING DIA.: 8"DRILLING METHOD: SONIC CONTINUOUS CORESAMPLING METHOD: CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOON

TIME DRILLING COMPLETE: _____

BOREHOLE COMPLETION / ABANDONMENT INFORMATIONSTART TIME: 3/28/08 - 8:00AM COMPLETE TIME: 10:45AMINSTRUMENTATION: INCLINOMETER / VW PIEZOMETER BACKFILL: GROUTELEVATION - TOP OF BORING: 6039.5' RELATIVE TO: MSL**GROUNDWATER CONDITIONS**WET AT ABOUT 12'**FOLLOWING FIELD WORK**TIME OF CLEAN-UP COMPLETE: 10:45AM TIME LEFT SITE: 10:45AMNOTES: WELL NO. 82108

		BOREHOLE LOG					BOREHOLE NO.: Tt-1	
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>2 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/27/08</u>						
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION	
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.				
0							SILTY SANDY CLAYEY GRAVEL WITH COBBLES (0 TO 9') SLIGHTLY MOIST, BROWN (5YR 4/3), LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL, COBBLES.	
1								
2								
3	5'							
4							5' - ROCK IN SHOE, ZERO RECOVERY.	
5				0			7.5' - COLOR CHANGE TO RED YELLOW (5YR 6/6).	
6								
7	5'							
8								
9				0			SANDY GRAVEL (9' TO 14') DRY, BROWNISH YELLOW (5YR 6/6), FINE COARSE SAND AND GRAVEL, TRACE SILTY CLAY, SUBROUNDED GRAVEL.	
10								
11	0							
12							12' - WET.	
13				0			CLAYSTONE (14' TO 19') MOIST, MOTTLED ORANGE-GRAY, VERY STIFF, SANDY, WEATHERED.	
14								
15	3.5'							
16								
17							18' TO 19' - ORGANICS TO BUFF-GRAY/BLACK.	
18		C A B A		0.75				
19								
20						 SILTY CLAYEY SAND (19' TO E.O.B.) VERY PALE BROWN (10YR 7/4), MEDIUM DENSE/MEDIUM STIFF, VERY FINE TO MEDIUM SAND, COHESIVE.		

		BOREHOLE LOG					BOREHOLE NO.:
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>3 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/27/08</u>					<u>Tt-1</u>
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
20	4'						SILTY CLAYEY SAND (19' TO E.O.B.) SEE DESCRIPTION ON PREVIOUS PAGE.
21							
22		CA B A		0.6			22' - VERY SANDY.
23	4'						
24							24' - WET, YELLOWISH BROWN (10YR 5/8), LOOSE-MEDIUM DENSE, FINE TO MEDIUM SAND, MOSTLY FINE SAND.
25				0			
26	5'						26.5' TO 28' - SANDY CLAY LAYER, BUFF-LIGHT BROWN WITH ORGANIC MOTTLING.
27							
28							28' - 3" ORGANIC LAYER IN CLAY MATRIX.
29	4'	CA B A		0.6			E.O.B. = 29.5'
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							



BOREHOLE LOG

BOREHOLE
NO.:

PAGE: 1 OF 3

DATE: 4/1/08

Tt-2

PROJECT INFORMATION

PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION

PROJECT NO.: 181750

CLIENT: S. M. STOLLER

OWNER: DOE

LOCATION: ROCKY FLATS

BOREHOLE LOCATION

SEE FIGURE 2

FIELD INFORMATION

DATE & TIME ARRIVED: 4/1/08 - 4:30PM

BOREHOLE LOGGED BY: JOE REED

VISITORS: NONE

WEATHER: _____

DRILLING INFORMATION

DRILLING COMPANY: BOART LONGYEAR

START TIME: 5:00PM

BORING DEPTH: 35.5' BORING DIA.: 8"

DRILLING METHOD: SONIC CONTINUOUS CORE

SAMPLING METHOD: CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOON

TIME DRILLING COMPLETE: 4/2/08 - 9:00AM

BOREHOLE COMPLETION / ABANDONMENT INFORMATION

START TIME: 4/2/08 - 9:15AM COMPLETE TIME: 11:30AM

INSTRUMENTATION: INCLINOMETER / VW PIEZOMETER BACKFILL: GROUT

ELEVATION - TOP OF BORING: 6027.8' RELATIVE TO: MSL

GROUNDWATER CONDITIONS

WET AT ABOUT 19'

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: 11:30AM TIME LEFT SITE: 11:30AM

NOTES: WELL NO. 82208



BOREHOLE LOG

BOREHOLE
NO.:

PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION

PAGE: 2 OF 3

PROJECT NO.: 181750

DATE: 4/1/08

Tt-2

DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
0							
1							SANDY CLAYEY GRAVEL (0 TO 1.5') DRY TO SLIGHTLY MOIST, DARK YELLOWISH BROWN (10YR 4/4), HARD, FINE TO COARSE SAND AND GRAVEL.
2							
3	3.2'						SANDY CLAYEY GRAVEL (1.5 TO 16.5') MOIST TO SLIGHTLY MOIST, DARK YELLOWISH BROWN (10YR 4/6), STIFF, FINE TO COARSE SAND AND GRAVEL.
4							
5							
6		CA B A		0.7			
7	1.0'						
8							
9							
10							
11		CA A		0.4			
12							
13	1.3'						10' TO 16.5' - ORGANICS, ROOTS, ORGANIC ODOR.
14							
15							
16		CA B A		1.0			
17							SILTY SAND (16.5' TO 20') SLIGHTLY MOIST TO MOIST, BROWNISH YELLOW (10YR 6/6), LOOSE, FINE-MEDIUM SAND (MOSTLY FINE), SLIGHTLY COHESIVE, CLAY INCLUSION (LIGHT GRAY), OCCASIONAL CEMENTED ZONES (WITH ROUNDED GRAVEL).
18							
19							19' - WET.
20							



BOREHOLE LOG

BOREHOLE
NO.:

PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION PAGE: 3 OF 3

PROJECT NO.: 181750

DATE: 4/1/08

Tt-2

DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
20							
21				0			
22	5.0'						22' - GRADES TO CLAY.
23							CLAY (22' TO 24.5') WET, MOTTLED GRAY-BROWN, SOFT, TRACE ROUNDED GRAVEL, GRADES TO GRAY CLAY.
24							
25	2'						CLAYSTONE (24.5' TO 28') WET, GRAY (10YR 6/1), SOFT, OCCASIONAL SAND STRINGERS.
26							
27							
28	6'						CLAYSTONE (28' TO E.O.B.) DRY, GRAY (10YR 6/1), HARD.
29		CA B A		0.8			
30							
31							
32							
33							
34							
35		CA B A		0.5			
36							E.O.B. = 35.5'
37							
38							
39							
40							

	BOREHOLE LOG		BOREHOLE NO.: Tt-3
	PAGE: <u>1 OF 3</u> DATE: <u>4/1/08</u>		
PROJECT INFORMATION PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PROJECT NO.: <u>181750</u> CLIENT: <u>S. M. STOLLER</u> OWNER: <u>DOE</u> LOCATION: <u>ROCKY FLATS</u> _____		BOREHOLE LOCATION SEE FIGURE 2	
FIELD INFORMATION DATE & TIME ARRIVED: <u>4/1/08 - 8:30AM</u> BOREHOLE LOGGED BY: <u>JOE REED</u> VISITORS: <u>NONE</u> WEATHER: _____			
DRILLING INFORMATION DRILLING COMPANY: <u>BOART LONGYEAR</u> START TIME: <u>9:00AM</u> BORING DEPTH: <u>39'</u> BORING DIA.: <u>8"</u> DRILLING METHOD: <u>SONIC CONTINUOUS CORE</u> SAMPLING METHOD: <u>CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOON</u> TIME DRILLING COMPLETE: <u>2:30PM</u>			
BOREHOLE COMPLETION / ABANDONMENT INFORMATION START TIME: <u>2:30PM</u> COMPLETE TIME: <u>4:30PM</u> INSTRUMENTATION: <u>INCLINOMETER / VW PIEZOMETER</u> BACKFILL: <u>GROUT</u> ELEVATION - TOP OF BORING: <u>6016.4'</u> RELATIVE TO: <u>MSL</u>			
GROUNDWATER CONDITIONS <u>NOT ENCOUNTERED DURING DRILLING</u>			
FOLLOWING FIELD WORK TIME OF CLEAN-UP COMPLETE: <u>4:10PM</u> TIME LEFT SITE: <u>4:30PM</u>			
NOTES: <u>WELL NO. 82308</u> _____ _____ _____			



BOREHOLE LOG

BOREHOLE
NO.:

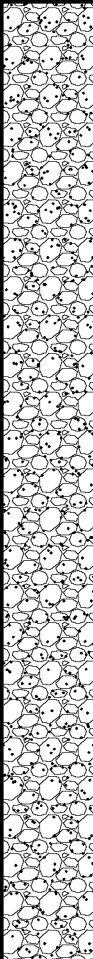
PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION PAGE: 2 OF 3

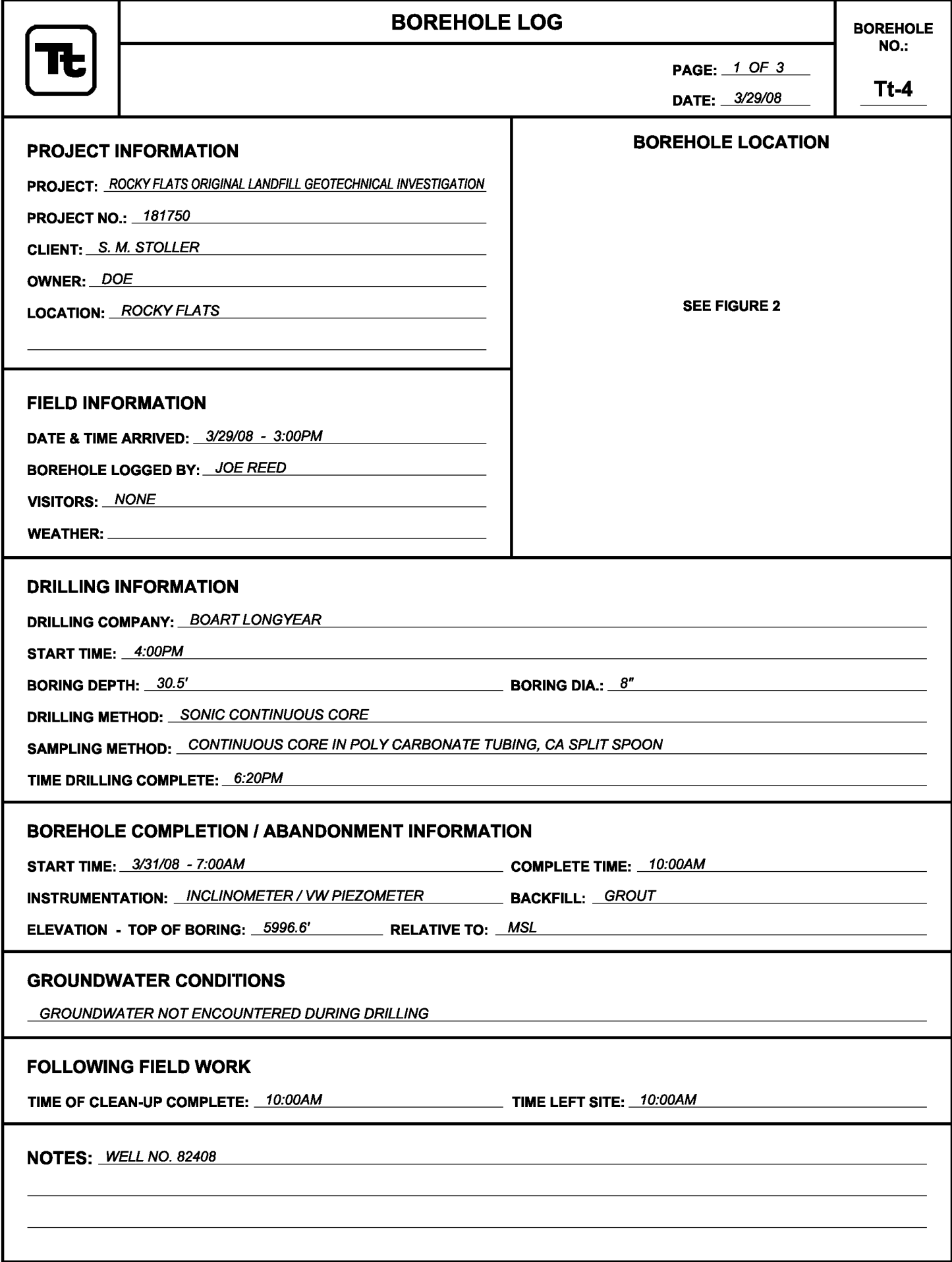
PROJECT NO.: 181750

DATE: 4/1/08

Tt-3

DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
0							SANDY GRAVELLY CLAY (0 TO 32') SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6), HARD, FINE TO COARSE SAND AND GRAVEL.
1							
2							
3	2.5'						
4							
5							
6		CA A		0.4			
7	0.75'						
8							
9							
10							10' - SANDY CLAY, SLIGHTLY MOIST, DARK GRAYISH BROWN (10YR 4/2), VERY STIFF, FINE TO COARSE SAND, TRACE FINE TO COARSE GRAVEL. TRACE ROOTS, TRACE ORGANICS.
11		CA B A		0.66			
12							
13	1.0'						
14							
15							15' - ROCK IN SHOE, SANDY GRAVELLY CLAY, MOIST TO SLIGHTLY MOIST, COBBLE AT TOP.
16		CA A		0.33			
17							
18	4.7'						
19							
20							

DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
20							SANDY GRAVELLY CLAY (0 TO 32') SEE DESCRIPTION ON PREVIOUS PAGE.
21		CA B A		1.2			20' - SANDY GRAVELLY CLAY, MOIST, YELLOWISH RED (5YR 4/6) MEDIUM STIFF TO SOFT, FINE TO COARSE SAND AND GRAVEL.
22	4.5'						
23							
24							
25							
26		CA B A		0.7			25' - SANDY GRAVELLY CLAY, MOIST, DARK GRAY (10YR 4/1) STIFF, FINE TO COARSE SAND AND GRAVEL, SUBROUNDED TO ANGULAR.
27	4.6'						
28							28' - HARD.
29							
30							
31		CA B A		0.55			30' - TO CLAYEY SANDY GRAVEL, SLIGHTLY MOIST, GRAY BROWN (10YR 5/2), STIFF TO HARD, FINE-TO COARSE SAND, TRACE GRAVEL, TRACE COBBLES, CLAY MATRIX.
32	4.0'					CLAYSTONE (32' TO E.O.B.) DRY, GRAY (10YR 5/1)., HARD, GREASY/WAXY TEXTURE.	
33							
34							
35							
36	2.5'	CA B A		0.8			
37							
38		CA A		0.4			
39						E.O.B. = 39'	
40							



**BOREHOLE LOG**BOREHOLE
NO.:PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATIONPAGE: 2 OF 3PROJECT NO.: 181750DATE: 3/29/08Tt-4

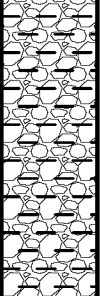
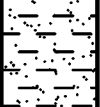
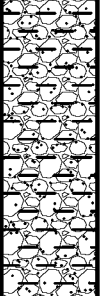
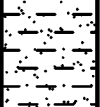
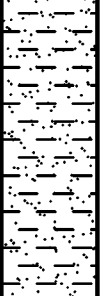
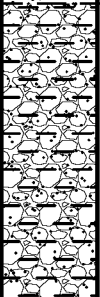
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
0							
1	1.5'						CLAYEY GRAVEL (0 TO 5') SLIGHTLY MOIST TO MOIST, YELLOWISH RED (5YR 5/6), MEDIUM DENSE.
2							
3							
4	1.4'						
5							
6		CA B A		0.7			SANDY CLAY (5' TO 6.5') SLIGHTLY MOIST, YELLOWISH RED (5YR 5/6), STIFF, FINE SAND, TRACE GRAY SANDY CLAY LENS, SOME GRAVEL.
7	3.1'						SANDY CLAYEY GRAVEL (6.5' TO 11.5') MOIST, REDDISH BROWN.
8							
9							
10							
11		CA B A		1.0			
12	4.8'						SANDY CLAYSTONE WITH GRAVEL (11.5' TO E.O.B.) MOIST TO WET, GRADES TO CLAYSTONE, SLIGHTLY MOIST TO MOIST, LIGHT BROWN GRAY (10YR 6/2), HARD, ORGANIC ODOR, WET AT TOP OF CLAYSTONE.
13							
14							
15							
16		CA B A		1.1			
17	2.9'						
18							
19							
20							

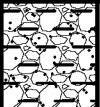
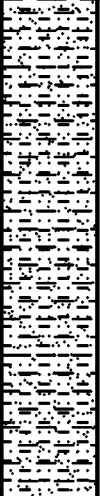
		BOREHOLE LOG					BOREHOLE NO.: Tt-4	
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>3 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/29/08</u>						
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION	
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.				
20							SANDY CLAYSTONE WITH GRAVEL (11.5' TO E.O.B.) SEE DESCRIPTION ON PREVIOUS PAGE.	
21								
22		CA B A		0.7				
23	5.0'							
24								
25								
26		CA B A		1.0				
27	2.0'							
28								
29								
30		CA A		0.33			E.O.B. = 30.5'	
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

**BOREHOLE LOG**BOREHOLE
NO.:PAGE: 1 OF 3DATE: 3/28/08Tt-5**PROJECT INFORMATION**PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATIONPROJECT NO.: 181750CLIENT: S. M. STOLLEROWNER: DOELOCATION: ROCKY FLATS**BOREHOLE LOCATION**

SEE FIGURE 2

FIELD INFORMATIONDATE & TIME ARRIVED: 3/28/08 - 11:15AMBOREHOLE LOGGED BY: JOE REEDVISITORS: NONEWEATHER: PARTLY CLOUDY**DRILLING INFORMATION**DRILLING COMPANY: BOART LONGYEARSTART TIME: 11:25AMBORING DEPTH: 35.5' BORING DIA.: 8"DRILLING METHOD: SONIC CONTINUOUS CORESAMPLING METHOD: CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOONTIME DRILLING COMPLETE: 4:00PM**BOREHOLE COMPLETION / ABANDONMENT INFORMATION**START TIME: 4:00PM COMPLETE TIME: 6:00PMINSTRUMENTATION: INCLINOMETER / VW PIEZOMETER BACKFILL: GROUTELEVATION - TOP OF BORING: 5996.6' RELATIVE TO: MSL**GROUNDWATER CONDITIONS**WET AT 5.5' DURING DRILLING**FOLLOWING FIELD WORK**TIME OF CLEAN-UP COMPLETE: 6:00PM TIME LEFT SITE: 6:00PMNOTES: WELL NO. 82508

		BOREHOLE LOG					BOREHOLE NO.: Tt-5	
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>2 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/28/08</u>						
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION	
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.				
0	2.5'						CLAYEY GRAVEL (0 TO 4') DARK BROWN. MEDIUM STIFF TO STIFF, COBBLES, GRADES TO SANDY CLAY.	
1								
2								
3								
4	3.6'	CA B A		0.8			SANDY CLAY (4' TO 6') MOIST, DARK YELLOWISH BROWN (10YR 4/6), MEDIUM STIFF, FINE TO COARSE SAND, TRACE FINE GRAVEL, ORGANIC, ORGANIC ODOR.	
5								
6							CLAYEY GRAVEL WITH SAND (6' TO 10') WET, REDDISH DARK BROWN, NO ORGANICS.	
7								
8								
9								
10	5.0'	CA B A		1.5			SANDY CLAY (10' TO 15') MOIST TO WET, DARK YELLOWISH BROWN (10YR 3/4), SOFT, FINE TO COARSE SAND, TRACE FINE TO COARSE GRAVEL, DEBRIS, FE STAINED, STRONG ORGANIC COLOR AND ODOR.	
11								
12							CLAYEY SANDY GRAVEL / SANDY GRAVELLY CLAY (15' TO 21') SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6), HARD, FINE TO COARSE SAND, FINE TO MEDIUM GRAVEL (SUBROUNDED).	
13								
14								
15								
16	0	CA A		0.3			CLAYEY SANDY GRAVEL / SANDY GRAVELLY CLAY (15' TO 21') SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6), HARD, FINE TO COARSE SAND, FINE TO MEDIUM GRAVEL (SUBROUNDED).	
17		CA/A		0.15				
18								
19								
20								
20' - NO ORGANICS.								

		BOREHOLE LOG					BOREHOLE NO.: Tt-5	
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>3 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/28/08</u>						
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION	
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.				
20	0.9'						CLAYEY SANDY GRAVEL / SANDY GRAVELLY CLAY (15' TO 21') SEE DESCRIPTION ON PREVIOUS PAGE.	
21								
22	5.0'	CA B A		1.25			SILTY SANDY CLAY (21' TO 27.5') SLIGHTLY MOIST, BROWNISH YELLOW (10YR 6/6), STIFF TO HARD, VERY FINE SAND.	
23								
24								
25								
26								
27	5.0'	CA B A		1.25			CLAYSTONE (27.5' TO E.O.B.) DRY TO SLIGHTLY MOIST, DARK GRAY (10YR 4/1), HARD.	
28								
29								
30								
31	5.0'							
32								
33								
34								
35		CA B A		0.66				
36							E.O.B. = 35.5'	
37								
38								
39								
40								



BOREHOLE LOG

**BOREHOLE
NO.:**

Tt-6

PAGE: 1 OF 3

DATE: 3/29/08

PROJECT INFORMATION

PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION

PROJECT NO.: 181750

CLIENT: S. M. STOLLER

OWNER: *DOE*

LOCATION: *ROCKY FLATS*

BOREHOLE LOCATION

SEE FIGURE 2

FIELD INFORMATION

DATE & TIME ARRIVED: 3/28/08 - 6:30PM

BOREHOLE LOGGED BY: JOE REED

VISITORS: NONE**WEATHER:**

DRILLING INFORMATION

DRILLING COMPANY: BOART LONGYEAR

START TIME: 3/29/08 - 8:45AM

BORING DEPTH: 30.5'

BORING DIA.: 8"

DRILLING METHOD: SONIC CONTINUOUS CORE

SAMPLING METHOD: CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOON

TIME DRILLING COMPLETE: 11:30AM

BOREHOLE COMPLETION / ABANDONMENT INFORMATION

START TIME: 12:00PM

COMPLETE TIME: 1:45PM

INSTRUMENTATION: INCLINOMETER / VW PIEZOMETER

BACKFILL: GROUT

ELEVATION - TOP OF BORING: 5986.5'

RELATIVE TO: MSL

GROUNDWATER CONDITIONS

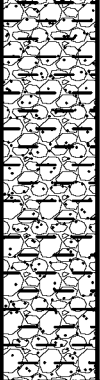
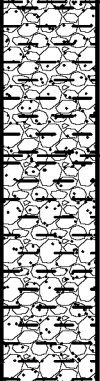
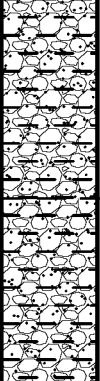
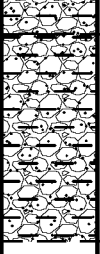
WET AT 5' DURING DRILLING

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: 1:45PM

TIME LEFT SITE: 1:45PM

NOTES: WELL NO. 82608

		BOREHOLE LOG					BOREHOLE NO.: Tt-6	
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>2 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/29/08</u>						
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION	
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.				
0	2.7'						SANDY GRAVELLY CLAY (0 TO 5') MOIST TO SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6) AND SOME GRAY BROWN (10YR 5/2), STIFF, FINE TO COARSE SAND AND GRAVEL.	
1								
2								
3								
4								
5	1.5'						5' - WET.	
6				0			SANDY GRAVELLY CLAY (5' TO 7') MOIST TO WET, BROWN (10YR 5/6), SOFT TO MEDIUM STIFF, FINE TO COARSE SAND AND GRAVEL, ORGANIC ODOR.	
7							SANDY GRAVELLY CLAY (7' TO 12.5') MOIST TO SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6) AND SOME GRAY BROWN (10YR 5/2), STIFF, FINE TO COARSE SAND AND GRAVEL.	
8								
9								
10	3.5'						SANDY GRAVELLY CLAY (12.5' TO 15.3') SLIGHTLY MOIST, GRAYISH BROWN (10YR 5/2), VERY STIFF TO HARD, FINE TO COARSE SAND AND GRAVEL, ANGULAR TO SUBROUNDED.	
11		CA A		0.4				
12								
13								
14								
15	4.5'						CLAYEY SANDY GRAVEL / SANDY GRAVELLY CLAY (15.3' TO 18') MOIST, YELLOWISH BROWN (10YR 5/6), HARD, FINE TO COARSE SAND AND GRAVEL.	
16		CA B A		1.2				
17								
18								CLAYSTONE (18' TO 20') VERY SLIGHTLY MOIST, YELLOWISH BROWN (10YR 5/6), HARD TO VERY STIFF.
19								
20								

		BOREHOLE LOG					BOREHOLE NO.: Tt-6			
		PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>3 OF 3</u> PROJECT NO.: <u>181750</u> DATE: <u>3/29/08</u>								
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION			
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.						
20	4.5'	CA B A		1.5			SANDY GRAVELLY CLAY (20' TO 23') MOIST TO SLIGHTLY MOIST, BROWN (10YR 5/3), STIFF TO HARD, FINE TO COARSE SAND AND GRAVEL.			
21										
22										
23	3.5'			0			CLAYSTONE (23' TO 26.5') VERY SLIGHTLY MOIST TO MOIST, DARK GRAYISH BROWN, HARD.			
24										
25										
26	3.5'			0			CLAY (26.5' TO 27.75') SLIGHTLY MOIST, DARK YELLOWISH BROWN (10YR 4/4), TRACE GRAVEL.			
27										
28										
29	3.5'			0.3			CLAYSTONE (27.5' TO E.O.B.) DRY, GRAY (10YR 6/1), HARD, SANDY LAYERS (FINE SAND, LIGHT BROWN GRAY (10YR 6/2)).			
30										
31										
32	E.O.B. = 30.5'									
33										
34										
35										
36										
37										
38										
39										
40										



BOREHOLE LOG

BOREHOLE
NO.:

PAGE: 1 OF 3

DATE: 4/2/08

Tt-7

PROJECT INFORMATION

PROJECT: ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION

PROJECT NO.: 181750

CLIENT: S. M. STOLLER

OWNER: DOE

LOCATION: ROCKY FLATS

BOREHOLE LOCATION

SEE FIGURE 2

FIELD INFORMATION

DATE & TIME ARRIVED: 4/2/08 - 12:30PM

BOREHOLE LOGGED BY: JOE REED

VISITORS: NONE

WEATHER: _____

DRILLING INFORMATION

DRILLING COMPANY: BOART LONGYEAR

START TIME: 12:40PM

BORING DEPTH: 28.5' BORING DIA.: 8"

DRILLING METHOD: SONIC CONTINUOUS CORE

SAMPLING METHOD: CONTINUOUS CORE IN POLY CARBONATE TUBING, CA SPLIT SPOON

TIME DRILLING COMPLETE: 4/2/08 - 1:20PM AND 4/8/08 - 1:45PM

BOREHOLE COMPLETION / ABANDONMENT INFORMATION

START TIME: 4/8/08 - 1:45PM COMPLETE TIME: 4/8/08 - 2:55PM

INSTRUMENTATION: INCLINOMETER / VW PIEZOMETER BACKFILL: GROUT

ELEVATION - TOP OF BORING: 5995.7' RELATIVE TO: MSL

GROUNDWATER CONDITIONS

FOLLOWING FIELD WORK

TIME OF CLEAN-UP COMPLETE: 2:55PM TIME LEFT SITE: 2:55PM

NOTES: DRILL / SAMPLE TO 6.5' ON 4/2/08. CORE BARREL THREADS WORE OUT. RESUME DRILLING 4/8/08.

WELL NO. 82708

BOREHOLE LOG						BOREHOLE NO.:	
						Tt-7	
PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u>						PAGE: <u>2 OF 3</u>	
PROJECT NO.: <u>181750</u>						DATE: <u>4/2&8/08</u>	
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
0	3.7'						CLAYEY GRAVEL WITH SAND (0 TO 3') MOIST, VERY STIFF, STRONG ORGANIC ODOR, ORGANICS.
1							
2							
3	5'						SANDY CLAY (3' TO 8.5') MOIST, DARK YELLOWISH BROWN (10YR 4/4), MEDIUM STIFF, FINE SAND, GRAVEL.
4							
5							
6		CA B A		0.7			CLAY (8.5' TO 10') WET, FINE, ORGANIC.
7							
8							
9	5'						SILTY CLAYSTONE (10' TO 22') SLIGHTLY MOIST TO MOIST, BROWNISH YELLOW (10YR 6/6) AND LIGHT YELLOWISH BROWN (10YR 6/4), STIFF TO HARD, FINE SAND, TRACE SANDY LENS, TRACE MOTTLED ORANGE-GRAY.
10							
11							
12							CLAY (8.5' TO 10') WET, FINE, ORGANIC.
13							
14							
15	5'						SILTY CLAYSTONE (10' TO 22') SLIGHTLY MOIST TO MOIST, BROWNISH YELLOW (10YR 6/6) AND LIGHT YELLOWISH BROWN (10YR 6/4), STIFF TO HARD, FINE SAND, TRACE SANDY LENS, TRACE MOTTLED ORANGE-GRAY.
16							
17							
18		CA B A		1.35			18' - GRADES TO GRAY BROWN. 18' TO 20' - TRACE ORGANICS.
19							
20							

BOREHOLE LOG						BOREHOLE NO.: Tt-7	
PROJECT: <u>ROCKY FLATS ORIGINAL LANDFILL GEOTECHNICAL INVESTIGATION</u> PAGE: <u>3 OF 3</u>							
PROJECT NO.: <u>181750</u> DATE: <u>4/2/08</u>							
DEPTH (FT)	CORE RECOV.	DRIVE SAMPLES			ADD'L SAMPLES	LITHOLOGY GRAPHIC	SOIL DESCRIPTION
		SAMPLE TYPE	BLOWS (PER 6")	RECOV.			
20	4.0'	CA B A		0.75			SILTY CLAYSTONE (10' TO 22') DESCRIPTION ON PREVIOUS PAGE. 20' - FE STAINED. CLAYSTONE (22' TO E.O.B.) DRY, GRAYISH BROWN (10YR 5/2), HARD. 27.5' - DARK BROWN. E.O.B. = 28.5'
21							
22							
23							
24		CA B A		0.4			
25							
26							
27							
28		CA / A		0.15			
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							