

LOG OF Boring 228-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.7	LOAMY TOPSOIL: 0-3', dark brown (scattered green paper debris).	
			0.6	SAND (SP): 3-5', light brown, fine to medium-grained.	
5			0.5	5-10': Fine to coarse-grained.	5
			0.7		
10			0.5	10-15': Fine to medium-grained.	10
		1	0.3		
				14': Gravel encountered.	
15			0.9	15-16': 10% gravel.	15
			0.3	16-20': Medium-grained.	
20					20
25					25

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Barr Engineering Co.
 4700 West 77th Street
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 12' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013906

LOG OF Boring 237G-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/29/11 Ended 6/29/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 2

Elevation --
 Total Depth 47'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			1.6	LOAMY TOPSOIL: 0-1', dark brown with some fine-grained sand.	
			1.7	SILTY SAND (SP-SM): 1-7', brown.	
5			1.7	3.5': Transitions to more brown sand, fine to medium-grained (reworked native).	5
			1.5	SAND (SP): 7-12', light brown, fine to medium-grained.	
			1.7	7': Trace gravel and coarse-grained sand.	
			1.9	12-16': Fine to coarse-grained.	
15				15': Trace gravel.	15
			1.3	16-20': Medium to coarse-grained with 30% large gravel.	
20			1.7	20-24': Brown with ~50% gravel.	20
			1.3	24-47': Sand contains ~30% gravel, black/reddish/white coarse-grained sand intermixed as broken down from the gravel.	25

(continued)

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Remarks:
 Background headspace readings were measured at less than 0.7 ppm. Sampled at 3' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013907

LOG OF Boring 237G-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/29/11 Ended 6/29/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 2

Elevation --
 Total Depth 47'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
35			1.5	SAND (SP): 7-12', light brown, fine to medium-grained. <i>(continued)</i>	35
40			1.3	38.5': Color transitions to light brown, fine to medium-grained.	40
45			1.2		45
50					50
55					55

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 Fax:

Remarks:
 Background headspace readings were measured at less than 0.7 ppm. Sampled at 3' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring 713A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 12'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			1.5	LOAMY TOPSOIL: 0-4', dark brown with fine-grained sand intermixed.	
			1.3	SILTY SAND (SP-SM): 4-5', brown to light brown.	
5			1.6	SAND (SP): 5-10', brown to light brown, medium to coarse-grained.	5
				8': Reddish-brown layer.	
10			0.8	10-12': Brown to light-brown, fine to medium-grained.	10
		1			
15					15
20					20
25					25

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Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 12' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013909

LOG OF Boring 717A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/29/11 Ended 6/29/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.6	ASPHALT/AGGREGATE: 0-1'.	
			1.1	TOPSOIL: 1-2.5', dark brown, former topsoil layer, compacted.	
			1.3	SILT (ML): 2.5-4', yellowish/reddish-brown, some trace gravel.	
5			0.6	SAND (SP): 4-5', brown, fine to medium-grained.	
			0.9	CLAY (CL): 5-5.5', yellowish/reddish-brown, lean with black mottling.	5
			1.0	SAND (SP): 5-6', brown, medium-grained.	
			1.0	6-10': Light brown, fine to medium-grained with gravel lens.	
10			0.8	SILT (ML): 10-10.5', yellowish/reddish brown with black mottling.	10
			1.3	SAND (SP): 10.5-12.5', light brown, fine to medium-grained.	
			1.1	11.5': Some silty sand observed with trace gravel.	
			1.1	12.5-15': Medium to coarse-grained with 10% gravel.	
15		1	0.5	15-20': Fine to medium-grained.	15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at less than 0.7 ppm. Sampled at 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013910

LOG OF Boring 717A-SB2

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/29/11 Ended 6/29/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			1.5	LOAMY TOPSOIL: 0-2', dark brown, some fine-grained sand in top 4".	
			1.5	SILT (ML): 2-3', yellowish/reddish-brown (native).	
			1.7	SAND (SP): 3-20', brown.	
5			1.6	5-6': Light Brown.	5
				6-7': Trace gravel, fine to medium-grained.	
				7-8.5': Medium to coarse-grained.	
			2.1	8.5-8.7': Very fine-grained with a layer of SILT. 8.7-10': Medium-grained.	
10			1.9	10-11': Light brown.	10
				11-12': Brown.	
				12-15': Light brown, medium to coarse-grained.	
15		1	2.0	15-17': Brown, fine to medium-grained.	15
			1.8	17-20': Light brown, fine to medium-grained.	
20					20
25					25

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Barr Engineering Co.
 4700 West 77th Street
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 Fax:

Remarks:
 Background headspace readings were measured at less than 0.6 ppm. Sampled at 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013911

LOG OF Boring 718A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 16'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			2	SILTY SAND (SP-SM): 0-2', light brown with ~25% gravel.	
			1.4	SILTY SAND (SP-SM): 2-7.5', brown to dark brown with possible former topsoil layer intermixed, ~20% gravel.	
5			1.2	SAND (SP): 7.5-9', brown to light brown, coarse-grained sand with 10% gravel.	5
			1.2	9-16': Light brown, fine to medium-grained.	
10			1.7		10
			1.6		
15		1			15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013912

LOG OF Boring A5-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0			1.0	LOAMY TOPSOIL: 0-0.5', dark brown with medium-grained light brown sand mixed in.	0
0.5			1.4	SAND (SP): Light brown, medium to coarse-grained with 10% gravel.	0.5
1.5			1.2	LOAMY TOPSOIL: 1.5-2', dark brown, reworked former topsoil, 15% gravel mix and some sand.	1.5
2			0.4	SAND with SILT (SP-SM): 2-7', brown with ~15% gravel.	2
5			1.2	5-7': Brown with former topsoil layer intermixed (FILL).	5
7			1.2	SAND (SP): Light brown, medium-grained, native.	7
10			1.9	10-15': Medium to coarse-grained.	10
15		1			15
20					20
25					25

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Barr Engineering Co.
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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 12' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013913

LOG OF Boring A7-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 10'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
		1	0.7	LOAMY TOPSOIL: 0-1', dark brown with gravel.	
			0.8	SAND (SP): 1-5', light brown, medium to coarse-grained with 15% gravel.	
5			0.7	5-10': 15-20% gravel.	5
			0.7	9': Higher gravel concentration lens.	
10				10-15': Coarse-grained with ~20% gravel.	10
15				Trace yellowish-brown clay at 15' bgs.	15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 0.5' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013914

LOG OF Boring BG-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0			2.0	LOAMY TOPSOIL: 0-0.5', dark brown. SILT (ML): 0.5-1', yellowish/reddish-brown, trace gravel. SAND (SP): 1-5', light brown with ~15% gravel.	0
5		1	1.0	5-10': Sand is medium-grained with small gravel mixed in.	5
10		2	1.1	9': Increasing quantity of gravel, ~25%.	10
15			1.0	10-15': Gravel is ~15%. 12': Some oxidation, rust coloring on rocks.	15

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 2' and 6' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013915

LOG OF Boring BG-SB2


Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 13'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0	0-7.5'	1	25.1	LOAMY TOPSOIL: 0-7.5', dark brown with roots, hard down to approx 4.5' bgs where it begins to soften up, some trace yellowish-brown clay chunks at 3' bgs.	0
5	5-7.5'	2	3.8		5
7.5	7.5-10'		1.4	SILT (ML): 7.5-10', yellowish-brown silt.	7.5
10			0.9		10
15			0.4		15
20					20
25					25

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 2' and 6' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring BG-SB3

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			8.6	LOAMY TOPSOIL: 0-1', dark brownish black.	
		1	8.7	SILT (ML): 1-2', yellowish-brown.	
			1.8	SAND (SP): 2-5', light brown, fine to medium-grained, 10% gravel.	
5		2	0.9	5-10': Brown with 10-20% gravel. Hit rock, poor recovery.	5
10			3.7	10-15': Light brown with 10% gravel. Hit rock, poor recovery.	10
15					15
20					20
25					25

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/16/11



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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 2' and 6' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013917

LOG OF Boring BG-SB4

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 1 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 6/28/11 Ended 6/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 1

Elevation --
 Total Depth 12.5'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			1.6	LOAMY TOPSOIL: 0-1.5', dark brown, with some gravel.	
		1		SILT (ML): 1.5-4', yellowish-reddish brown.	
5			1.4	SAND (SP): 4-5', light brown, fine to medium-grained.	5
		2		5-10': Medium-grained.	
10			1.4	10-10.5': Medium to coarse-grained. 10.5-11': Brown, fine-grained with 10% gravel. 11-12.5': Light brown, medium to coarse-grained.	10
15					15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 2' and 6' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring 101A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.2	TOPSOIL with GRAVEL: 0-1', brown.	
				SILT (ML): 1-3.5', dark brown.	
				2.5-3.5': Yellow/reddish brown.	
		1	0.2	SAND (SP): 3.5-7', fine to medium-grained, reddish brown.	
5				Intermixed red and light brown sand with gravel at 5' bgs.	5
			0.2	7-15': Light brown, medium to coarse-grained, 10% gravel.	
10		2	0.2		10
15					15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 4' and 12' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring 101A-SB2


Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0				TOPSOIL: 0-0.5', dark brown sand with silt.	0
0				SAND (SP): 0.5-1.5', light brown, coarse-grained, 40% gravel.	0
0			0.1	Coal fragments from 1.5-2' bgs.	0
0				2-5': Brown to reddish brown, medium to coarse-grained, 10% gravel.	0
5		1			5
10				10-11.5': Brown to light brown, fine to medium-grained, trace pockets of silty sand.	10
10		2	0.1	11.5-15': Light brown, 10% gravel.	10
15					15
20					20
25					25

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 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 4' and 12' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring 227A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/19/11 Ended 10/19/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.0	SAND with SILT (SP-SM): 0-2', brown, 20% gravel.	
			0.1	3-inch black organic layer at 1.5' bgs. SAND (SP): 2-10', brown to light brown, medium to coarse-grained, 20% gravel.	
5			0.1		5
10			0.1	3-inch layer of clayey sand at 9' bgs. 10-15': Brown, medium to coarse-grained, 10% gravel.	10
15		1		3-inch layer of gray clayey sand at 12.5' bgs. 2-inch layer of dark brown clayey sand at 14' bgs.	15
20					20
25					25

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 14' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013921

LOG OF Boring 301ALP-SB1

Client University of Minnesota

Drill Contractor Matrix

Project Name UMore East RI Stage 2

Drill Method Geoprobe

SHEET 1 OF 1

Number 23/19-1092

Drilling Started 10/18/11 Ended 10/18/11

Elevation --

Location Rosemount, MN

Logged By ADN/SRN2

Total Depth 10'

Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.3	SAND (SP): 0-1', fine to medium-grained, trace gravel, brown. (FILL)	
			0.3	SILT (ML): 1-2', brown to reddish brown.	
			0.3	SAND (SP): 2-5', light brown, 10% gravel, reddish brown at 2' bgs.	
5		1	0.3	5-10': Brown to light brown, 10% gravel.	5
10		2			10
15					15
20					20
25					25

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.3 ppm.
 Sampled at 4' and 10' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013922

LOG OF Boring 303A-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0.0			0.0	GRAVELLY SAND: 0-1', 50% gravel, reddish fine to medium-grained sand.	0.0
0.4			0.4	SAND (SP): 1-5', brown to reddish brown, trace gravel, clay clumps intermixed. (FILL)	0.4
5		1	0.4	5-10': Light brown, medium to coarse-grained, trace gravel, SILT at 10' bgs.	5
10			0.1	10-11.5': Brown, fine to medium-grained, trace gravel.	10
11.5		2	0.0	11.5-20': Light brown, medium to coarse-grained, trace gravel.	11.5
15			0.1		15
20		3			20

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Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 4', 12', and 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring 716A-SB5

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.2	SILTY SAND (SM): 0-5', dark brown, coal and concrete present, intermixed yellowish brown/brown/dark brown silt, mottled from 4-5' bgs, hard/compacted.	
			0.2		
5			0.2	SILT (ML): 5-7.5', dark brown, hard/compact, some light brown to reddish brown silt intermixed.	5
				SILTY SAND (SM): 7.5-10', dark brown to black, weak, trace fine-grained sand.	
10			0.2	CLAY (CL): 10-12.5', dark brown, dry, compact.	10
		1	0.2	SILT (ML): 12.5-15.5', yellowish brown.	
15			0.2	SAND (SP): 15.5-17.5', medium to coarse-grained, reddish/yellowish brown,	15
				17.5-18': Fine to medium-grained, dark brown to black bedding at 18' bgs. 18-20': Medium to coarse-grained.	
20		2		Brown bedding at 19' bgs.	20
25					25

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.2 ppm.
 Sampled at 12' and 20' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013924

LOG OF Boring 716A-SB6

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.1	SILTY SAND (SM): 0-1.5', dark brown.	
			0.1	SAND with SILT (SP-SM): 1.5-4', intermixed dark brown/yellow/reddish brown silt.	
5			0.2	SAND (SP): 4-6', medium to coarse-grained, reddish brown, some silty sand intermixed.	5
			0.2	6-10': Light brown, medium to coarse-grained, 10% gravel. Coarse gravel layer at 7.5' bgs	
10			0.2	10-12': Fine to medium-grained.	10
		1		12-13': Fine to coarse-grained. 13-14': Fine to medium-grained.	
15			0.2	14-15': Medium to coarse-grained, silt layer bedding at 14' bgs. 15-17': Fine to medium-grained.	15
				17-20': Medium to coarse-grained.	
20		2			20
25					25

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Barr Engineering Co.
 4700 West 77th Street
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.1 ppm.
 Sampled at 12' and 20' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013925

LOG OF Boring 716B-SB1


Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 15'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.1	SAND with SILT and GRAVEL (SP-SM): 0-0.5', brown. SILTY SAND (SM): 0.5-5', reddish brown to dark brown, hard, compacted, trace gravel.	
5			0.1	SAND (SP): 5-15', light brown, medium to coarse-grained, trace gravel.	5
10			0.2		10
15		1			15
20					20
25					25

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 12' bgs.
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring CAP-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0				LOAMY TOPSOIL: 0-1', brown.	0
1		1	0.2	SAND (SP): 1-5', light brown, medium to coarse-grained, 10-20% gravel.	1
5				5-7': Medium-grained with trace gravel, black clayey layering along edge of core.	5
7				7-10': Medium to coarse-grained with trace gravel.	7
10				10-12.5': Medium-grained with trace gravel, rust colored mottling at 12' bgs, clayey black layering along edge of core at 10' bgs.	10
12.5		2	0.2	12.5-15': Medium to coarse-grained with large quantities of pulverized gravel resulting from drilling.	12.5
15			0.0	15-20': Medium to coarse-grained with 20% gravel, black mottling at 17' bgs.	15
20		3			20

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Barr Engineering Co.
 4700 West 77th Street
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.2 ppm.
 Sampled at 3', 12', and 18' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013927

LOG OF Boring CAP-SB2

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0-0.5'				TOPSOIL: 0-0.5', dark brown.	0-0.5'
0.5-3'				SAND (SP): 0.5-3', light brown, medium-grained, trace gravel.	0.5-3'
3-4'			0.2	3-4': Dark brown compacted former topsoil.	3-4'
4-8'			0.3	4-8': Medium to coarse-grained, trace gravel.	4-8'
8-10'			0.2	8-10': Medium-grained with 20-30% gravel, some fine-grained silty sand mottling at 8.5' bgs.	8-10'
10-13'			0.4	10-13': Grayish-brown, fine to medium-grained, trace gravel.	10-13'
13-15'			0.3	13-15': Light brown, medium to coarse-grained with 30% gravel, orange mottling at 13' bgs.	13-15'
15-20'			0.3	15-20': Light brown to brown, medium to coarse-grained, 30-40% gravel.	15-20'

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 Fax:

Remarks:
 Background headspace readings were measured at 0.2 ppm.
 Sampled at 5', 12', and 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring OP-SB1

Client University of Minnesota Drill Contractor Matrix
 Project Name UMore East RI Stage 2 Drill Method Geoprobe
 Number 23/19-1092 Drilling Started 10/18/11 Ended 10/18/11
 Location Rosemount, MN Logged By ADN/SRN2

SHEET 1 OF 1

Elevation --
 Total Depth 20'
 Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
0-5				SAND (SP): 0-5', light brown with cobbles/gravel.	0-5
5-10		1	0.0	5-10': Medium to coarse-grained with 20-30% gravel.	5-10
7-10				7-10': Coarse-grained.	7-10
10-11				10-11': Fine to medium-grained.	10-11
11-20		2	0.1	11-20': Medium to coarse-grained.	11-20
13-14.5				13-14.5': 20-30% gravel.	13-14.5
15-16		3	0.1		15-16
20					20

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 Fax:

Remarks:
 Background headspace readings were measured at 0.0 ppm.
 Sampled at 5', 12', and 16' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013929

LOG OF Boring U-LWBB7-SB1

Client University of Minnesota
 Project Name UMore East RI Stage 2
 Number 23/19-1092
 Location Rosemount, MN

Drill Contractor Matrix
 Drill Method Geoprobe
 Drilling Started 10/19/11 Ended 10/19/11
 Logged By ADN/SRN2

Elevation --
 Total Depth 20'
 Screened Interval NA

SHEET 1 OF 1

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.4	TOPSOIL: 0-2', brown sand with silt, trace gravel.	
			0.4	SAND (SP): 2-20', light reddish brown, medium to coarse-grained, 10% gravel.	
5			0.4	3-inch dark brown organic silt layer at 7' bgs.	5
10			0.4	12-15': trace small gravel.	10
15			0.3		15
		1	0.3	19-20': 40% gravel, some rust colored mottling.	20
20					20
25					25

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Barr Engineering Co.
 4700 West 77th Street
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.3 ppm.
 Sampled at 17' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring U-LWBC6-SB1

Client University of Minnesota

Drill Contractor Matrix

Project Name UMore East RI Stage 2

Drill Method Geoprobe

SHEET 1 OF 1

Number 23/19-1092

Drilling Started 10/18/11 Ended 10/18/11

Elevation --

Location Rosemount, MN


Logged By ADN/SRN2

Total Depth 20'

Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
				SAND (SP): 0-1.5', light brown, medium-grained, 20% gravel.	
			0.2	1.5-2': Dark brown, fine to medium-grained, plastic debris.	
			0.3	2-5': Light brown, medium to coarse-grained, trace gravel.	
5			0.4	5-6': Light brown, fine to medium-grained, 10% gravel, trace amount of plastic and wood debris.	5
			0.4	6-15': Light brown, medium to coarse-grained, 10% gravel.	
10					10
15			0.4	15-17': Brown, fine to medium-grained, 10% gravel.	15
		1	0.3	17-20': Light brown, medium to coarse-grained, 40% gravel.	
20			0.3		20
25					25

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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.2 ppm.
 Sampled at 17' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring U-LWBC7-SB1

Client University of Minnesota
 Project Name UMore East RI Stage 2
 Number 23/19-1092
 Location Rosemount, MN

Drill Contractor Matrix
 Drill Method Geoprobe
 Drilling Started 10/19/11 Ended 10/19/11
 Logged By ADN/SRN2

Elevation --
 Total Depth 25'
 Screened Interval NA

SHEET 1 OF 1

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
			0.4	SILT (ML): 0-1', brown.	
			0.5	SILTY SAND (SM): 1-2.5', light brown to brown, trace gravel.	
				SAND (SP): 2.5-5', light brown, medium to coarse-grained, 20% gravel.	
5				5-6': Brown to light brown, fine to medium-grained, 10% gravel.	5
			0.4	6-7': Light brown, fine to medium-grained, 10% gravel.	
				7-10': Light brown, medium-grained, 10% gravel.	
				Brown sand with silt layer at 8' bgs.	
10			0.4	10-15': Light brown-brown, medium to coarse-grained.	10
				Dark brown clay layer at 12' bgs.	
15				15-17': Light brown to brown, fine to medium-grained, 10% gravel.	15
			0.4	17-20': Light brown, medium to coarse-grained, 10% gravel.	
		1			
20			0.4	20-25': Light brown, medium to coarse-grained, trace gravel.	20
		2			
25					25

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 4700 West 77th Street
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 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.3 ppm.
 Sampled at 18' and 23' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013932

LOG OF Boring U-LWBC7-SB3

Client University of Minnesota

Drill Contractor Matrix

Project Name UMore East RI Stage 2

Drill Method Geoprobe

SHEET 1 OF 1

Number 23/19-1092

Drilling Started 10/18/11 Ended 10/18/11

Elevation --

Location Rosemount, MN

Logged By ADN/SRN2

Total Depth 15'

Screened Interval NA

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	DEPTH FEET
	0.2		0.2	SAND with SILT (SP-SM): 0-1.5', brown.	
	0.2		0.2	SAND (SP): 1.5-7', trace gravel, reddish brown.	
5	0.3		0.3		5
	0.3		0.3	7-10': Light brown, medium to coarse-grained, 10-20% gravel.	
10	0.3	1	0.3	10-11': Brown, medium-grained, trace gravel. 11-15': Light brown, medium to coarse-grained.	10
15	0.3		0.3		15
20					20
25					25

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Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 Background headspace readings were measured at 0.2 ppm.
 Sampled at 11' bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-A5-018

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/23/11 Ended 11/23/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		1	0.0	TOPSOIL: 0-0.5', dark brown, loamy with 20% medium-grained sand.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 64' bgs GROUT Type: Neat Cement Interval: 0-59' SEAL Type: Bentonite Interval: 59-61' SANDPACK Type: Red Flint Interval: 61-76' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 64-74' BOREHOLE Diameter: 8.25"	
		2	0.0	SAND (SP): 0.5-5', yellowish brown (10YR 5/8), medium to coarse-grained with 10% gravel.		
5		3	0.0	SAND (SP): 5-20', light brown (7.5YR 6/4), fine to medium-grained with 30% gravel.		5
		4	0.0	Ran into large rock at 6' bgs, 20% gravel from 6/8' bgs.		
		5	0.0	Trace gravel from 8-10' bgs.		
10						10
		6	0.0	Trace gravel from 14-16' bgs.		
15						15
		7	0.0	20-50': Light brown, medium to coarse-grained with 10% gravel.		
20					20	
		8	0.0	Some oxidation mottling in sand at 25' bgs, 20% gravel (some large gravel).		
25					25	

(continued)

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784732
 Background PID headspace = 0.0 ppm.
 Static Water Level = 67.6 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-A5-018

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/23/11 Ended 11/23/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
			0.0	SAND (SP): 5-20', light brown (7.5YR 6/4), fine to medium-grained with 30% gravel. (continued) 10% gravel and transferring to more coarse-grained sand at 30' bgs.		
35		10	0.0	30% gravel at 35' bgs, medium to coarse-grained sand.		35
40		11	0.0	Little recovery, pulverized rock (red granite) and gravel in sample.		40
45		12	0.0	10% gravel at 45' bgs.		45
50		13	0.0	50-76': Light brown, fine to medium-grained, 10% gravel.		50
55		14	0.0	20% gravel at 55' bgs.		55

(continued)

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784732
 Background PID headspace = 0.0 ppm.
 Static Water Level = 67.6 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-A5-018

Client University of Minnesota

Drill Contractor SDE

Project Name UMore East RI Stage 1

Drill Method Hollow Stem Auger - 4.25" I.D.

SHEET 3 OF 3

Number 23/19-1092

Drilling Started 11/23/11 Ended 11/23/11

Elevation --

Location Rosemount, MN


Logged By ADN

Total Depth 76'

Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		15	0.0	SAND (SP): 5-20', light brown (7.5YR 6/4), fine to medium-grained with 30% gravel. (continued) Bedded layer of coarse-grained sand at 60' bgs, 20% gravel.		
65		16	0.0	Medium to coarse-grained at 65' bgs, transitions to more coarse-grained with depth, trace gravel. SWL at 67.6' bgs.		65
70		17	0.0	Fine to medium-grained at 70' bgs, more coarse-grained at top of sample, trace gravel, saturated.		70
75		18	0.0	Medium to coarse-grained and brown at 75' bgs, 10% gravel, saturated.		75
80						80
85						85

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Barr Engineering Co.
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 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784732
 Background PID headspace = 0.0 ppm.
 Static Water Level = 67.6 ft bgs.
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-B7-013

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/29/11 Ended 11/29/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 61'
 Screened Interval 50-60'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
0		1	0.0	TOPSOIL: 0-1.5', dark brown, loamy.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 50' bgs GROUT Type: Neat Cement Interval: 0-46' SEAL Type: Bentonite Interval: 46-48' SANDPACK Type: Red Flint Interval: 48-61' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 50-60' BOREHOLE Diameter: 8.25"	0
1.5		2	0.0	SILT (ML): 1.5-2.5', yellowish brown (10YR 5/6).		1.5
2.5		3	0.0	SAND (SP): 2.5-14', brownish yellow (10YR 6/6), fine to medium-grained, trace gravel.		2.5
5		4	0.0			5
10		5	0.1	Dark brown thin bedded striations at 9' bgs, no gravel.		10
15		6	0.0	14-34.5': Light brown, medium to coarse-grained with 20% gravel.		15
20		7	0.0			20
25		8	0.0	30% gravel from 24-34.5' bgs.		25

(continued)

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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784727
 Background PID headspace = 0.0 ppm.
 Static Water Level = 51.5 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013937

LOG OF Boring MW-B7-013

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/29/11 Ended 11/29/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 61'
 Screened Interval 50-60'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		9	0.0	SAND (SP): 2.5-14', brownish yellow (10YR 6/6), fine to medium-grained, trace gravel. (continued)		
35		10	0.4	SILT (ML): 34.5-34.9', dark yellowish brown (10YR 4/6), fine-grained. SAND (SP): 34.9-44', light brown, fine to medium-grained.		35
40		11		30% gravel at 39' bgs.		40
45		12	0.0	44-54': Medium-grained with 10% gravel.		45
50		13		No recovery due to pushing rock the entire way. SWL at 51.5' bgs.		50
55		14	0.0	54-61': Medium to coarse-grained with trace gravel, saturated.		55
				20% gravel from 59-61' bgs.		

(continued)

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Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784727
 Background PID headspace = 0.0 ppm.
 Static Water Level = 51.5 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013938

LOG OF Boring MW-B7-013

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/29/11 Ended 11/29/11
 Location Rosemount, MN Logged By ADN

SHEET 3 OF 3

Elevation --
 Total Depth 61'
 Screened Interval 50-60'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
	15'	15	0.0	SAND (SP): 34.9-44', light brown, fine to medium-grained. <i>(continued)</i>		
65						65
70						70
75						75
80						80
85						85

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Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784727
 Background PID headspace = 0.0 ppm.
 Static Water Level = 51.5 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-B7-014

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/22/11 Ended 11/22/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 72'
 Screened Interval 62-72'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		1	0.0	TOPSOIL: 0-1.5', dark brown, loamy with 20% sand.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 62' bgs GROUT Type: Neat Cement Interval: 0-58' SEAL Type: Bentonite Interval: 58-60' SANDPACK Type: Red Flint Interval: 60-72' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 62-72' BOREHOLE Diameter: 8.25"	
		2	0.0	SILT (ML): 1.5-2.5', yellowish brown (10YR 7/6).		
		3	0.0	SAND (SP): 2.5-5', yellowish brown, medium-grained with 20% gravel.		
5		4	0.0	5-9': Light brown, medium-grained with 10% gravel.		
		5	0.0	9-10': Light brown, fine-grained.		
10		6	0.0	SAND (SP): 10-72', light brown, medium to coarse-grained with 10% gravel.		
15		7	0.0			
25		8	0.0	Large gravel encountered with sand at 25' bgs.		

(continued)

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 Fax:

Remarks:
 UNIQUE I.D. = 784728
 Background PID headspace = 0.0 ppm.
 Static Water Level = 63.8 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013940

LOG OF Boring MW-B7-014

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/22/11 Ended 11/22/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 72'
 Screened Interval 62-72'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		9	0.0	SAND (SP): 10-72', light brown, medium to coarse-grained with 10% gravel. <i>(continued)</i> Trace gravel at 30' bgs.		
35		10	0.0	20% gravel at 35' bgs.		35
40		11	0.0	30% gravel with some large gravel at 40' bgs.		40
45		12	0.0	Fine to medium-grained at 45' bgs.		45
50		13	0.0	10% gravel at 50' bgs.		50
55		14	0.0	Coarse-grained with 30% gravel at 55' bgs.		55
				(continued)		

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Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784728
 Background PID headspace = 0.0 ppm.
 Static Water Level = 63.8 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013941

LOG OF Boring MW-B7-014

Client University of Minnesota

Drill Contractor SDE

Project Name UMore East RI Stage 1

Drill Method Hollow Stem Auger - 4.25" I.D.

SHEET 3 OF 3

Number 23/19-1092

Drilling Started 11/22/11 Ended 11/22/11

Elevation --

Location Rosemount, MN

Logged By ADN

Total Depth 72'

Screened Interval 62-72'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		15	0.0	SAND (SP): 10-72', light brown, medium to coarse-grained with 10% gravel. (continued) Medium to coarse-grained with 20% gravel at 60' bgs.		
65		16	0.0	SWL at 63.8' bgs. Light brown to brown and saturated at 65' bgs.		65
70		17	0.0			70
75						75
80						80
85						85

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Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784728
 Background PID headspace = 0.0 ppm.
 Static Water Level = 63.8 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-B7-015

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/29/11 Ended 11/30/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		1	0.0	TOPSOIL: 0-2', dark brown, loamy, trace medium-grained sand.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 65' bgs GROUT Type: Neat Cement Interval: 0-60' SEAL Type: Bentonite Interval: 60-62' SANDPACK Type: Red Flint Interval: 62-76' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 65-75' BOREHOLE Diameter: 8.25"	
		2	0.0	SAND (SP): 2-5', brownish yellow (10YR 6/6), medium-grained with trace gravel.		
5		3	0.0	5-6.5': Light brown, medium to coarse-grained with trace gravel.		5
		4	0.0	6.5-9.5': Light brown, fine to medium-grained, dark brown-black bedded striations, organic material at 7' and 9' bgs.		
10		5	0.1	9.5-14': Light brown, medium to coarse-grained with trace gravel.		10
		6	0.0	14-19': Light brown, fine to medium-grained.		
15		7	0.0	SAND (SP): 19-34', light brown, medium to coarse-grained, gravel.		15
20		8	0.0	30% gravel at 25' bgs.		20
25						25

(continued)

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Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784729
 Background PID headspace = 0.0 ppm.
 Static Water Level = 66.9 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013943

LOG OF Boring MW-B7-015

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/29/11 Ended 11/30/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		9	0.0	SAND (SP): 19-34', light brown, medium to coarse-grained, gravel. (continued) Poor recovery due to increasing gravel content. (Red Granite)		
35		10	0.0	34-59.5': Light brown, medium to coarse-grained with 20% gravel.		35
40		11		Poor recovery due to increasing gravel content.		40
45		12		Poor recovery due to increasing gravel content.		45
50		13	0.0			50
55		14		Trace gravel from 54-70' bgs. Poor recovery due to increasing gravel content (rock plug in split spoon).		55
				59.5-76': Light brown, medium to coarse-grained. (continued)		

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Barr Engineering Co.
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 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784729
 Background PID headspace = 0.0 ppm.
 Static Water Level = 66.9 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013944

LOG OF Boring MW-B7-015

Client University of Minnesota
 Project Name UMore East RI Stage 1
 Number 23/19-1092
 Location Rosemount, MN

Drill Contractor SDE
 Drill Method Hollow Stem Auger - 4.25" I.D.
 Drilling Started 11/29/11 Ended 11/30/11
 Logged By ADN

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

SHEET 3 OF 3

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		15	0.0	SAND (SP): 19-34', light brown, medium to coarse-grained, gravel. <i>(continued)</i>		
65		16	0.0	SWL at 66.9' bgs.		65
70		17	0.0	10% gravel from 70-76' bgs.		70
75		18	0.0			75
80						80
85						85

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 Fax:

Remarks:
 UNIQUE I.D. = 784729
 Background PID headspace = 0.0 ppm.
 Static Water Level = 66.9 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013945

LOG OF Boring MW-C6-020

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/21/11 Ended 11/21/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		1	0.1	TOPSOIL: 0-1', dark brown, loamy with 20% sand.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 65' bgs GROUT Type: Neat Cement Interval: 0-60' SEAL Type: Bentonite Interval: 60-62' SANDPACK Type: Red Flint Interval: 62-76' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 65-75' BOREHOLE Diameter: 8.25"	
		2	0.0	SILT (ML): 1-1.5', yellowish brown (10YR 5/4) with trace sand. SAND with SILT (SP-SM): 1.5-4', dark yellowish brown (10YR 4/6). Black organic silt with rusty oxidation mottling present at 2' bgs.		
5		3	0.0	SILT (ML): 4-6.5', dark yellowish brown (10YR 4/4) with trace gravel, low plasticity.		
		4	0.1	SAND (SP): 6.5-14', light brown, medium to coarse-grained.		
10		5	0.0	20% gravel (very coarse) at 8' bgs.		
15		6	0.0	14-19': Light brown, coarse-grained with 20% gravel.		
20		7	0.0	POOR RECOVERY from 19-44' bgs. Sand with silt with trace gravel and 10% sand at 19' bgs.		
25		8		Granite gravel in sample with pulverized rock, no soil recovery.		
				Granite gravel in sample with pulverized rock, no soil recovery.		

(continued)

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784734
 Background PID headspace = 0.0 ppm.
 Static Water Level = 68 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013946

LOG OF Boring MW-C6-020

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/21/11 Ended 11/21/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		9		SAND (SP): 6.5-14', light brown, medium to coarse-grained. <i>(continued)</i>		
35		10		Granite gravel in sample with pulverized rock, no soil recovery.		35
40		11		Granite gravel in sample with pulverized rock, no soil recovery.		40
45		12	0.0	44-60': Brown to yellowish brown, medium to coarse-grained, bedded, 20-30% gravel.		45
50		13	0.0			50
55		14	0.0	Brown sand transitions to light brown with 20% gravel (concentrated) at 55' bgs.		55
				<i>(continued)</i>		

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Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784734
 Background PID headspace = 0.0 ppm.
 Static Water Level = 68 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-C6-020

Client University of Minnesota
 Project Name UMore East RI Stage 1
 Number 23/19-1092
 Location Rosemount, MN

Drill Contractor SDE
 Drill Method Hollow Stem Auger - 4.25" I.D.
 Drilling Started 11/21/11 Ended 11/21/11
 Logged By ADN

Elevation --
 Total Depth 76'
 Screened Interval 65-75'

SHEET 3 OF 3

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
60-65	15'	15	0.0	SAND (SP): 6.5-14', light brown, medium to coarse-grained. (continued) 60-76': Light brown, medium to coarse-grained with trace gravel.		60-65
64			0.0	Yellowish brown and fine-grained at 64' bgs.		64
65		16	0.0	Brown to light brown, medium to coarse-grained with trace gravel at 65' bgs.		65
68			0.0	SWL at 68' bgs.		68
69		17	0.0	Brown, coarse-grained at 69' bgs.		69
75		18	0.0			75

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784734
 Background PID headspace = 0.0 ppm.
 Static Water Level = 68 ft bgs.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

UMP013948

LOG OF Boring MW-C7-016

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/28/11 Ended 11/28/11
 Location Rosemount, MN Logged By ADN

SHEET 1 OF 3

Elevation --
 Total Depth 75'
 Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		1	1.7	TOPSOIL: 0-1.5', dark brown, loamy with trace sand.	PRO. CASING Diameter: 6" Type: Steel Interval: 3' ags - 5' bgs RISER CASING Diameter: 2" Type: Steel Interval: 2' ags - 64' bgs GROUT Type: Neat Cement Interval: 0-55' SEAL Type: Bentonite Interval: 55-61' SANDPACK Type: Red Flint Interval: 61-74' SCREEN Diameter: 2" Type: Stainless Steel, 10 Slot Interval: 64-74' BOREHOLE Diameter: 8.25"	
		2	3.0	SILT (ML): 1.5-2.5', dark yellowish brown (10YR 4/6).		
		3	4.1	SAND (SP): 2.5-3', brown, medium-grained, trace gray clay intermixed. 3-8': Light brown, medium-grained, 10% fines.		
5		4	3.7	Coarse-grained bedding at 7' bgs.		
		5	0.8	8-14': Light brown, fine to medium-grained.		
10		6	0.6	SAND (SP): 14-29', light brown, medium to coarse-grained, 10% gravel.		
15		7	0.7	Medium-grained with trace gravel at 19' bgs.		
20		8		No recovery, driller indicated pushing rock down the whole way.		
25				29-34': Medium to coarse-grained with 20% gravel (very coarse). Darker medium-grained 0.5" bedded sand layer with crushed gravel at 29.5' bgs.		

(continued)

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784730
 Background PID headspace = 0.5 - 4.0 ppm.
 Static Water Level = 64.3' bgs.
 Set screen at 74 ft bgs due to sandstone/silt/clay at water table, not as conducive to recovery below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-C7-016

Client University of Minnesota Drill Contractor SDE
 Project Name UMore East RI Stage 1 Drill Method Hollow Stem Auger - 4.25" I.D.
 Number 23/19-1092 Drilling Started 11/28/11 Ended 11/28/11
 Location Rosemount, MN Logged By ADN

SHEET 2 OF 3

Elevation --
 Total Depth 75'
 Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		9	1.3	SAND (SP): 14-29', light brown, medium to coarse-grained, 10% gravel. (continued) Light brown fine to medium-grained at 30' bgs.		
35		10	1.0	34-49': Light brown, coarse-grained with 20% gravel, yellowish brown clay chunks with some oxidation from 34-36' bgs.		35
40		11		No recovery, driller indicated pushing rock down the whole way.		40
45		12	0.0	Fine to medium-grained with silt layer at 45' bgs.		45
50		13	2.0	CLAY (CL): 49-51', brown with very fine-grained sand, medium plasticity.		50
				SAND (SP): 51-54', light brown, fine to medium-grained with trace gravel.		
55		14	3.6	CLAYEY SAND (SC): 54-60', reddish brown (5YR 4/4), low to medium plasticity, soft to medium soft.		55
(continued)						

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784730
 Background PID headspace = 0.5 - 4.0 ppm.
 Static Water Level = 64.3' bgs.
 Set screen at 74 ft bgs due to sandstone/silt/clay at water table, not as conducive to recovery below ground surface*
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring MW-C7-016

Client University of Minnesota

Drill Contractor SDE

Project Name UMore East RI Stage 1

Drill Method Hollow Stem Auger - 4.25" I.D.

SHEET 3 OF 3

Number 23/19-1092

Drilling Started 11/28/11 Ended 11/28/11

Elevation --

Location Rosemount, MN

Logged By ADN

Total Depth 75'

Screened Interval 64-74'

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	DEPTH FEET
		15	4.0	SAND (SP): 60-60.5', brown (10YR 5/3), fine-grained with trace sandy clay, low plasticity. SAND (SP): 60.5-69', yellowish red (10YR 5/3), fine to medium-grained with trace gravel, oxidation present.		
65		16	5.2	Brown (10YR 5/3) sandy clay chunks at 64' bgs, medium-stiff to stiff. SWL at 64.3' bgs.		65
70		17	3.9	SANDSTONE: 69-76', yellow with some oxidation.		70
75		18	2.4	10% large gravel at 75' bgs.		75
80						80
85						85

SIMPLE ENVIRO LOG 5 23191092_UMORE.GPJ LIBRARY.GLB 12/27/11



Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803
 Telephone: 952-832-2600
 Fax:

Remarks:
 UNIQUE I.D. = 784730
 Background PID headspace = 0.5 - 4.0 ppm.
 Static Water Level = 64.3' bgs.
 Set screen at 74 ft bgs due to sandstone/silt/clay at water table, not as conducive to flow below ground surface.
 Additional data may have been collected in the field which is not included on this log.

UMP013951

Barry U More

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 103/

MINNESOTA UNIQUE WELL
AND BORING NO.

784727

WELL OR BORING LOCATION
County Name
Dakota

Township Name
Rosemount
Township No.
115N
Range No.
19W
Section No.
25
Fraction
SW SW SW 1/4

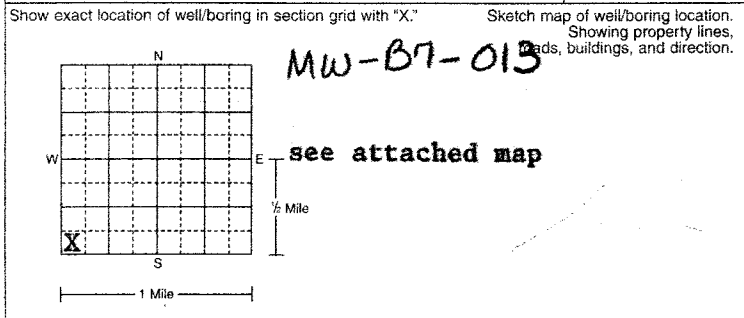
WELL/BORING DEPTH (completed)
60 ft.
DATE WORK COMPLETED
Nov. 29, 2011

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
Longitude _____ degrees _____ minutes _____ seconds _____

DRILLING METHOD
 Cable Tool
 Driven
 Dug
 Auger
 Rotary
 Jetted

House Number, Street Name, City, and Zip Code of Well Location
15XXX Blaine Ave, Rosemount 55068
or Fire Number _____

DRILLING FLUID _____
WELL HYDROFRACTURED? Yes No
From _____ ft. To _____ ft.



USE
 Domestic
 Monitoring
 Heating/Cooling
 Noncommunity PWS
 Environ. Bore Hole
 Industry/Commercial
 Community PWS
 Irrigation
 Remedial
 Elevator
 Dewatering

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

CASING MATERIAL
 Steel
 Plastic
Drive Shoe? Yes No
 Threaded
 Welded

CASING Diameter _____ Weight _____ Specifications _____
2 in. to 50 ft. lbs./ft. _____
8 1/2 in. to 60 ft. lbs./ft. _____
in. to _____ ft. lbs./ft. _____
in. to _____ ft. lbs./ft. _____

Property owner's mailing address if different than well location address indicated above.
**410 Church St
Minneapolis, MN 55455**

SCREEN
Make **Johnson**
Type **SS**
Slot/Gauze **10**
Set between **50** ft. and **60** ft. FITTINGS **thread**
OPEN HOLE
From _____ ft. To _____ ft.
Diam. **2"**
Length **10'**

STATIC WATER LEVEL
Measured from **grade**
52 ft. Below Above land surface. Date measured **11/29/11**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

PUMPING LEVEL (below land surface)
ft. after _____ hrs. pumping _____ g.p.m.

Well/boring owner's mailing address if different than property owner's address indicated above.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" X 6ft.** Above grade
 At-grade (Environmental Well and Boring ONLY) **24" EX**

GROUTING INFORMATION
Weat cement No **0** 45 16
Grout materials Neat cement Bentonite Concrete Other
bentonite From **45** To **47** ft. _____ Yds. Bags
From _____ To _____ ft. _____ Yds. Bags
From _____ To _____ ft. _____ Yds. Bags

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
top soil	black		0	2
sand & gravel	gray		2	60

NEAREST KNOWN SOURCE OF CONTAMINATION
_____ feet _____ direction _____ type

Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No. TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

Stevens Drilling & Env. Svc. Inc. 2255
Licensee Business Name _____ Lic. or Reg. No. _____
556 **12/5/11**
Certified Representative Signature _____ Certified Rep. No. _____ Date _____
Randy Johnson

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY
784727

Name of Driller _____ UMP013952

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes, Chapter 103F

MINNESOTA UNIQUE WELL
 AND BORING NO.

784728

WELL OR BORING LOCATION
 County Name
Dakota

Township Name **Rosemount** Township No. **115N** Range No. **19W** Section No. **36** Fraction **NW NE NW**

WELL/BORING DEPTH (completed) **72** ft. DATE WORK COMPLETED **Nov. 23, 2011**

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
 Longitude _____ degrees _____ minutes _____ seconds _____

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

House Number, Street Name, City, and Zip Code of Well Location
15XXX Blaine Ave, Rosemount 55068 or Fire Number _____

DRILLING FLUID _____ WELL HYDROFRACTURED? Yes No

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.

MW - B7-014
see attached map

USE Domestic Monitoring Heating/Cooling
 Noncommunity PWS Environ. Bore Hole Industry/Commercial
 Community PWS Irrigation Remedial
 Elevator Dewatering _____

CASING MATERIAL Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic _____

CASING Diameter **2** in. to **62** ft. Weight _____ lbs./ft. Specifications _____
 _____ in. to _____ ft. _____ lbs./ft. _____
 _____ in. to _____ ft. _____ lbs./ft. _____

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

SCREEN Make **Johnson** OPEN HOLE From _____ ft. To _____ ft.
 Type **SS** Diam. **2"**
 Slot/Gauze **10** Length **10'**
 Set between **62** ft. and **72** ft. FITTINGS **thread**

Property owner's mailing address if different than well location address indicated above.
**410 Church St
 Minneapolis, MN 55455**

STATIC WATER LEVEL Measured from **grade**
64 ft. Below Above land surface Date measured **11/23/11**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

PUMPING LEVEL (below land surface)
 _____ ft. after _____ hrs. pumping _____ g.p.m.

Well/boring owner's mailing address if different than property owner's address indicated above.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" x 6"** ~~24"~~ above grade
 At-grade (Environmental Well and Boring ONLY) **24"**

GROUTING INFORMATION
 Weighted cement No **0** Bentonite **55** Concrete **14** Other **x**
 Grout materials Neat cement _____
 From **55** To **57** ft. _____ Yds. Bags
 From _____ To _____ ft. _____ Yds. Bags
 From _____ To _____ ft. _____ Yds. Bags

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
fill sand	tan		0	4
sand	tan		4	72

NEAREST KNOWN SOURCE OF CONTAMINATION
 _____ feet _____ direction _____ type

Well disinfected upon completion? Yes No
 PUMP
 Not installed Date installed _____
 Manufacturer's name _____
 Model Number _____ HP _____ Volts _____
 Length of drop pipe _____ ft. Capacity _____ g.p.m.
 Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
 Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
 Was a variance granted from the MDH for this well? Yes No TN# _____

WELL CONTRACTOR CERTIFICATION
 This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

Stevens Drilling & Env.Svc. Inc. 2255
 Licensee Business Name Lic. or Reg. No.
 _____ 556 12/5/11
 Certified Representative Signature Certified Rep. No. Date

IMPORTANT - FILE WITH PROPERTY PAPERS
 WELL OWNER COPY **784728**

Randy Johnson
 Name of Driller **UMP013953**

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes, Chapter 103J

MINNESOTA UNIQUE WELL
 AND BORING NO.

784729

WELL OR BORING LOCATION
 County Name
Dakota

Township Name **Rosemount** Township No. **115N** Range No. **19W** Section No. **36** Fraction **NE SE NW**

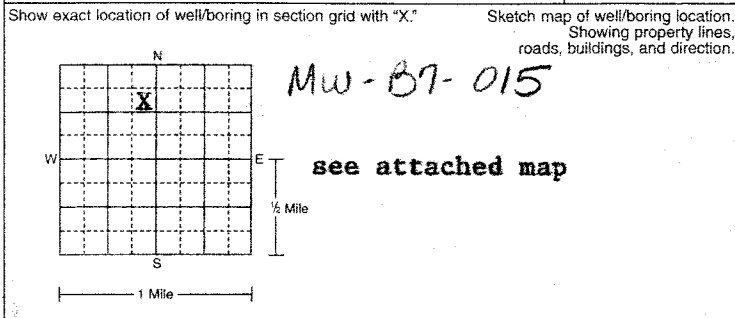
WELL/BORING DEPTH (completed) **70** ft. DATE WORK COMPLETED **Nov. 30, 2011**

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
 Longitude _____ degrees _____ minutes _____ seconds _____

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

House Number, Street Name, City, and Zip Code of Well Location
15XXX Blaine Ave, Rosemount 55068

DRILLING FLUID _____ WELL HYDROFRACTURED? Yes No



USE Domestic Monitoring Heating/Cooling
 Noncommunity PWS Environ. Bore Hole Industry/Commercial
 Community PWS Irrigation Remedial
 Elevator Dewatering

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

CASING MATERIAL Steel Plastic Drive Shoe? Yes No
 Threaded Welded
 CASING Diameter **2** in. to **60** ft. Weight _____ lbs./ft. Specifications _____
 HOLE DIAM. **8 1/2** in. to **70** ft.

Property owner's mailing address if different than well location address indicated above.
**410 Church St
 Minneapolis, MN 55455**

SCREEN Make **Johnson** Type **SS** OPEN HOLE From _____ ft. To _____ ft.
 Slot/Gauze **10** Length **10'**
 Set between **60** ft. and **70** ft. FITTINGS **thread**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

STATIC WATER LEVEL Measured from **grade**
62 ft. Below Above land surface Date measured **11/30/11**

Well/boring owner's mailing address if different than property owner's address indicated above.

PUMPING LEVEL (below land surface)
 _____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" x 6"** **24"** above grade
 At-grade (Environmental Well and Boring ONLY)

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
top soil	black		0	2
sand & gravel	tan		2	70

GROUTING INFORMATION
 Well **neat cement** No **0** **55** **19** Other **x**
 Grout materials Neat cement Bentonite Concrete Other
bentonite **55** **57** **1**
 From _____ To _____ ft. _____ Yds. Bags
 From _____ To _____ ft. _____ Yds. Bags
 From _____ To _____ ft. _____ Yds. Bags

NEAREST KNOWN SOURCE OF CONTAMINATION
 _____ feet _____ direction _____ type

Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
 Manufacturer's name _____
 Model Number _____ HP _____ Volts _____
 Length of drop pipe _____ ft. Capacity _____ g.p.m.
 Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
 Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
 Was a variance granted from the MDH for this well? Yes No TN# _____

WELL CONTRACTOR CERTIFICATION
 This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

REMARKS, ELEVATION, SOURCE OF DATA, etc.
 Use a second sheet, if needed.

Stevens Drilling & Env. Svc. Inc. 2255
 Licensee Business Name Lic. or Reg. No.

556 **12/5/11**
 Certified Representative Signature Certified Rep. No. Date

IMPORTANT - FILE WITH PROPERTY PAPERS
 WELL OWNER COPY **784729**

Randy Johnson
 Name of Driller **UMP013954**

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes, Chapter 103/

MINNESOTA UNIQUE WELL
 AND BORING NO.

784730

WELL OR BORING LOCATION

County Name
Dakota

Township Name **Rakemount** Township No. **115N** Range No. **19W** Section No. **36** Fraction **SE NE SW 1/4**

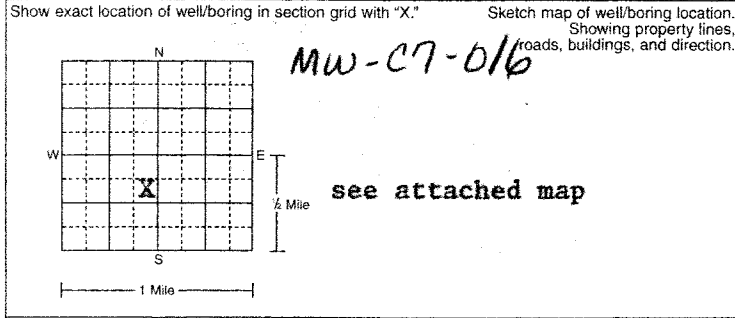
WELL/BORING DEPTH (completed) **74** ft. DATE WORK COMPLETED **Nov. 28, 2011**

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
 Longitude _____ degrees _____ minutes _____ seconds _____

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

House Number, Street Name, City, and Zip Code of Well Location
15XXX Blaine Ave, Rosemount 55068

DRILLING FLUID _____ WELL HYDROFRACTURED? Yes No



USE Domestic Monitoring Heating/Cooling
 Noncommunity PWS Environ. Bore Hole Industry/Commercial
 Community PWS Irrigation Remedial
 Elevator Dewatering _____

CASING MATERIAL Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic _____

CASING Diameter **2** in. to **64** ft. Weight _____ lbs./ft. Specifications _____
 HOLE DIAM. **8 1/2** in. to **74** ft.

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

SCREEN Make **Johnson** OPEN HOLE From _____ ft. To _____ ft.
 Type **SS** Diam. **2"**
 Slot/Gauze **10** Length **10'**
 Set between **64** ft. and **74** ft. FITTINGS **thread**

Property owner's mailing address if different than well location address indicated above.
**410 Church St
 Minneapolis, MN 55455**

STATIC WATER LEVEL Measured from **grade**
66 ft. Below Above land surface Date measured **11/28/11**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

PUMPING LEVEL (below land surface)
 _____ ft. after _____ hrs. pumping _____ g.p.m.

Well/boring owner's mailing address if different than property owner's address indicated above.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" x 6'** ~~24"~~ above grade
 At-grade (Environmental Well and Boring ONLY) **24"**

GROUTING INFORMATION
 Well neat cement No **0** Bentonite **55** Concrete **20** Other **X**
 Grout materials portland **55** _____ _____ _____
 From _____ To _____ ft. _____ Yds. Bags

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
top soil	black		0	3
sand & gravel	gray		3	60
silty sand	tan		60	65
fine sand	tan		65	74

NEAREST KNOWN SOURCE OF CONTAMINATION
 _____ feet _____ direction _____ type

Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
 Manufacturer's name _____
 Model Number _____ HP _____ Volts _____
 Length of drop pipe _____ ft. Capacity _____ g.p.m.
 Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
 Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
 Was a variance granted from the MDH for this well? Yes No TN# _____

WELL CONTRACTOR CERTIFICATION
 This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

Stevens Drilling & Env.Svc.Inc. 2255
 Licensee Business Name Lic. or Reg. No.
556 **12/5/11**
 Certified Representative Signature Certified Rep. No. Date

IMPORTANT - FILE WITH PROPERTY PAPERS
 WELL OWNER COPY **784730**

Name of Driller **Randy Johnson** **UMP013955**

WELL OR BORING LOCATION

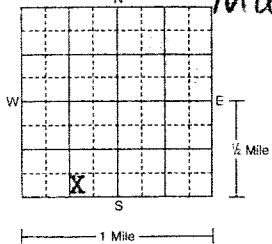
County Name
Dakota

Township Name **Rosemount** Township No. **115N** Range No. **19W** Section No. **26** Fraction **SW SE SW**
1/4 1/4 SW 1/4

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
Longitude _____ degrees _____ minutes _____ seconds _____

House Number, Street Name, City, and Zip Code of Well Location or Fire Number
1367 145th St E, Rosemount 55068

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



MW-A5-018

see attached map

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

Property owner's mailing address if different than well location address indicated above.
**410 Church St
Minneapolis, MN 55455**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

Well/boring owner's mailing address if different than property owner's address indicated above.

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
fill sand	tan		0	4
sand	tan		4	74

REMARKS, ELEVATION, SOURCE OF DATA, etc.
Use a second sheet, if needed.

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes, Chapter 1037

MINNESOTA UNIQUE WELL AND BORING NO.
784732

WELL/BORING DEPTH (completed) **74** ft. DATE WORK COMPLETED **Nov. 23, 2011**

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

DRILLING FLUID _____ WELL HYDROFRACTURED? Yes No
From _____ ft. To _____ ft.

USE Domestic Monitoring Heating/Cooling
 Noncommunity PWS Environ. Bore Hole Industry/Commercial
 Community PWS Irrigation Remedial
 Elevator Dewatering _____

CASING MATERIAL Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic _____

CASING Diameter _____ Weight _____ Specifications _____
2 in. to **64** ft. _____ lbs./ft. _____ **8 1/2** in. to **72** ft.
_____ in. to _____ ft. _____ lbs./ft. _____
_____ in. to _____ ft. _____ lbs./ft. _____

SCREEN Make **Johnson** OPEN HOLE From _____ ft. To _____ ft.
Type **SS** Diam. **2"**
Slot/Gauze **10** Length **10'**
Set between **64** ft. and **74** ft. FITTINGS **thread**

STATIC WATER LEVEL Measured from **grade**
66 ft. Below Above land surface Date measured **11/23/11**

PUMPING LEVEL (below land surface)
_____ ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" x 6'** **10** in. above grade
 At-grade (Environmental Well and Boring ONLY) **24"**

GROUTING INFORMATION
Well grouted Yes No **0** **63** **14** **x**
Grout materials Neat cement Bentonite Concrete Other **1**
neat cement **bentonite**
From **63** To **65** ft. _____ Yds. Bags
From _____ To _____ ft. _____ Yds. Bags
From _____ To _____ ft. _____ Yds. Bags

NEAREST KNOWN SOURCE OF CONTAMINATION
_____ feet _____ direction _____ type

Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Stevens Drilling & Env. Svc. Inc. 2255
Licensee Business Name Lic. or Reg. No.
556 **12/05/11**
Certified Representative Signature Certified Rep. No. Date
Randy Johnson

Name of Driller **Randy Johnson** UMP013956

IMPORTANT - FILE WITH PROPERTY PAPERS WELL OWNER COPY **784732**

**MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD**
Minnesota Statutes, Chapter 103J

MINNESOTA UNIQUE WELL
AND BORING NO.

784734

WELL OR BORING LOCATION

County Name

Dakota

Township Name **Rosemount** Township No. **115N** Range No. **19W** Section No. **35** Fraction **NW NE SE 1/4**

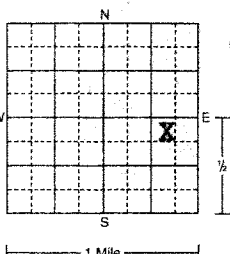
WELL/BORING DEPTH (completed) **75** ft.

DATE WORK COMPLETED **Nov. 21, 2011**

GPS LOCATION: Latitude _____ degrees _____ minutes _____ seconds _____
Longitude _____ degrees _____ minutes _____ seconds _____

House Number, Street Name, City, and Zip Code of Well Location **155XX Blaine Ave, Rosemount 55068** or Fire Number _____

Show exact location of well/boring in section grid with "X." Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



MW-C6-020

see attached map

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted

DRILLING FLUID _____ WELL HYDROFRACTURED? Yes No
From _____ ft. To _____ ft.

USE
 Domestic Monitoring Heating/Cooling
 Noncommunity PWS Environ. Bore Hole Industry/Commercial
 Community PWS Irrigation Remedial
 Elevator Dewatering _____

CASING MATERIAL Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic _____

CASING Diameter	Weight	Specifications	HOLE DIAM.
2 in. to 65 ft.	lbs./ft.		8 1/2 in. to 75 ft.
_____ in. to _____ ft.	_____ lbs./ft.		_____ in. to _____ ft.
_____ in. to _____ ft.	_____ lbs./ft.		_____ in. to _____ ft.

PROPERTY OWNER'S NAME/COMPANY NAME
Regents of the U of M

Property owner's mailing address if different than well location address indicated above.
**410 Church St
Minneapolis, MN 55455**

SCREEN Make **Johnson** OPEN HOLE From _____ ft. To _____ ft.
Type **SS** Diam. **2"**
Slot/Gauze **10** Length **10'**
Set between **65** ft. and **75** ft. FITTINGS **thread**

STATIC WATER LEVEL Measured from **grade**
67 ft. Below Above land surface Date measured **11/21/11**

WELL OWNER'S NAME/COMPANY NAME
Regents of the U of M

Well/boring owner's mailing address if different than property owner's address indicated above.

PUMPING LEVEL (below land surface)
ft. after _____ hrs. pumping _____ g.p.m.

WELLHEAD COMPLETION
 Pitless/adaptor manufacturer _____ Model _____
 Casing Protection **6" x 6"** **12"** above grade
 At-grade (Environmental Well and Boring ONLY) **24"**

GROUTING INFORMATION
Well grouted Yes No
Grout materials: Neat cement Bentonite Concrete Other
Neat cement From **60** To **62** ft. **1** Yds. Bags
bentonite From _____ To _____ ft. _____ Yds. Bags
From _____ To _____ ft. _____ Yds. Bags

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
fill	tan		0	5
sand & gravel	tan		5	75

NEAREST KNOWN SOURCE OF CONTAMINATION
feet _____ direction _____ type _____

Well disinfected upon completion? Yes No
PUMP
 Not installed Date installed _____
Manufacturer's name _____
Model Number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No TN# _____

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

Use a second sheet, if needed.

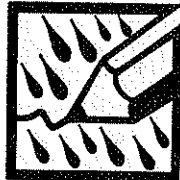
Stevens Drilling & Env. Svc. Inc. 2255
Licensee Business Name _____ Lic. or Reg. No. _____

556 12/5/11
Certified Representative Signature _____ Certified Rep. No. _____ Date _____

IMPORTANT - FILE WITH PROPERTY PAPERS
WELL OWNER COPY **784734**

Randy Johnson
Name of Driller **UMP013957**

UMORE EAST RE



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

DRILLING / GW Mon

June²³ 2011 - Oct 19 2011

23/19 - 1092.00

Location GDW East Date 6/28/11
Project / Client U of M ANN

DESCRIPTION
DK BROWN LOAMY TOPSOIL (SCATTERED GREEN PAPER DEBRIS)
LT BROWN SP (mg) Cache
LT BROWN SP (mg)
LT BROWN SP (mg-mg), vertical grayish/green Stations from 10-12.5' gravel encountered @ 14' Bbs
* SAMPLES 12' BUS @ 8:10 (M.S.F) 5 PICKUPS IN SAME SP
LT BRN SP w/ 1070 gravel
LT BRN SP (mg)

Location GDW East Date 6/28/11
Project / Client U of M ANN

DEPTH	O/D	P/D	B/LD
* RUN 1 (0-5') 4' RECOVERY	N/N	0.7	0.0
3-5'	N/N	0.6	0.0
* RUN 2 (5-10') 3.5' RECOVERY	N/N	0.5 (5-7.5)	0.0
5-10'	N/N	0.7 (7.5-10)	0.0
* RUN 3 (10-15') 4' RECOVERY	N/N	0.5 (10-12.5)	
10-15'	N/N	0.3 (12.5-15)	
* RUN 4 (15-20') 4' RECOVERY	N/N	0.9	0.0
15-20'	N/N	0.3	0.0

228-SB1

Location Gov Nuth
Project / Client U of M

Date 6/28/11

ADD

A7-501 MOVED 35' S OF ORIG LOCATION

DEPTH OLD PID BGS

* RUN 1 (0-5') 3' RECOVERY

0-1 N/N 0.7 0.0

1-5 N/N 0.8 0.0

* RUN 2 (5-10') 3.5' RECOVERY

5-10 N/N 0.7 (S75) 0.0

N/N 0.7 (75-10)

* RUN 3 (10-15') 2' RECOVERY

10-15' N/N

* SAMPLED @ 0.5' BGS DUE TO NO IMPACTS FOUND @ DEPTH, PER SME REQUEST

@ 9:10 (M, S, F)

PER SME REQUEST

DESCRIPTION

DARK BROWN LOAMY TOPSOIL w/ GRAVEL

LT BEN mg-cg SP w/ 15% gravel
(none)

LT BEN mg-cg SP w/ 5-20% gravel,
higher gravel concentration @ 9' BGS

LT BEN cg SP w/ ~20% gravel,
small piece of yellow/brown clay @ 15' BGS

Location Gov Nuth
Project / Client U of M

Date 6/28/11

ADD

Location Gow North
Project / Client U of M

Date 6/28/11

ADN

AS-SB1

DEPTH	OID	PID	BRGD
* RUN 1 (0-5')	3' RECOVERY		
0-0.5	N/A	1.0	0.0
0.5-1.5		1.4	0.0
1.5-2		1.2	0.0
2-5		0.4	0.0
* RUN 2 (5-10')	3' RECOVERY		
5-7	N/A	1.2	0.0
7-10	N/A	1.2	0.0
* RUN 3 (10-15')	3.5' RECOVERY		
10-15'		1.4	0.0

* 10:00 SAMPLED @ 12' BUS (M.S.F)

Location Gow North
Project / Client U of M

Date 6/28/11

ADN

DESCRIPTION
DARK BROWN LOAMY TOPSOIL w/ mg LT BROWN SAND MIXED IN
LT BROWN mg-cg SP w/ 10% gravel
DARK BROWN LOAMY (FINE TOPSOIL) MIXTURE, 15% gravel and some SAND
BROWN SP-SM w/ ~15% gravel
BROWN SP-SM
BROWN SP-SM w/ POSSIBLY SOME FINE TOPSOIL INTERMIXED (FILL)
LT BROWN SP (mg) → rebe
LT BROWN SP (mg-cg)

Location NAM/BG Date 6/28/11

Project / Client U of M ADN

BG-SB1

DEPTH	OID	PID	BKGD
RUN 1 (0-5')	3' RECOVERY	-	-
0-0.5	NIN	-	-
0.5-1	NIN	-	-
1-5	NIN	2.0	0.0
RUN 2 (5-10')	4' RECOVERY		
5-10	NIN	1.0 (5-7.5)	0.0
		1.1 (7.5-10)	0.0
RUN 3 (10-15')	3' RECOVERY		
10-15'	NIN	1.0	0.0

* 10:50 SAMPLED 1' BGS (M,S,F,V)
 10:55 SAMPLED 6' BGS (M,S,F,V)
 11:00 SAMPLED 12' BGS (M,S,F)
 ↳ HOLD PER TIME REQUEST

Location NAM/BG Date 6/28/11

Project / Client U of M ADN

DESCRIPTION

DARK BROWN LOAMY TOPSOIL

YELLOWISH REDDISH BROWN SILT w/ TRACE GRAVEL

LIGHT BROWN SP w/ 15% gravel

LIGHT BROWN SP (mg) w/ small gravel mixed in, ↑ quantity of gravel at ± 9' BGS approx 25% gravel

LIGHT BROWN mg SP w/ 15% gravel some oolitic (rust coloring) on rocks ± 12' BGS

Location NAM/BC Date 6/28/11
Project / Client U of M

ADN

DEPTH	OID	PID	BEGD
* RUN 1 (0-5') 4' RECOVERY			
0-5'	MIN	25.1	0.0
* RUN 2 (5-10') 4' RECOVERY			
5-7.5	MIN	3.8	0.0
7.5-10	MIN	1.4	
* RUN 3 (10-13') 3' RECOVERY			
10-12	MIN	0.9	0.0
12-13	MIN	0.4	0.0
	- 11:30 SAMPLED 2' (M,S,F,V)		
	- 11:45 ↓ 6' (M,S,F,V)		
	- 11:50 ↓ 12' (M,S,F) → HARD		
			PER JME RECOVERED

Location NAM/BC Date 6/28/11
Project / Client U of M

ADN

DESCRIPTION
DARK BROWN LOAMY TOPSOIL w/ROOTS ↳ HARD DOWN TO APPROX 4.5' WHERE IT BEGINS TO SOFTEN UP, SOME HARDENED YELLOW-BROWN CLAY CLUMBS @ 3' BGS
DARK BROWN LOAMY TOPSOIL, moist
YELLOWISH BROWN SILT (NATIVE), moist
YELLOWISH BROWN SILT moist
YELLOWISH BROWN SILT, DRYER THAN ↑ LAYER

Location: NAY186
Project / Client: U of M

Date: 6/28/11
ANN

DEPTH	OID	PID	DEGD
0-1'	MIN (0-5') 35' RECOVERY	8.6	0.0
1-2'	MIN	8.7	0.0
2-5'	MIN	1.8	0.0
5			
7	2 UN2 (5-10') 1' RECOVERY		
	MIN	0.9	0.0
	CHES ROCK :: POOR RECOVERY		
11	2 RUNS (10-15') 1' RECOVERY		
	MIN	3.7	0.0
12	10-15'		
	(HIT ROCK :: POOR RECOVERY)		
	-12:10 SAMPLED 2' BUS		
	-12:15 6' BUS		
	-12:20 12' BUS		
	↳ HOLD PER		
	TIME RECOVER		

Location: NAY186
Project / Client: U of M

Date: 6/28/11
ADU

DESCRIPTION
DE BROWN-BLACK LOAMY TAFSEL
YELLOW-BROWN SILT (NARVE)
LT BROWN Fg-mg SP, 10% gravel
BROWN SP w/ 10-20% gravel
LT BROWN-BROWN SP w/ 10% gravel

Location NAVY/BG

Date 6/28/11

Project / Client U of M

ADN

BG-SB4

DEPT

OID

PID

BEGD

*RUN 1 (0-5') 35' RECOVERY

0-1.5

N/N

0.0

1.5-4

1.6

0.0

4-5

*RUN 2 (5-10') 4' RECOVERY

5-10'

N/N

0.0

1.4

0.0

*RUN 3 (10-12.5) 2.5' RECOVERY

10-10.5

N/N

10.5-11

N/N

11-12.5

N/N

- 12:45 SAMPLED 2' BUS

- 12:50 6' BUS

- 12:55 12' BUS

↳ HAND PER TIME REQUEST

Location NAVY/BG

Date 6/28/11

Project / Client U of M

ADN

DESCRIPTION

DARK BROWN LEAMY TOPSOIL w/ SOME GRAVEL

YELLOW/OLIVEY BROWN SILT (MAYBE)

LIGHT BROWN SP (fg-mg)

LIGHT BROWN mg SP

LIGHT BROWN mg-cg SP

BROWN fg SP w/ 10% gravel

LIGHT BROWN mg-cg SP

Location ABC Line Date 6/28/11
Project / Client U of M

ADN

H13A-SB1

RUN 1 (0-5') 4' RECOVERY

DEPTH	OID	PID	BEGD
0-4'	NIN	1.5	0.0

4-5'	NIN	1.3	0.0
------	-----	-----	-----

RUN 2 (5-10') 3' RECOVERY

5-10'	NIN	1.6	0.0
-------	-----	-----	-----

3' RECOVERY

10-12'	NIN	0.8 Ambient	0.0
--------	-----	-------------	-----

NOT ENOUGH MATERIAL TO DIG UP

-14:00 SAMPLED @ 12' BGS

(MIS, FV) since jar

Not sure if material was retched

Location ABC Line Date 6/28/11
Project / Client U of M

ADN

DESCRIPTION

DR BROWN LOAMY TOPSOIL w/fg sand in, kerused

BROWN-LIGHT BROWN SP-SM

BROWN-LIGHT BROWN ~~RECOVERED~~ SP, REDDISH
BROWN SP (mg) PACKET @ 28' BGS

BROWN-LIGHT BROWN fg-mg SP

Location ABC Linc

Date 6/28/11

Project / Client U of M

ADN

DESCRIPTION	PID	BLGD
118A-5B1		
BERRY	0.0	BLGD
RUN 1 (0-5)	3.5' RECOVERY	
0-2'	N/N	2 0.0
2-5'	N/N	1.4 0.0
RUN 2 (5-10')	3.5' RECOVERY	
5-7.5'	N/N	- -
7.5-9'	N/N	1.2 0.0
9-10'	N/N	1.2 0.0
RUN 3 (10-16')	4' RECOVERY	
10-16'	N/N	1.7 0.0
		1.6 0.0

- 15:00 SAMPLED 16 BLS (M.S.V.)

Date 6/28/11

Location ABC Linc

Project / Client U of M

ADN

DESCRIPTION
LIGHT BROWN SP-SM mixed w/ 25% gravel
BROWN - DARK BROWN SP-SM, w/ POSSIBLE FMR
TOPSOIL - WATER EXTREMELY AZOIC gravel
BROWN - LIGHT BROWN cy SP w/ 10% gravel
LIGHT BROWN Sp-mg SP
LIGHT BROWN Sp-mg SP

22

Location

ABC Line

Project / Client

U of M

Date

6/29/11

ADN

8:00

SAFETY MEETING

GOY, PATRICK → MATRIX

ADN

- 717A-SBI UTILITIES cleared by Gene &

water main map

11:30

FINISHED FINAL BORING @ 2376-SBI

12:30

MATRIX OFFSITE

23

Location

ABC Line

Project / Client

U of M

Date

6/29/11

ADN

Location ABL Lane Date 6/29/11

Project / Client U of M ADN

DEPTH	O/D	PID	BKGD
117A-SB1 5-16	N/S, P/V		
0-1'	N/N	-	-
1-2.5'	N/N	0.6	0.4
2.5-4'	N/N	1.1	0.4
4-5'	N/W	1.3	0.4
5-6.5'	5-10' 3.5' Recovery	0.6	0.4
6-7.5'	5.5-6.6'	0.9	0.2
7.5-10'	6-7.5'	1.0	0.4
	7.5-10'	1.0	0.4

DESCRIPTION

ASPHALT / AGGREGATE

DK GRAY - BLACK FRMR TOPSOIL LAYER
- COMPACTED

YELLOW / REDDISH BROWN SILEX w/ SOME TRACE
GRAVEL

BROWN fy-mg SP

YELLOW / REDDISH BROWN CLAY (LEAN), w/ BLK
COARSE (INTERMEDIATE)

BROWN mg SP

LT BROWN fy-mg SP w/ good lens

LT BROWN fy-mg SP (medium)

24 Location ABL Lane Date 6/29/11

Project / Client U of M ADN

DEPTH	O/D	PID	BKGD
117A-SB1 5-16	N/S, P/V		
0-1'	N/N	-	-
1-2.5'	N/N	0.6	0.4
2.5-4'	N/N	1.1	0.4
4-5'	N/W	1.3	0.4
5-6.5'	5-10' 3.5' Recovery	0.6	0.4
6-7.5'	5.5-6.6'	0.9	0.2
7.5-10'	6-7.5'	1.0	0.4
	7.5-10'	1.0	0.4

DESCRIPTION

ASPHALT / AGGREGATE

DK GRAY - BLACK FRMR TOPSOIL LAYER
- COMPACTED

YELLOW / REDDISH BROWN SILEX w/ SOME TRACE
GRAVEL

BROWN fy-mg SP

YELLOW / REDDISH BROWN CLAY (LEAN), w/ BLK
COARSE (INTERMEDIATE)

BROWN mg SP

LT BROWN fy-mg SP w/ good lens

LT BROWN fy-mg SP (medium)

Location ABC Line

Date 6/29/11

Project / Client U of M

ADN

[17A-SB] ~~STAIR DECK~~ (continued)

DEPTH	O/D	PID	BKGD
* RUN 3 (10-15') 4' RECOVERY			
10-10.5	N/N	0.8	0.4
10.5-12.5		1.3	0.4
12.5-15		1.1	0.6
* RUN 4 (15-20') 4.5' RECOVERY			
15-20	N/N	0.5	0.3

-8:30 SAMPLED 16' BGS (M/S, P, U)

Location ABC Line

Date 6/29/11

Project / Client U of M

ADN

DESCRIPTION
YELLOW/REDDISH BROWN SOIL CLAY MIXED w/ BLACK COARSEM
LT BRN fg-mg SP w/ BRWN SR SM @ 11.5' BGS, TRACE GRAVEL
LT BRN mg-cg SP w/ 10% gravel (max)
LT BRN fg-mg SP w/ 10% gravel

28 Location ABC Line Date 6/29/11
 Project / Client U of M ADD

DEPTH	OID	PID	BLGD
* RUN 1 (0-5') 4' RECOVERY			
0-2'	N/N	1.5	0.4
2-3'	N/N	1.5	0.4
3-6'	N/N	1.7	0.5
* RUN 2 (5-10') 4' RECOVERY			
5-6'	N/N	1.6	0.5
6-10'	N/N	2.0	0.5
* RUN 3 (10-15') 4.5' RECOVERY			
10-11'	N/N	-	-
11-12'	N/N	1.9	0.5
12-15'	N/N	2.0	0.5
* RUN 4 (15-20') 4.5' RECOVERY			
15-17'	N/N	1.8	0.5
17-20'	N/N		

29 Location ABC Line Date 6/29/11
 Project / Client U of M ADD

9-20 SAMPLES 16' BUS (M, S, P, F)
 DUPLICATE IN CORRIDOR

DESCRIPTION
DARK BROWN LOAMY TOP SOIL, SOME FG SAND IN TOP 4"
YELLOWISH/REDDISH BROWN SILT (NATIVE)
LT BROWN FINE SP
BROWN MGY SP
LT BROWN SP w/ Trace gravel (fg mg @ 6-7', mg-cg 7-8.5', 8.5-8.7 very fg silt layer, 8.7-10 mg)
LT BROWN MGY SP
BROWN MGY SP
Light Brown MGY-CG SP
BROWN FINE MGY SP
Light Brown FINE MGY SP

Location ABC Lane Date 6/29/11

Project / Client U of M ADU

DEPTH	G/D	R/D	REMARKS
[2376-SB1] HAVED 10' S OF GPS LOCATION			
0-1	N/N	1.6	0.4
1-4	N/N	1.7	0.4
4-7	N/N	1.7	0.5
7-8	N/N	1.5	0.4
8-12	N/N	1.7	0.5
12-16	N/N	1.9	0.6
16-20	N/N	1.3	0.5
20-24	N/N	1.7	0.3

Date 6/29/11

Project / Client U of M ADU

CMIS, F, V	DESCRIPTION
	DARK BROWN LOAMY TOPSOIL W/ SOME Fg SAND
	BROWN SP-SM TRANSITIONING TO BROWN SP ^{MICE} AROUND 3.5' BGS (Fg-mg) → FILL
	BROWN SP-SM (FIN)
	LIGHT BROWN Fg-mg SP (nodules), TRACE GRAVEL & 7' BGS clay sand
	LIGHT BROWN Fg-mg SP
	LIGHT BROWN Fg-mg SP
	LIGHT BROWN Fg-clay SP, trace gravel @ 15' BGS
	LIGHT BROWN mg-clay SP, trace gravel (16-19')
	BROWN mg-clay SP w/ 50% gravel

Location ABC Lane Date 6/29/11

Project / Client U of M

ADN

- 1100 SAMPLED 30' BUS (M, S, F, V)

DESCRIPTION

BROWN CG SP w/ 2-30-40% gravel, black, reddish, which CG SAND INTERMIXED AS BROWN DOWN FROM THE GRAVEL

BROWN MY-CG SP w/ 12-20% gravel, black, reddish, which CG SAND

Light brown my-cg SP

LT BROWN GYING SP

Location ABC Lane Date 6/29/11

Project / Client U of M

ADN

2376-SBI CONTINUED

DEPTH	O/D	PID	REGRD
* RUN 7 (24-28) 3' RECOVERY	N/A	1.3	0.4
24-28			
* RUN 8 (28-32) BUS 2.5' RECOVERY			
28-32	N/A		
NOT ENOUGH VOLUME TO BAG NO HIT WHEN MEASURED IN AMBIENT CONDITIONS			
* RUN 9 (32-36) BUS 3' RECOVERY			0.5
32-36	N/A	1.5	
* RUN 10 (36-40) BUS 2.5' RECOVERY			
36-38.5	N/A		
38.5-40	N/A	1.3	0.5
* RUN 11 (40-44) BUS 2.5' RECOVERY			
40-42			
42-44		1.2	0.3
* RUN 12 (44-47) BUS → REFUSAL → END OF BORE			
44-47			

Umore East

Location

Date 7/12/11

Project / Client U of M

GW Monitoring

ADN

7:15 ADN ONSITE

- Got JB & Keith (SDE) started in geophysics area after safety meet

8:45 Set up @ MW-29

- Many problems including hose tear, controller connection

10:30 Finished troubleshooting, went to Home Depot for supplies

→ CALD YSE PH=7.00, 10.00 COND=1000 ORP=228
Finished @ MW-29

- JB done for day (low batteries)

15:00 Moved to MW-C7-004

16:30 Finished @ MW-C7-004

YSE POST CAL

PH 7=6.89 PH 10=9.92 COND 1000=996
ORP=225.0 @ 28.7°C

17:40 ADN / SDE / Zorge OFFSITE

Location

Umore East

Date 7/12/11

Project / Client

U of M

GW Monitoring

ADN

7:00 ADN ONSITE / AKB ONSITE

Safety meeting

8:00 Set up @ MW-E4-010

9:00 JB (Zorge) ONSITE

10:00 Finished @ MW-E4-010

10:15 Set up @ MW-A6-006

12:00 Finished @ MW-A6-006

12:30 Lunch

12:30 T00006 Locked → No key

13:00 Set up @ T00019 → removed

transducer, to see @ gauge

until Zorge decides what to do

- Collected Duplicate MH

14:30 Finished @ T00019

15:00 Cut off lock @ T00006 Per Zorge's

approval, to replace w/ Barr lock

- Began Sampling

16:40 Finished @ T00006

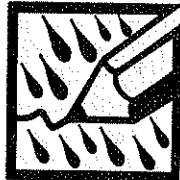
YSE POST CAL

PH 7=7.05 PH 10=10.10 COND=996

ORP=227.8

17:20 ADN / AKB OFFSITE

UMORE EAST RE



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

DRILLING / GW Mon

June²³ 2011 - Oct 19 2011

23/19 - 1092.00

Project / Client V of M

OP GPD ADU 5R02

~~GP~~ 5R1

DEPTH	O/N	PID	SKED
* RUN 1 (0-5')	0' Recovered		
↳ RAW INTO RAWLY SW → 3 APPROX.			
* RUN 2 (5-10')	5' Recovered		
5-10	V/N	0.0 5'	0.0
		0.1 9'	0.0
* RUN 3 (10-15')	5' Recovered		
10-15'	V/N	0.1 12'	0.0
* RUN 4 (15-20')	4' Recovered		
15-20'	V/N	0.1 16'	0.0

20' END OF BORING

Project / Client V of M

GP ADU 5R02

DESCRIPTION
* REED METALS SAMPLE @ 5' 12' 16' 9:00
NO RECOVERED, LIGHTER BROWN SP W/ COBBLES, GRAVEL
LIGHT BROWN SP ^{mg-cg} w/ 20-30% gravel
SP CG 7-10' (analyzed)
DARK BROWN SP, ^{mg-cg} 10-11' mg-cg 11-15'
20-30% gravel from (3-14.5' layers)
10% otherwise
LT BROWN mg-cg SP

Location Gow East Date 10/18/11

Project / Client U of M

GP ABU/SRNZ

CAR-SB

DEPTH	O/D	P/D	REGD
* RUN 1 (0-5') 2' RECOVERY	-	-	-
0-1	-	2	3'
1-5	-	2	3'
* RUN 2 (5-10') 5' RECOVERY	-	5	10'
5-7	-	5	10'
7-10	-	2	9'
* RUN 3 (10-15') 5' RECOVERY	-	2	9'
10-12.5'	-	0.2	0.2
12.5-15'	-	0.2	0.2
* RUN 4 (15-20') 5' RECOVERY	-	0.0	0.2
15-20'	-	0.0	0.2

Location Gow East Date 10/18/11

Project / Client U of M

GP ABU/SRNZ

DESCRIPTION
* Bedside sample @ 3', 12', 18' 9:45
Brown loamy TOSSOL
LT BEW mg-cg SP, 10-20% gravel
LT BEW mg SP w/ trace gravel, black layers along edge of core
LT BEW mg-cg SP 100% w/ trace gravel
LT BEW mg SP w/ 100% trace gravel
→ Best cores MOTTLED @ 12' BES, on mg edge @ 10'
LT BEW mg SP w/ pulverized rock (mg only)
LT BEW mg SP w/ 100% gravel, b/c no 1/4" @ 17' bags could be missed

Location Gar East

Date 10/18/11

Project / Client U of M

GP ABN/SPN2

DEPTH	O/D	P/D	BLGD
CAP-SBZ			
ABN 1 (0-5')	N/A	RECOVER	-
0-0.5'	N/A	-	-
0.5-3'	N/A	0.3	2' 0.2
3-4'	N/A	0.2	0.2
ABN 2 (5-10')	3.5' RECOVER	0.3	0.2
5-8'	N/A	0.3	0.2
8-16'	N/A	0.2	0.2
ABN 2 (10-15')	5' RECOVER	0.4	0.2
10-13'	N/A	0.4	0.2
13-15'	N/A	0.3	0.2
ABN 4 (15-20')	4.5' RECOVER	0.3	0.2
15-20'	N/A	0.3	0.2

20' End of Borehole

Location Gar East

Date 10/18/11

Project / Client U of M

GP ABN/SPN2

DESCRIPTION
4 REBAR rods spaced @ 5', 12', 16', 10:30
DE BAN TOPSOIL
LT BAN ^{mg} SR, trace gravel (likely G11)
DK BAN COMPACTED FORMER TOPSOIL LAYER
LT BAN mg-cg SP, trace gravel
LT BAN ^{mg} SP w/ 20-30% gravel, some lg sp-som @ 8.5' BIS, rust-colored mottling @ 8.5'
Clayey brown lg-mg SP w/ trace gravel
LT BAN mg-cg SP w/ 20% gravel, pulverized rock, rust-colored nodules @ 13' logs
LT BAN ^{mg} -BAN ^{mg} SP w/ 30-40% gravel

Location Site wide Date 10/18/11

Project / Client UGM

GP ADD/S&PZ

U-LMBCT-SB3

- RAINWATERWATER SEWER ZONE, mixed

DEPTH	O/S	PID	RELOD
↓ RUN 1 (0.5')	2.5' Recovery		
0-1.5'	N/A	0.2	0.2
1.5'	N/A	0.2	0.2
↓ RUN 2 (5-10')			
5-7		—	—
7-16		0.3	0.2
↓ RUN 3		0.3	0.2
10-11		0.3	—
11-15'		0.3	0.3

15' END OF BORING

Location Site wide Date 10/18/11

Project / Client UGM

GP ADD/S&PZ

15' from MH

↓ 11' BUS SAMPLE PUB, PEST, M, S, V

DESCRIPTION 11:30

MH Rm Pest

Brown SP-SM

Reddish-brown SP w/ trace gravel (CA11)

Reddish-brown SP w/ trace gravel

LT Brown mpyg SP w/ 10-20% gravel (like note)

MP SP w/ trace gravel, sudden change to LT Brown mpyg SP

Project / Client U of M
GP ABN/SPU2

30 APR 581

DEPTH	O/D	P/D	GRAB
ABN1 (0-5')	3.5	3.5	3.5
0-1	WIN	0.3	0.3
1-2	WIN	0.3	0.3
2-5	WIN	0.3	0.3
ABN2 (5-10')	3.5	3.5	3.5
5-10	WIN	0.3	0.3

10' END OK BURN

Project / Client U of M
ABN/SPU2

1 Rank with @ 4', 10' logs 12:20

DESCRIPTION

Brown - w/ma SP, hard gravel (G11)
 Brown - Red Brown silty
 LT Red SP w/ 10% gravel, red-brown @ 2' logs

Red - LT Red SP, 10% gravel, calc. thin @ 9' logs,

Project / Client U of M
 GP ADN/SRNZ

303A-SB1

DEPTH	OIB	PID	RECD
# RUN 1 (0-5') 7.5' RECOVER	N/N	0.0	0.0
0-1	N/N	0.0	0.0
1-5	N/N	0.0	0.1
# RUN 2 (5-10') 4' RECOVER	N/N	—	—
5-6.5	N/N	0.0	0.1
6.5-10	N/N	0.0	0.1
# RUN 3 (10-15') 5' RECOVER	N/N	0.1	0.0
10-11.5	N/N	0.0	0.0
11.5-15	N/N	0.1	0.0
# RUN 4 (15-20') 5' RECOVER	N/N	0.1	0.0
15-20	N/N	0.1	0.0

20' END OF BORING

Project / Client U of M
 GP ADN/SRNZ

DESCRIPTION
* 13200 4', 12', 16' metric samples
LT BEN SP (Gravel layer) 50% gravel, red clay SP in top 0.5'
BEN - EDR ^{clay} 1' Brown SP (G11) w/ trace gravel & clay intermixed
↓
LT BEN mg-cg SP w/ trace gravel (cont'd) silt end
BEN g-mg SP, trace gravel
LT BEN mg-cg SP, trace gravel
LT BEN ^{mg-cg} SP, w/ trace gravel

Location ABC Line Date 10/18/11

Project / Client U of M

GP ADD/SRN2

101A-SB1

DEPTH	QID	PIB	REGD
REVR1 (10-5')	4' RECONREQ	—	—
0-1	N/A	—	—
1-2.5	N/A	0.2	0.0
2.5-3.8	N/A	—	—
3.8-5	N/A	0.2	0.0
REVR2 (5-10') 3' RECONREQ	N/A	—	—
5-7	N/A	—	—
7-10	N/A	0.2	0.1
REVR3 (10-15') 3' RECONREQ	N/A	—	—
10-15	N/A	0.2	0.1

15' END OF BRANCH

Location ABC Line Date 10/18/11

Project / Client U of M

GP ADD/SRN2

DESCRIPTION
A 1345 PUB @ 4', 12'
MIX OF BRND TOPSOIL & GRAVEL
DK BRND FRAMEE TOPSOIL W/GRV, SILT
YELLOW/RED BRND SILT
REMOVED BRND SP @ 4'-10'
↓
UT BRND mg-cg SP, 1070 1070 gms/1
← DETERMINED RED, UT BRND SP AND CRANIC (SILT)
UT BRND mg-cg SP, 1070 1070 gms/1

(Some red-brown SP @ top of 10-15 interval, likely B1 in flow above layer)

Location ABC Linc Date 10/18/11

Project / Client U of M

GP ADN/GRN-2

DEPTH	QID	PIB	BECD
-------	-----	-----	------

10A-SBZ

ABUN1 (0-5') 3' Recovery

0-0.5 N/A

0.5-1.5 N/A

1.5-2 N/A

2.5-5 N/A

ABUN2 (5-16') 0' Recovery

ABUN3 (10-15') 3' Recovery

10-11.5 N/A

11.5-15 N/A

0.1	0.0
0.1	0.0

15' END OF BOPINT

Project / Client U of M

GP ADN/GRN-2

DESCRIPTION

14:00 PDS @ 4', 12'

DK BUN SP/SM TOPSOIL

LT BUN CG SP w/100% gravel

LT BUN CG @ 1.5-2' bags

BUN - RED BUN SP w/100% gravel

BUN-LT BUN SP w/100% gravel (Cul?)

LT BUN SP w/100% gravel (Cul?)

Location ABC Line Date 10/18/11

Project / Client UOR M

GP ADN/SP02

716 B-SB1

DEPTH	O/D	P/D	BL/D
A RUN 1 (0-5)	1.5' RECOVERY		
0-0.5			
0.5-2	N/A	0.1	0.0
2-5			
5-10	2' RECOVERY	0.1	0.0
10-15	3' RECOVERY	0.2	0.0

15' END OF BORING

Location ABC Line Date 10/18/11

Project / Client UOR M

GP ADN/SP02

1420

12' bgs

DESCRIPTION
BEN SP-SM & GRAVEL
INTERMEDIATE BEN-BEN-DE BEN SM, HARD & COMPACTED, FINE GRAEL
LT (RM) mg-cq SP, trace gravel (extensive)

Project / Client U of M

GP ADN/SRDZ

716 A-SB6	DEPTH	OID	PID	BKID
A Run 1 (0-5') 4.5' Recovery	N/A	0.1	0.1	
0-2	N/A	0.1	0.1	
2- 0-4 4	N/A	0.1	0.1	
4-5	N/A	0.2	0.1	
some organics seen @ 2'				
A Run 2 (5-10') 4.5' Recovery	N/A	0	-	
SB	N/A			
6-16	N/A	0.2	0.1	
A Run 3 (10-15') 3.5' Recovery	N/A	0.2	0.1	
10-15'	N/A			
A Run 4 (15-20)	N/A	0.2	0.1	
15-20	N/A			

20' END OF BORING

Project / Client U of M

GP ADN/SRDZ

LS100	SAMPLED	V.P.M @ 1/2'	R.M @ 20'
DK BROWN	SM TRANS TO SPSSM @ 11.5'		
INTERMIXED SILT	layers (DK BROWN, YELLOW (RED BROWN))		
REDDISH BROWN	mg-Cg (5 BENT) some sm mixed		
		CLAY!	
		some Gg DE BEAD INTERMIXED	
		could be fine silty layer	
		some Gg DE BEAD INTERMIXED	
UT BEAD SP	mg-Cg SP w/ 10% gravel		
	↳ conc gravel layer @ 7.5' logs		
UT BEAD SP	Fg-mg (10-12)		
	Fg-Cg (12-13)		
	Fg-mg (13-14)		
	silt layer @ 14'		
	mg-Cg (14-15)		
UT BEAD SP	Fg-mg (15-17)		
	mg-Cg (17-18)		
	mg-Cg (18-20)		

Project / Client U of M
 GP ABN/SEN2

DEPTH	OLD	PID	BECD
716A-SB5			
* RUN 1 (0-5') 4.5' Recovery	N/N	0.2	0.2
0-1	N/N	0.2	0.2
2-5'	N/N	0.2	0.2
* RUN 2 (5-10') 5' Recovery	N/N	0.2	0.2
5-7.5	N/N	0.2	0.2
7-7.5			
7.5-16	N/N	—	—
* RUN 3 (10-15')			
10-12.5	N/N	0.2	0.2
12.5-15	N/N	0.2	0.2
* RUN 4 (15-20') 4.5' RE			
15-15.5	N/N	—	—
15.5-20'	N/N	0.2	0.2

20' END OF BORING

Project / Client U of M
 GP ABN/SEN2

DEPTH	DESCRIPTION	CLAY?
15.30	SAMPLED P.M @ 17, 20'	
	DLR BEAM SM w/ COALD CONCRETE PRESSURE	
	INTERMIXED YELLOW BEAM/BEAM, DL BEAM SILT	
	IS SOME OXIDATION @ 4-5' BIS, HARD/COMPACT	
	DL BEAM SILT, HARD/COMPACT	
	SOME LT BEAM, RED BEAM SILT MIXED IN	
	DL BEAM-BLK SM, CAN BEATE CLUMPS	
	EASILY IN FINGERES, some lg sand	
	DL BEAM CLAY, DRY, COMPACT	
	YELLOW BEAM SILT	
	RED BEAM SP	
	mg-cg (15.5-17.5)	
	mg-cg (17.5-18)	
	debm like 1" bedding @ 18' SM	
	mg-cg (18-20)	
	6m 2" bedding @ 19' SM	

Location Abc Line Sta Wld Date 10/19/11

Project / Client U of M

GP ADN/SKNZ

2274-SB1 V-LWB6-SB1

DEPTH	O/D	PID	BLVD
1' Run 1 (0-5')	3.5' Recovery		
0-1.5	N/A		
1.5-2	N/A	0.2	0.2
2-5	N/A	0.3	0.2
1' Run 2 (5-10)	3' Recovery		
5-6	N/A	0.4	0.2
6-10	N/A	0.4	0.2
1' Run 3 (10-15)	1' Recovery		
10-15	N/A	—	—
1' Run 4 (15-20)	5' Recovery		
15-17	N/A	0.4	0.3
17-20	N/A	0.3	0.3
		0.3	0.3

Location Abc Line Sta Wld Date 10/19/11

Project / Client U of M

GP ADN/SKNZ

4:30 M_s, S_p, O_v 17'

Description V-m-smsd

LT BRW mg SP w/ 12070 gravel
DL BRW mg SP w/ 10 plastic debris
UT BRW mg-cq SP w/ trace gravel

UT BRW mg SP w/ 1070 gravel, plastic debris, trace wood
LT BRW mg-cq SP w/ 1070 gravel



BRW mg SP w/ 1070 gravel
UT BRW mg-cq SP w/ 1070 gravel (covered)
all about?

Location Site Water ABL Unit Date 10/19/11

Project / Client DOTM

GP ADN/SRN2

Notes near from P&M

227A-581

DEPTH OLD PID BGSN

ABUN1 (0-5) 3.5' Recovery

0-2 .0 2' .0

2-5 .1 4' .0

5-16 .1 10' .0

ABUN2 (5-10) 3.5' Recovery

10-15' .1 14' .0

ABUN3 (10-15')

Location Site Water ABL Unit Date 10/19/11

Project / Client DOTM

GP ADN/SRN2

1845 M, S, P, V @ 14' BGS

Ground SP-Sm, 20% gravel

1.5' BGS 3" Black Layer - 100% organic

Brown - V Brown mg-Cg SP w/ 20% gravel

3" chunk of SC @ 9' BGS

UT Brown

Brown SP-Sm mg-Cg w/ 10% gravel

- Gray SC @ 12.5' BGS (3" chunk)

- DC Brown SC @ 14' BGS (2" chunk)

Location Sik Widi Date 10/19/11

Project / Client U of M

GP ADN/SENZ

U-UNBC7-SR1

DEM O/D PID BE/D

ADN1 (0-5) 3' Recovery

0-1 N/N R- 0.4 0.1

01-25 N/N 0.4 0.3

2.5-5 N/N 0.5 0.3

ADN2 (5-10) 4' Recovery

5-6 N/N - 0.4 0.3

6-7 N/N - 0.4 0.3

7-10 N/N 0.4 0.3

ADN3 (10-15) 4' Recovery

10-15 N/N 0.4 0.3

ADN4 (15-20) 4' Recovery

15-17 N/N - 0.4 0.3

17-26 N/N 0.4 0.3

ADN5 (20-25)

20-25 N/N 0.4 0.3

25' END OK
BORING

Location Sik Widi Date 10/19/11

Project / Client U of M

GP ADN/SENZ

10100 18.23' BUS - M, S, P, O, V

DESCRIPTION

Brown silt

LT Brown - Brown SM, trace gravel

LT Brown mg-cq SP, 20% gravel

BRN - LT BRN fq-mg SP, 10% gravel

LT BRN fq-mg SP, 10% gravel

LT BRN mg SP, 10% gravel

LT SP - SM layer @ 8' Brown

LT BRN - Brown mg-cq SP

LT BRN clay silt @ 12' BUS

LT BRN - Brown G-mg SP, 10% gravel

LT Brown mg-cq SP, 10% gravel (shale)

LT BRN mg-cq SP, trace gravel

Location Site W-4 Date 10/19/01

Project / Client U of M

GP ABN/SRWZ

U-WBBS 7 SRI

DEPTH	OID	PID	RECD
APUN1 (0-5') 4' Recovery	N/N	0.4	0.3
0-2		0.4 0.4	0.3
2-5	Substr / N ↑ contaminated		
APUN2 (5-10') 3' Recovery	N/N	0.4	0.3
5-10			
APUN3 (10-15') 4.5' Recovery	N/N	-	-
10-12			
12-14	N/N	0.4	0.3
APUN4 (15-20') 4.5' Recovery	N/N	0.3	0.3
15-20		0.3	0.3

Location Site W-4 Date 10/19/01

Project / Client U of M

GP ABN/SRWZ

10'HS M.S.V, P.D. 4' IT'
DESCRIPTION

BRAND ST-SON TOPSON, TRACE GRANEL
UT RECOVER BRAND mg-cg SP, 1070 gran!

RECOVERED
UT BAN mg-cg SP w/ 1070 GRANEL
↳ 3" CUT LAYERED, 7" BGS DATE BRAND

UT BAN mg-cg SP w/ trace small gran! (case)

TRANSFER TO 2 VOTs gran @ 19-20' BGS
↳ SOME ON-DIAPHR (LWS W/UREN)

17-19'



Barr Engineering Company

Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-29					
Location: Rosemount, MN				Date: 7/12/11					
Project #: 23/19-1092 48RI 510				Sample Time: 14:17					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	N → Dummy Masthead lock			uS/cm					
Casing diameter:	6" → Steel		Time/Volume	Temp. °C	Cond. @ 25	pH	ORP Eh	D.O.	
Total well depth:*	≈ 230'		12:05	10.11	506	4.66	282.0	9.90	
Static water level:*	70.64'		12:50	10.16	506	5.94	118.0	9.64	
Water depth:*	≈ 160'		13:22	10.14	505	6.06	125.0	9.64	
Well volume: (gal)	160 × 1.47 = 235 Gal		13:55	10.13	506	6.12	114.6	9.55	
Purge method:	Submersible (Glossub)		14:05	10.23	506	6.08	116.1	9.53	
Sample method:	↓		14:15	10.15	506	6.06	112.1	9.56	
Start time:	11:35		Odor: —						
Stop time:	14:16		Purge Appearance: Clear, no odor						
Duration: (minutes)	161		Sample Appearance:						
Rate, gpm:	1.67 gpm (MAX Flow 177)		Comments: No drawdown @ max flow rate						
Volume, purged:	268,87 Gal		Sample Depth = 147' 160'						
Duplicate collected?	No		1x well volume, then sampled @ stabilization						
Sample collection by:	ADN		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	No		Well Condition: Good						
MW: groundwater monitoring well			WS: water supply well		SW: surface water		SE: sediment		other: open borehole
VOC-	semi-volatile-	general-	nutrient-	cyanide-		DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal- ^{Carbon}		methane-		filter-		
Others: Chloride Perchlorate			Anions		alkalinity		Chloride, sulfate, nitrate, nitrite, perchlorate		

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

= 140 mm necessary

2pm



Barr Engineering Company Field Log Data Sheet

Client: UMORE			Monitoring Point: MW-C7-004						
Location: Rosemount, MN			Date: 7/12/11						
Project #: 23/19-1092 48RI 510			Sample Time: 16:25						
GENERAL DATA			STABILIZATION TEST						
Barr lock:	N- Master Lock								
Casing diameter:	2"		Time/Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	92		15:25	11.09	463	5.51	5.6	9.41	Slightly Cloudy
Static water level:*	70.15'		15:35	11.10	463	8.00	-12.2	9.38	Clear
Water depth:*	21.85'		15:43	11.23	463	8.15	-8.3	9.60	Clear
Well volume: (gal)	3.50 gal		15:53	11.49	463	7.80	-14.3	9.51	Clear
Purge method:	Geosub		16:03	10.90	463	7.00	4.3	9.75	Clear
Sample method:	↓		16:08	10.87	463	6.66	9.9	9.74	Clear
			16:13	11.07	463	6.48	12.6	9.72	Clear
			16:18	11.05	463	6.42	13.1	9.47	Clear
Start time:	15:05		Odor: none		463	6.39	14.2	9.75	Clear
Stop time:	16:24		Purge Appearance:		Brown cloudy				
Duration: (minutes)	79 min		Sample Appearance: Clear						
Rate, gpm:	0.756 gpm (186 on controller)		Comments: Intake = 87' Depth No drawdown						
Volume, purged:	59 Gal								
Duplicate collected?	N								
Sample collection by:	ADN								
	CO2-	Mn2-	Fe(T)-	Fe2-					
Others present:			Well Condition: GOOD						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-			
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-				
Others:	Perchlorate, sulfate, nitrate, nitrite				Ammonia/Alkalinity				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

10.5



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-EH-010																			
Location: Rosemount, MN				Date: 7/13/11																			
Project #: 23/19-1092 48RI 510				Sample Time: 9:26																			
GENERAL DATA			STABILIZATION TEST																				
Barr lock:	N-Master Lock																						
Casing diameter:	2" Steel		Time/Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance														
Total well depth:*	272 ^{273.45}		8:34	10.78	514	4.62	209.5	9.55	Clear														
Static water level:*	54.49		8:43	10.99	512	5.66	102.9	9.30	Clear														
Water depth:*	17.51'		8:51	11.08	513	6.69	41.6	9.12	clear														
Well volume: (gal)	2.8 Gal		9:00	11.18	513	6.88	31.2	9.14	clear														
Purge method:	Submersible Geosub		9:09	11.17	513	6.89	29.6	9.16	clear														
			9:18	10.72	513	6.62	42.4	9.36	clear														
Sample method:	↓		9:22	10.77	513	6.63	43.7	9.32	clear														
			9:26	10.81	513	6.64	44.1	9.32	clear														
Start time:	8:25		Odor: None																				
Stop time:	9:27		Purge Appearance: Initially Chocolate Brown → Clear within 5 mins																				
Duration: (minutes)	62 min		Sample Appearance: Clear																				
Rate, gpm:	≈ 0.33 GPM		Comments: 67' Intake Depth																				
Volume, purged:	20.66 Gal																						
Duplicate collected?	ADW AKB No																						
Sample collection by:	ADW AKB																						
Others present:			CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: Good																
MW: groundwater monitoring well			WS: water supply well			SW: surface water			SE: sediment			other:											
VOC-			semi-volatile-			general-			nutrient-			cyanide-			DRO-			Sulfide-					
oil, grease			bacteria-			total metal-			cations filtered metal-			methane-			filter-								
Others: Arsenic / Alkalinity												chlorate, sulfate, nitrate, nitrite, per C											

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE		Monitoring Point: MW- A6-006						
Location: Rosemount, MN		Date: 7/12/11						
Project #: 23/19-1092 48RI 510		Sample Time: 11:37						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	N → master lock							
Casing diameter:	2" steel	Time/Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	≈ 112 - 113.85	10:45	10.33	430	5.99	41.3	9.16	Slightly brown, turbid
Static water level:*	82.45	10:54	10.34	431	5.66	47.6	8.86	clear
		11:03	10.32	431	6.56	9.9	8.92	clear
Water depth:*	≈ 40'	11:12	10.36	431	6.95	-3.4	8.95	clear
		11:21	10.34	432	7.13	-3.1	9.07	clear
Well volume: (gal)	6.4	11:30	10:34	432	7.14	-0.1	9.14	clear
		11:35	10:38	432	7.17	0.7	9.18	clear
Purge method:	Submersible Geoprobe							
Sample method:	↓							
Start time:	10:33	Odor: None						
Stop time:	11:36	Purge Appearance: Turbid was choc brown, v turbid						
Duration: (minutes)	63	Sample Appearance: Clear						
Rate, gpm:	0.75 GPM	Comments: Intake Depth ≈ 107'						
Volume, purged:	47.25							
Duplicate collected?	No							
Sample collection by:	ADN AKB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition:						
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	Chlorine filtered metal-	methane-	filter-			
Others:	Ammonia → Salicylate nitrate Sulfate perchlorate		Alkalinity					

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

10:35



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: 700019				
Location: Rosemount, MN				Date: 7/13/11				
Project #: 23/19-1092 48RI 510				Sample Time: 14:22				
GENERAL DATA		STABILIZATION TEST						
Barr lock:	none							
Casing diameter:	4 Steel	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	~160' 161.8	13:50	9.79	504	6.01	52.4	10.02	Clear
Static water level:*	72.88	14:00	9.67	506	5.09	58.1	10.07	Clear
Water depth:*	~90	14:10	9.68	507	5.05	56.8	10.07	clear
Well volume: (gal)	57.8	14:20	9.62	508	5.05	60.3	10.10	Clear
Purge method:	Submersible Geopac							
Sample method:	↓							
Start time:	13:20	Odor: None						
Stop time:	14:21	Purge Appearance: Initially Rust Colored, turbid → Clear after 5 min						
Duration: (minutes)	161	Sample Appearance: Clear						
Rate, gpm:	1.8	Comments: Temperature transducer pulled up + bagged prior to sample Intake depth = 145' pumped at max speed						
Volume, purged:	33.8							
Duplicate collected?	Yes							
Sample collection by:	ADW AKB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	Slam Caban	Well Condition: OK						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	Cations filtered metal-		methane-	filter-		
Others: Arsenic, Chloride, Perc, Sulphate, Nitrate, Nitrite		Alkalinity						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE			Monitoring Point: T00006					
Location: Rosemount, MN			Date: 7/13/11					
Project #: 23/19-1092 48RI 510			Sample Time: 16:32					
GENERAL DATA		STABILIZATION TEST						
Barr lock:	NO, Boss lock cut & replaced w/ Barr lock							
Casing diameter:	4"	Time/Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*	143	15:55	9.94	450	7.05	106.0	10.44	Clear
Static water level:*	69.70	16:05	9.95	450	6.94	142.1	8.41	clear
Water depth:*	~75.5	16:15	9.94	450	6.93	124.9	8.26	clear
Well volume: (gal)	~47.45	16:25	9.95	450	6.94	113.6	8.20	clear
Purge method:	Submerged Bypass	16:30	9.95	450	6.94	109.5	8.18	Clear
Sample method:	↓							
Start time:	15:22	Odor: None						
Stop time:	16:31	Purge Appearance: Clear						
Duration: (minutes)	69 min	Sample Appearance: Clear						
Rate, gpm:	1.75	Comments: static H ₂ O level from outer 6in casing H ₂ O level lower removed & bypassed prior to sampling Pumped at max speed Intake at 135' → placed back in well at some depth post sampling						
Volume, purged:	121 Gal							
Duplicate collected?	NO							
Sample collection by:	ADW/AKB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	—	Well Condition: ok						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment		other:
VOC-	semi-volatile	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	edus filtered metal-	methane-	filter-			
Others:	Chloride, Pec. Sulfate, Nitrate, Nitrite			Alkalinity				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: PB-1				
Location: Rosemount, MN				Date: 7/14/11				
Project #: 23/19-1092 48RI 510				Sample Time: 12:00				
GENERAL DATA			STABILIZATION TEST					
Barr lock:								
Casing diameter:		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Total well depth:*		11:57 #27	21.01	1	7.50	123.9	7.95	clear
Static water level:*								
Water depth:*								
Well volume: (gal)								
Purge method:								
Sample method:								
Start time:		Odor:						
Stop time:		Purge Appearance:						
Duration: (minutes)		Sample Appearance:						
Rate, gpm:		Comments: Blank was distilled water @ MW-28						
Volume, purged:								
Duplicate collected?								
Sample collection by: ADN/AKB		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: —		Well Condition:						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-	semi-volatile	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal- <i>cu, pb, zn</i>	filtered metal-	methane-	filter-			
Others: Alkalinity Ammonia sulfate, chlorate, per hodes, nitrate <i>nitrate</i>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-28					
Location: Rosemount, MN				Date: 7/14/11					
Project #: 23/19-1092 48RI 510				Sample Time: 11:28					
GENERAL DATA			STABILIZATION TEST						
Barr lock:	No American lock removed & replaced w/ Barr lock		Time/Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	6-in								
Total well depth:*	≈ 230'		9:20	9.47	531	6.84	96.7	9.42	Clear
Static water level:*	69.20'		7:50	1.16	3	7.43	105.6	10.7	clear
Water depth:*	≈ 160 ft		10:20	1.15	2	7.91	109	10.83	clear
Well volume: (gal)	235 gal ^{x1.47}		10:28	9.49	534	6.89	178.9	10.45	clear
Purge method:	Geosub Submersible		10:59	9.49	532	6.75	143.4	9.82	Clear
Sample method:	↓		11:10	9.46	531	6.92	137.3	9.77	Clear
			11:21	9.46	531	6.98	119.5	9.77	Clear
			11:26	9.46	531	7.02	113.5	9.77	Clear
Start time:	8:07		Odor: None						
Stop time:	11:27		Purge Appearance: Clear						
Duration: (minutes)	200		Sample Appearance: Clear						
Rate, gpm:	1.67 gpm ^{new flow rate}		Comments: Intake depth ≈ 140' MS/MSB						
Volume, purged:	334 gal								
Duplicate collected?	No → MS/MSB								
Sample collection by:	ADU/AKB		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	_____		Well Condition: OK						
MW: groundwater monitoring well	WS: water supply well	SW: surface water	SE: sediment	other: 6" open borehole					
<input checked="" type="checkbox"/> VOC-	<input checked="" type="checkbox"/> semi-volatile-	<input type="checkbox"/> general-	<input type="checkbox"/> nutrient-	<input type="checkbox"/> cyanide-	<input type="checkbox"/> DRO-	<input type="checkbox"/> Sulfide-			
<input type="checkbox"/> oil, grease-	<input type="checkbox"/> bacteria-	<input checked="" type="checkbox"/> ^{@cations} total metal-	<input type="checkbox"/> filtered metal-	<input type="checkbox"/> methane-	<input type="checkbox"/> filter-				
Others:	Alkalinity, Arsenic, sulfate, chlorate, perchlorate, nitrate, nitrite								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

140 mm



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-23D				
Location: Rosemount, MN				Date: 7/14/11				
Project #: 23/19-1092 48RI 510				Sample Time: 14:34				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	N- Dummy filled							
Casing diameter:	4"		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.
Total well depth:*	2135' ^{actual} 120.00' ^{14'} 104'		9.76	481	6.59	50.9	9.40	Clear
Static water level:*	35.95		14:13	9.77	482	6.72	47.2	9.45
Water depth:*	2135' 299'		14:22	9.81	482	6.73	51.9	9.50
Well volume: (gal)	265 gal		14:32	9.80	482	6.70	53.2	9.50
Purge method:	Submersible Geopub							
Sample method:	↓							
Start time:	13:30		Odor: No					
Stop time:	14:33		Purge Appearance: Slightly Rust - Light Brn Color → Clear					
Duration: (minutes)	63		Sample Appearance: Clear					
Rate, gpm:	1.8 GPM		Comments: 2120' Intake Depth FB-1 Location					
Volume, purged:	113.4 Gal							
Duplicate collected?	N							
Sample collection by:	ADN AKB							
Others present:			CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: OK	
MW: groundwater monitoring well			WS: water supply well			SW: surface water		
SE: sediment			other:					
VOC-	semi-volatile-	general	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	Calms total metal-	filtered metal-	methane-	filter-			
Others: Alkalinity, Arsenic, Sulfate, Nitrate, Nitrite, Chloride, perchlorate								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE		Monitoring Point: MW-AS-018						
Location: Rosemount, MN		Date: 12/7/11						
Project #: 23/19-1092 48RI 510		Sample Time: 8:47						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	4			mS/cm ³				
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	ORP E _H	D.O.	Turbidity Appearance
Total well depth:*	76.61	8:29	10.09	.495	7.49	-119.6	11.23	clear
Static water level:*	68.82	8:35 8:40	10.11 10.08	.494 .493	7.50 7.50	-111.4 -112.4	10.93 10.96	clear clear
Water depth:*	7.79	8:45	10.04	.493	7.50	-107.4	11.04	clear
Well volume: (gal)	1.25 Gal							
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	8:07	Odor: None						
Stop time:	8:46	Purge Appearance: Clear						
Duration: (minutes)	39 min	Sample Appearance: Clear						
Rate, gpm:	0.75 GPM	Comments: 72.5' Intake Depth						
Volume, purged:	29.3 Gal							
Duplicate collected?	N							
Sample collection by: ADN		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present: AKB		Well Condition: GOOD						
MW: groundwater monitoring well		WS: water supply well	SW: surface water	SE: sediment	other:			
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others: Alkalinity		Cations / Anions						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE			Monitoring Point: MW-C6-020					
Location: Rosemount, MN			Date: 12/7/11					
Project #: 23/19-1092 48RI 520			Sample Time: 10:17					
GENERAL DATA			STABILIZATION TEST					
Barr lock:	✓				ms/cm ³			
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	ORP -mV	D.O.	Turbidity Appearance
Total well depth:*	77.73	10:00	9.37	.721	7.17	-723	9.79	clear
Static water level:*	69.79	10:05	9.36	.720	7.17	-676	9.78	clear
Water depth:*	7.94	10:10	9.38	.720	7.17	-59.1	9.77	clear
Well volume: (gal)	1.27 Gal	10:15	9.38	.720	7.16	-55.9	9.77	clear
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	9:45	Odor: NONE						
Stop time:	10:16	Purge Appearance: Clear						
Duration: (minutes)	31 MIN	Sample Appearance: Clear						
Rate, gpm:	1.5 GPM	Comments:						
Volume, purged:	46.5 Gal							
Duplicate collected?	N							
Sample collection by:	ADN							
Others present:	AKB	CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: GOOD		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-								
oil,grease- bacteria- total metal- filtered metal- methane- filter-								
Others: <u>Alkalinity</u> <u>Carbonates/Ammonia</u>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

4/12/11



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-87-014				
Location: Rosemount, MN				Date: 12/7/11				
Project #: 23/19-1092 48RI 520				Sample Time: 11:27				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	Y			ms/cmB				
Casing diameter:	2"	Time/Volume	Temp. °C	Cond. @ 25	pH	OEP/Eh	D.O.	Turbidity Appearance
Total well depth:*	74.64'	11:15	9.5	.777	7.29	16.8	11.21	clear
Static water level:*	66.02'	11:20	9.48	.777	7.29	19.9	11.21	clear
Water depth:*	74.64' 8.62'	11:25	9.49	.776	7.29	26.5	11.20	clear
Well volume: (gal)	1.38 gal							
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	10:55	Odor: None						
Stop time:	11:26	Purge Appearance: clear						
Duration: (minutes)	31 MIN	Sample Appearance: clear						
Rate, gpm:	1 GPM	Comments: 70' Intake Depth						
Volume, purged:	31 GPM							
Duplicate collected?	N							
Sample collection by:	ADN							
		CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	AKB	Well Condition: GOOD						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others:	calcium ions		alkalinity					

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-C7-016				
Location: Rosemount, MN				Date: 12/7/11				
Project #: 23/19-1092 48RI 520				Sample Time: 13:15				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	Y			ns/cm ³				
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	ORP mV	D.O.	Turbidity Appearance
Total well depth:*	76.14'	12:58	9.2	.504	7.5	-50.6	8.01	clear
Static water level:*	65.80'	13:03	9.19	.505	7.5	-49.3	8.30	clear
Water depth:*	10.34'	13:08	9.03	.505	7.51	-52.6	8.38	clear
Well volume: (gal)	165 Gal	13:13	8.96	.506	7.51	-45.3	8.57	clear
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	12:40	Odor: None NONE						
Stop time:	13:14	Purge Appearance: Slightly turbid, brown						
Duration: (minutes)	34 MIN	Sample Appearance: Clear						
Rate, gpm:	0.5 gpm	Comments: 71' Intake Depth						
Volume, purged:	17 Gal							
Duplicate collected?	N							
Sample collection by:	ADN							
Others present: AKB		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: GOOD		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-volatile- general- nutrient- cyanide- DRO- Sulfide-								
oil,grease- bacteria- total metal- filtered metal- methane- filter-								
Others: Alkalinity Calcium / Arsenic								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-B7-015				
Location: Rosemount, MN				Date: 14:30 12/7/11				
Project #: 23/19-1092 48RI 510				Sample Time: <input checked="" type="checkbox"/>				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	✓			mS/cm ³				
Casing diameter:	2"	Time/ Volume	Temp. °C	Cond. @ 25	pH	ORP EHT	D.O.	Turbidity Appearance
Total well depth:*	78.01	14:18	9.64	0.743	7.34	16.8	10.32	Clear
Static water level:*	69.65	14:23	9.63	0.742	7.34	19.8	10.30	Clear
Water depth:*	78.01 8.36	14:28	9.58	0.742	7.34	22.2	10.32	Clear
Well volume: (gal)	1.34 gal							
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	14:01	Odor: No odor						
Stop time:	14:29	Purge Appearance: Clear						
Duration: (minutes)	28 MIN	Sample Appearance: Clear						
Rate, gpm:	1.5 GPM	Comments: 74' Intake Depth						
Volume, purged:	42 Gal							
Duplicate collected?	N							
Sample collection by:	ADN							
Others present: AKB		CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: Good		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-		semi-volatile-		general-		nutrient-		cyanide-
oil, grease-		bacteria-		total metal-		filtered metal-		methane-
Others: Alkalinity		Cations/Anions						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: UMORE				Monitoring Point: MW-B7-013				
Location: Rosemount, MN				Date: 12/7/11				
Project #: 23/19-1092 48RI 510				Sample Time: 15:27				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	Y							
Casing diameter:	2"	Time/ Volume	Temp. °C	mg/cm ³ Cond. @ 25	pH	ORP Eh	D.O.	Turbidity Appearance
Total well depth:*	62.41	15:15	9.26	0.726	7.22	19.1	10.96	Clear
Static water level:*	53.10	15:20	9.26	0.725	7.21	23.7	11.07	Clear
Water depth:*	9.31	15:25	9.23	0.725	7.21	26.1	11.08	Clear
Well volume: (gal)	1.49 Gal							
Purge method:	GeoSub							
Sample method:	GeoSub							
Start time:	15:00	Odor: None						
Stop time:	15:26	Purge Appearance: Clear						
Duration: (minutes)	26 min	Sample Appearance: Clear						
Rate, gpm:	1.67 GPM	Comments: 58' Intake Depth						
Volume, purged:	43.4 Gal							
Duplicate collected?	N							
Sample collection by:	ADN	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:	AKB	Well Condition: GOOD						
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC	semi-volatile	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal	methane-	filter-			
Others:	Alkalinity	Colony/Anoms						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company Field Log Data Sheet

Client: <u>Umare</u>				Monitoring Point: <u>T00020</u>				
Location: <u>Rosemount, MN</u>				Date: <u>12/8/11</u>				
Project #: <u>23/19-1092 48RE 520</u>				Sample Time: <u>9:32</u>				
GENERAL DATA			STABILIZATION TEST					
Barr lock:	<u>N - Put a Barr Lock On Following Sampling</u>							
Casing diameter:	<u>4"</u>	Time/Volume	Temp. °C	µS/cm ³ Cond. @ 25	pH	ORP Eh	D.O.	Turbidity Appearance
Total well depth:*	<u>132.31</u>	<u>8:52</u>	<u>9.50</u>	<u>0.911</u>	<u>7.29</u>	<u>-95.2</u>	<u>8.19</u>	<u>Turbid, Brown</u>
Static water level:*	<u>81.94</u>	<u>8:59</u>	<u>9.57</u>	<u>0.909</u>	<u>7.29</u>	<u>-92.9</u>	<u>7.95</u>	<u>Sl Turbid, yellow</u>
Water depth:*	<u>50.37</u>	<u>9:09</u>	<u>9.62</u>	<u>0.908</u>	<u>7.30</u>	<u>-88.2</u>	<u>7.86</u>	↓
Well volume: (gal)	<u>32.75 Gal</u>	<u>9:21</u>	<u>9.66</u>	<u>0.908</u>	<u>7.30</u>	<u>-88.2</u>	<u>7.87</u>	
Purge method:	<u>GeoSub</u>	<u>9:30</u>	<u>9.70</u>	<u>0.907</u>	<u>7.30</u>	<u>-84.1</u>	<u>7.89</u>	<u>Clear</u>
Sample method:	<u>GeoSub</u>							
Start time:	<u>8:25</u>	Odor: <u>Slight smell of Sulfur</u>						
Stop time:	<u>9:31</u>	Purge Appearance: <u>Yellow-Brown Turb</u>						
Duration: (minutes)	<u>66 MIN</u>	Sample Appearance: <u>Clear</u>						
Rate, gpm:	<u>1.67 GPM</u>	Comments: <u>127' Intake Depth</u>						
Volume, purged:	<u>110 Gal</u>							
Duplicate collected?	<u>N</u>							
Sample collection by:	<u>ADN</u>							
Others present:	<u>SRN2</u>	CO2-	Mn2-	Fe(T)-	Fe2-	Well Condition: <u>OK - No Lock</u>		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-	filter-			
Others: <u>Alkalinity</u> <u>Calcium/Ammonia</u>								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

UMore East
Remedial Investigation
Surface Soil Sampling



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

6/22/11 - 10/28/11

23/19 - 10/2.00

Location _____ Date 6/22/11
Project / Client _____ KCS

Bkgd	Description
0.0	SP-SM, w/ gravel, med brn
0.0	↓ soil is saturated
0.0	Brn SP-SM w/ gravel med brn
0.0	Class 5 at 6"
0.0	Sandy loam topsoil, dk brn
0.0	↓
0.0	Brn SP-SM w/ gravel med brown
0.0	SP-SM w/ gravel
0.0	SP-SM w/ gravel
0.0	Sandy loam w/ class 5 @ 2" - w/ gravel

4 Location W More East Date 6/22/11
Project / Client _____ KCS

ID	o/d	PID
301A-P-SS1-0.5'	n/n	0.0
301A-P-SS2-0.5'	n/n	0.1
303A-SS1-0.5'	n/n	0.0
303A-SS2-0.5'	n/n	0.0
303A-SS3-0.5'	n/n	0.0
303A-SS4-0.5'	n/n	0.0
303A-SS5-0.5'	n/n	0.0
302A-SS1-1.0'	n/n	0.1
302A-SS2-1.0'	n/n	0.0
302A-SS3-1.0'	n/n	0.0

- burned biological process. few sample hole. 4/19/10
m=2

MSDS

Location UMore East Date 6/22/11

Project / Client _____

IED old PTD

108B-SS4-0.5 n/n 0.0

108B-~~SS3~~-0.5 n/n 0.0

108B-SS2-0.5 n/n 0.0

108B-SS1-0.5 n/n 0.0

108B-SS5-.05 n/n 0.0

m-3

Location UMore East Date 6/22/11

Project / Client _____

AKBKCB

Bleg

0.0

0.0

0.0

0.0

0.0

Desolphin
dark brown sandy
brown topsoil

medium brown sp
w/ gravel

medium grained
sandy topsoil

topsoil w/ silt
w/ m/L

topsoil & sand mix

Location UMove East

Date 6/23/11

Project / Client _____

KCB

700 Safety Meeting

745 Started Surface Soil Sampling

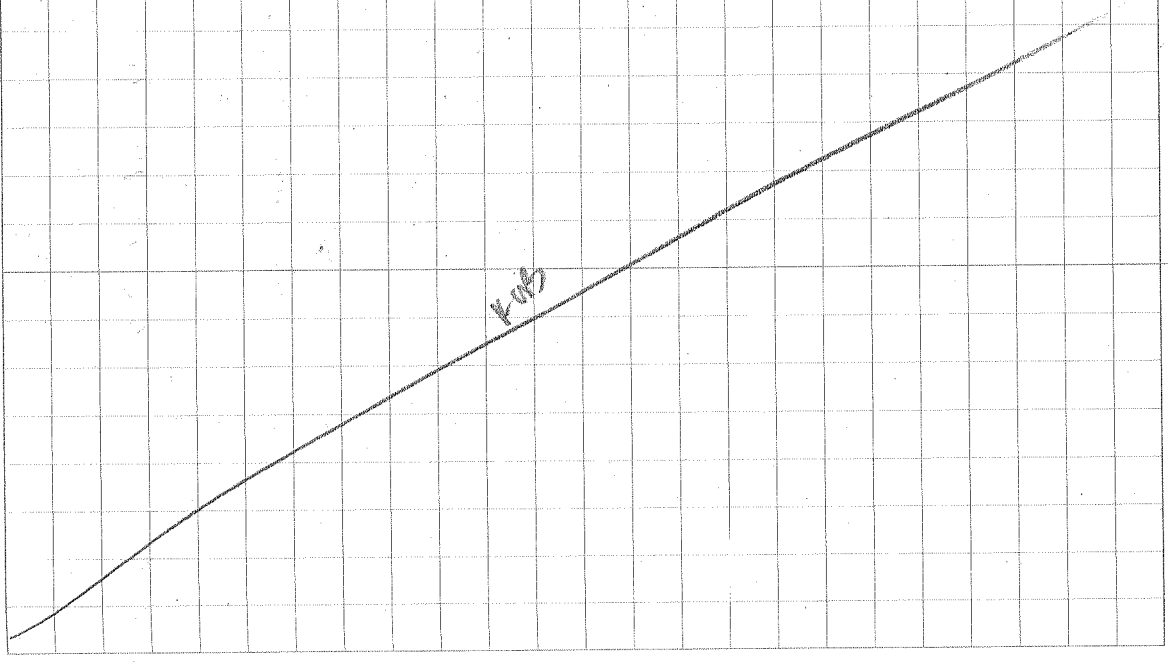
- Done removing diesel tank
outside 713A tomorrow

1800 KCB Barr offsite

Location UMove East

Date 6/23/11

Project / Client _____



Location UMore East Date 6/23/11

Project / Client _____
KCB

ID	o/d	PID
501B-SS1	n/n	2.8
* M-5 for SrocS + PCBs		
501B-SS2		5.1
* MS/MSD Volume for		
501A-SS1	n/n	0.9
* M-6 for SrocS, PCBs, RECL, MOBILES		
113B-SS1	n/n	0.5
113B-SS2	n/n	9.3
113B-SS3	n/n	3.4
208B-SS1		
* mixed out 5' due to concrete walkway to low area		
208B-SS2	n/n	0.1
Same		
* MS/MSD Volume for		
501E1-SS1	n/n	0.5

Location UMore East Date 6/23/11

Project / Client _____
KCB

Bt gd	Description
0.0	Dk brn loamy topsoil
0.0	Dk brn loamy topsoil
0.0	Dk brn. loamy topsoil
0.0	Dk. brn. loamy topsoil
0.0	Dk. brn. loamy topsoil
0.0	Dk. brn. loamy topsoil
0.0	Dk. brn. loamy topsoil
0.0	Dk. brown. loamy topsoil
0.0	Dk. brown sandy loamy topsoil
0.0	Sandy loam topsoil Dk. brn

Location UMore East Date 6/23/11

Project / Client _____

K.S.B

ID	o/d	PID
209A-SS1-0.5'	n/n	0.5
209A-SS2-0.5'	n/n	0.4
706A-SS1-0.5'	n/n	0.1
E7-SS1-0.5'	n/n	1.8
E7-SS2-0.5'	n/n	0.2
E7-SS3-0.5'	n/n	0.0

Location UMore East Date 6/23/11

Project / Client _____

K.S.B

Bkgd	Description
0.0	Lt brn SP w/ Dk brn topsoil
0.0	Dk brn loamy topsoil
0.0	Sandy dk brn loamy topsoil
0.0	Dk brn loamy topsoil
0.0	Lt brn SP w/ topsoil
0.0	Dk brown silty sand with gravel

12

Location Umore East

Date 6/24/11

Project / Client

KCB

11:00 Safety meeting

11:30

Begin Surface Soil sampling

12:00

Dettlerman onsite to look

12:30

at Dole Explosives tank near 713A

1:00

- Kathy + Gene spoke with rep

1:30

- Will collect 2 samples in tank basin

1:45

Bob (Private Underground) onsite

- KCB + Gene + Bob reviewed Watermain Map

15

Date 6/24/11

Location

Project / Client

KCB

Location UMore East

Date 6/24/14

Project / Client

KCB

ID	Old	OID
237F-SS1-0.5	nohd	0.0
237F-SS2-0.5	nohd	0.0
237F-SS3-0.5	nohd	0.0
224A-SS1-0.5	n/n	0.0
224A-SS2-0.5	n/n	↓
240C-SS1-0.5	n/n	
240C-SS2-0.5	n/n	
240C-SS3-0.5	n/n	
707FF-SS1-0.5 LMI-DUP	n/n	0.0
FB-1		
707FF-SS2-0.5	n/n	0.0
FB-2		

UMore East

Date 6/24/14

Project / Client

KCB

Bkgd	Description
0.0	dark brn topsoil
0.0	clck brn topsoil
0.0	GP. w/gravel
↓	DK brn topsoil w/ Gravel
	DK brn topsoil w/ sand
	DK brn topsoil w/ Gravel
	DK brn topsoil w/ rd brn SP topsoil - Sandy
0.0	
0.0	DK brn sandy topsoil

Location UMore East

Date 6/24/11

Project / Client

KCB

1 ID old P10

710A-SS1-05 no/no 0.0

2
7
E
E
E

Location UMore East

Date 6/24/11

Project / Client

KCB

Bkkg Description

0.0 Class S read 3.30
over

Location ABC Linc /
Project / Client U of M

Date 6/27/11

ADN

7:00 Safety meeting: ADN, ROB, Tim (SDE)

10:00 MET W/ GUY (MATRIX) PRIOR TO
UTILITY MEET

↳ GAVE HIM MAPS

↳ TO START @ 9:00 TOMORROW
WITH DRILLING

↳ GUY SAID HE CAN HANDLE

THE MEET → ADN AVAILABLE
FOR ASSISTANCE IF NEEDED

10:30 WENT TO ASSIST GUY

11:05 FINISHED W/ UTILITY MEET / WENT TO
LUNCH

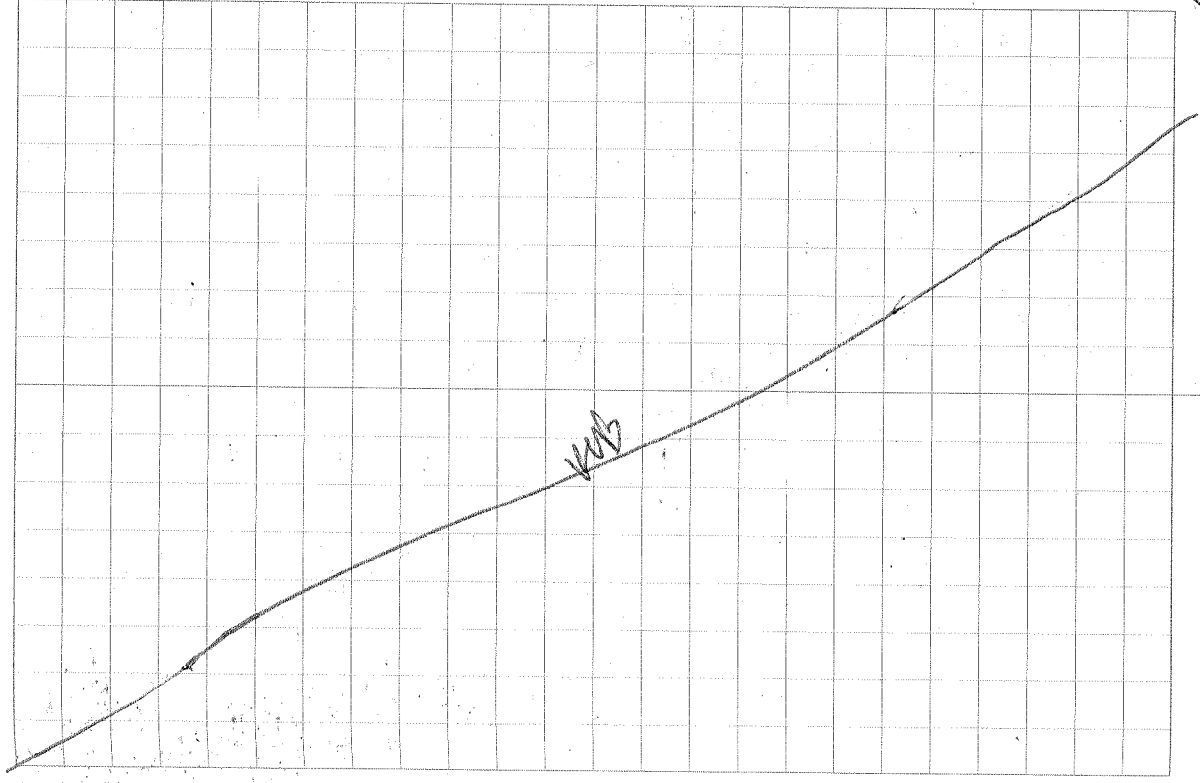
12:15 RESUMED WORK

10:00 SAMPLED IN 202C AREA, MAPS/TABLES
MISASSEMBLED 220C

Location ABC Linc
Project / Client U of M

Date 6/27/11

ADN



Location ABC Line Date 6/27/11
 Project / Client U of M

ADN

ID	O/D	P/D	BRGD
746B-SS1-0.5	N/N	1.5	0.0
8:20 (M,S)			
↳ SAMPLED A FEW FT S OF SOME SURFICIAL			
746B-SS2-0.5	N/N	0.4	0.0
8:40 (M,S)			
22926-SS1-0.5	N/N	0.0	0.0
9:35 (M,S,F)			
SAMPLED 5' OF FOUND BOND WALL			
22926-SS2-0.5	N/N	0.0	0.0
9:40 (M,S,F)			
SAMPLED 8" OF FOUND RUIN WALL			
707X-SS1			
11:00 (M,S,F)	N/N	0.0	0.0
704E-SS1-0.5			
12:30 (M,S,F)	N/N	2.0	0.0
704XX-SS1-0.5	N/N		
12:45 (M,S,F)	→ DUPLICATE M-1		
238B-SS1-0.5	N/N	2.2	0.0
13:10 (M,S,F)			
238B-SS2-0.5	N/N	0.1	0.0
13:15 (M,S,F)			

Location ABC Line Date 6/27/11
 Project / Client U of M

ADN

DESCRIPTION
DARK BROWN LOAMY TOPSOIL
DEBRIS & BURNED WOOD
Brown fg-mg SP w/ dk brn topsoil intermixed
DARK BROWN LOAMY TOPSOIL
DARK BROWN LOAMY TOPSOIL
3m. to dk brn. loamy topsoil w/ fine sand
DARK BROWN LOAMY TOPSOIL
DARK BROWN LOAMY TOPSOIL w/ fg-mg sand mixed in
DARK BROWN LOAMY TOPSOIL
DARK BROWN LOAMY TOPSOIL MIXED w/ some fg sand

Location ABC Line
Project / Client U of M

Date 6/27/11

ADN

ID	O/D	PID	BKGD
238B-SS3-0.5' 13:45 (M,S,F)	N/N	2.1	0.0
238B-SS4-0.5' 13:50 (M,S,F)	N/N	0.0	0.0
239A-SS1-0.5' 14:30 (M,S,F)	N/N	0.0	0.0
239A-SS2-0.5' 14:40 (M,S,F)	N/N	0.0	0.0
239A-SS3-0.5' 14:50 (M,S,F)	N/N	0.2	0.0
202C-SS1-1' 15:30 (M,S,F)	N/N	0.3	0.2
202C-SS2-1' 15:40 (M,S,F)	N/N	1.0	0.2
202C-SS3-1' 15:50 (M,S,F)	N/N	0.4	0.2
202C-SS4-1' 16:00 (M,S,F)	N/N	1.1	0.2
202C-SS5-0.5' 16:10 (M,S,F)	N/N	0.8	0.7

Location ABL
Project / Client U of M

Date 6/27/11

ADN

DESCRIPTION
DK BRN TOPSOIL w/ ↑ QUANTITY OF ORG MATERIAL
DK BRN LOAMY TOPSOIL w/ Fg SAND, some wood debris
DK BRN LOAMY TOPSOIL
DARK BRN LOAMY TOPSOIL
DARK BRN LOAMY TOPSOIL
Lt brn Fg SP mixed w/ dark brown topsoil
DARK BRN LOAMY TOPSOIL w/ Fg-Lg brown SP mixed in, 20% gravel
BROWN SP
DARK BRN TOPSOIL w/ brown SP & 20% gravel
BROWN SP-SM w/ DARK BRN TOPSOIL
MIXED IN

Location Udum

Date 6/28/11

Project / Client _____

7:00 Safety Meeting

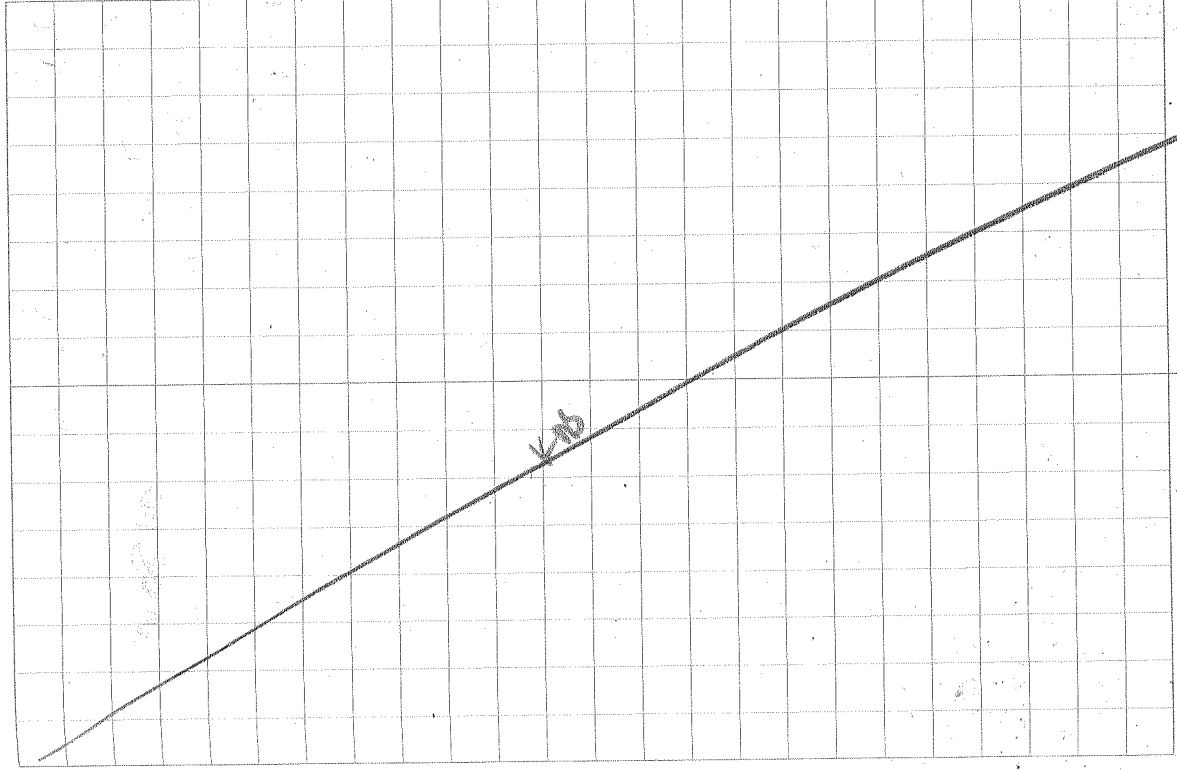
7:45 - Start the Surface Soil Sampling @ bunny gumb

14:00 - AKB + AMB went to observe geoprene drilling with ADN.

Date 6/28/11

Location _____

Project / Client _____



Location: UMore East

Date: 6/26/11

Project / Client:

ID	OID	PID
B6-SS1-0.5 -08:00 (S,M)	N/A	0.0
B6-SS2-0.5 -08:15 (S,M,F)	N/A	0.3
B6-SS3-0.5 -08:30 (S,M)	N/A	0.0
B6-SS4-0.5 -08:45 (S,M)	N/A	0.0
A3-SS1-0.5 10:00 (S,M)	N/A	0.0
A3-SS2-0.5 9:20 (S,M)	N/A	1.4
10SD-SS5-0.5	N/A	1.0

- not in table called AIME to verify
 notes & sample tags
 - 11:15, metals, swabs, flashpoint

- M-1 - Dup of 10SD-SS5-0.5

Field Blank - 1
 11:30 Metals, Swabs, Flashpoint

Location: UMore East

Date: 6/28/11

Project / Client:

BKD	Descriptive
0.0	Bm. SP with some silt topsoil
0.0	DK. Km. loamy topsoil
0.0	DK. Km. loamy topsoil
0.0	DK. Km. loamy topsoil (v. little sand)
0.0	loamy topsoil - w/sae sae
0.0	loamy gravel sand w/silt, gravel
0.0	dark, silty loam

ID	OID	PID
B D5-SS1-0.5 -12:00 (S.M)	N/A	0.0
B 22919-SS1-0.5 -13:00 (S.M, F)	n/n	0.1
B 22919-SS2-0.5 -13:15 (S.M, F)	n/n	0.0
A 22919-SS3-0.5 -13:30 (S.M, F) N/A	N/A	0.7
B 22919-SS4-0.5 -13:45 (S.M, F)	N/A	1.2
RR-E4-SS1-0.5 -15:15 (S.M)	N/A	0.5

B D5-SS1-0.5
-12:00 (S.M)

B 22919-SS1-0.5
-13:00 (S.M, F)

B 22919-SS2-0.5
-13:15 (S.M, F)

A 22919-SS3-0.5
-13:30 (S.M, F) N/A

B 22919-SS4-0.5
-13:45 (S.M, F)

RR-E4-SS1-0.5
-15:15 (S.M)

BKD	Description
0.0	DK brown loamy topsoil w/ gravel + trace sand
0.0	loamy topsoil w/ some sand
0.0	loamy topsoil w/ some sand
0.0	loamy topsoil w/ some sand
0.0	loamy topsoil w/ some sand
0.0	silty topsoil w/ trace sand + clay

0.0 DK brown loamy
topsoil w/ gravel
+ trace sand

0.0 loamy topsoil w/ some
sand

0.0 loamy topsoil w/ some
sand

0.0 loamy topsoil w/ some
sand

0.0 loamy topsoil w/ some
sand

0.0 silty topsoil w/ trace
sand + clay

Location UMore East Date 6/28/11

Project / Client _____

ID	OD	PID
22A-SS1-0.5 -15:30(S,M,F)	N/A	0.0
22A-SS2-0.5 -15:45(S,M,F)	N/A	3.3
22A-SS3-0.5 -16:00(S,M,F)	N/A	0.5
ES-SS1-0.5 -16:30(S,M)	N/A	0.5

Location UMore East Date 6/28/11

Project / Client _____

BKD	Description
0.0	Bm. silty sand with some gravel
0.0	Bm. silty sand with some gravel
0.0	Bm. silty sand with some gravel
0.0	Bm. to dk. brn. silty sand

Location UMore East

Date 6/29/11

Project / Client

ID OID PID

501A2-SS1-0.5 n/a 0.4
9:15 (S.M.P)

501B2-SS1-0.5 n/a 1.4
8:15 (S.M.P)

501C2-SS1-0.5 n/a 1.2
8:30 (S.M.P)
~~501A2-SS1-0.5 n/a 0.4~~

FB-1

9:30 (M/S)

501E2-SS1-0.5 n/a 0.8
-10:00 (S.M.P)
*MS/MSD on S.M.P

GC-SS1 n/a 0.0
(S.M. Pesticides(S))
10:45 VOCs

P = PCB

Location UMore East

Date 6/29/11

Project / Client

ACB+AHB

BKD Descript.

0.0 Sand w/silt, w/gravel
bottom

0.0 DK. brn. poorly graded
sand w/silt top soil

0.2 DK. brn silty sand
topsoil w/gravel

~~0.0~~

0.0 DK. brown sandy
loam topsoil
w/ gravel

0.0

loamy sand, topsoil
dark brown
well banded, shiny
piece scattered
throughout - took sample

~~ID~~ ~~OP~~ ~~PTD~~

~~GC-SSA~~ n/y 1.0

-05
(M.S, pesticides (3))
11:30
VCS

GC-SS3-05 no access due

222A-SS4-05 n/no 4.0
~~12:30~~ (M.S.F)

222A-SS5-05 9.0

13:15 (M.S.F)
222A-SS6-0.5 0.6

13:45 (M.S.F) 27
M/A

RR05-SS4-05
(M.S) 11:30
M/SMSD

Bkg Description

0.0 poorly graded sand w/ trace silt

trace shiny/curly material - similar to GC-SS1 material in smaller plot -

to electric fence

0.0 loamy topsoil w/ pot. ACM
Gravel, nails

0.0 loamy topsoil w/ sand

0.0 loamy ~~stony~~ topsoil w/ gravel

0.0 loamy topsoil dark brown

Location UMore East

Date 6/29/11

Project / Client _____

ID 0/D PTD

RR-D5-SS3-0.5 N/A 1.7
-15:00 (S.M)

D5-SS2-0.5 N/A 0.9
-16:15 (S.M)

SOLD2-SS1 called JME regarding location & he said to skip it due to road construction & traffic impacts - AUG

SOLFID-SS1-0S N/A f.s.a

16:00
(S, M, FEB. 1002)
called UOE due to PFD per JME email

Location UMore East

Date 6/29/11

Project / Client _____

BKD Description

0.0 Brn. loam w/ fine sand & gravel

0.0 Dk. Brn. loam w/ topsoil w/ trace gravel

0.0 loam, topsoil

Location W More East Date 6/29/11

Project / Client _____

<u>CTID</u>	<u>OID</u>	<u>PID</u>
C7-SS2-0.5 (6:45 AM)	VM	0.4
C7-SS1-0.5 17:00 (M)		0.5

Location _____ Date 6/29/11

Project / Client _____

<u>BWD</u>	<u>Description</u>
0.0	DK. W. silty clay
0.0	sandy top soil w/ silt & clay brown

Location GOW East / Gow North Date 6/30/11

Project / Client U of M

ADN

ID	Q/D	PID	BKGD
707A-SS1-0.5'	N/N	0.4	0.0
7140 (M)			
707A-SS2-0.5'	N/N	0.6	0.5
7150 (M)			
707A-SS3-0.5'	N/N	0.7	0.4
8100 (M)			
D7-SS1-0.5'	N/N	1.2	0.6
9100 (M)			
A7-SS1-0.5'	N/N	0.9	0.3
9150 (M/S) WS/MSD			
A6-SS2-0.5'		0.9	0.4
10:50 (M/S) DUPLICATE N-1			
A6-SS1-0.5'	N/N	0.7	0.3
11:20 (M/S)			
A5-SS3-0.5'	N/N	0.7	0.4
1210 (M/S)			
RR-A5-SS2	N/N	0.8	0.3
12:40 (M/S)			
FB-1 (RR-A5-SS1)			
13:00 (M/S)			
RR-A5-SS1	N/N	0.4	0.1
13:15 (M/S)			
RR-A7-SS1	N/N	0.7	0.1
13:45 (M/S)			

Location GOW East / Gow North Date 6/30/11

Project / Client U of M

ADN

DESCRIPTION
DARK BROWN LOAMY TOPSOIL
↓
DARK BROWN LOAMY TOPSOIL w/ some fg-mg sand INTERMIXED
DARK BROWN LOAMY TOPSOIL
BROWN SP-5M w/ 15% GRAVEL (AGGREGATE ABOVE SAMPLE DEPTH)
DARK BROWN LOAMY TOPSOIL (EDGE OF WETLANDS) HEAVILY ROOTED
DARK BROWN LOAMY TOPSOIL
BROWN mg-cg SP w/ 20% GRAVEL (AGGREGATE TOP 6")
BROWN fg-mg SP-5M mixed w/ TOPSOIL (DARK BROWN, LOAMY)
BROWN mg-cg SP w/ 20% GRAVEL

Location Sik-Wide Date 7/6/11
 Project / Client U of M ADN

- 1:00 ADN / JB ONSITE
 ~ SAFETY MTG
 ↳ JB signed PIIASP
- GAVE JB TOUR OF GEOPHYSICS AREA
 ↳ WOULD LIKE MORE GRASS CUT
 ↳ ESTIMATES 5-6 DAYS OF WORK
- ADN ~~SUB~~ DID RECON ON SEWER INVESTIGATION LOCATIONS (SEE SEWER MAP FOR DETAILS)
- GENE TO GET MORE EQUIP TOM. AM TO CONTINUE GRASS CUTTING IF PRACTICAL (DOESNT WANT TO FURTHER DAMAGE EQUIPMENT)
- ADN RECON'D MW LOC.
 ↳ SEE MW Table for details
- JB finished w/ pot, to finish today around 3PM

Location Sik Wide Date 7/6/11
 Project / Client U of M ADN

- ADN took photos of sewer locations
 - Called JME to discuss sewer locations
 1:45 ADN @ JB OFFICE

Location ABL Line / Gow East / Gow Central Date 7/16/11
Project / Client U of M

ADN

ID	OID	PID	REQD
108B-SS1-0.5'	N/N	1.2	0.9
8:00 (M,S,F)	→ DUPLICATE M-1		
108B-SS3-0.5'	N/N	1.4	0.5
8:30 (M,S,F)	→ MS/MSD		
101A-SS1-0.5'	N/N	4.2	0.4
9:30 (S,P)	→ DUPLICATE M-2, MS/MSD		
501C-SS1-0.5'	N/N		
12:35 (M,S,P)	→ FB-1		

ABL Line ↑

~~Gow Central~~ Gow East ↓

501FLS-SS1-0.5'	N/N	0.4	0.0
13:30 (M,S,P)			
501FL1-SS1-0.5'	N/N	0.0	0.0
15:00 (M,S,P)	→ MS/MSD		
502 Gow Central ↓			
GC-SS4-0.5'	N/white flees	0.5	0.0
16:00 (F,E,A)	↳ nitrocellulose		

Location ABL Line / Gow East / Gow Central Date 7/17/11
Project / Client U of M

ADN

DESCRIPTION
Lt brown - brown fq-mg SP w/ gravel (2-50%)
DK brown loamy topsoil
Lt brown - brown SP-SM w/ 2-50% gravel (gravel road sample)
DK brown loamy topsoil w/ eq mg-eq sand mixed in

Brown - DK brown loamy topsoil ↓

Dark brown loamy topsoil informed w/ white flees from unknown material (possible nitrocellulose)

Location

Site Wide
U of M

Project / Client

ADN

Date

7/7/11

7:00 ADN, JB ON SITE

- SAFETY MEETING

- WALKED GEOPHYS AREA W/ JB

- BEGAN SS SAMPLES

12:00 Lunch

12:30 Resumed Work

13:00 Came across unknown white material
(possible nitro cellulose)

- friable

- white w/ dark gray speckles

- $\approx 3 \times 3$ area @ surface

- Collected GPS point

→ Called JME

- To sample soil around material w/
some white mat'l included for

Flashpoint, asbestos (old), nitrocellulose

- ~~Put~~ Flagged off area & covered
white material

17:00 ADN OFF-SITE

Location

W More East

Date

7/14/11

Project / Client

KCB

1030 KCB begins test

- ~~test~~ surface soil sampling

1230 KCB offsite

Location W Mon East Date 7/14/11

Project / Client _____
KCB

ID	o/d	PID/Bkqd
66-553-0.5	n/h	0.0/0.0

Location _____ Date 7/14/11

Project / Client _____

Description
Rd. brn: SP

Location U Move East Date 7/18/11

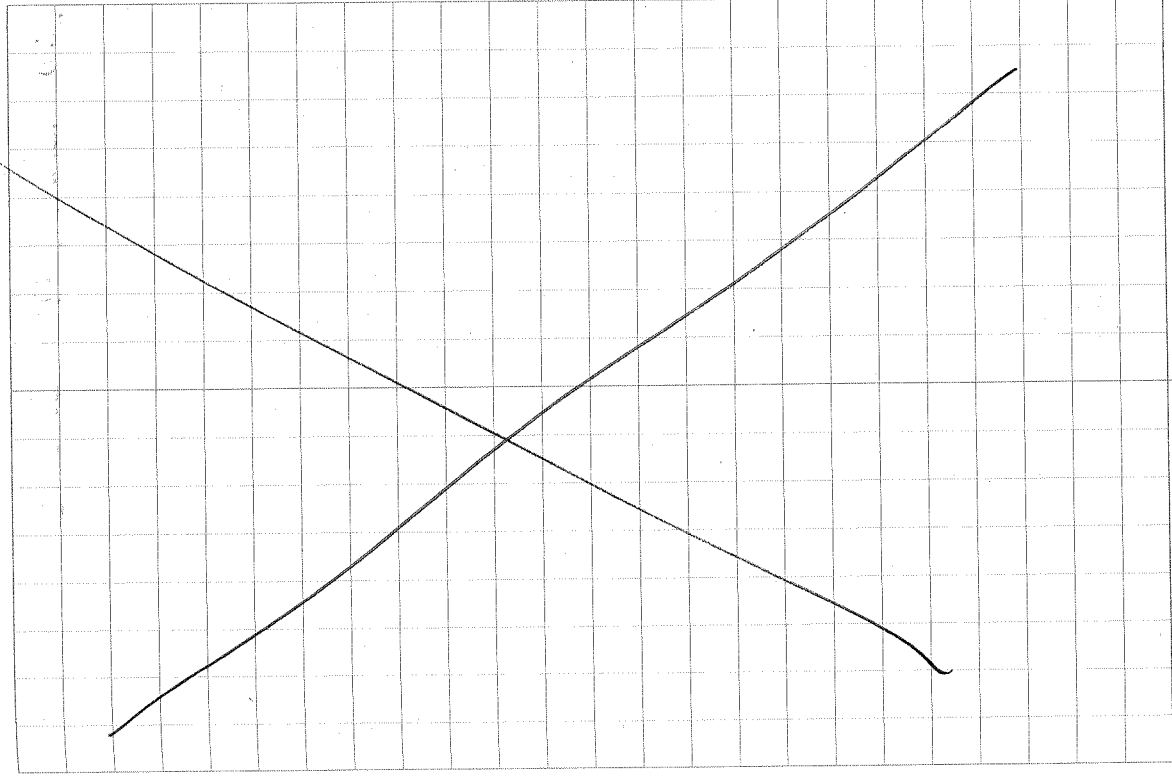
Project / Client Senior Invest ADN/KCB

700 KCB/ADN onsite

10:30 Heavy rain & lightning
- ADN/KCB offsite for day

Location _____ Date _____

Project / Client _____



Location Umore East
 Project / Client U of M

Date 7/15/11

AS/N/CA

ID	Q/D	P/D	B/G/D
U-Scan 5-1	N/N	0.0	0.0
7:30 (M,S,F,V,P)	N/N	0.0	0.2
8:00 (M,S,F,V,P) →			
U-PB6-1	N/N	0.0	0.0
8:30 (M,S,F,V,P)			
U-Scan B6-1	N/N	1.0	0.6
9:00 (M,S,F,V,P)			

due to no sample material in proposed sensor location
 due to no moisture SNAP CAP COLLECTED
 MOVED TO NEAREST MANHOLE WEST

Location Umore East
 Project / Client U of M

Date 7/15/11

ADU/KCB

DESCRIPTION
Dark brown silty sand w/ trace gravel (clean)
Dark brown silty sand w/ trace gravel & roots
Dark brown silty sand w/ trace gravel (clean)
Dark brown silty sand w/ trace gravel in proposed sensor location
Dark brown saturated silty sand
Dark brown silty sand w/ trace roots
WEST

Location Uman East Date 7/18/11

Project / Client V of M
Sewer Inv./SS Sampling ADN

7:15 ADN ONSITE

CAL'D INSTRUMENTS / PREP FOR DAY

-SEWER CREW ONSITE (DAVE CORRY)

-SEE MAPS FOR NOTES @ Each location

14:00 ADN OFFSITE

Location Uman East Date 7/20/11

Project / Client K of MN
ADN / KCB

8:00 KCB + ADN onsite

11:00 KCB + ADN offsite

7/20/11

Location Umce East

Date 7/18/11

Project / Client U of M

ADN

ID	OD	PID	BEGD
B3-SS1-0.5	n/n	1.0	0.0
501F-SS1-0.5	n/n	0.6	0.0
2PC5-SS1	n/n	0.5	0.0
USanC7-1	n/n	-	-

7/20/11

Location Umce East

Date 7/18/11

Project / Client U of M

ADN

DESCRIPTION
DK brn loamy topsoil
Sandy topsoil, rd brn
Sandy topsoil
DK Brn SMA

UMore East
Remedial Investigation
Surface Soil Sampling



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

6/22/11 - 10/28/11

23/19 - 10/2.00

Location _____ Date _____

Project / Client _____

END STAGE

T

Location _____ Date _____

Project / Client _____

BEGIN

STAGE

T

Location Umore East

Location Umore East

Project / Client U of M
SS Sampling

Project / Client U of M
SS Sampling

ADN

ADN

ID	OID	PID	BK6
Namy/B6			
B6-SS5	N/N	11.3	0.0
9:50	M.S. V → V collected due to ↑ PID READING		
B6-SS6	N/N	6.7	0.0
9:05	M		
B6-SS7	N/N	0.2	0.0
9:15	M.S		
B6-SS8	N/N	0.2	0.0
9:30	M		
<u>Low East</u>			
301ALP-SS3	N/N	0.3	0.0
10:05	M		
301ALP-SS4	N/N	0.3	0.0
10:15	M		
301ALP-SS5	N/N	0.2	0.0
10:25	M.S / M.S.A		
303A-SS6	N/N	0.2	0.0
10:40	M		
303A-SS10	N/N	0.2	0.0
10:50	M		
303A-SS9	N/N	0.3	0.0
11:00	M		

BROWN SP-SM w/30% gravel
THEN GRAVEL w/ SHovel, COULDN'T GET THRU EXCEPT 303A

DARK BROWN LOAMY TOPSOIL w/10% gravel

DARK BROWN LOAMY TOPSOIL w/30% gravel

LIGHT BROWN SP-SM, 10% gravel



Location Umare East
Project / Client U of M

Date 10/10/11

SS Sampling ADN

ID	O/D	PID	BKGD
<u>LOW EAST</u>			
303A-SS8	N/N	0.4	0.0
11:15 M			
303A-SS11	N/N	0.3	0.0
11:30 M	A FB-1		
CAP-SS1	N/N	0.2	0.0
12:50 M			
CAP-SS2	N/N	0.1	0.0
13:00 M,S			
CAP-SS3	N/N	0.2	0.0
13:15 M			
CAP-SS4	N/N	0.1	0.0
13:30 M			
CAP-SS5	N/N	0.1	0.0
13:45 M			
<u>DEF LINE</u>			
207DD-SS3	N/N	0.2	0.0
2:40 M,S			
207DD-SS2	N/N	8.9	0.0
2:55 M,S	A M-1		
207DD-SS1		458	0.0
3:10 M,S,N			

Collected due to ↑ PID reading

Location Umare East
Project / Client U of M

Date 10/10/11

SS Sampling ADN

DESCRIPTION
DARK BROWN TOPSOIL MIXED W/ LIGHT BROWN SP
BROWN SP-SM W/20% gravel
DARK BROWN LOAMY TOPSOIL
DARK BROWN CLAYEY TOPSOIL W/ TRACE RED-BRN CLAY
DARK BROWN LOAMY TOPSOIL
DARK BROWN SP-SM W/ TRACE CLAY (Dk-Brown)
BROWN SP
BROWN SP-SM W/ TRACE GRAVEL



Location Umme East Date 10/10/11

Project / Client U of M
SS Sampling ADN

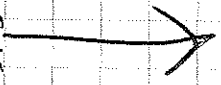
ID	OID	PID	BLGD
SITE WIDE			
S01A2-552	N/N	0.4	0.0
16:15 S	→ road dr	to black glassy debris (hor?)	
S01A2-553	N/N	0.1	0.0
16:30 S			
S01A2-594	N/N	0.2	0.0
16:45 S			

Location Umme East Date 10/10/11

Project / Client U of M
SS Sampling ADN

DESCRIPTION

LIGHT BROWN SP-SM w/30% gravel



68 Location Umore East Date 10/11/11
 Project / Client U of M
SS Sampling ADN/ARB

ID	O/D	PID	B/G/D
<u>ABL Line</u>			
16T-SS1	N/N	0.2	0.0
9:45 M			
16T-SS2	N/N	0.1	0.0
9:00 M			
16T-SS3	N/N	0.1	0.0
9:15	Arsenic → To determine how far As extent		
32T-SS1	N/N	0.0	0.0
9:30 M	M-1		
32T-SS2	N/N	0.0	0.0
9:40 M			
32T-SS3	N/N	0.0	0.0
9:50	Arsenic → consistent w/ 16T-SS3		
10:1A-SS2	PCB-M-2		
10:15	N/N	0.0	0.0
10:1A-SS3	N/N	0.0	0.0
11:15	P		
16:1A-SS4	N/N	0.0	0.0
11:20	P		
12:30	N/N	0.0	0.0
12:30	N/N		

69 Location Umore East Date 10/11/11
 Project / Client U of M
SS Sam ADN/ARB

DESCRIPTION
DARK BROWN LOAMY TOPSOIL
per conversation w/ JME
BROWN SP-SM w/ 20% gravel
Brown, sandy, 40% gravel
Brown SP-SM slightly loamy
med to dark brown, loamy

Location UMare east Date 10/11/11

Project / Client U of M
SS Sampler AKB/ADN

EP	OID	PID	BKID
22920-SS4	N/N	0.0	0.0
12:50 M			
22920-SS5	N/N	0.0	0.0
13:00 M			
22920-SS14	N/N	0.0	0.0
13:30 M			
222A-SS7	N/N	0.9	0.0
13:45 M			
222A-SS8	N/N	0.6	0.0
13:55 M			
222A-SS9	N/N	0.2	0.0
14:05 M			
<u>AC LINE</u>			
220B-SS2	N/N	0.0	0.0
14:40			
<u>NAM/BG</u>			
1:50-1113	N/N	8.8	0.0
15:00 M			
1050 TT19	N/N	0.0	0.0
15:15			
15:15 NO (MSD) MS006			

Location UMare east Date 10/11/11

Project / Client U of M
SS Sampler 4KB/ADN

Description
med brown - loamy topsoil
mod brown - loamy topsoil
med brown, loamy topsoil
BEN SP-SM
↓
3cm loamy topsoil
mod brown SP-SM
mod brown SP-SM

Location Umare East

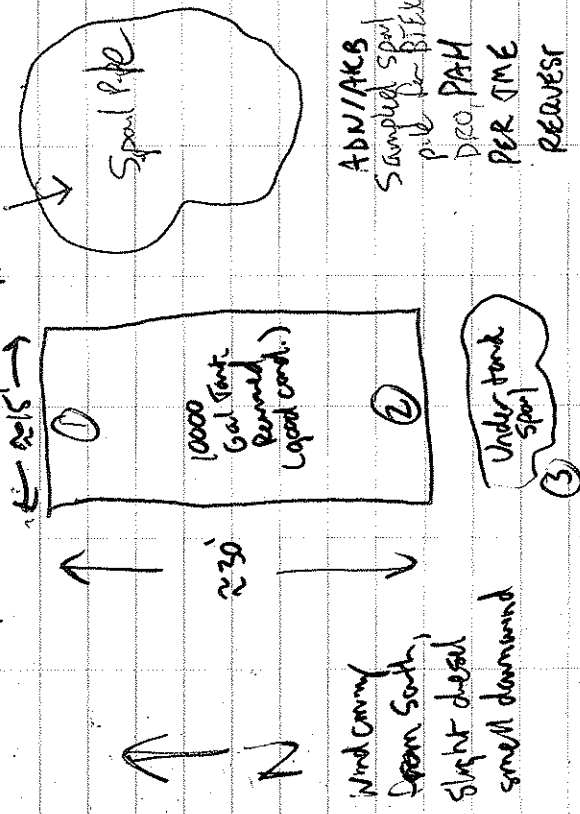
Date 10/11/11

Project / Client V of M

Oil Tank Removal

ADW/AKB

8:00 TANK REMOVAL BEGAN (DOVE)
 8:30 - DETERMAN ON SITE TO SAMPLE & HAUL OFF TANK
 - PCA ON SITE (WOMAN... SHIRLEY SMITH'S)
 TO OVERSEE TANK REMOVAL
 → VOC headspace (as per)



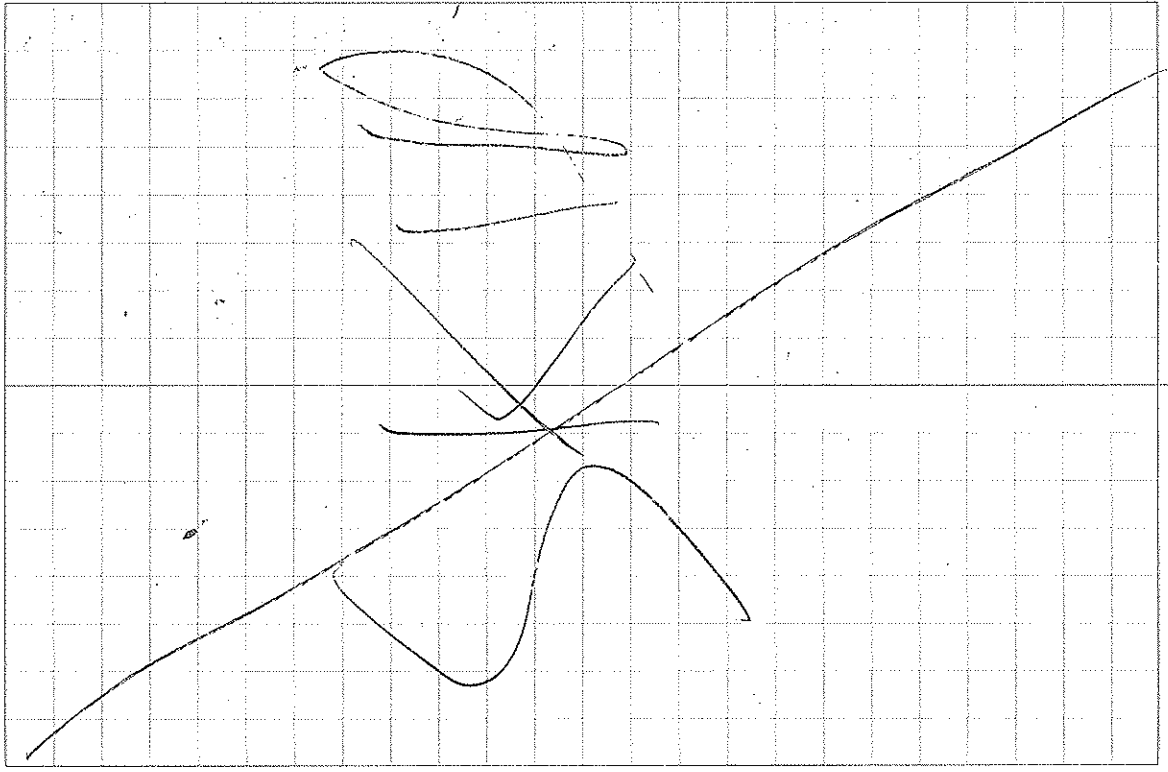
ADW/AKB
 Sampled Spill
 pipe for BTEX
 DICO, PAH
 PER TIME
 REQUEST

① = Determan Sample location → Field Personnel
 DID NOT KNOW WHAT TO SAMPLE FOR, INDICATED
 HE WAS TO SAMPLE VIALS & SEND TO LAB
 KNEW NO OTHER INFO

② = SUIICANT DISCONTINUATION (LACK) IN TOP 2" OF SOIL (COVERED?)
 BARR ROLE TO OBSERVE & DOCUMENT (TOOR PLUS)

Location _____ Date _____

Project / Client _____



Location Umore East

Date 10/11/11

Project / Client U of M

SS Sampling ADN/AKB

ID	O/D	PID	BLGD
<u>ABC lower</u>			
700A-SS6	NW	0.0	0.0
1000	M		
700A-SS5	NW	0.0	0.0
1015	M		
700A-SS4	NW	0.0	0.0
16:20	M		
700A-SS3	NW	0.0	0.0
16:25	M		
700A-SS2	NW	0.0	0.0
16:30	M		

Location Umore East

Date 10/11/11

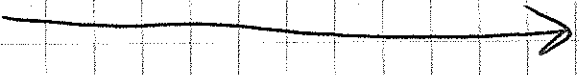
Project / Client

SS Sampling

ADN/AKB

DESCRIPTION

SP-5M BLWN



Location UMore east Date 10/21/11

Project / Client U of M
SS Sampling

TD OID PTD Bkg
2000 Central

E1600-SS1 N/N 1.3 .7
8:00 M,S,U
M-1 (Duplicate)

E1600-SS2 N/N 1.8 1.2
8:15 M,S,U

FB-1 M,S,U - -
8:20

E1600-SS5 N/N 1.5 1.3
8:30 M,S

E1600-SS6 N/N 1.5 1.4
8:35 M,S
- M,S,U

E1600-SS7 N/N 1.6 1.4
8:45 M,S

E1600-SS9 N/N 2.2 1.3
9:10 M,S

Location UMore east Date 10/21/11

Project / Client U of M
SS Sampling

Descriptions

med-brown, silty

med brown, silty

-

light brown, SP

Brown, SP w/ trace gravel

Brown, SP

Brown, SP with trace gravel

Location Umare East Date 10/12/11

Project / Client U of M
Surface Soil Sampling

Desighn
Brown, SP
Brown SP-SM, trace gravel
Brown, trace gravel
Brown, ~~soft~~ silty
Brown, silty loam
silty loam, trace gravel
Beak flayed markers

76 78 Location Umare East Date 10/12/11

Project / Client U of M
Surface Soil Sampling

IP 01D P1D Bk
(Good Centre)
E 11:00 D-SS10 N1W 1.5 1.5
E 9:30 M1.8
GC-SS8 N1W 1.7 1.4
E 10:10 MS10
MS10MSD
GC-SS9 N1W 2.1 1.2
10:20 MSU
E GC-SS7 N1W 1.9 1.7
10:40 MSU
E GC-SS11 N1W 1.7 1.4
8 11:00 MS
E GC-SS10 N1W 1.8 1.4
E 11:20 MS10
MS10MSD
E

Location Umoa EastDate 10/13/11Project / Client U of M

SS Sampling

ADN/ABB

ID	OID	PID	BKID
<u>GC-SS5</u>	<u>N/N</u>	<u>0.8</u>	<u>0.8</u>
<u>8:00</u>	<u>M,S,V</u>		
<u>8:45</u>	<u>M,S</u>	<u>1.8</u>	<u>1.5</u>
<u>9:20</u>	<u>M,S,F</u> (mixed) Nitrocellulose	<u>1.2</u>	<u>1.5</u>
<u>9:35</u>	<u>M-1 (Dup)</u>	<u>N/N</u>	
<u>10:00</u>	<u>M,S,F</u> Nitrocellulose	<u>2.1</u>	<u>1.4</u>
<u>FB-1</u>	<u>M,S,F</u>		

↳ collected an extra for. bus used had

Location Umoa EastDate 10/13/11Project / Client U of M

SS Sampling

ADN/ABB

DESCRIPTION

Brown sp-sm w/ trace gravel, slightly lumpy

Brown sp-sm w/ trace gravel

Brown sand loam w/ trace gravel
Black material throughoutDark brown loamy sand
w/ black material
(cont?)Dark brown loamy sand
w/ black material
(cont?)

Location UMme east Date 10/13/11

Project / Client U of M
Surface Soil Sample

ABC	LINE	OID	PIP	Bkg
707PF-SS6	NIN	3.6	1.8	1.8
10.30	M.S			
707PF-SS5	NIN	1.5	2.0	2.0
10.40	M.S			
707PF-SS3	NIN	2.1	1.7	1.7
10.45	M.S			
707PF-SS7	NIN	1.8	1.7	1.7
10.50	S			
107PF-SS4	NIN	5.9	1.7	1.7
10.55	S			
717A-SS4	NIN	1.8	1.7	1.7
11.00	S			
717A-SS6	NIN	1.7	1.6	1.6
11.05	P.S			
717A-SS6	NIN	1.7	1.8	1.8
11.15	S			

Location UMme east Date 10/13/11

Project / Client U of M
Surface Soil Sample

Descript
brn, loamy topsoil
Brn loamy topsoil good?
Brn loamy topsoil trace sand
light brn. loamy soil trace gravel
Dark brn loamy topsoil
Dark Brn loamy topsoil
light Brn loamy topsoil
Med brn sandy loam trace gravel

Location UMme euss Date 10/16/11

Project / Client U of M
Surface Sample

ABC Line ID	OID	PID	Blg
717A-SS1	NIN	1.7	114
12.15 M-a (dup)			
FB-0			
12.20 P			
717A-SS2	NIN	2.0	114
12.30 P			
717A-SS3	NIN	1.5	115
12.45 P			
m8/m8d			
235A-SS0	NIN	4.1	114
13.12 M, S			
235A-SS3	NIN	1.7	114
13.30 S			
235A-SS4	NIN	5.5	114
14.45 S			
1.00			
235A-SS5	NIN	1.0	114
1.80 M, S			
			m8/m8d

Location UMme Date 10/13/11

Project / Client U of M
Surface Sample

Description
Brom sandy loam topsoil
loamy sand Brn
loamy w/ tan sand Brn
sandy loam dark brn
Dark brn sandy loam
Dark brn sandy loam
med brn sandy loam

Location U Mine east

Date 10/13/11

Project / Client U of M

Surface Sample

ABC Line

ID	OTD	PID	Blog
255A-SS6	NIN	3.5	1.4
2:00 S			
251A-SS4	NIN	1.5	1.5
2:30 S			
251A-SS5	NIN	1.5	1.5
2:45 S			
251A-SS1	NIN	1.3	1.4
3:00 S			
251A-SS2	NIN	.5	.7
3:15 S			
2080-SS1	NIN	0.8	0.7
3:30 S			
2080-SS2	NIN	1.3	1.0
3:45 S			

Location U Mine east

Date 10/13/11

Project / Client U of M

Surface Sample

Descriptr

Dark brown, sp

Dark brown, sp

Dark Bmn sp-srn

Dark Bmn. sp-srn

Dark brown, sp-srn

yellow brown, sp w/sgm

Dark brown sp-srn

Location Umare East RE
Project / Client V of M

Date 10/14/11

SS Sampling ADN/SCNZ

ID	O/D	AD	B&G/D
<u>Site Water</u>			
501C-SS2	N/N	6.7	0.7
8:00 M			
501C-SS3	N/N	0.9	0.3
8:15 M			
501C-SS4	N/N	0.5	0.4
8:30 M			
501C-SS5	N/N	1.0	0.4
8:45 M <u>MS/MSD</u>			
501E1-SS2	N/N	1.0	0.4
9:10 M			
501E1-SS3	N/N	0.4	0.3
9:15 M			
501E1-SS4	N/N	0.4	0.3
9:20 M <u>AFB-1</u>			
716A-SS2	N/N	0.5	0.4
10:00 P			
716A-SS3	N/N	0.4	0.3
10:15 P <u>AFB-2</u>			
716A-SS4	N/N	0.5	0.4
10:30 P			
716A-SS5	N/N		
10:45 P			

Location Umare East RE
Project / Client V of M

Date 10/14/11

SS Sampling ADN/SCNZ

DESCRIPTION
DK BROWN LOAMY TO SILTY SOME ^{SP} SAND INTERMIXED
DK BROWN SP-SM W/TRACE GRAVEL
DK BROWN LOAMY TO SILTY W/SOME SP INTERMIXED
BROWN SP-SM
LIGHT BROWN SP W/40% GRAVEL
BROWN SP W/50% GRAVEL

Location Umme East RI

Date 10/14/11

Project / Client U of M

SS Sampling ADN/SRNZ

ID	O/D	PID	BKGD
ABC Umme			
217A-SS1	N/N	0.5	0.3
12:00 S			
217A-SS2	N/N	0.5	0.4
12:10 S			
217A-SS3	N/N	0.6	0.5
12:20 M, S			
217A-SS4	N/N	0.6	0.3
12:50 S, A			
217A-SS5	N/N	0.5	0.3
13:00 S, A			
217A-SS6	N/N	0.6	0.5
13:15 S, A			
217A-SS5	N/N	0.3	0.2
13:30 M			
217A-SS6	N/N	0.5	0.3
13:40 M			
217A-SS7	N/N	0.5	0.3
13:50 M, S			
217A-SS8	N/N	0.5	0.3
14:00 M			

Location Umme East RI

Date 10/14/11

Project / Client U of M

SS Sampling ADN/SRNZ

DESCRIPTION
Brown SP-SM
LT Brown SP-SM w/10% gravel
Brown SP-SM, 10% gravel
Brown SP-SM, 10% gravel
Brown SP-SM, trace gravel
↓
Brown SM, topsoil
Brown SP-SM, topsoil
Brown SP-SM, topsoil
Brown STIF yellow/reddish brown silt

Location Umore East RI

Date 10/17/11

Project / Client U of M

SS Sampling ADN/ARNZ

ID	OID	PID	BKGD
<u>Gow East</u>			
<u>617A-SS2</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>8140 M</u>			
<u>617A-SS3</u>	<u>N/N</u>	<u>0.1</u>	<u>0.0</u>
<u>8150 M, S</u>	<u>* FB-1</u>		
<u>617A-SS13</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>9100 M</u>			
<u>617A-SS14</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>9110 M</u>			
<u>617A-SS15</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>9120 M, S</u>	<u>* MS/MSD</u>		
<u>617A-SS9</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>1220 M</u>			
<u>617A-SS11</u>	<u>N/N</u>	<u>0.6</u>	<u>0.0</u>
<u>1230 M, S</u>	<u>* MS/MSD</u>	<u>* FB-2</u>	
<u>617A-SS10</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>1240 M</u>			
<u>617A-SS12</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>1250 M</u>	<u>* M-1</u>		
<u>617A-SS4</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>13100 M</u>			
<u>617A-SS1</u>	<u>N/N</u>	<u>0.0</u>	<u>0.0</u>
<u>13116 M</u>			

Location Umore East RI

Date 10/17/11

Project / Client U of M

SS Sampling ADN/ARNZ

DESCRIPTION
<u>Brown SP-SM</u>
<u>Brown SP-SM w/ 30% sand, ^{coal} bone present</u>
<u>Brown SP-SM, 10amm</u>
<u>Brown SP-SM w/ trace quartz and some VBS: color black material, not dense → burned tort?</u>
<u>Brown SP-SM</u>
<u>Brown SP-SM, coal present</u>
<u>Brown fg-mg SP, coal present</u>
<u>Brown SP-SM, coal present</u>
<u>Brown Gng SP, coal present</u>
<u>Brown fg-mg SP, coal present</u>
<u>Brown SP</u>

Location Umore east Date 10/10/11

Project / Client Uy, M
sewer sample

Description
Light brown, fine grained soil wood & roots
Dark brown - silt
Dark Brown, silt
Saturated silty, dark brown, mainly inorganic organic

Location Umore east Date 10/10/11

Project / Client sewer sampling

ID	OID	PID	Bkg
1	U-10-B27-1	YIN	
6	8:15		
9	V, metals, Zn	0.0	.1
5	SUOCs & PCBs - m/s/m		
6	U-SAVEH-1		
9	10:00	MIN	.2
6	V, M, Pb, PCB, S		.2
9	M-1 (metals duplicate)		
6	PB-1		
6	PCBs, Metals, SUOCs		
1	10:15		
6	17U-PC4-1		.2
6	10:35		
17	Metals, VOC, SUOCs, OC, Pb		
6	PCBs - m/s/m		
21			
6	13U-10BSC7-3	MIN	.2
6	13:00		
1	PCBs, M, S, OC, Pb		

Location Ume cast

Date 10/20/11

Project / Client U of M

soil sampling

~~ID QD PID Bkg~~

~~U-LWC5-1 NW ← C.D~~

~~3.00~~

~~Moist, voc, sugars~~

~~FB-2~~

~~Metals~~

Location Ume cast

Date 10/20/11

Project / Client U of M

soil sampling

Description

Dark Brown, sp sm

Location Umine east Date 10/21/11

Project / Client UdM
Sever / Surface Soil Sample

ID	OTD	PIP	Big
UCC 0-1	N/D	0.0	0.0
Metals, UCC, SOCC			
CC-Post	PCB		
8:30			
UCC 0-2	N/D	0.0	0.0
Metals, UCC, SOCC			
CC-Post	PCBs		
10:00			
M-1 - Metals Due of UCC 0-2			
B6-551	N/D	0.0	0.0
M, S			
11:00			
C6-551	N/D	0.2	0.2
M, S			
11:16			
C6-552	N/D	0.0	0.0
M, S			
12:45			
C6-553	N/D	0.0	0.0
M, S			
13:00			

Location Umine east Date 10/21/11

Project / Client UdM
Sever / Surface Soil Sample

Description
↑
Dark brown, w/wink spots. sp sm
Dark brown sp-sm
Brown sp-sm
Brown sp-sm
Brown sp-sm

Location U Mine East Date 10/25/11

Project / Client U of M
Surface Soil Sampling

Medium barn sp sm

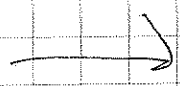
med barn sp sm - new ground

med barn sp sm

med barn sp sm

med barn sp sm

Med Barn sampling



Black box

Location U Mine East Date 10/25/11

Project / Client U of M
Surface Soil Sampling

DD 010 PID Bkg
77A-SS1 NW 0.0 0.0

PCBs

0.00

208E-SS1 NW 0.0 0.0

SUCS - 850

208F-SS1

9.15 SUCS NW 0.0 0.0

FB-1

9.15 FB SUCS

220A-SS1 NW 0.0 0.0

10.10 SUCS

220B-SS2 NW 0.0 0.0

10.15 SUCS

FB-2

10.20 SUCS

10SD-SS1 NW 0.0 0.0

10.45 Metals

FB-3

10.50 Metals

TR 10-SS1 NW 0.0 0.0

11.45 1, 2, 5, 10, 15

11.00-SS1 NW 0.0 0.0

12.00 SUCS

Location UMare east Date 10/28/11

Project / Client U of M
Surface / Sub Soil Sampling

FD 07D PTP Bkg

240 B-SS1 NW 0.0 0.0

SWCS - 13:40 NW 0.0 0.0

BS-SS1 NW 0.0 0.0

Metals SWCS 14:00 0.0 0.0

BS-SS2 14:20 NW 0.0 0.0

Metals, SWCS 0.0 0.0

SOC-SS4 0.0 0.0

Metals 15:10 0.0 0.0

SR06-SS1 NW 0.0 0.0

Arsenic 15:15 0.0 0.0

SR01-SS1 15:30 NW 0.0 0.0

Arsenic 15:45 0.0 0.0

SR41-SS1 NW 0.0 0.0

Arsenic 15:45 0.0 0.0

Coal - C7-SS1 - coal chips in bag

Metals, SWCS 16:00

Coal - C5 - SS 16:16 - coal chips in bag

Location UMare east Date 10/28/11

Project / Client U of M
Surface Soil Sampling

Description

Sp - topsoil

to sandy loam, typical lots of organic

↓

↓

Sp-5m Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

Sp-5m Darker Brown

↓

UMore East
Remedial Investigation
Test Trenching
Book #1



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

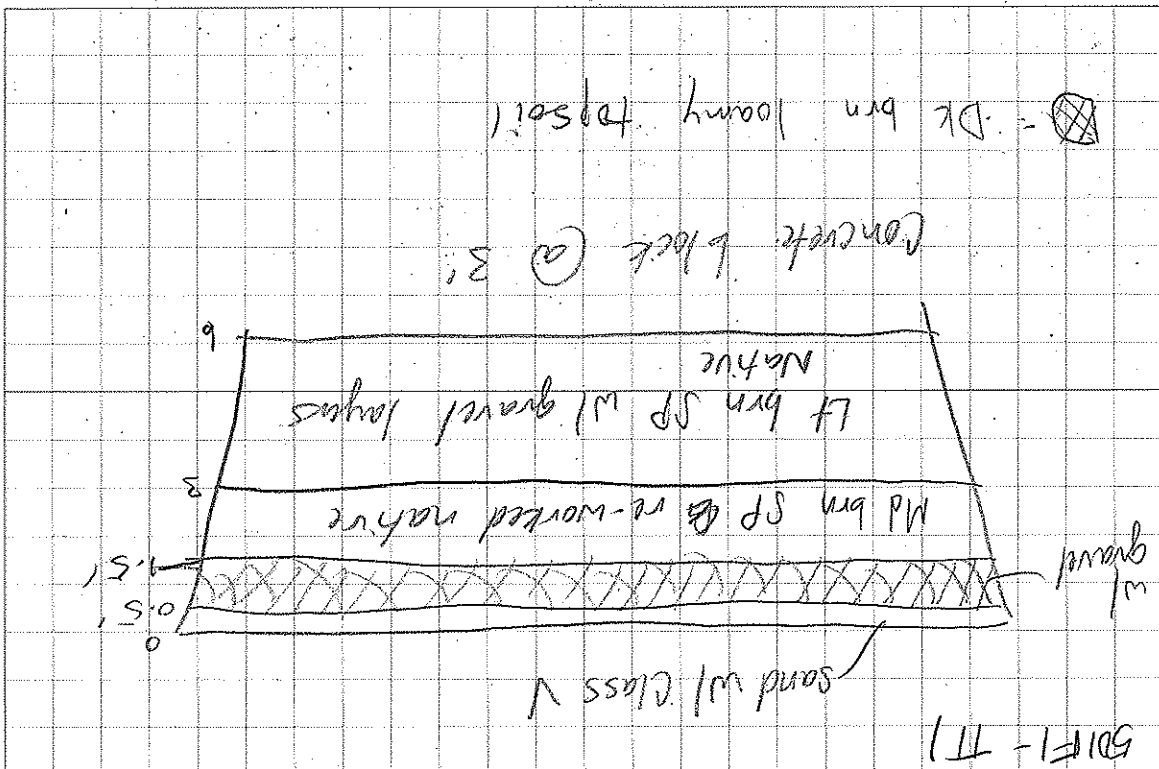
6/20/2011 - 6/29/2011

23/19-1092.00

Location UMore East Date 6/20/11

Project / Client 60W East

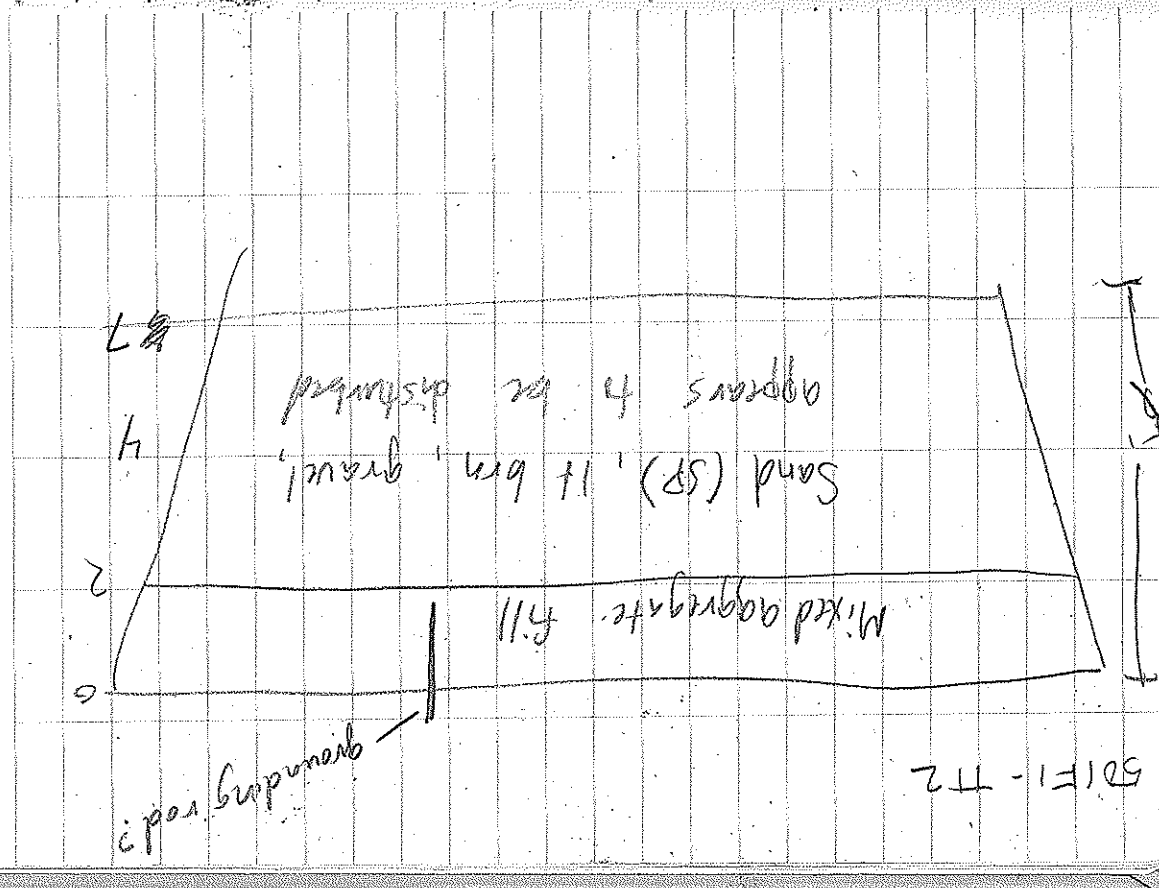
ADN/kob



Location UMore East Date 6/20/11

Project / Client 60W East

ADN/kob



Location U More East
Project / Client GOW East

Date 6/20/11

ADN/KEB

ID	o/d	n/n	RID
501E1-TT2-2'		n/n	0.0
501E1-TT1-3'	n/n		0.0
501E1-TT3-3'	n/n		0.0
50107-TT1-2'	n/n		0.0
303A-TT2	n/n		0.0
303A-TT1	n/n		0.0
303SAB-TT1-2'	n/n		0.0
303SAB-TT2-25'	n/n		0.0

Location U More East
Project / Client GOW East

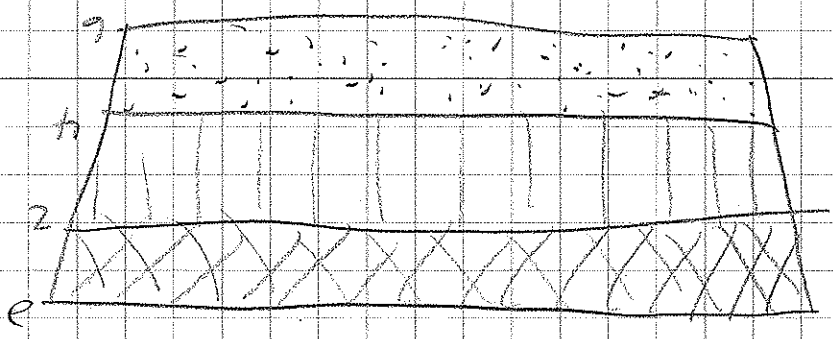
Date 6/20/11

ADN/KEB

Bkgd	Description
0.0	Dk brn gry SM w/ gravel, possible topsoil layer
0.0	lt brn SP
0.0	Dk brn loamy topsoil
0.0	ld brn ML
0.0	Dk brn topsoil
0.0	gry brn ML w/ SP
0.0	Dk brn loamy topsoil
0.0	Dk brown loamy TOPSOIL w/ some gravel #1070

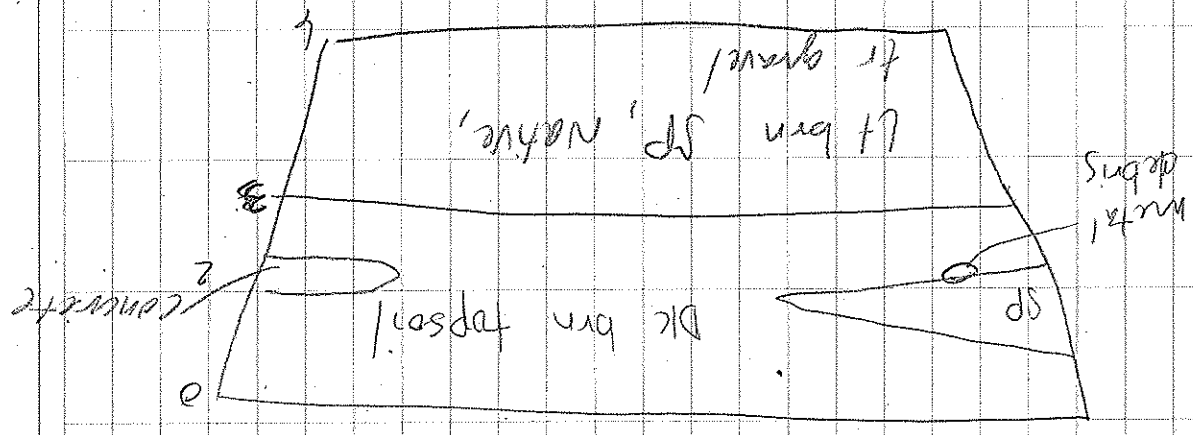
Location: WMore East Date: 6/20/11
 Project / Client: GOW East ADM/KCB

LT brn SP = [dotted box]
 RD brn ML = [cross-hatched box]



15D107-TT1

Location: WMore East Date: 6/20/11
 Project / Client: GOW East ADM/KCB



5D1F1-TT3

10 Location UMore East Date 6/20/11
Project / Client 60W East

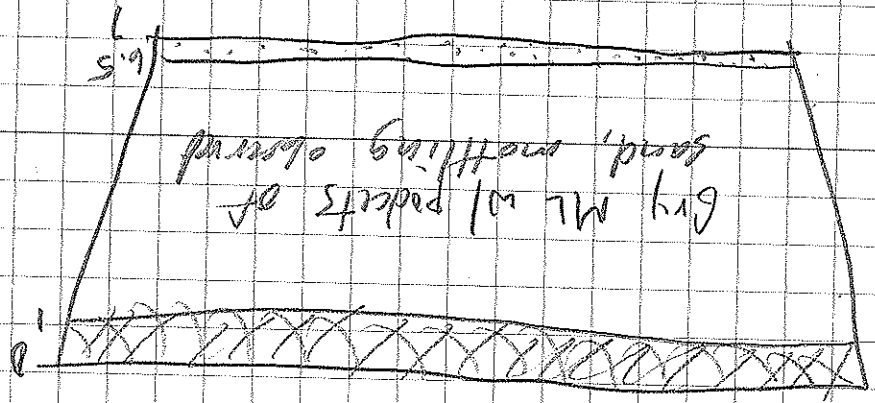
ADN/KRB



303A-112

Location UMore East Date 6/20/11
Project / Client

KRB/ADN

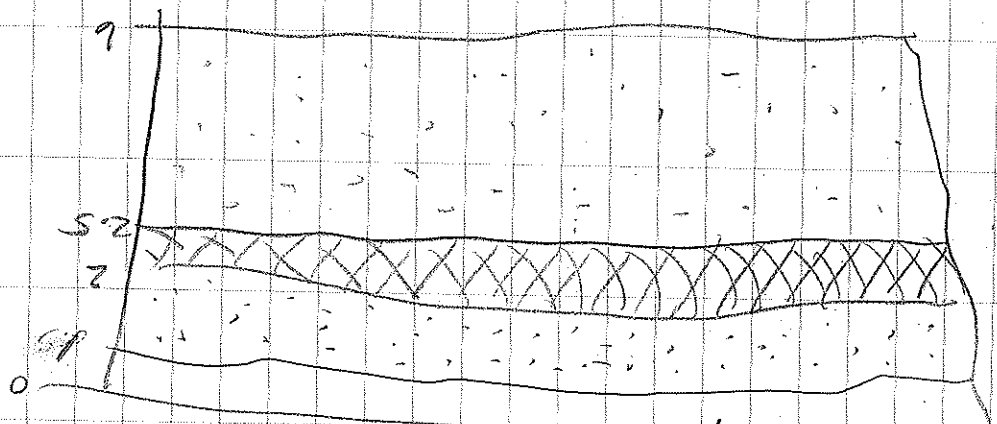


303A-111

Location UMore East Date 6/20/11

Project / Client GOV East

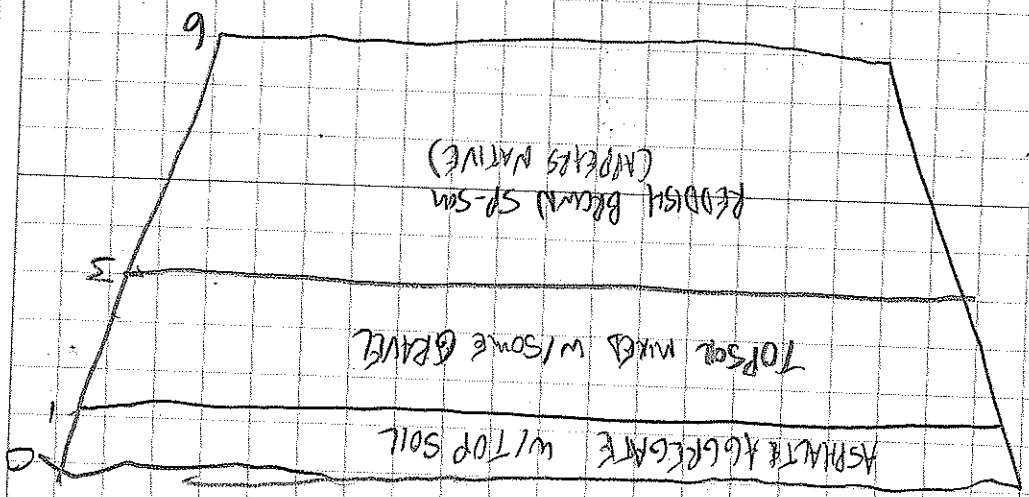
KCB/ADN



303 SAAB - TT1

Location UMore East Date 6/20/11

Project / Client

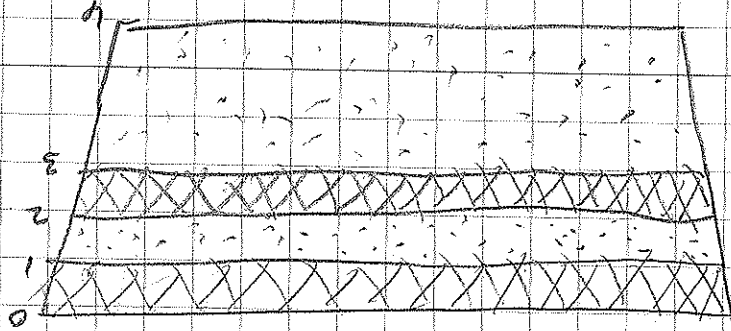


303 SAAB - TT2

Location: UMore East Date: 6/20/11

Project / Client:

Project / Client:



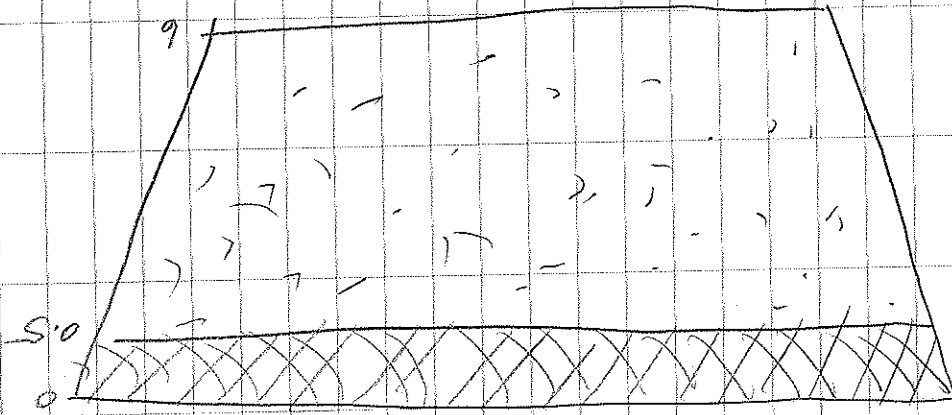
202 SARR-TT1
303ALP-TT1

Location: UMore East Date: 6/20/11

Project / Client: GOW East

ADN/KCS

Project / Client:



202 SARR-TT1
303ALP-TT1

Location W More East Date 6/20/11

Project / Client ADN / KCB

Bkgd	Description
0.0	Lt brn SP
0.0	Brn loamy topsoil
0.0	Brn topsoil w/ lt brn sand
0.1	Lt brn SP
0.1	↓
0.0	Brn loamy topsoil
0.1	Lt brn SP
0.1	brn mid sand, red silty discoloration
0.1	Brn SP
0.0	DK brn loamy topsoil
0.0	LT BRN SP-SM, 10% GRAVEL

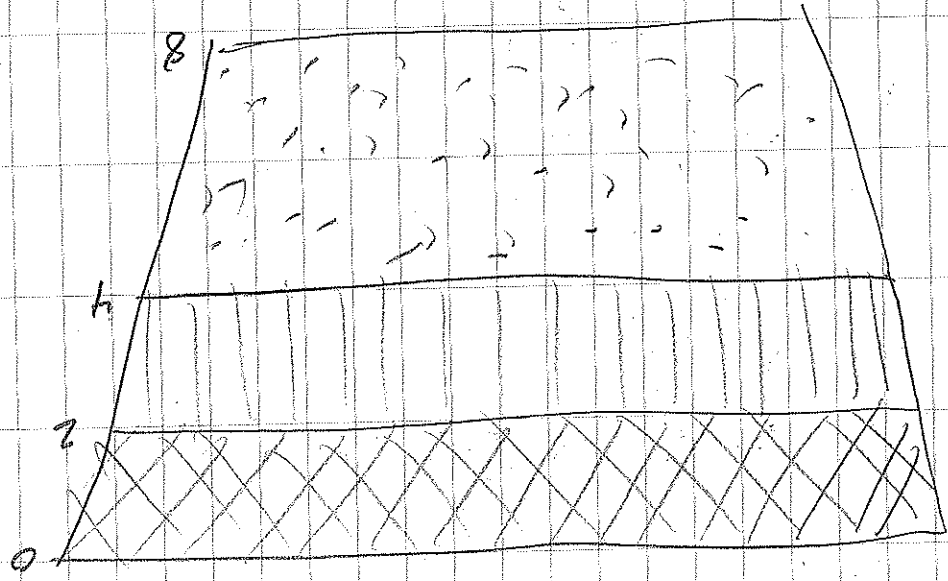
Location W More East Date 6/20/11

Project / Client ADN / KCB

ID	o/d	PID
303A1P-TT1-1'	n/n	0.0
7024-TT3-2'	n/h	0.0
7024-TT3-0.5'	n/h	0.0
303A2-TT1-3.5'	n/h	0.5
303A2-TT1-1.0'	n/h	0.1
303A2-TT2-1.0'	n/h	0.0
303A2-TT2-3.5'	n/h	0.1
NATP3-B-1'	red/n	0.4
F-NATP3-B-6'	n/h	0.4
CAP-TT11	n/h	0.0
CAP-TT10	n/h	0.0

Location UMore East Date 6/20/11

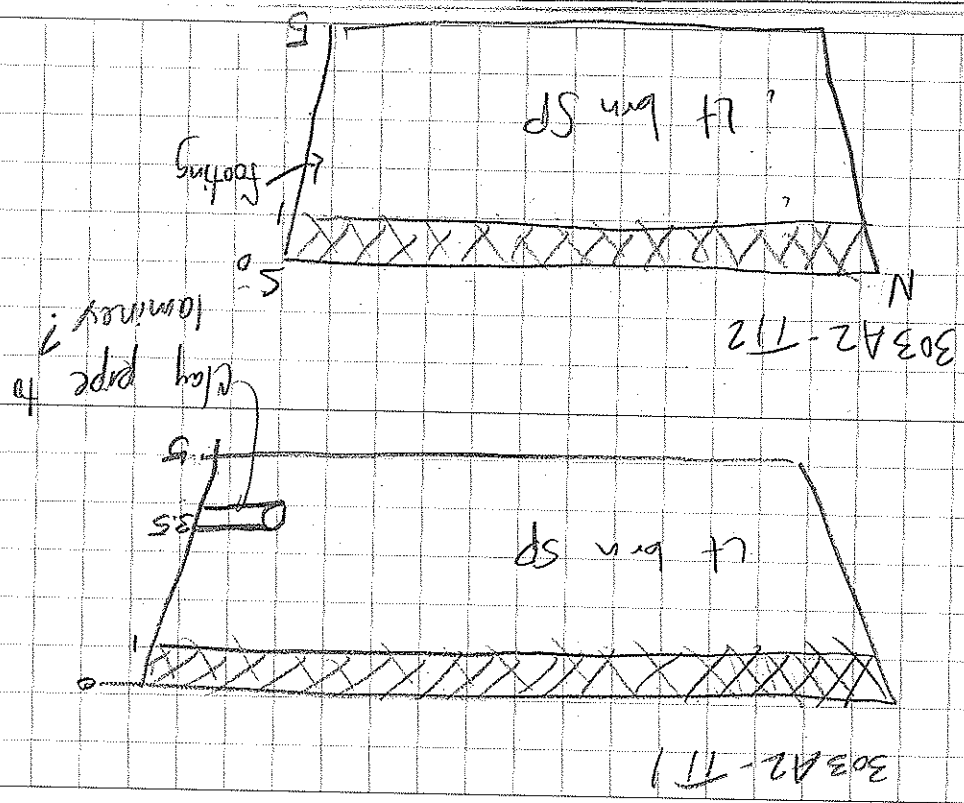
Project / Client Gow East ADN/KCB



7224-TT1+2

Location UMore East Date 6/20/11

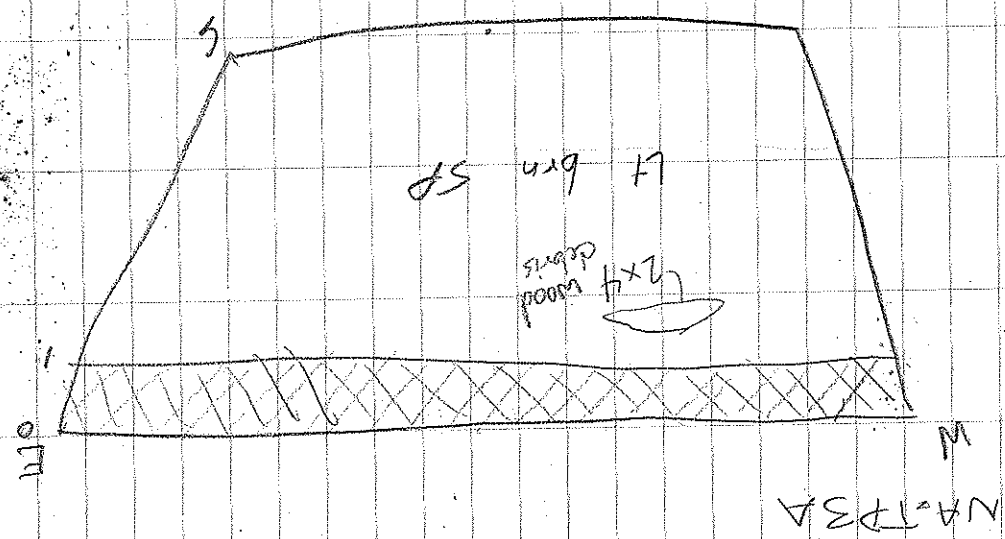
Project / Client Gow East ADN/KCB



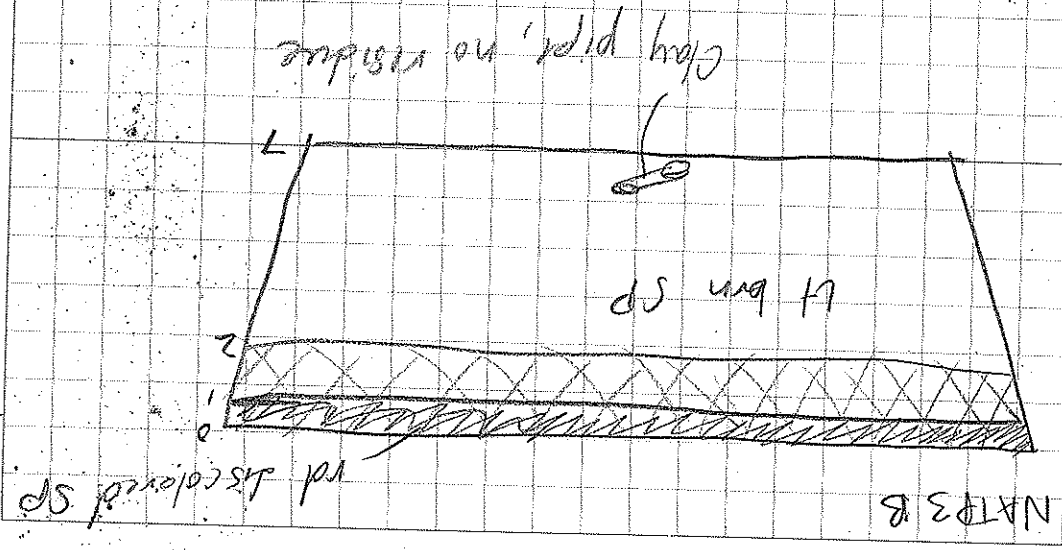
303A2-TT1

303A2-TT2

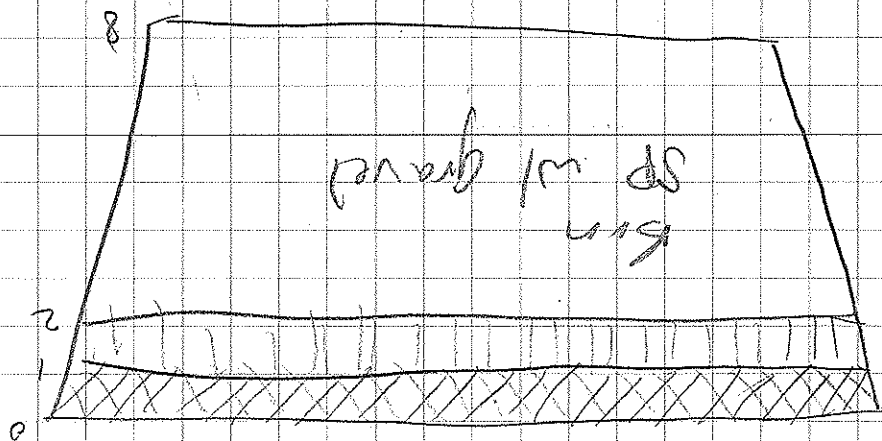
20 Location UMore East Date 6/20/11
Project / Client GOW East ADN/KCB



21 Location UMore East Date 6/20/11
Project / Client GOW East ADN/KCB

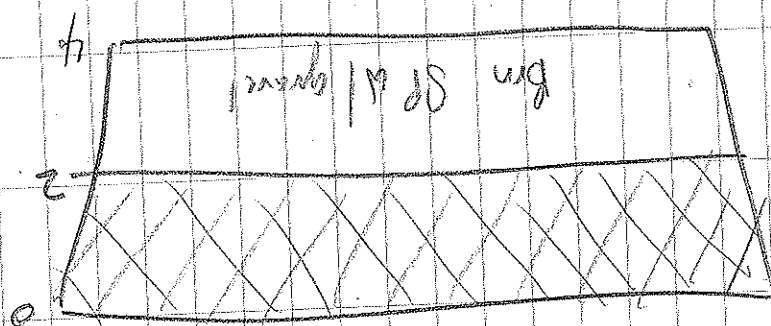


Location UMore East Date 6/20/11
 Project / Client GOV EAST ADN/KCB



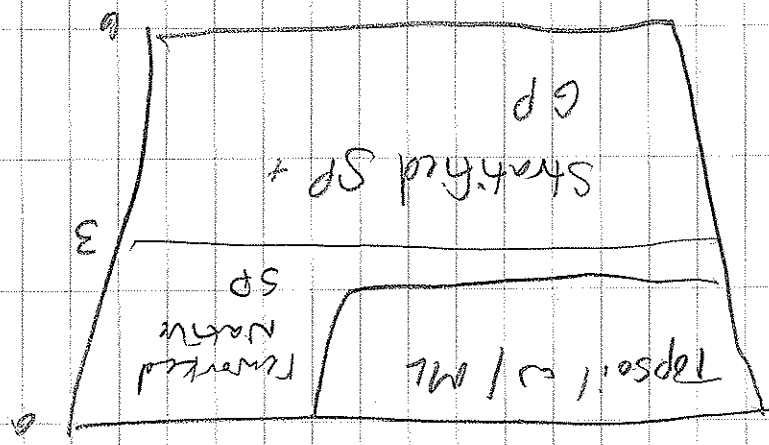
CAP-111

Location UMore East Date 6/20/11
 Project / Client GOV EAST ADN/KCB



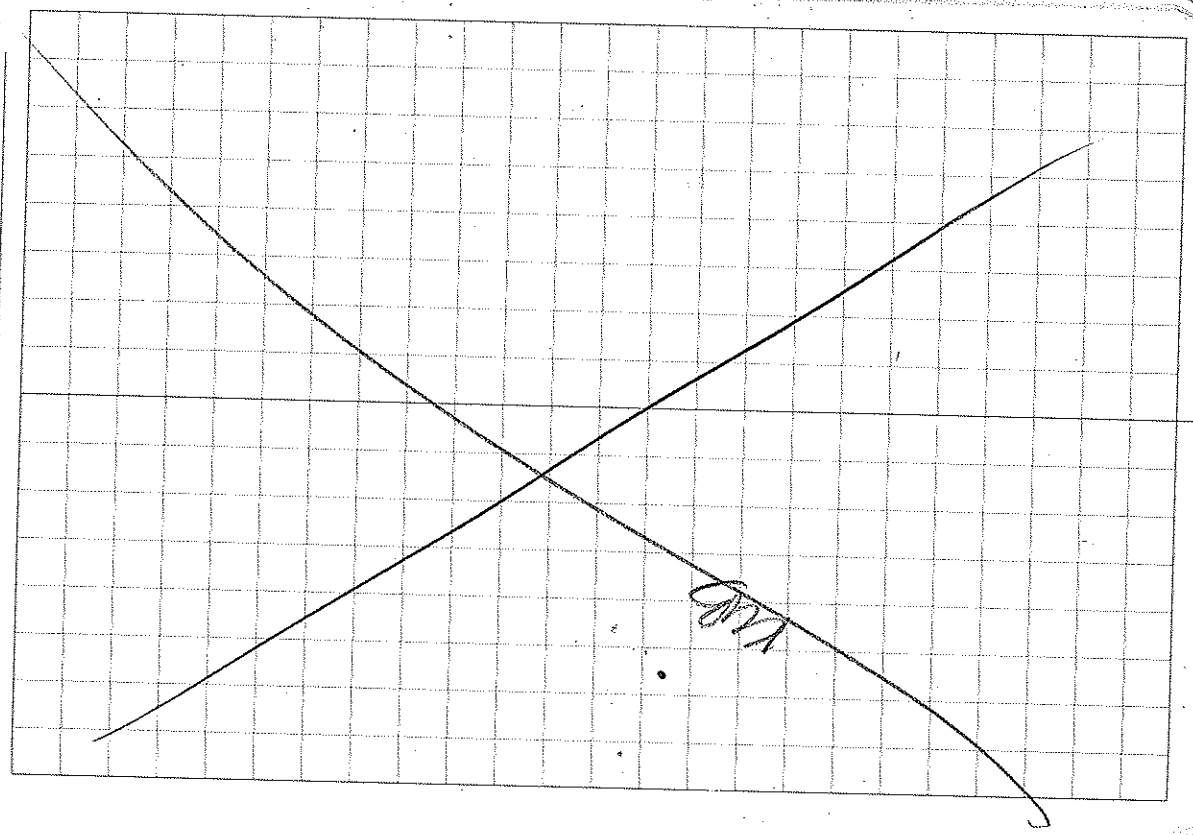
CAP-111

Location U More East Date 6/20/14
Project / Client GOW East ADN/KCB



042-118

Location _____ Date _____
Project / Client _____



Location UMore East Date 6/20/11

Project / Client 60W East

REB/ADN

ID ~~015~~ 010 PID

CAP-113-4' N/A 0.1

Location _____ Date _____

Project / Client _____

BK6D DESCRIPTION

0.0 0' Brn SPSM

Location UMore East
Project / Client ABC Line

Date 6/21/11

ADN/KCB

700 Conducted safety meeting

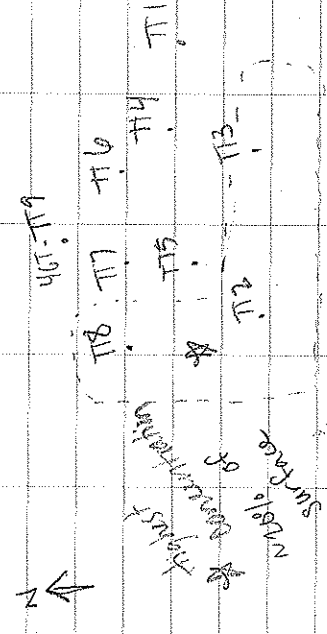
730 Begin Test trenching
at Temp Shops area

920 KCB met w/ Sandy (Private
Under ground)
-KCB provided maps of University
water main

- Bob will be onsite today,
Wed or Thurs depending on
weather

-KCB requested that Bob call
when he arrives possible

Approximate extent of 1 surficial
coal cinders:



152-151

Location UMore East
Project / Client

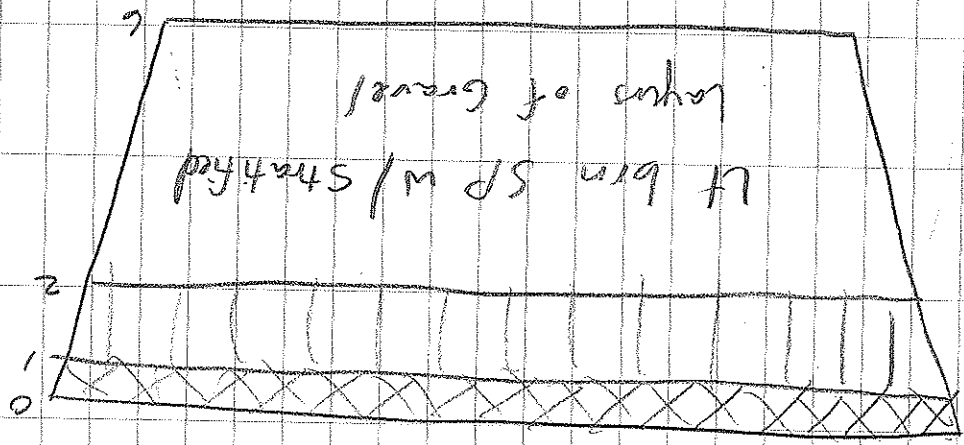
Date 6/21/11

ADN/KCB

1015 Move to Warehouse Area

30 Location UMore East Date 6/21/11
Project / Client ABC Line

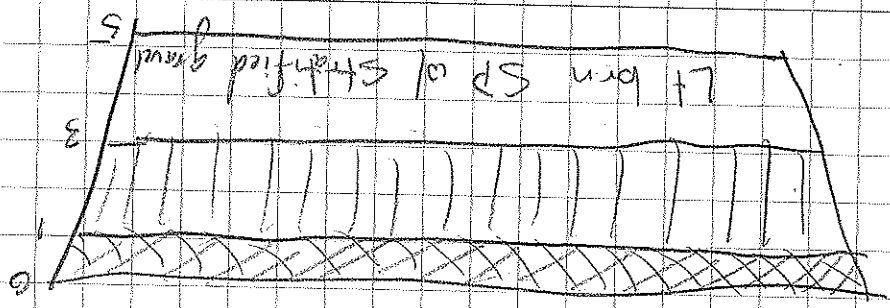
ADN/KCB



46T-711

31 Location UMore East Date 6/21/11
Project / Client ABC Line

ADN/KCB



SAME

46T-714

46T-713

Location uMore East Date 6/2/11

Project / Client ABC Line

ADN/keB

ID	o/d	PID
46T-111-1'	n/n	0.0
46T-113-1'	n/n	0.0
46T-112-1'	n/n	0.0
46T-114-1'	n/n	0.0
46T-115-0.5	n/n	0.6
46T-116-0.5	n/n	0.0
46T-117-0.5	n/n	0.0
46T-118-0.5	n/n	0.0
46T-119-0.5	n/n	0.0
EEA5-111	n/n	0.0
EEA5-112-1	n/n	0.0
EEA5-113-0.5	n/n	0.0

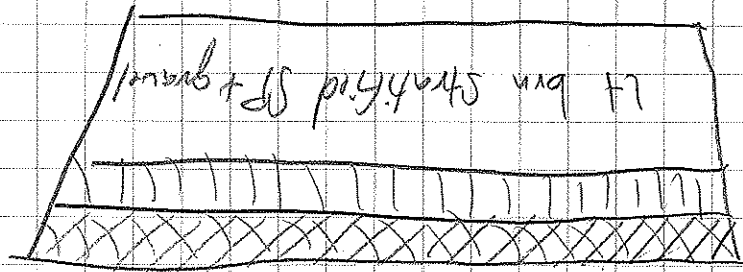
Location _____ Date _____

Project / Client _____

Btgd	Description
0.0	DK brn loamy topsoil
	Buried topsoil
	Buried topsoil w/ tr ashly clinders
	Ben stony topsoil

Location _____ Date _____

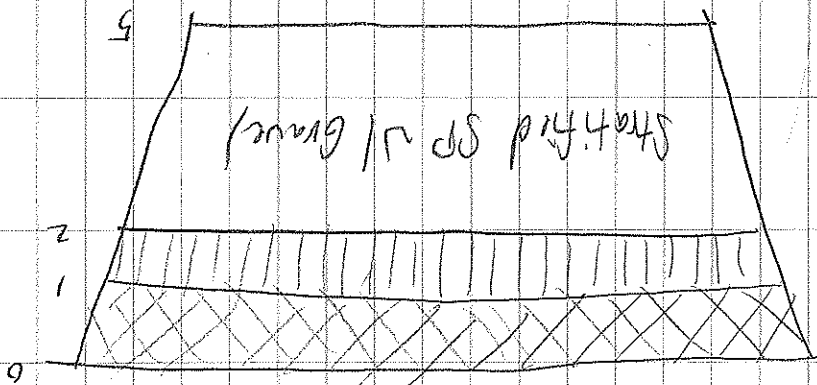
Project / Client _____



46T-117

Location _____ Date _____

Project / Client _____



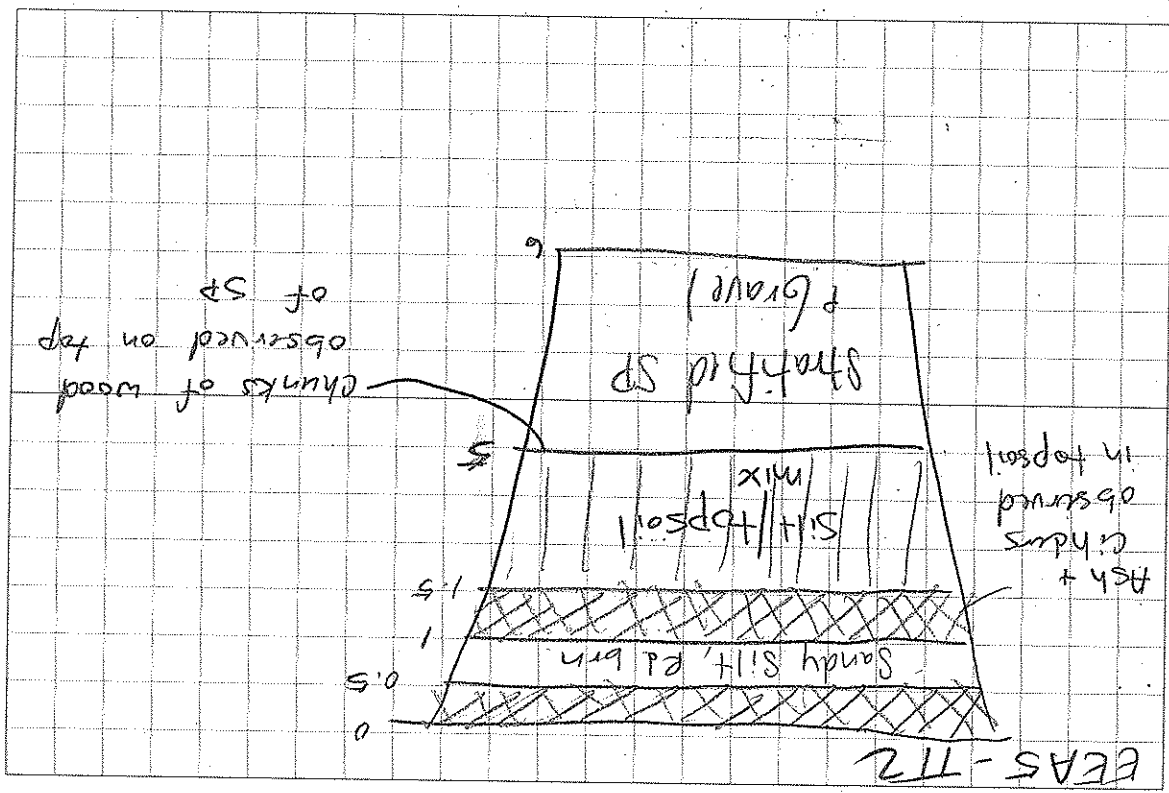
46T-116 SAME
46T-117 SAME

46T-115

Date _____

Location _____

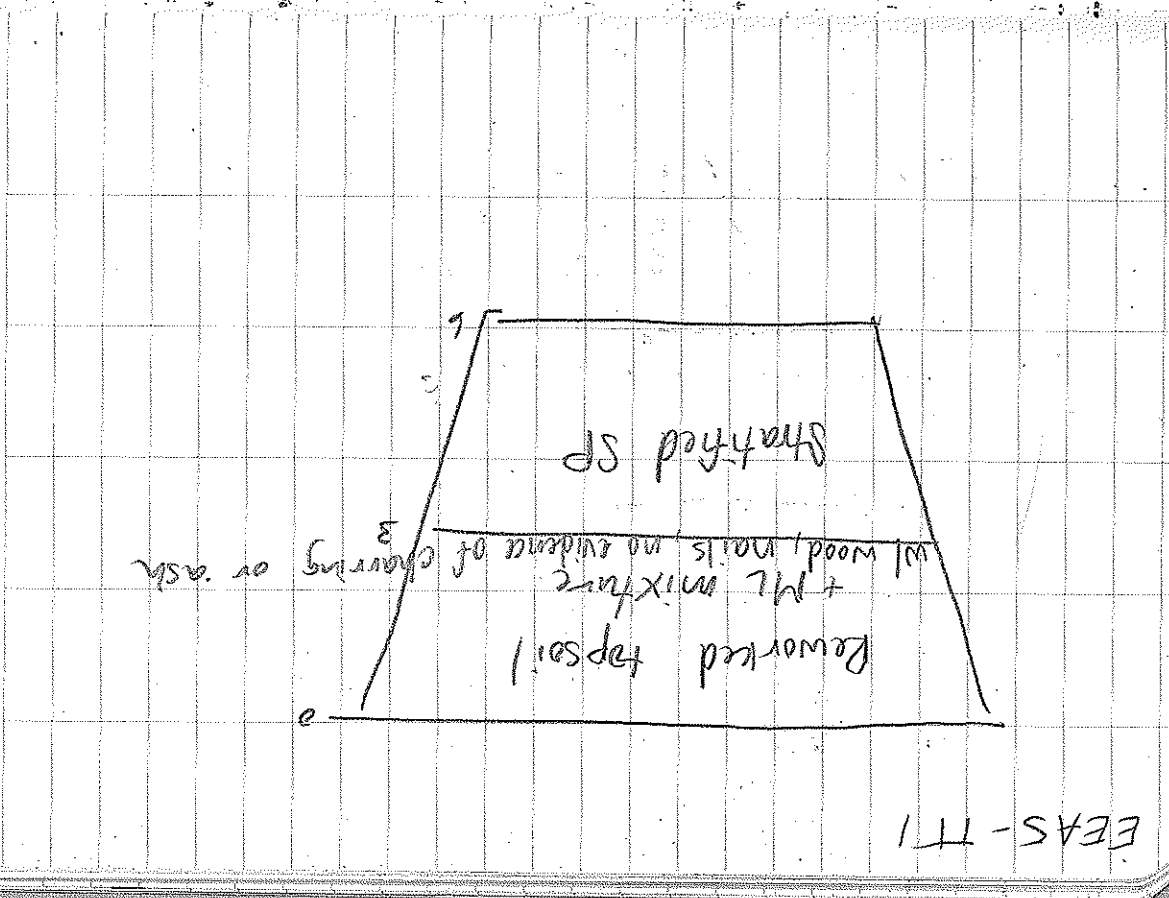
Project / Client _____



Date _____

Location _____

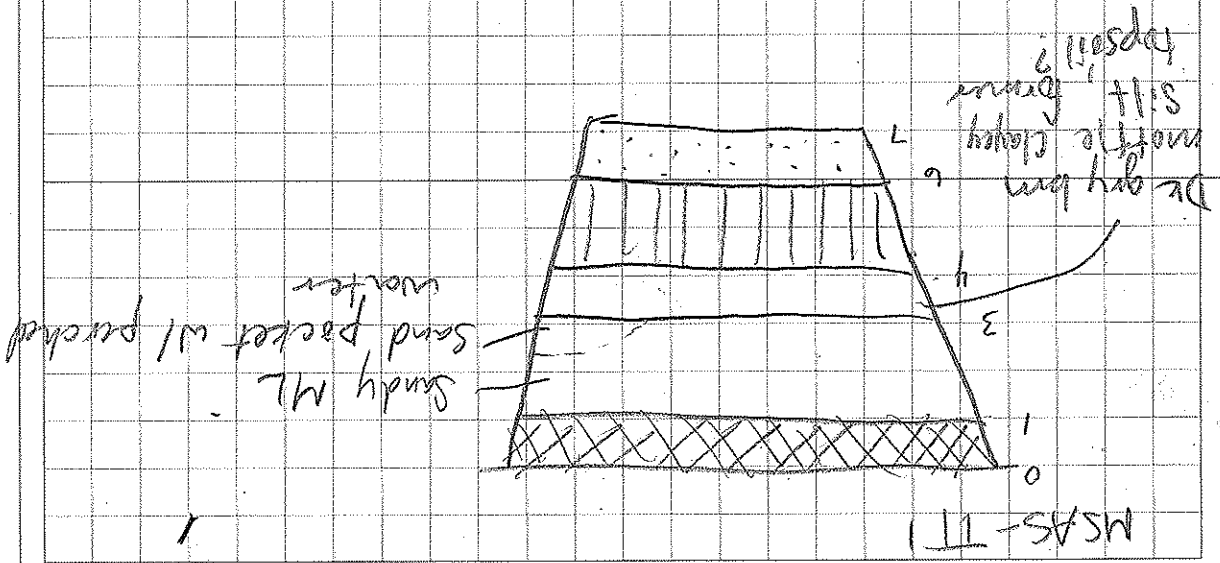
Project / Client _____



Date

Location

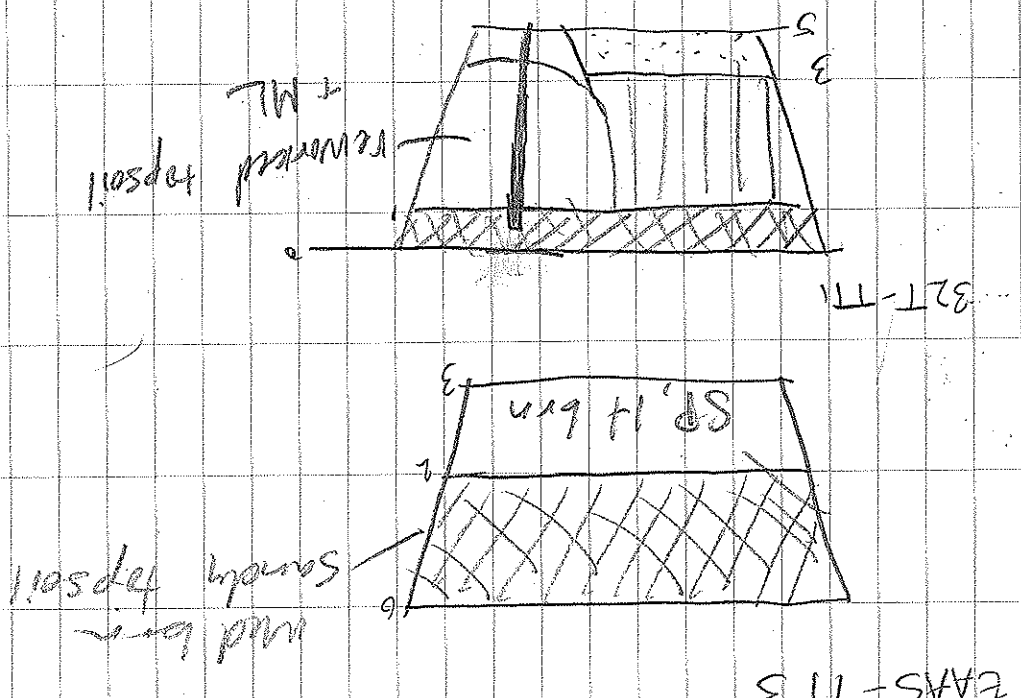
Project / Client



Date

Location

Project / Client



Location _____

Project / Client _____

Date _____

ID	o/d	PID
32T-T12	n/a	0.0
MSA8-T11- 0 ³	n/a	0.0
32T-T11-4'	n/a	0.0
29T-T11-0.5'	n/a	0.0
29T-T12-0.5'	n/a	

Date _____

Location _____

Project / Client _____

Bkgd	Description
0.0	Brn sandy topsoil
0.0	DK grey brn mottled clayey silt
0.0	Reworked SP ₁ topsoil + ML
0.0	DK brn topsoil

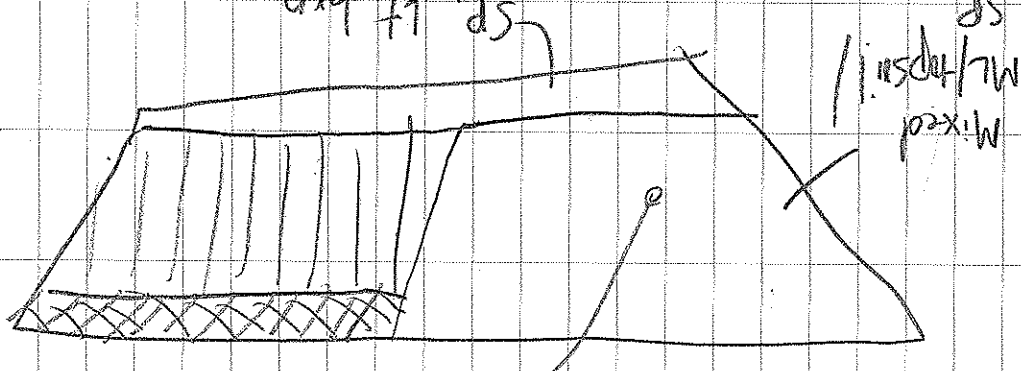
↓

Location _____

Date _____

Project / Client _____

2" ϕ steel pipe running N/S



32T-T11

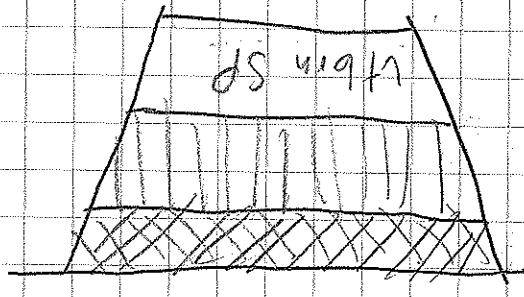
Location _____

Date _____

Project / Client _____

29T-T2

SAME



29T-T11

Location _____

Date _____

Project / Client _____

ABC Line

Date 6/22/11

Project / Client U of M

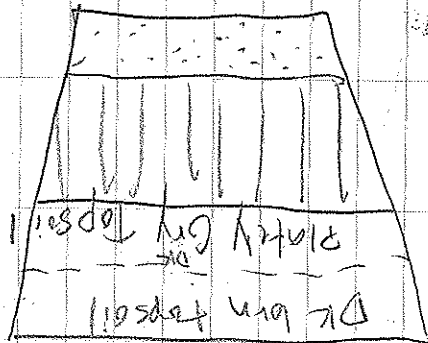
ADN

8:00 CONDUCTED SAFETY MTC
KCB, ADN, AKB, ~~STERN~~ (SDE)

11:30 LUNCH BREAK
12:00 RETURNED TO WORK

13:30 STORE W/ MR. JENSEN
↳ CURRENT DIG LOCATION (914-A-TT1) STADLER
DEM'D 16 YRS AGO

17:40 ADN/KOB OFFSITE

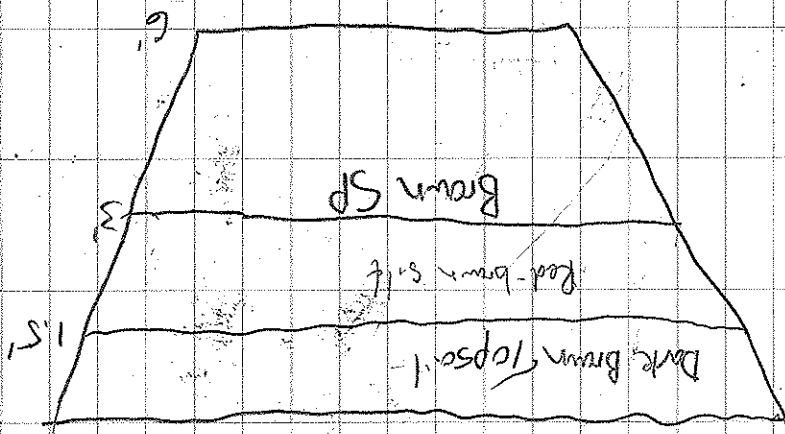


229T-TT2

Location ABC Line
Project / Client U of M

Date 6/22/11

ADN

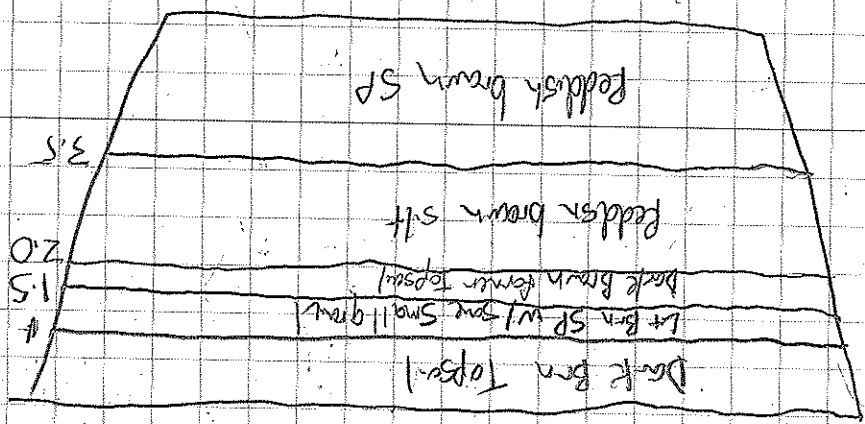


229T-TT1

Location ABC Line
Project / Client U of M

Date 6/22/11

ADN



230T-TT1

Location ABC Line / DEF Line Date 6/22/11
Project / Client U of M

ADD

ID	OID	PID	BLGD
220T-TT1-0.5' (M.S)	N/N	0.0	0.0
230T-TT1-1.5'	N/N	0.0	0.0
8:55 (M.S.V)			
24T-TT1-3'	N/N	0.0	0.0
9:15 (M.S)			
16T-TT2-1'	N/N	0.0	0.0
9:45 (M.S)			
16T-TT1-0.5'	N/N	0.0	0.0
10:00 (M.S)			
14T-TT1-0.5'	N/N	0.0	0.0
10:36 (M.S)			
NSA-TC4-TT1-0.5'	N/N	0.0	0.0
11:00 (M.S)			
209T-TT1-0.5'	N/N	0.0	0.0
12:15 (M.S)			
209T-TT2-0.5'	N/N	0.1	0.0
12:40 (M.S)			

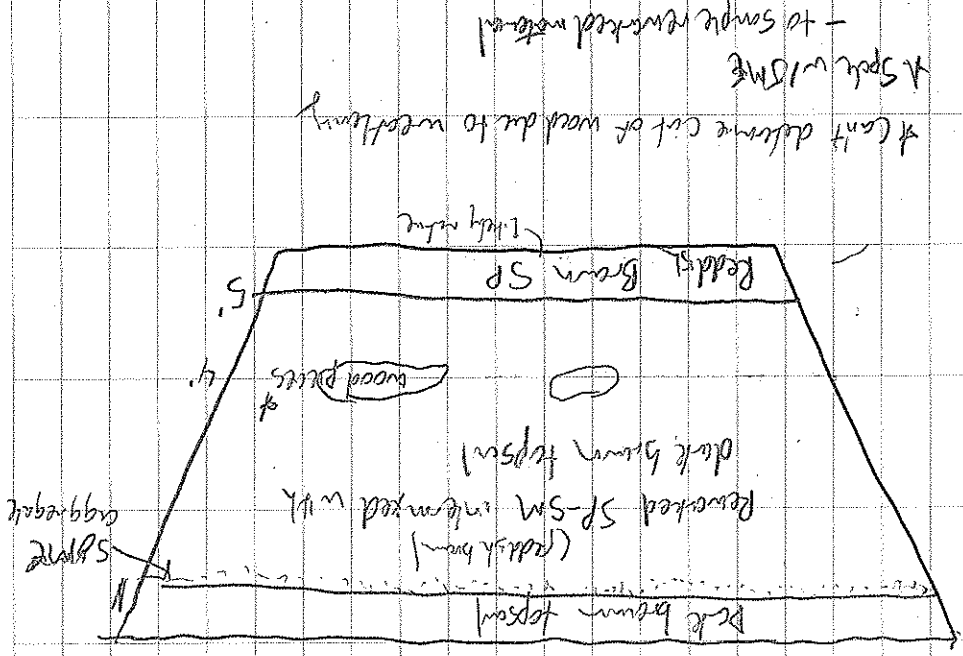
Location ABC Line / DEF Line Date 6/22/11
Project / Client V of M

ADD

DESCRIPTION
DK BROWN TOP SOIL W/ INTERMIXED SANDS (BROWN)
DK BROWN FORMER TOPSOIL LAYER
REMARKS REDDISH-BRN SP. SM W/ INTERMIXED TOPSOIL LAYER (BROWN)
Dark brown loamy topsoil
Dark brown loamy topsoil
Dark brown loamy topsoil
Dark brown loamy topsoil
Dark brown loamy topsoil with some intermixed sand
Red brown silt intermixed with reddish brown SP - yellow-brown silt

Location ABC Lane Date 6/22/11

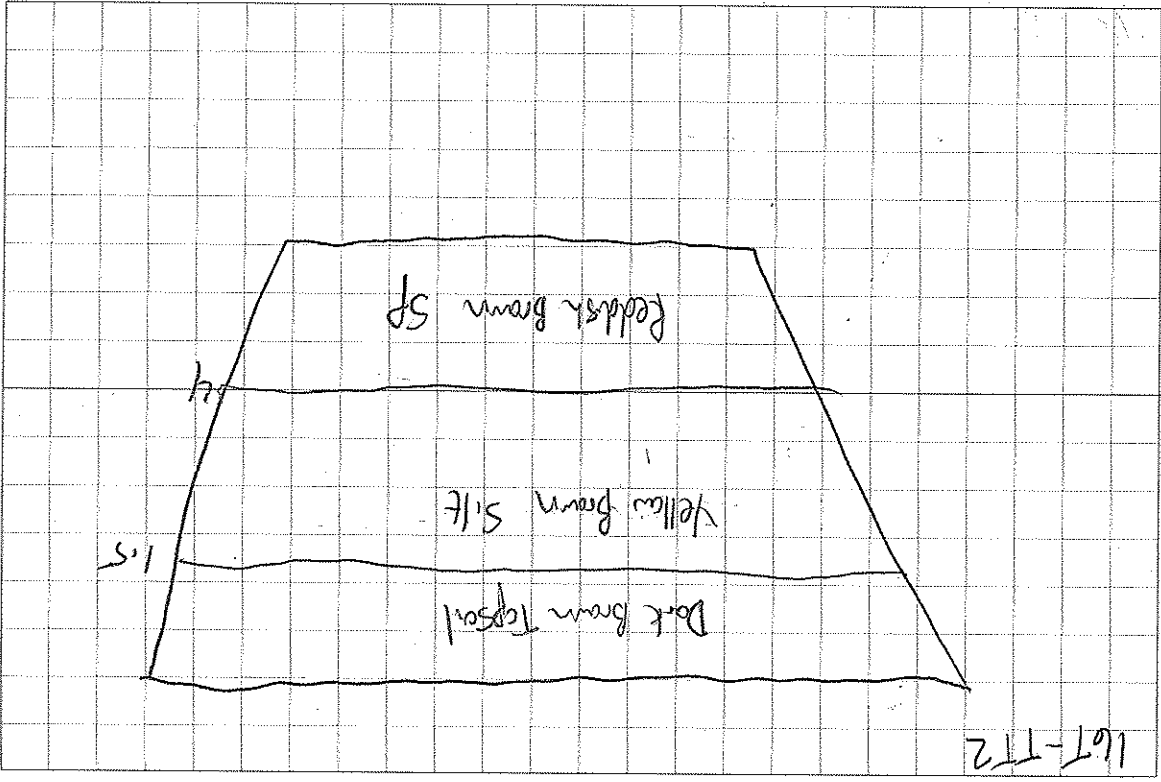
Project / Client V of M ADN



24T-TT1

Location ABC Lane Date 6/22/11

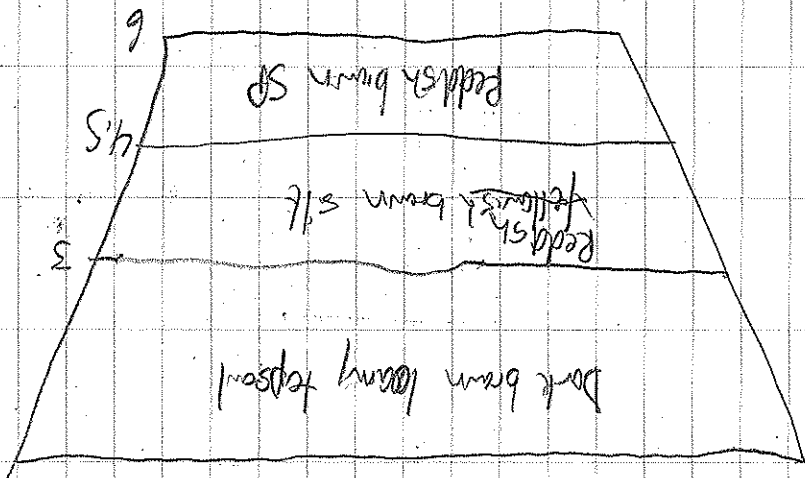
Project / Client V of M ADN



Location ABC Linc
Project / Client Vof M

Date 6/23/11

ADN

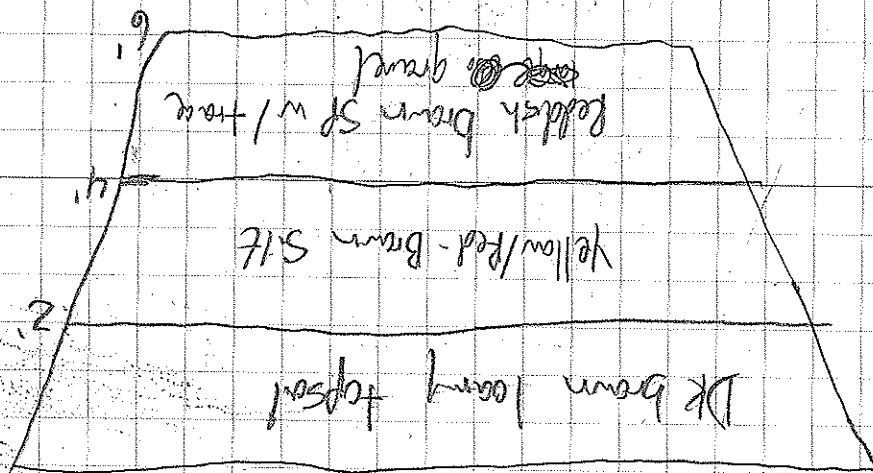


169-TT1

Location ABC Linc
Project / Client Vof M

Date 6/23/11

ADN



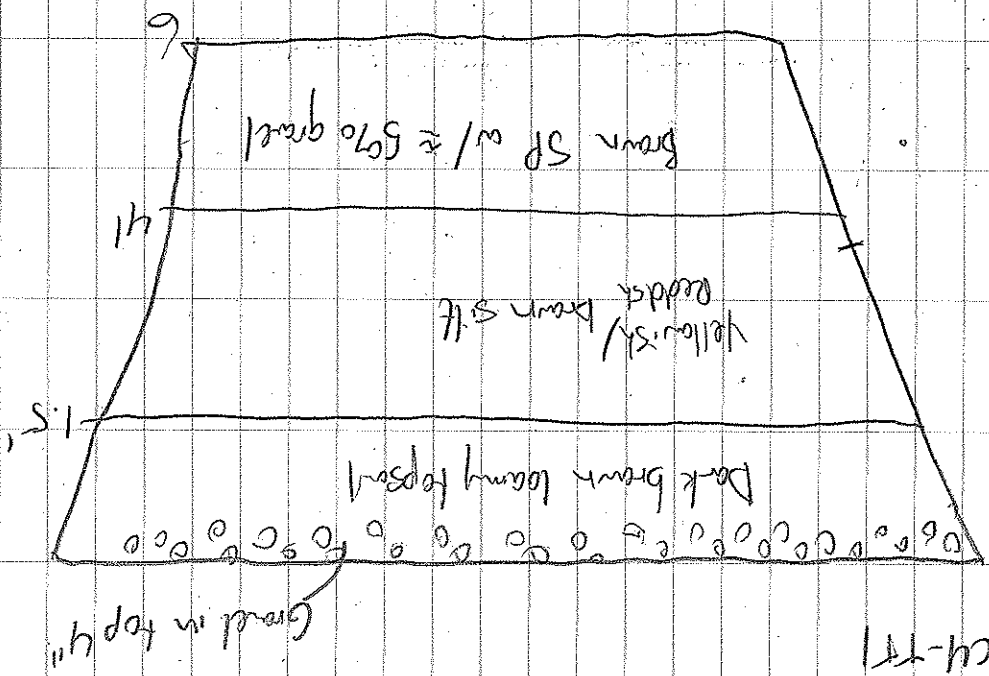
147-TT1

Location ABC Lme

Date 6/22/11

Project / Client U of M

ADN



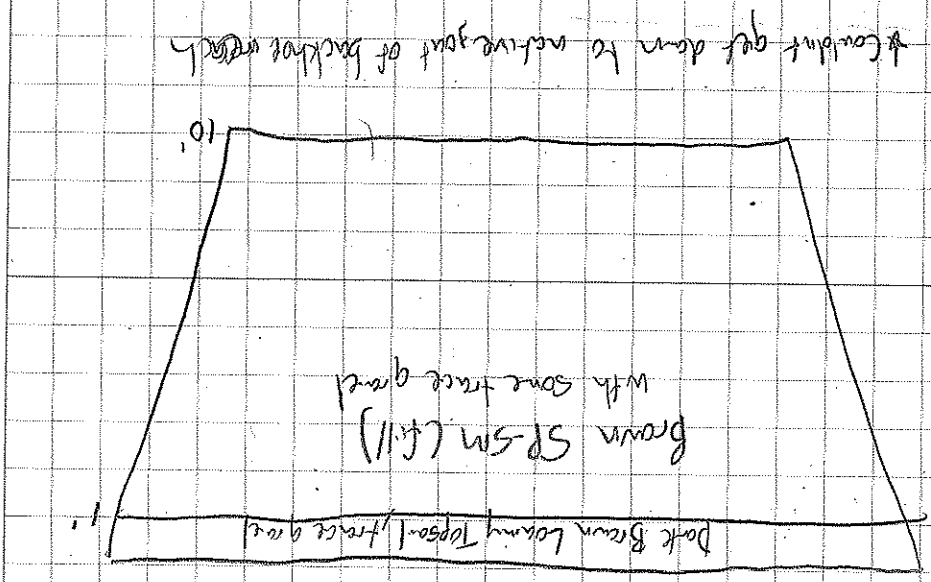
MSA-TCU-TT1

Location DEF Line

Date 6/22/11

Project / Client U of M

ADN

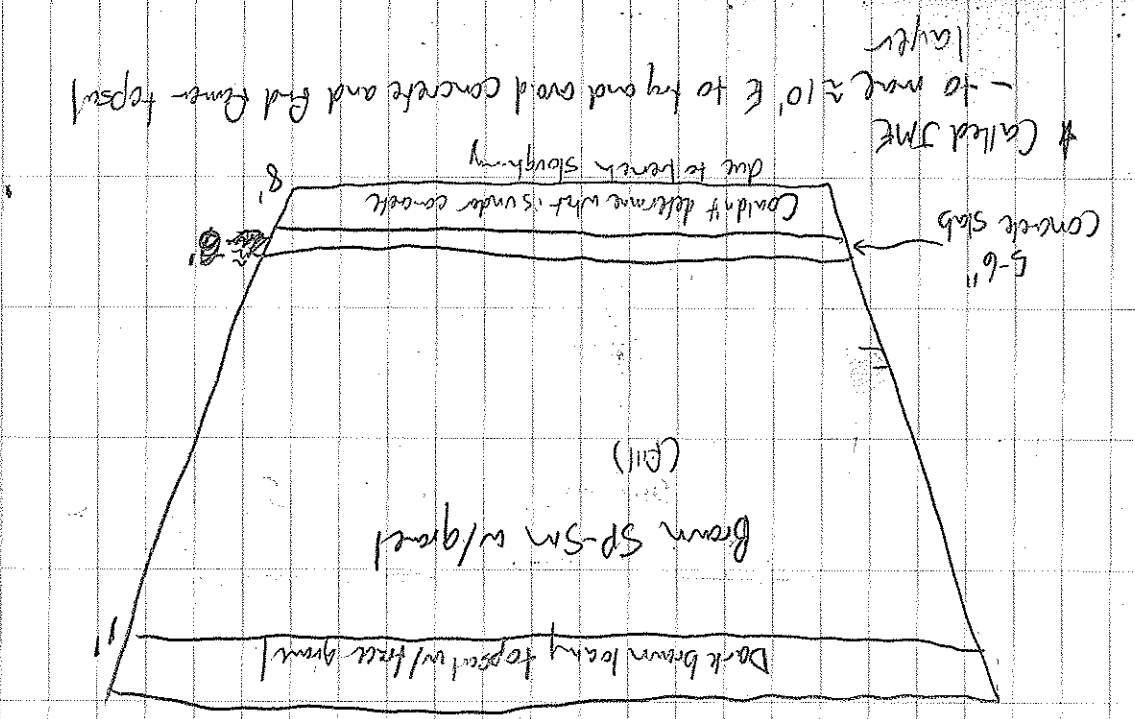


209T-TT1

Location DEF Line
Project / Client U of M

Date 6/22/11

ADN

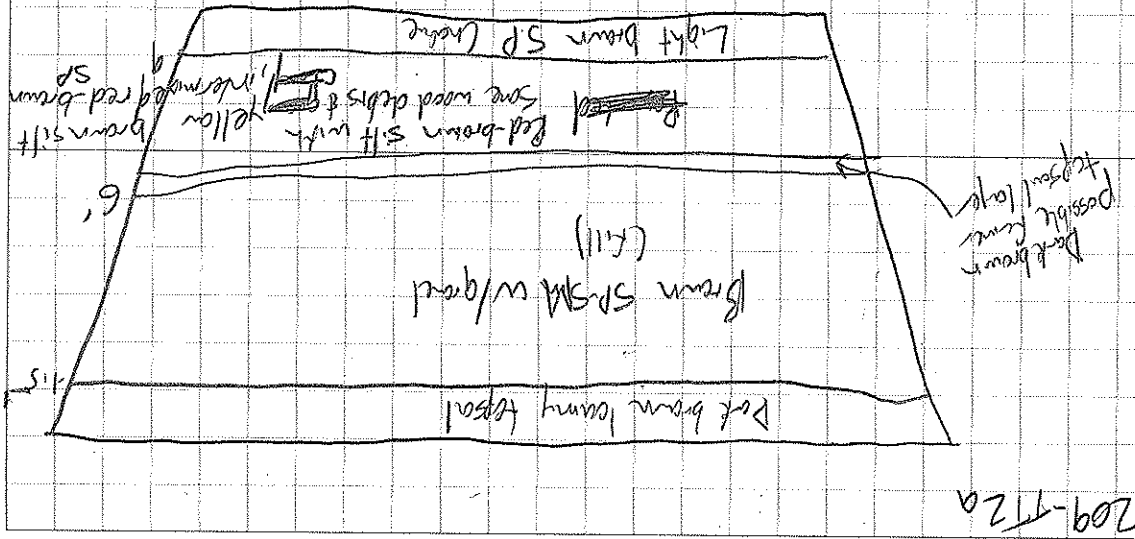


209T-TT2

Location DEF Line
Project / Client U of M

Date 6/22/11

ADN



209-TT2a

Location DEF Line
Project / Client U of M

Date 6/22/11

ADN

ID	OID	PID	BKGD
914A-TT1-0.5'	N/N	0.0	0.0
14:20 (M.S)			
909A-TT1-2.5'	N/N	0.0	0.0
14:50 (M.S)			
921A-TT1-0.5'	N/N	0.0	0.0
15:20 (M.S)			
208T-TT1-0.5'	N/N	0.0	0.0
15:50 (M.S)			
915A-TT1-0.5'	N/N	0.0	0.0
16:05 (M.S)			
207T-TT1-2.5'	N/N	0.0	0.0
16:30 (M.S)			
920A-TT1-0.5'	N/N	0.0	0.0
16:45 (M.S)			
236T-TT1-8'	N/N	0.1	0.0
171/5 (M.S)			
2576 TT1-0.5'	N/A	0.0	0.0

Location DEF Line
Project / Client U of M

Date 6/22/11

ADN

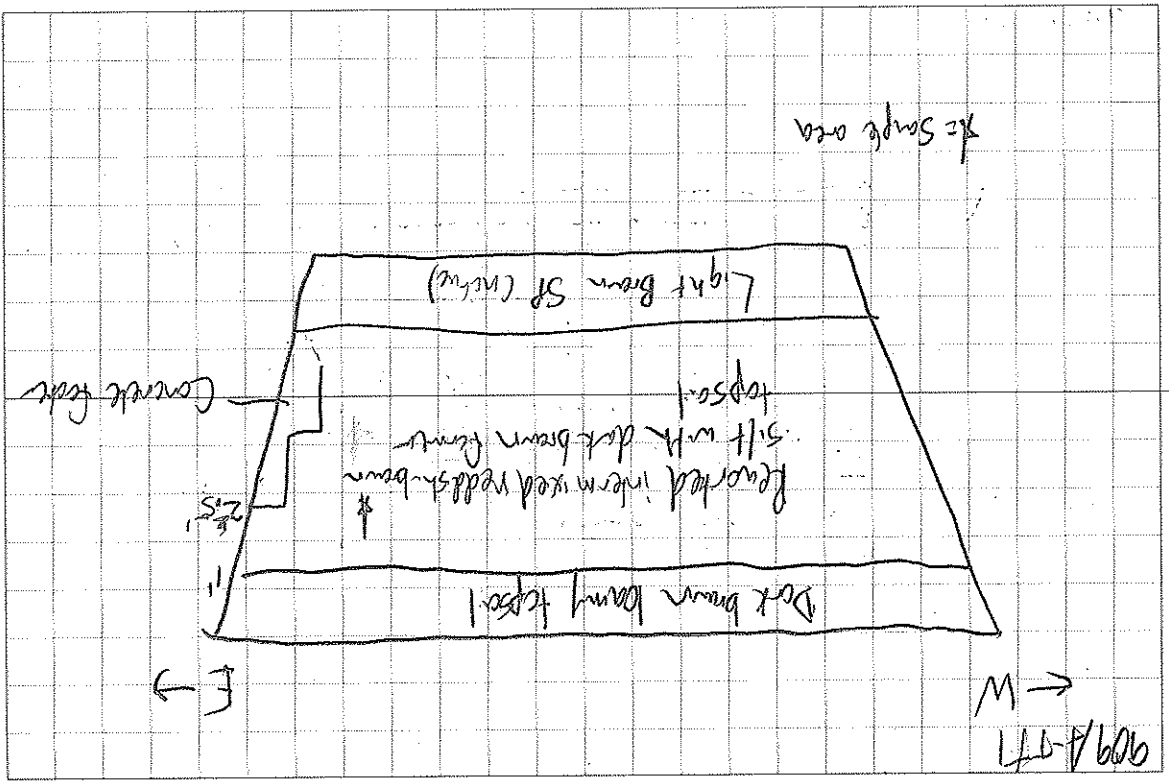
DESCRIPTION
Dark brown loamy topsoil mixed w/ Brown SPd Gravel
Intermixed reddish brown silt with dk brn topsoil
Dark brown loamy topsoil
Dark brown loamy topsoil
Dark brown loamy topsoil
Dark brown to black former topsoil layer
Dark brown topsoil w/cg sand mbrm. rock
Brown SP-SM w/15% gravel
Topsoil w/ white sandy debris

Date 6/22/11

Location DEF Line

Project / Client U of M

ADN

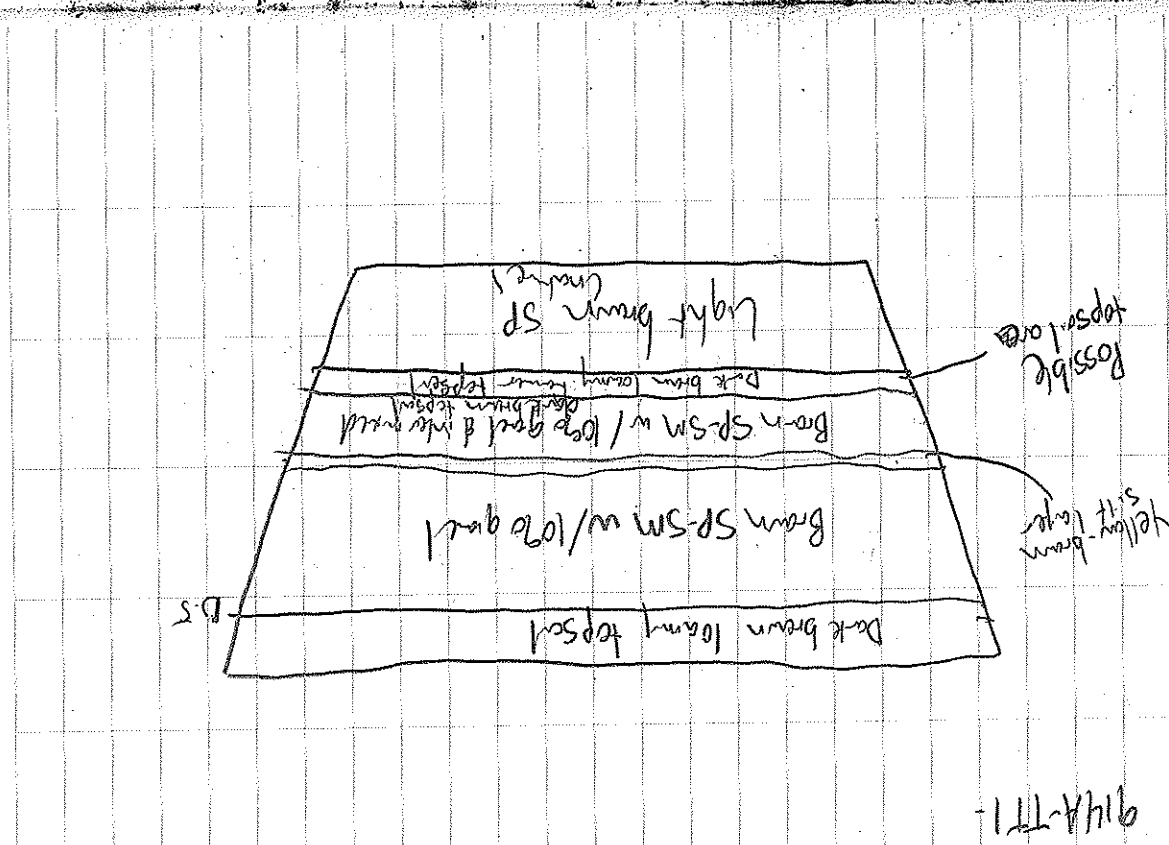


Date 6/22/11

Location DEF Line

Project / Client U of M

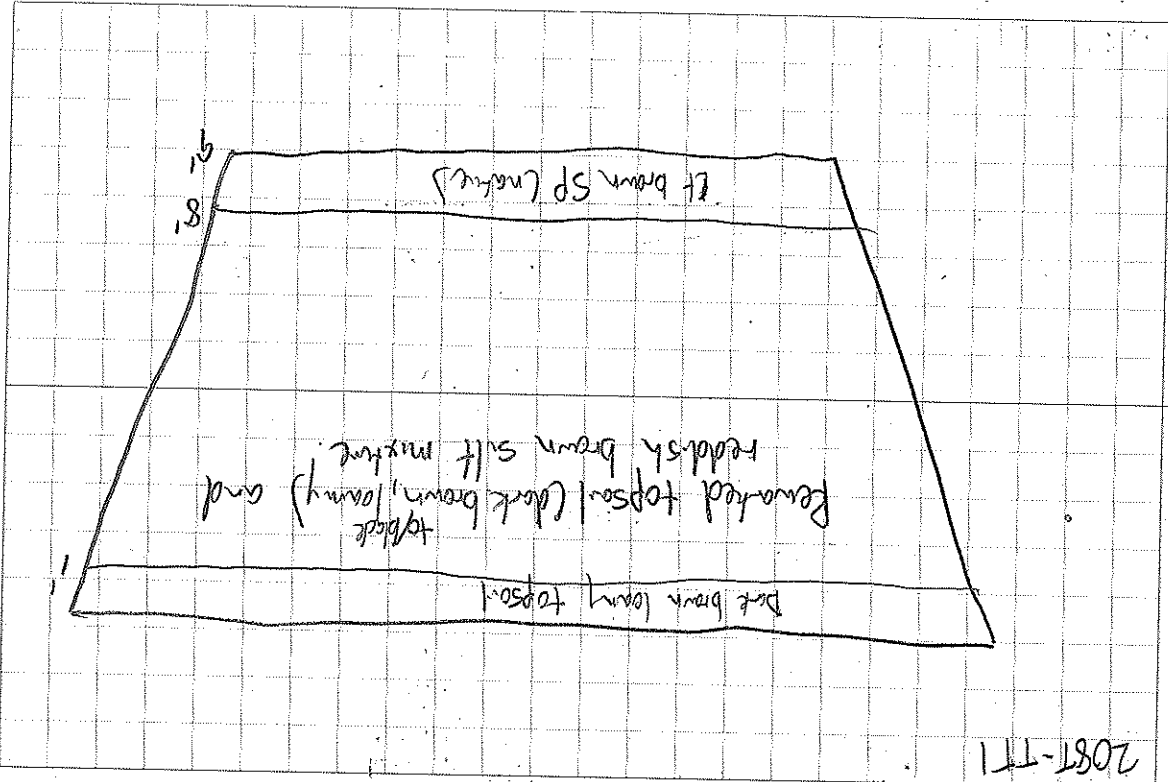
ADN



Date 6/22/11

Location DEF Line
Project / Client VDM

ADN

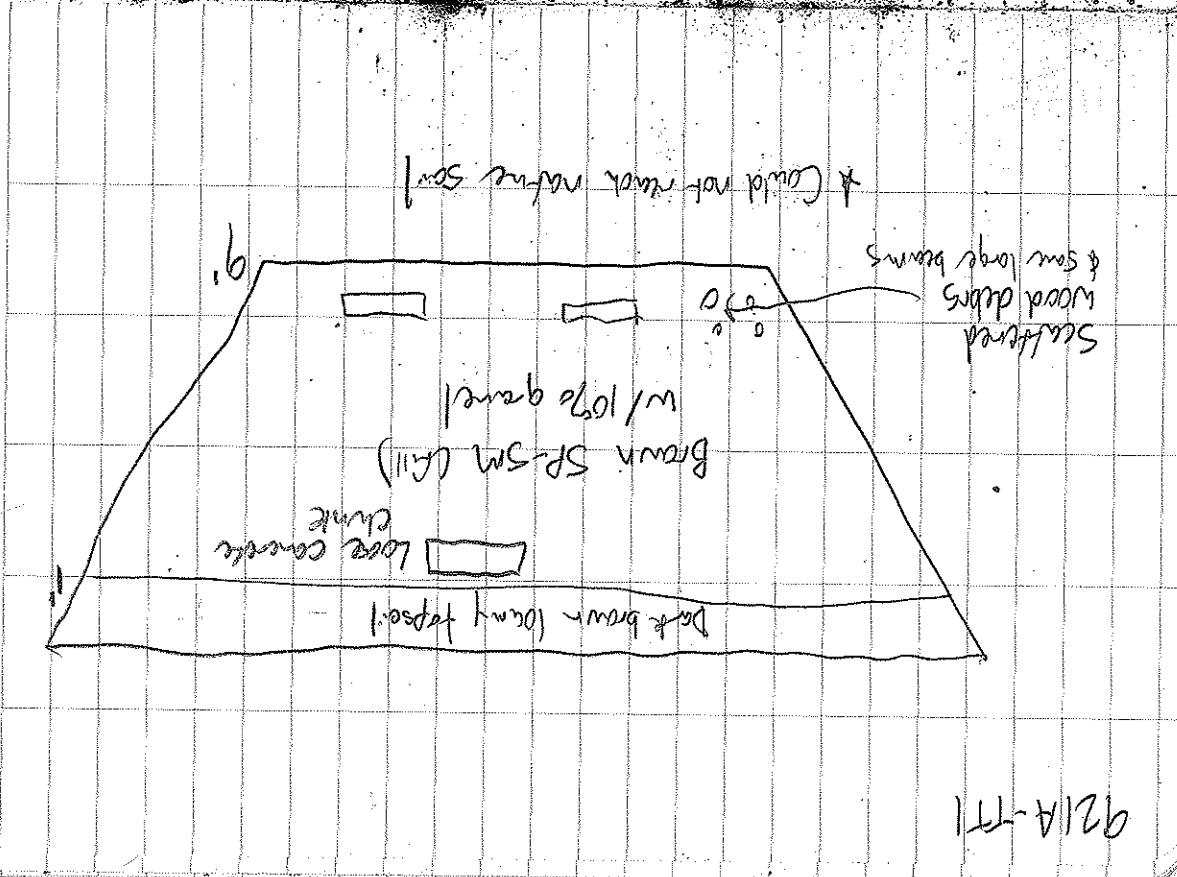


208T-T11

Date 6/22/11

Location DEF Line
Project / Client VDM

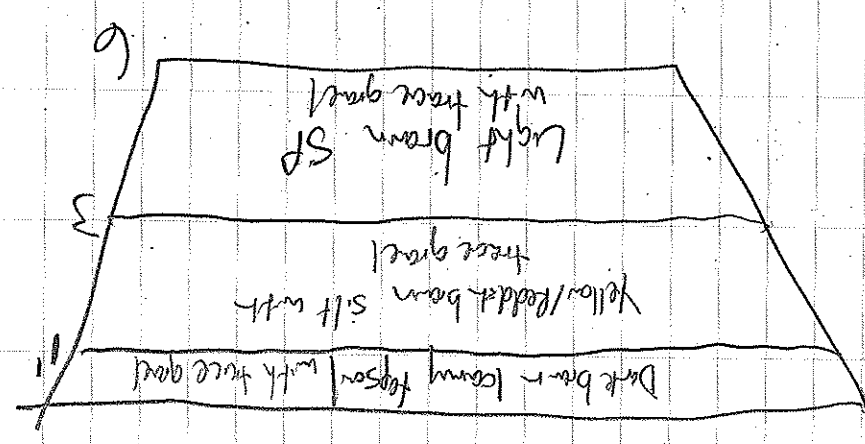
ADN



921A-T11

Location DEF Line
Project / Client U of M

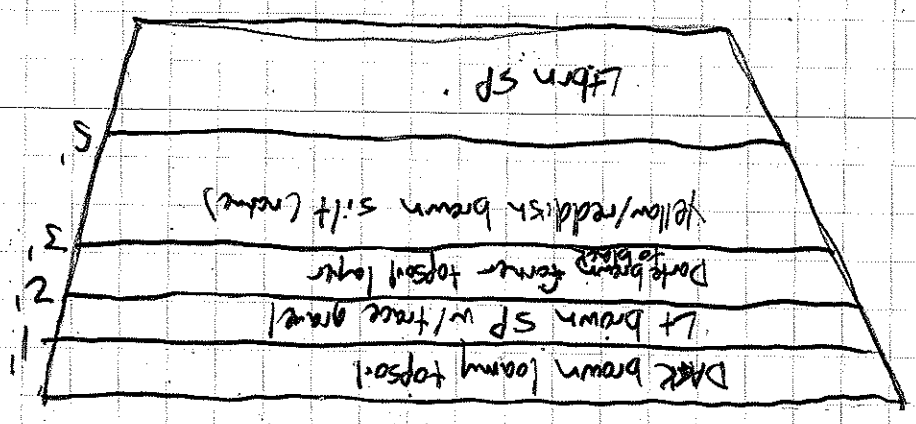
Date 6/22/11
ADN



925A-TT1 → listed as 925A-TT1 on map

Location DEF Line
Project / Client U of M

Date 6/22/11
ADN



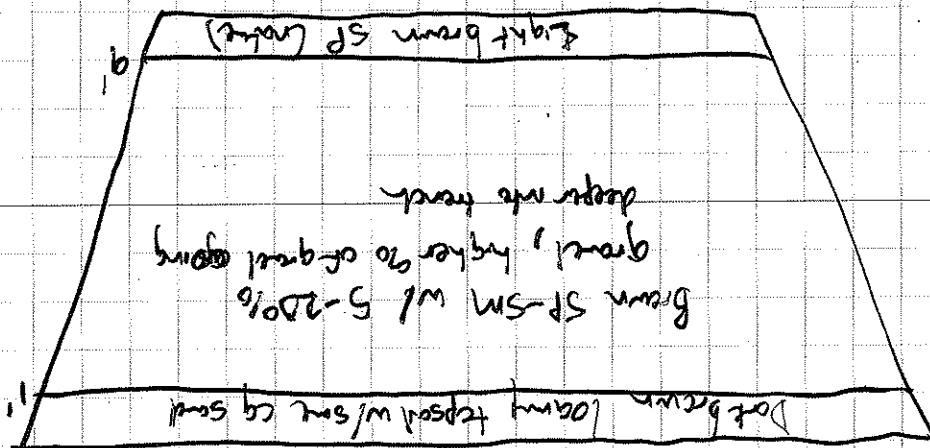
2071-TT1

Date 6/22/11

Location DEF Linc

Project / Client U of M

ADP



*Spill w/ TIME - sample @ 8' BGS

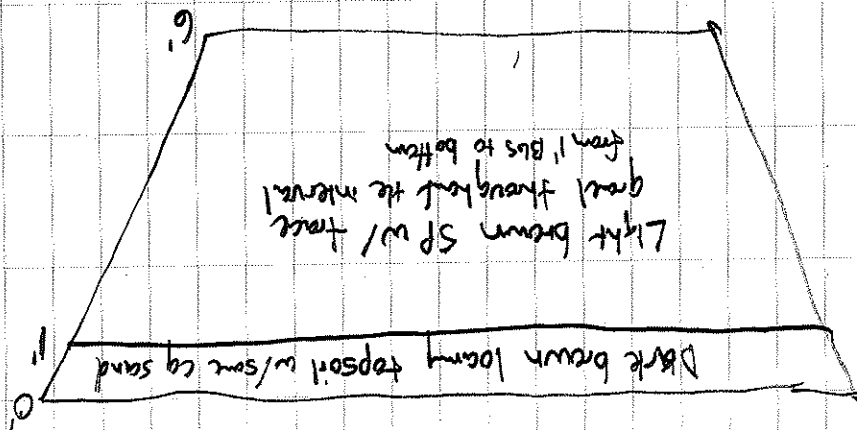
236T-TT1

Date 6/22/11

Location DEF Linc

Project / Client U of M

ADP



920A-TT1

Location ABC Linc Date 6/23/11
Project / Client U of M ADN

7:00 ADN, KCB, Adrienne, & Terry onsite

* Safety meeting

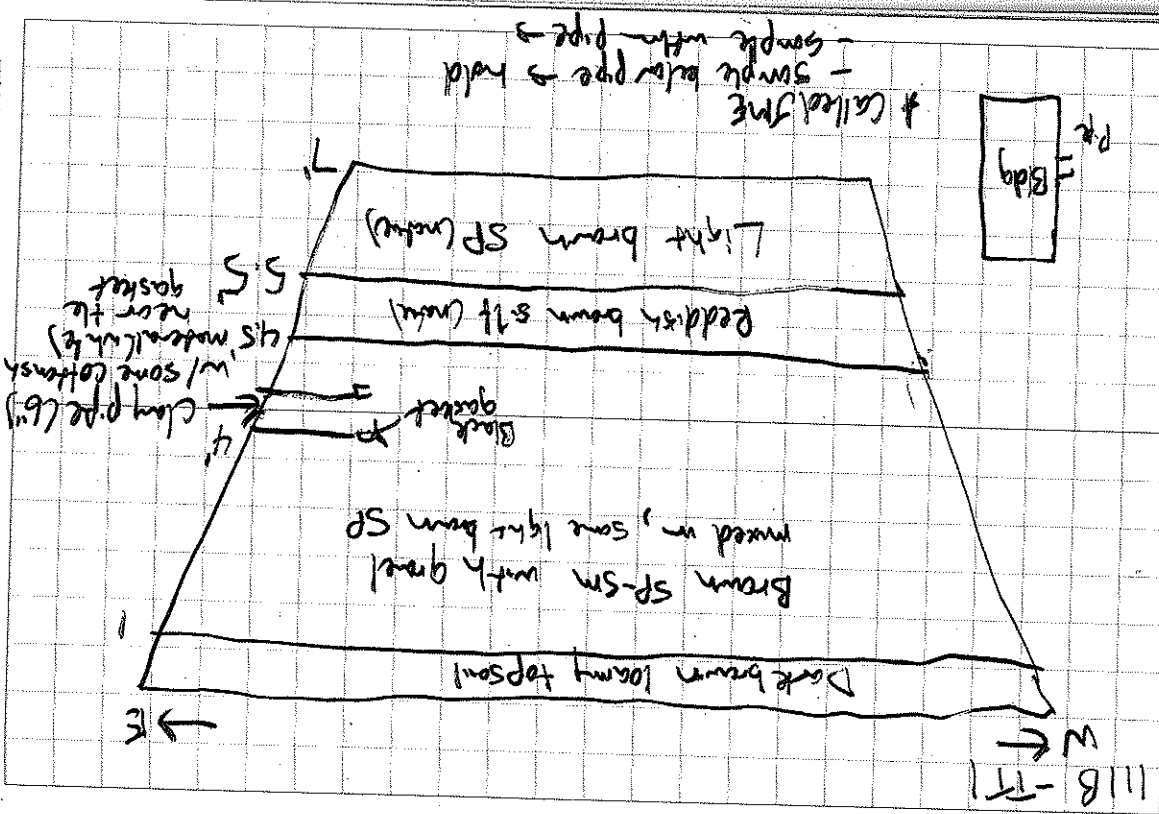
11:45 Lunch break
12:15 Back to work

13:40 Spoke w/ Jim
↳ 208C instead of B
↳ 235A instead of C

15:30 RAN INTO WHITE FIBERS, PUTTY-LIKE MATERIAL @ 2376-TT1 ≈ 6" bgs, charred edges.
- either GPS or metal from four test holes.
- called JME (contingency plan) to obtain samples of following
- soil around white material
- charred material
- white material for U of M material analysis

17:20 ADN/KCB/Adrienne/SDE office

Location ABC Linc Date 6/23/11
Project / Client U of M ADN



Location ABC Line Date 6/23/11
 Project / Client U of M ABN

ID	OID	PID	BEGD
04111B-TT1-PPL	N/N	0.0	0.0
8:30 4' Bos (M,S,F,EL,HD)			
111B-TT1-5'	N/N	0.0	0.0
8:35 (M,S,F,EL,HD)			
111B-TT2-0.5'	N/N	0.0	0.0
8:50 (M,S,F)			
111B-TT2-5'	N/N	0.0	0.0
8:55 (M,S,F)			
113B-TT2-5'	N/N	0.0	0.0
9:30 (M,S,F)			
113B-TT2-5'			
113B-TT1-0.5'	N/N	0.0	0.0
9:50 (M,S,F)			
113B-TT1-5'	N/N	0.0	0.0
10:00 (M,S,F)			
206B-TT2-5'	N/N	0.0	0.0
10:05 (M,S)			
206B-TT1-5'	N/N	0.0	0.0
11:05 (M,S)			
206B-TT3-0.5'	N/N	0.0	0.0
11:20 (M,S)			
206B-TT3			
11:25			

Location ABC Line Date 6/23/11
 Project / Client U of M

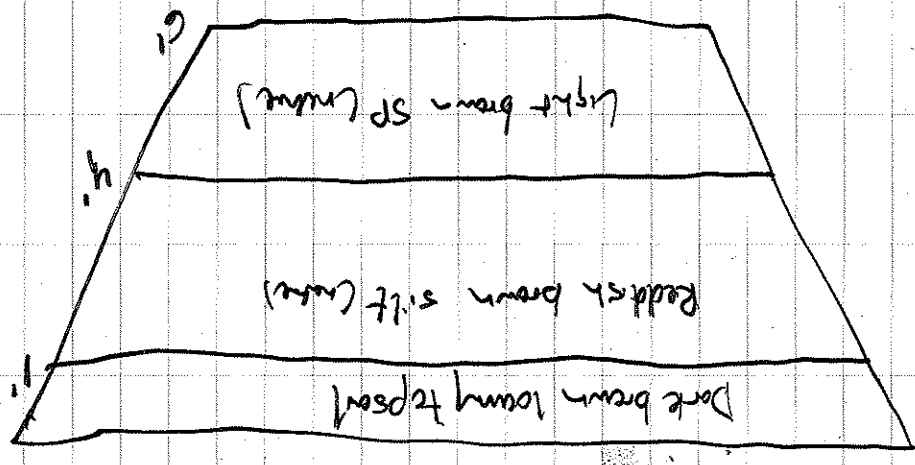
DESCRIPTION
Brown SP-SM
Brown SP w/ trace gravel & intermixed lt brn SP
Dark brown loamy topsoil
Light brown SP
Reconstituted topsoil w/ brown SP and gravel ^{debrn}
Dark brown loamy topsoil
Reconstituted topsoil (alk brn) with mixed with red-brown silt & some gravel
Dark brown loamy former topsoil layer
Reddish brown silt and former topsoil layer
Dark brown loamy topsoil

Location ABC Lane

Date 6/23/11

Project / Client U of M

ADN



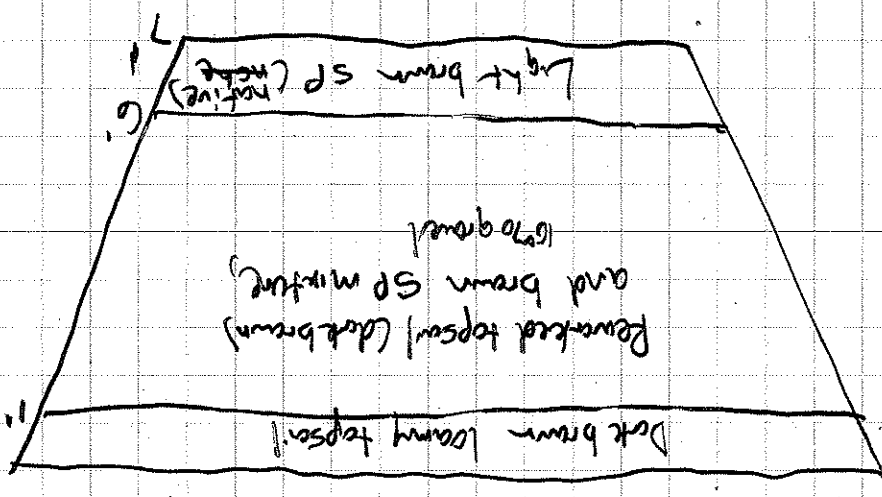
11B-TT2

Location ABC Lane

Date 6/23/11

Project / Client U of M

ADN

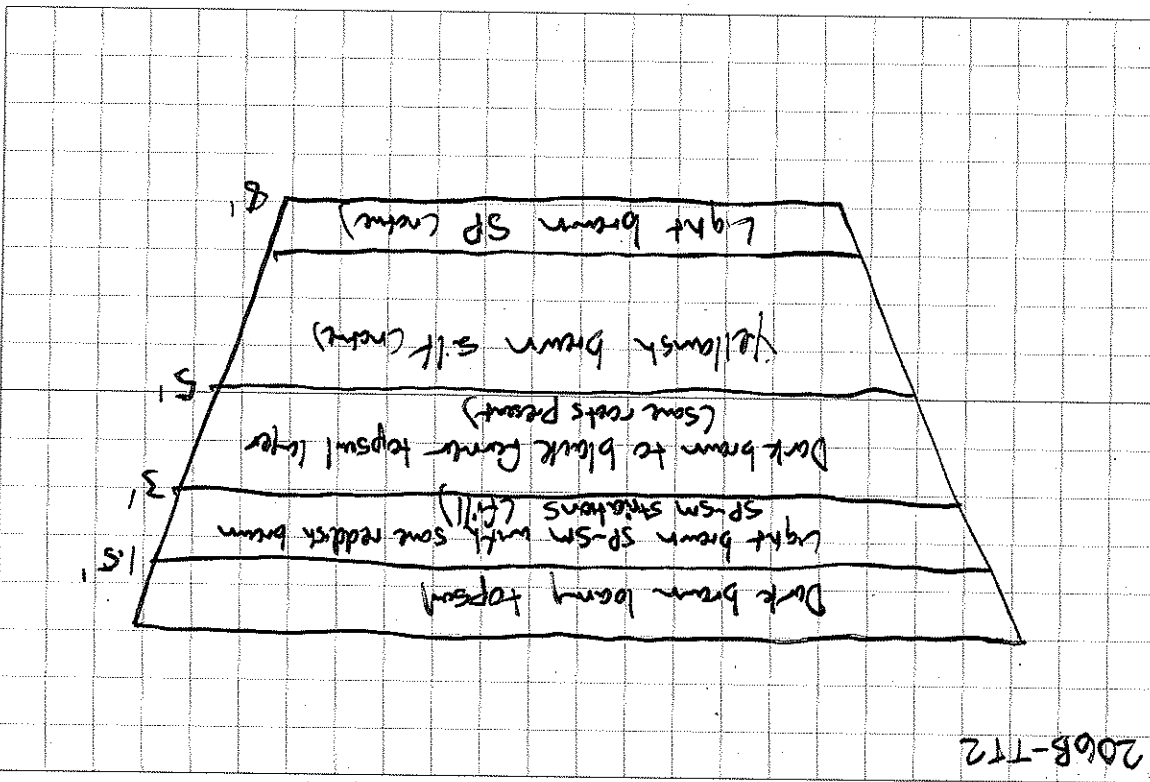


113B-TT2

Date 6/23/11

Location ABC Line
Project / Client U of M

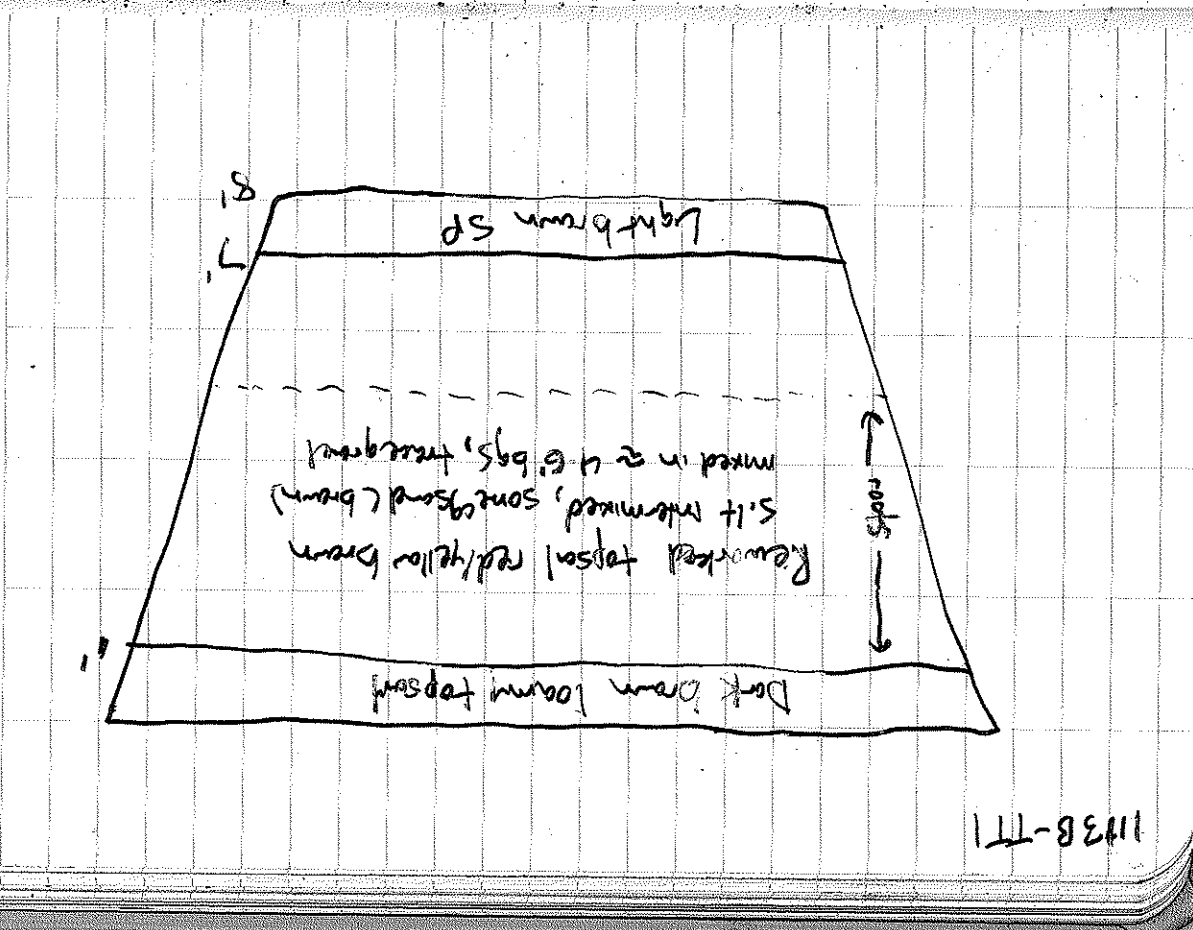
ADN

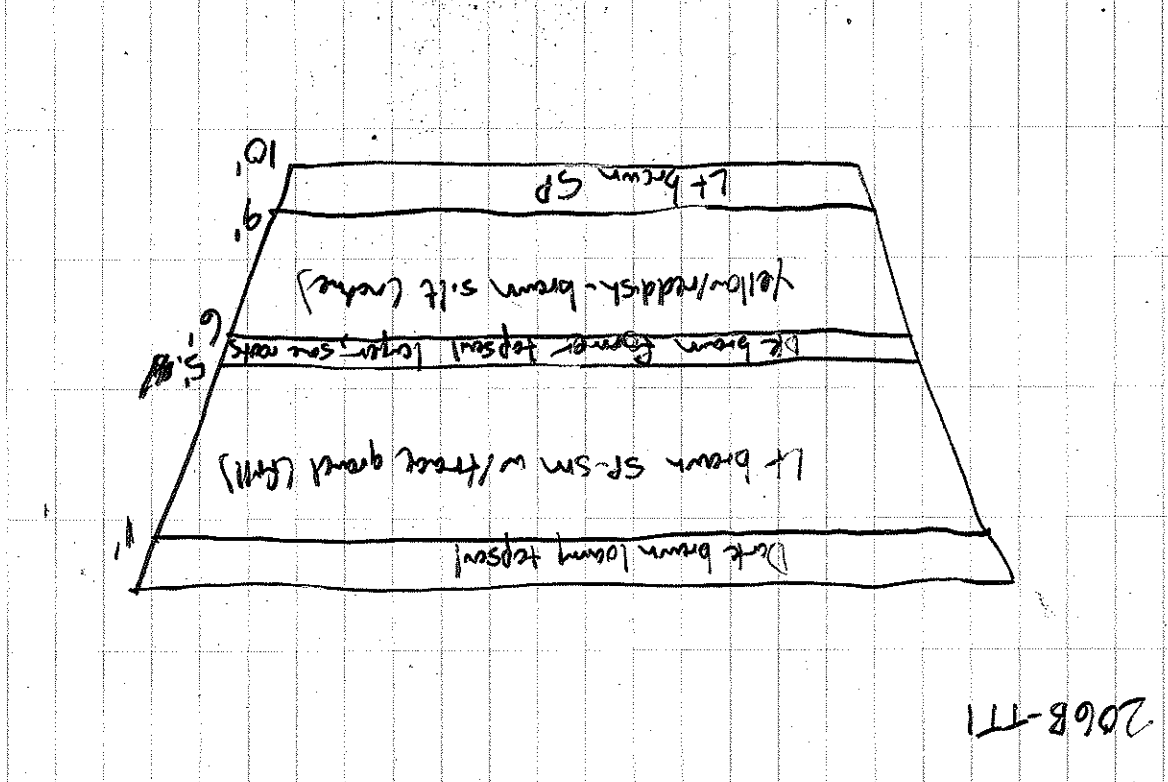
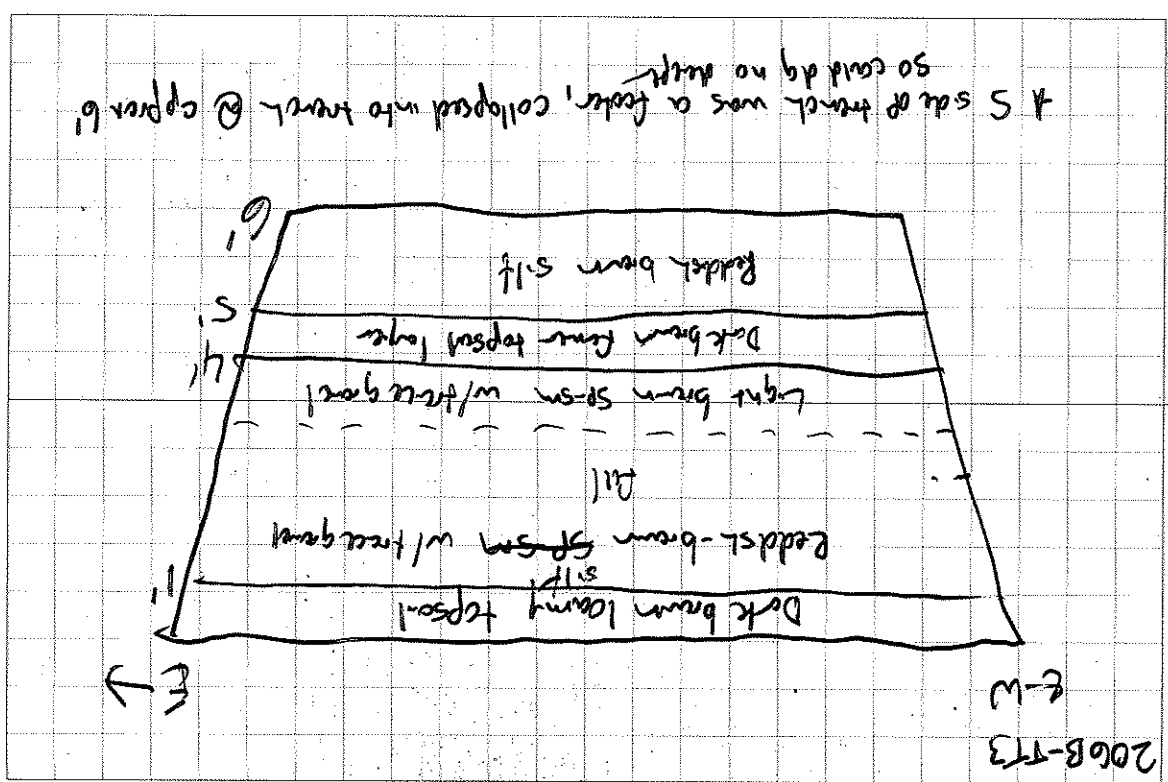


Date 6/23/11

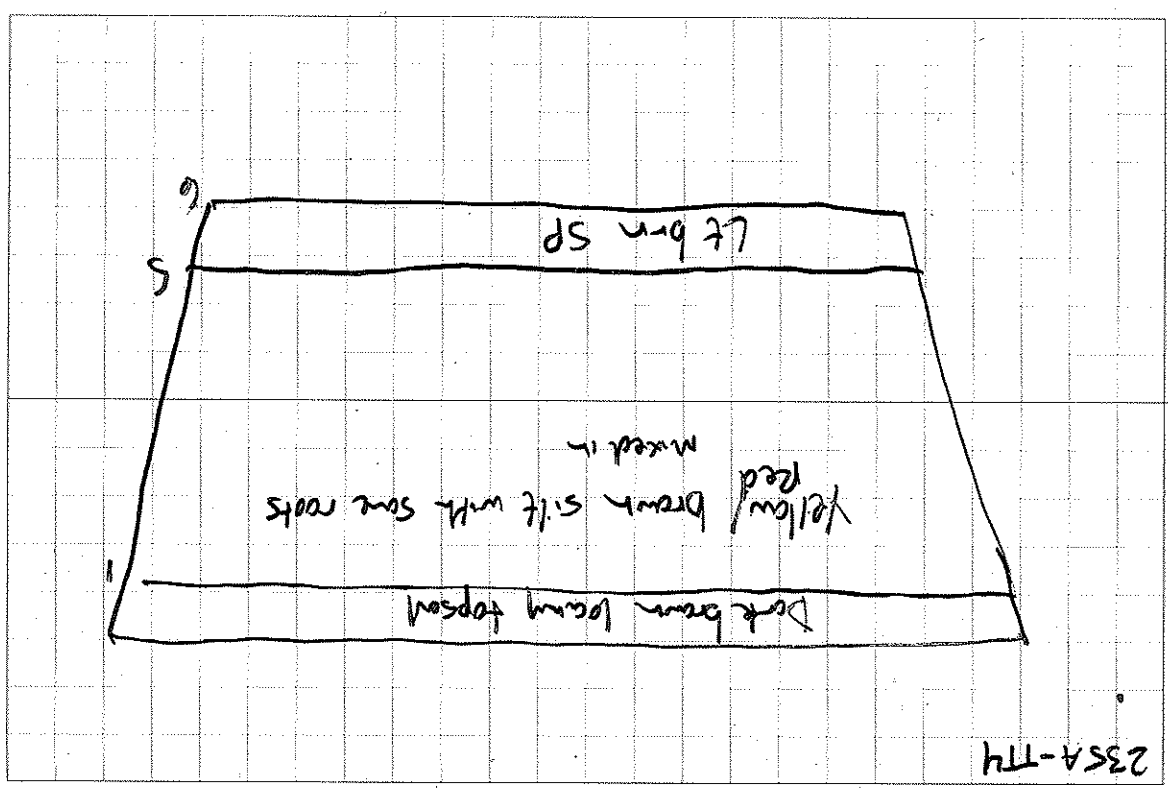
Location ABC Line
Project / Client U of M

ADN

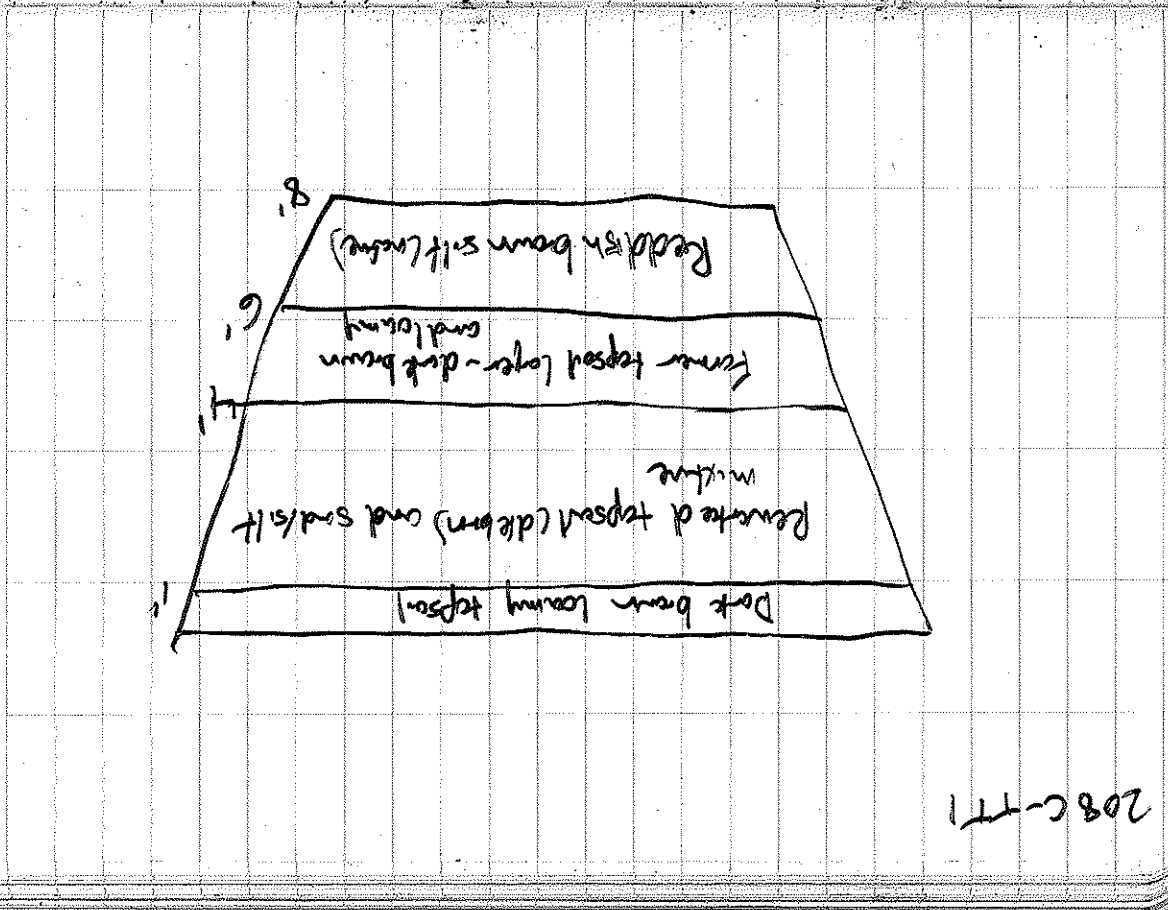




Location ABC Lane Date 6/23/11
 Project / Client U of M ARN



Location ABC Lane Date 6/23/11
 Project / Client U of M ARN



DESCRIPTION
DARK Brown loamy topsoil
Reddish-brown. SP-SM
Dark brown loamy topsoil
DARK Brown loamy topsoil
Reddish brown silt mixed with rootlets topsoil
Dark brown loamy topsoil
Brown SP-SM

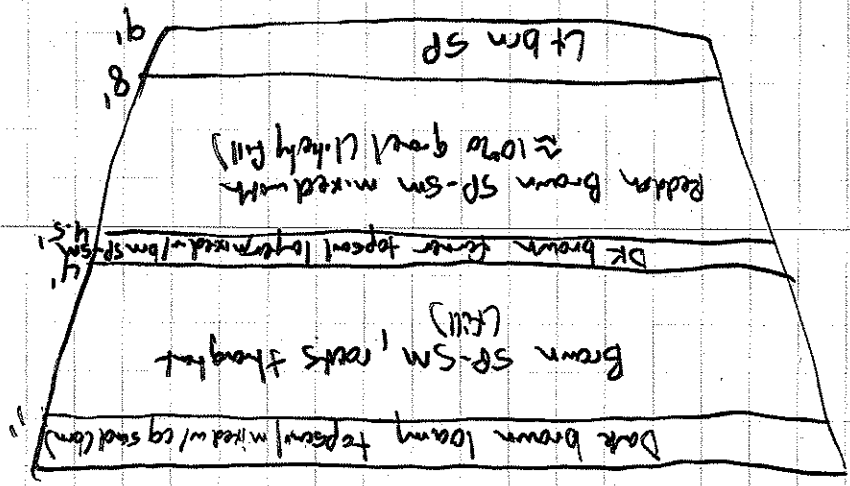
ID	OID	PID	BE6B
208C-TT1-0.5'	N/N	0.0	0.0
13:00 (M,F)			
208C-TT1-3'	N/N	0.0	0.0
13:05 (M,S)			
235A-TT4-0.5'	N/N	0.0	0.0
14:00 13:05 (M,S,F)			
235A-TT3-0.1'	N/N	0.0	0.0
14:00 (M,S,F)			
235A-TT3-3.5'	N/N	0.0	0.0
14:05 (M,S)			
235A-TT2-1.1'	N/N	0.0	0.0
14:20 (M,S,F)			
235A-TT2-3.5'	N/N	0.0	0.0
14:25 (M,S)			

Date 6/23/11

Location ABC LMC

Project / Client U of M

ADN



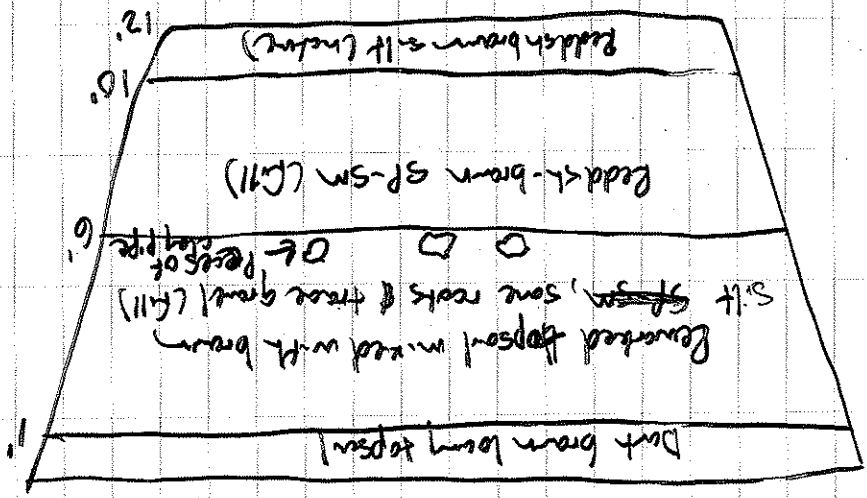
236A-TT2 → 8' W of T44-235C

Date 6/23/11

Location ABL LMC

Project / Client U of M

ADN



236A-TT3 → 8' W of T44-235C

700 ADN, KCB, AKB, Terry over
- safety meeting

1530 HIT BURNED MATERIAL A FEW INCHES
BUS

↳ CHARRED TAR-LIKE MATERIAL

- GLASSY & SOLID WHEN BROKE
APART, DISTINCT SMOEL

- SOME PLACM COATING ON

SOME OF THE CHARRED PIECES

- SOME BURNED WOOD AS WELL

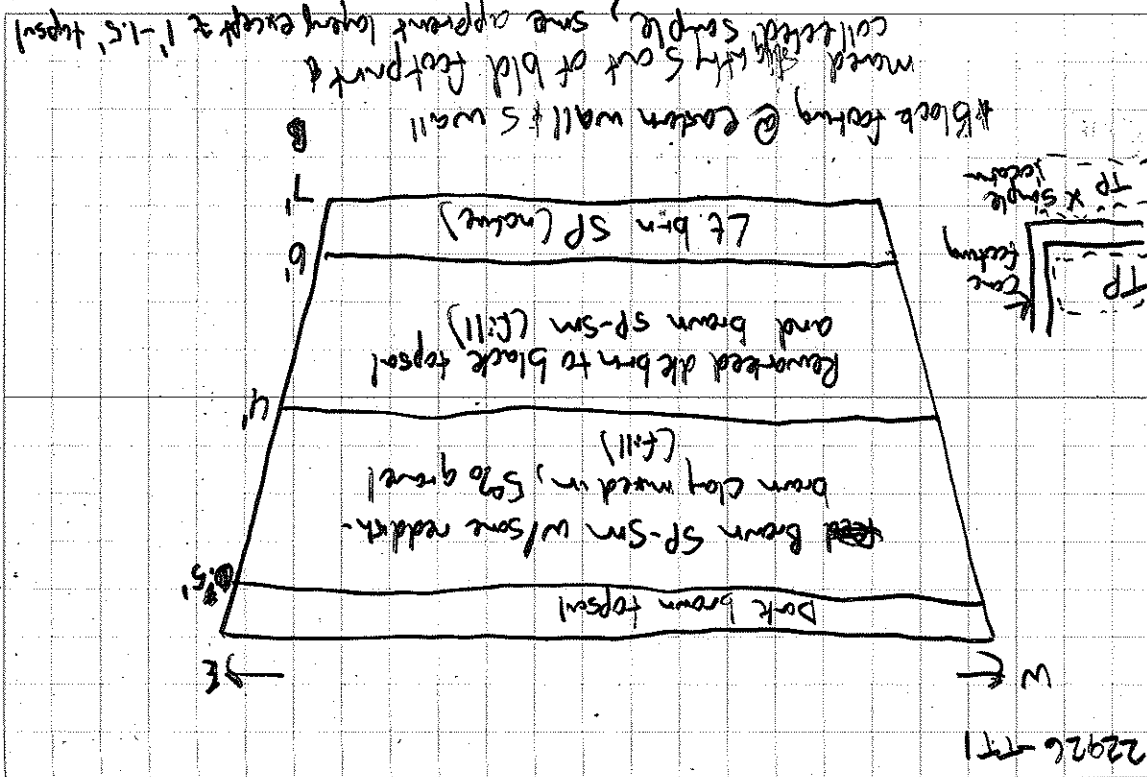
↳ SPOKE W/ JME

- ANALYZE MIX OF CHARRED SOIL

AROUND CHARRED MAT'L (PUB)

AND NATIVE SIL @ 1' BUS (SPOKE)

HOOD
SOME



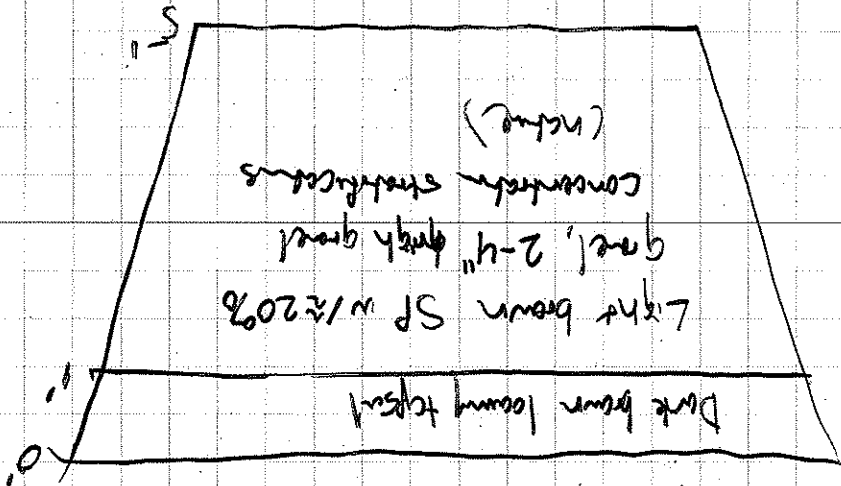
ID	OID	PID	BKGS
22926-TT1-0.5'	N/N	0.0	0.0
8:00 (M,S,F)			
RR-BS-TT1-0.5'	N/N	0.0	0.0
8:30 (M,S)			
RR-BS-TT1-0.5'	N/N	0.5	0.0
9:00 (M,S)			
DS-TT2-0.5'	N/N	0.3	0.0
9:35 (M,S)			
D4-TT3-0.5'	N/N	0.0	0.0
10:20 (M,S)			
D4-TT4-0.5'	N/N	0.2	0.0
11:00 (M,S)			
D4-TT2-0.5'	N/N	0.0	0.0
11:35 (M,S)			
D3-TT1-0.5'	N/N	1.04	0.0
13:30 (M,S,N)	← V collected due to ↑ Pid hit		
D3-TT3-1'		54.0	0.0
14:00 (M,S,N)	← V collected due to ↑ Pid hit		
→ FS-3'		10.1	0.0
D3-TT2-0.5'	N/N		
14:30 (M,S)			

DESCRIPTION
Dark brown loamy topsoil
Dark brown topsoil mixed w/ Cg sand & gravel
Dark brown topsoil (loamy)
Dark brown loamy topsoil
Lt brn SP w/ sand topsoil
Dark brown loamy topsoil
Dark brown loamy deposit w/ lg sand mixed in
Dark brown loamy topsoil
Dark brown loamy topsoil fls
(containing gips due to tree cover) ± 20' SW of org 100
Yellow, reddish brown Silt
Dark brown loamy topsoil

Location Gov Central Date 6/24/11

Project / Client U of M

ADN

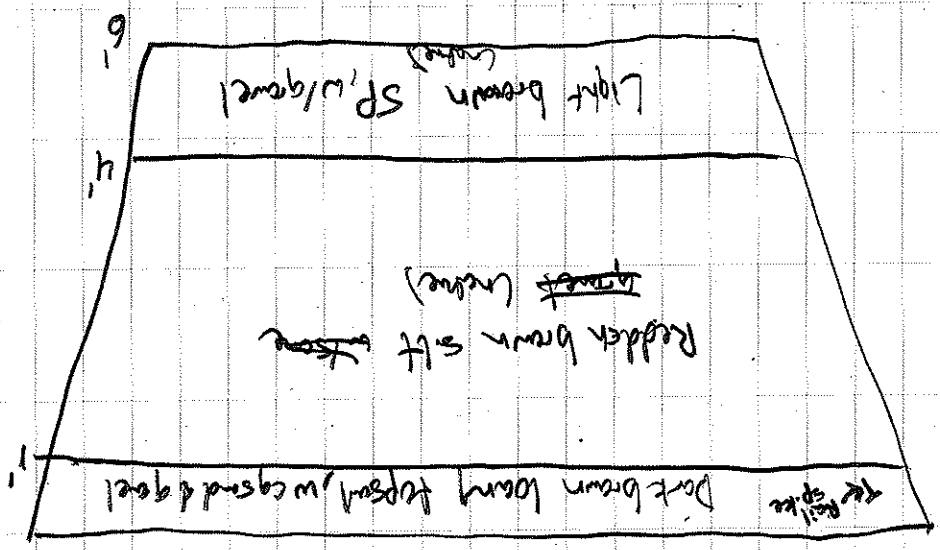


RE-85-TT1

Location Gov Central Date 6/24/11

Project / Client U of M

ADN

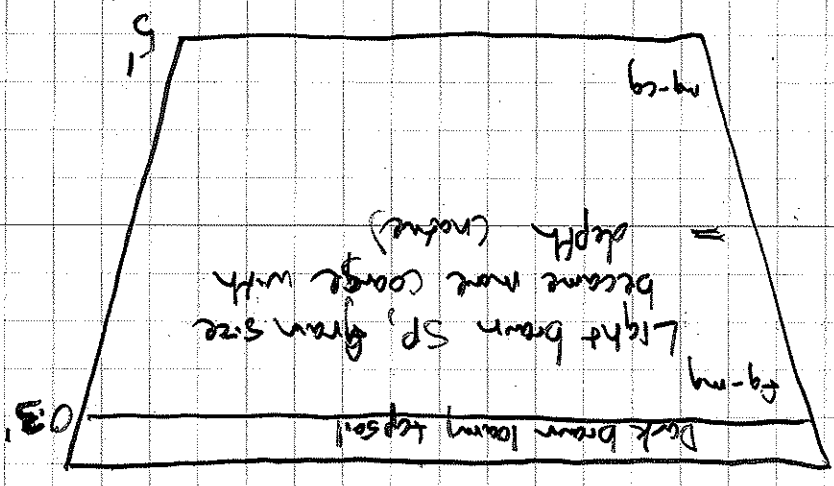


RE-85-TT1

Location DeFlane Date 6/24/11

Project / Client U of M

ADN

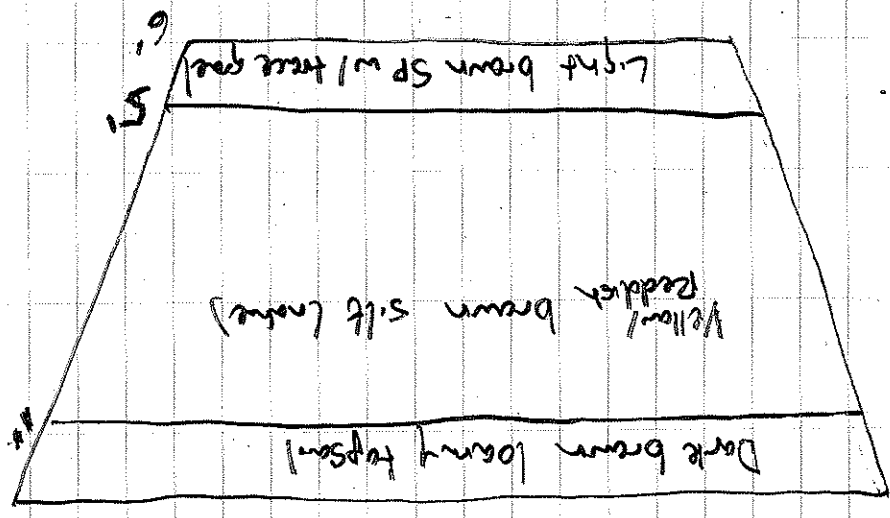


DH-TT3

Location Gow Central Date 6/24/11

Project / Client U of M

ADN



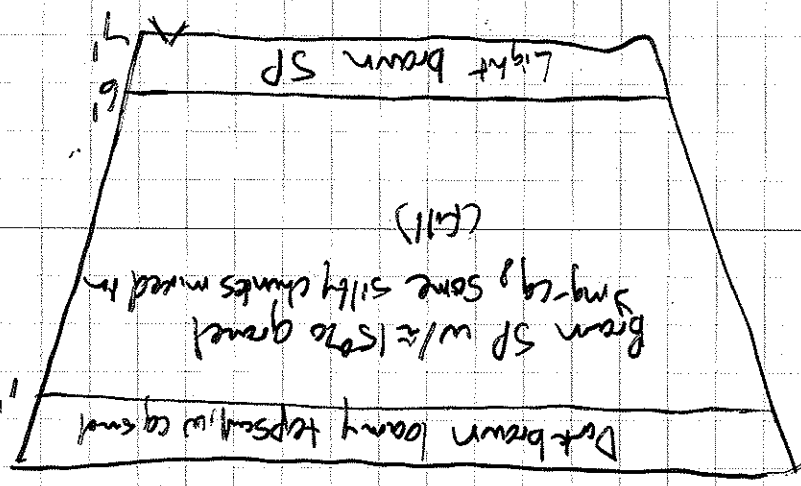
DS-TT2

Date 6/24/11

Location DEF Linc
Project / Client U of M

ADN

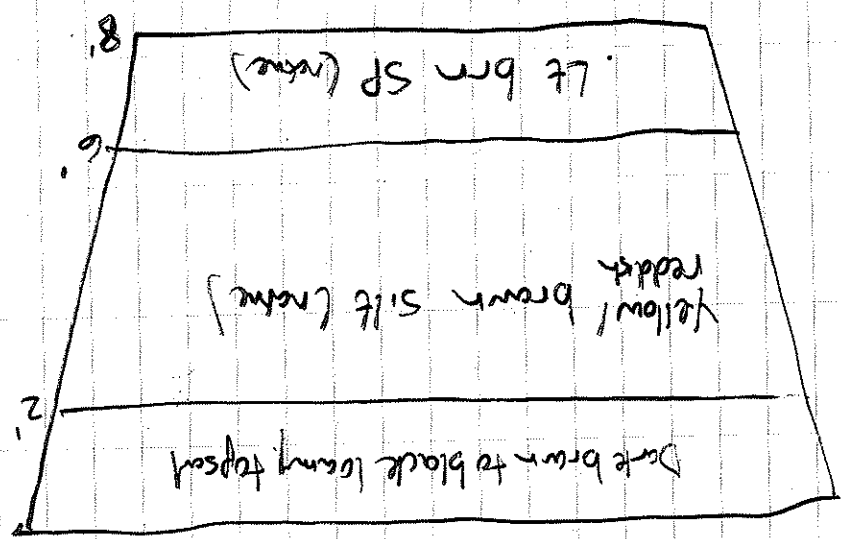
~~DATE~~



D4-T12

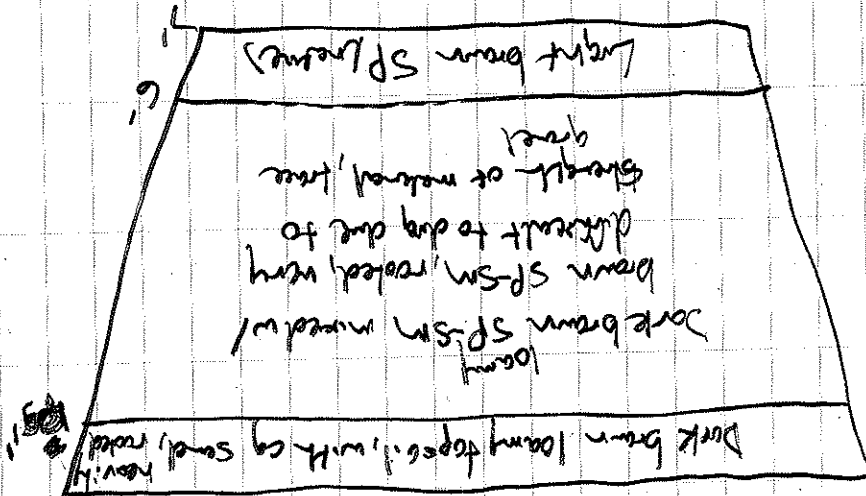
Location DEF Linc
Project / Client U of M

ADN



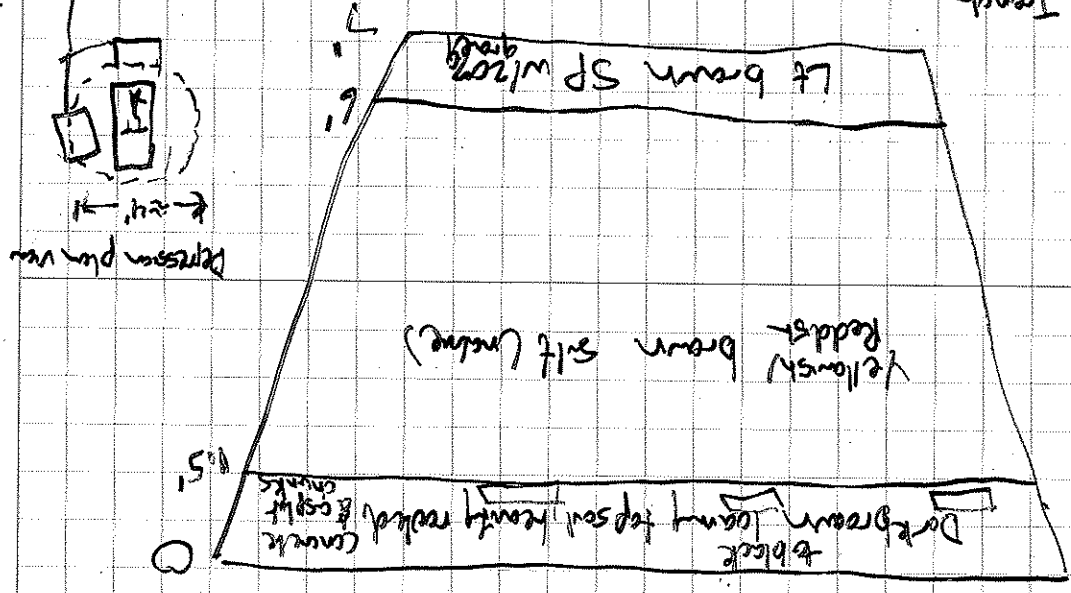
D4-T12

ANN



D3-TT7

ANN



D3-TT3

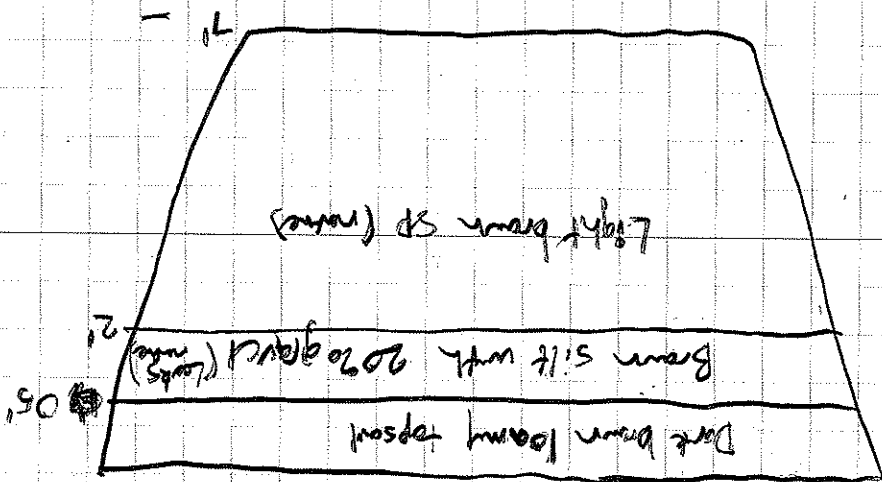
Date 6/24/11

DEF Line

Location

Project / Client U of M

ADN



D4-TT1

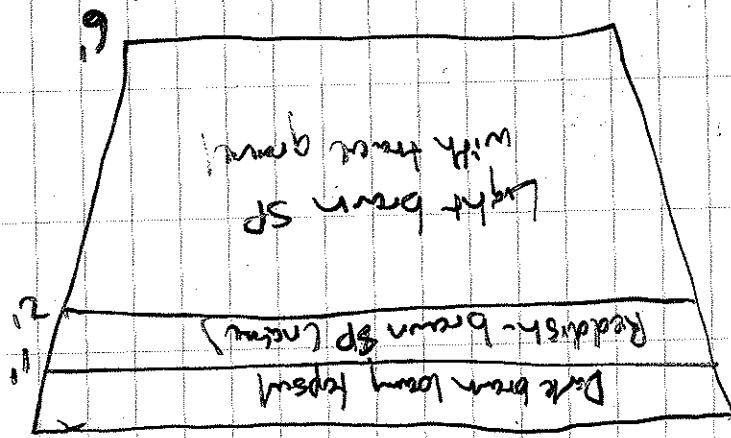
Date 6/24/11

DEF Line

Location

Project / Client U of M

ADN



D3-TT2

Location DEF Line
Project / Client U of M

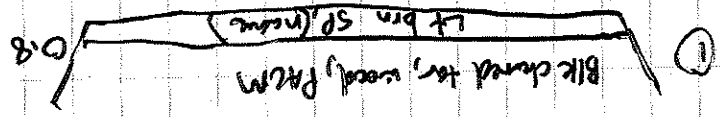
Date 6/28/11
ANN

ID	Q/D	PID	BKGD
D4-TT1-0.5'	NN	0.1	0.0
15:10 (M.S)			
207DDTT1-0.5'	4-ferrous / BK	36.8	0.0
16:30 (M.S.P) HOLD			
207-DD1-TT1-1'	ferrous / BK	22.4	0.0
16:35 (M.S.P)			

Location DEF Line
Project / Client U of M

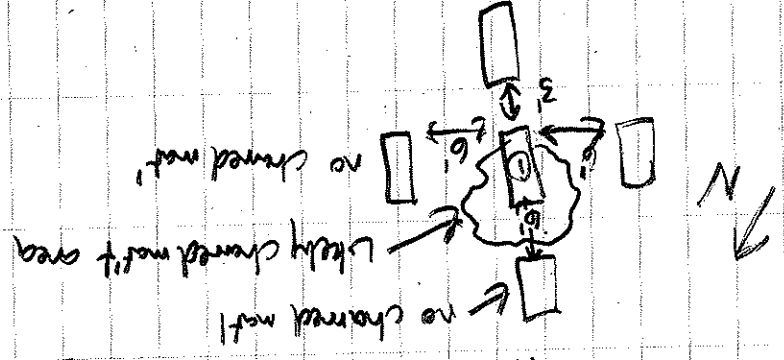
Date 6/28/11
ANN

DESCRIPTION
 Dark brown loamy topsoil w/ reddish brown silt and gravel
 Dark brown topsoil w/ clay sand mixed with fine
 chondal material (hor, Pterom, wood)
 Native lt brn SP



207-DB1-T11

Plan View



700 KCB on-site

730 Tim (SDE) on-site
Conduct safety meeting

830 Begin at 225T-T11

12:30 Break for lunch

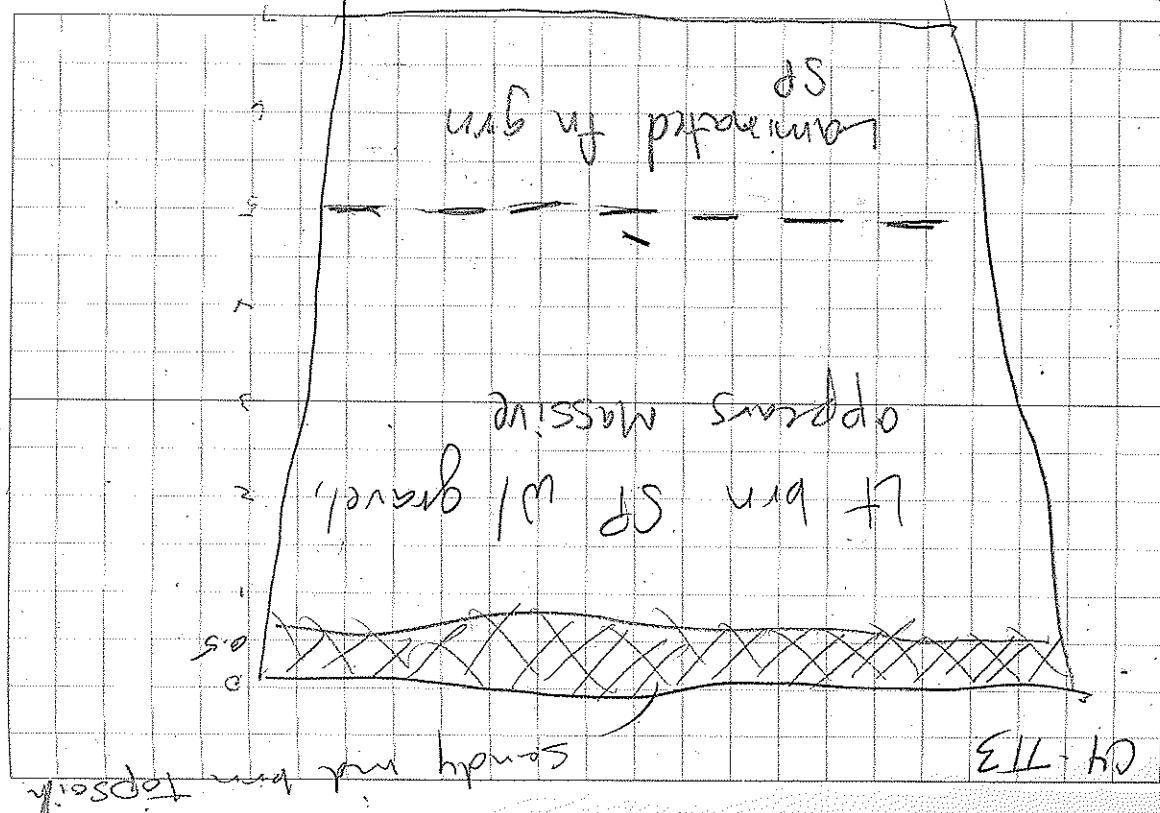
12:45 AAN called:

- Couldn't find 2 COCS
- Re-sample 108B-SSI +3
- Is there a 26T-T11 location?
→ No, miss labeled jar 24T-T11

Location UMore East Date 6/27/11

Project / Client DEF Line

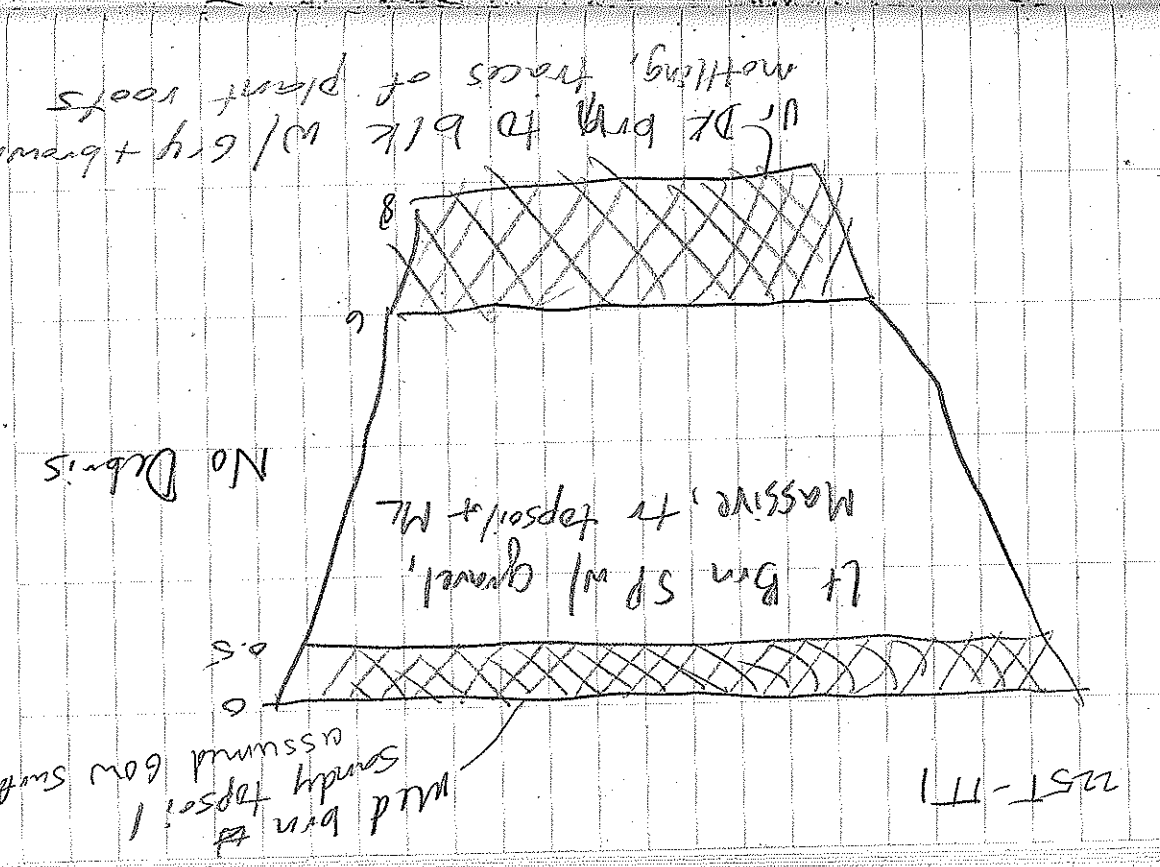
KEB



Location UMore East Date 6/27/11

Project / Client DEF Line

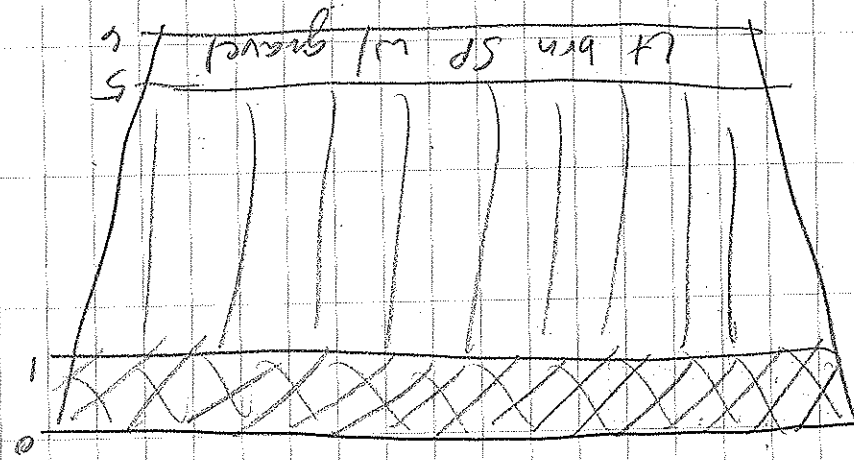
KEB



ID	o/d	PID
225T-TT1-0.5'	n/n	0.0
C4-TT3-0.5'	n/n	
C4-TT1-0.5'	st n/n (cut grass odov)	8.9
6SD-TT2- 0.5'	n/n	0.0
6SD-TT4-0.5'	n/n	0.0
C4-TT2-0.5'	n/n	0.0
10SD-TT1-0.5'	n/n	0.0
10SD-TT ⁴ 1-0.5'	n/n	0.0
10SD-TT5-0.5'	n/n	0.0
10SD-TT2-0.5'	n/n rd, blk, rust	0.0
10SD-TT3-0.5'	n/n	0.0

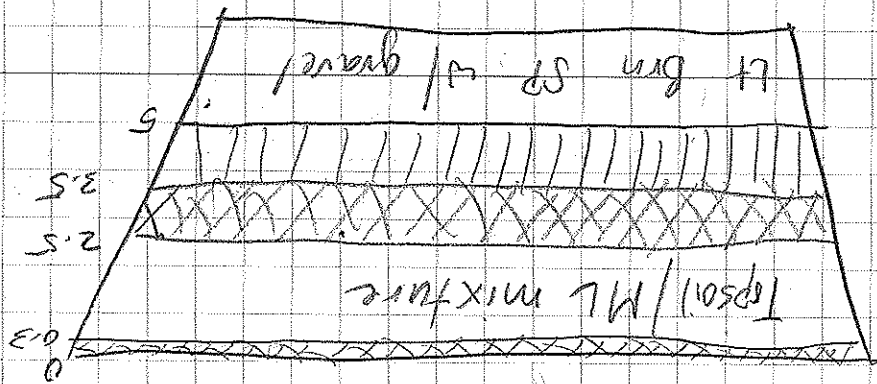
Bkgd	Description
0.0	Sandy brn topsoil ↓
0.0	loamy topsoil, med. brn ↓
0.0	, dk brn ↓
0.0	↓, med brn ↓
0.0	↓ dk brn
	Dk brn loamy topsoil
	Dk brn Sandy loam topsoil
	↓ Fill, Dk brn topsoil w/ debris (nails, metal)

No debris, appears Native



GSD - TT3

No debris observed



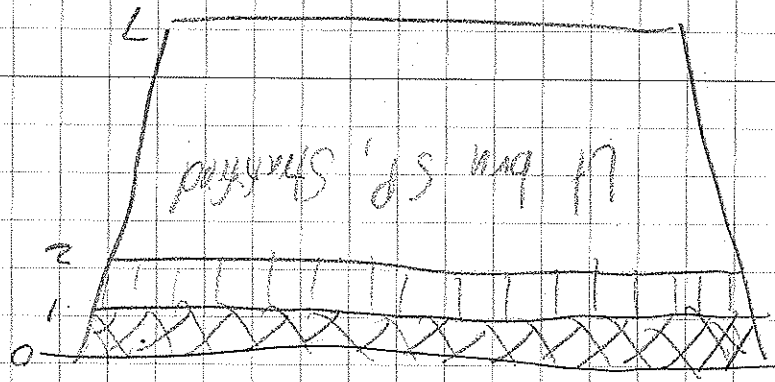
GSD-TT4

Location U More East

Date 6/27/11

Project / Client

KUB



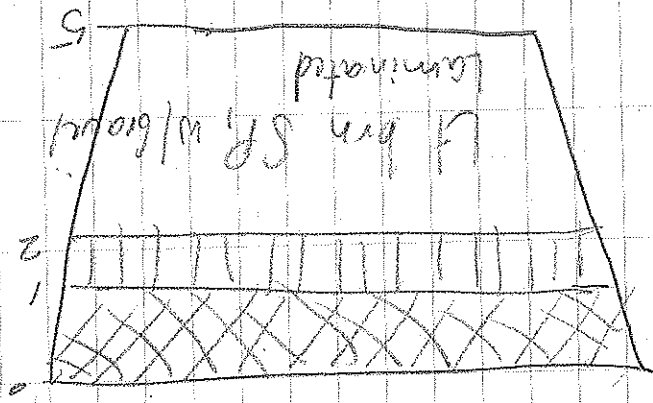
6SD-112

Location U More East

Date 6/27/11

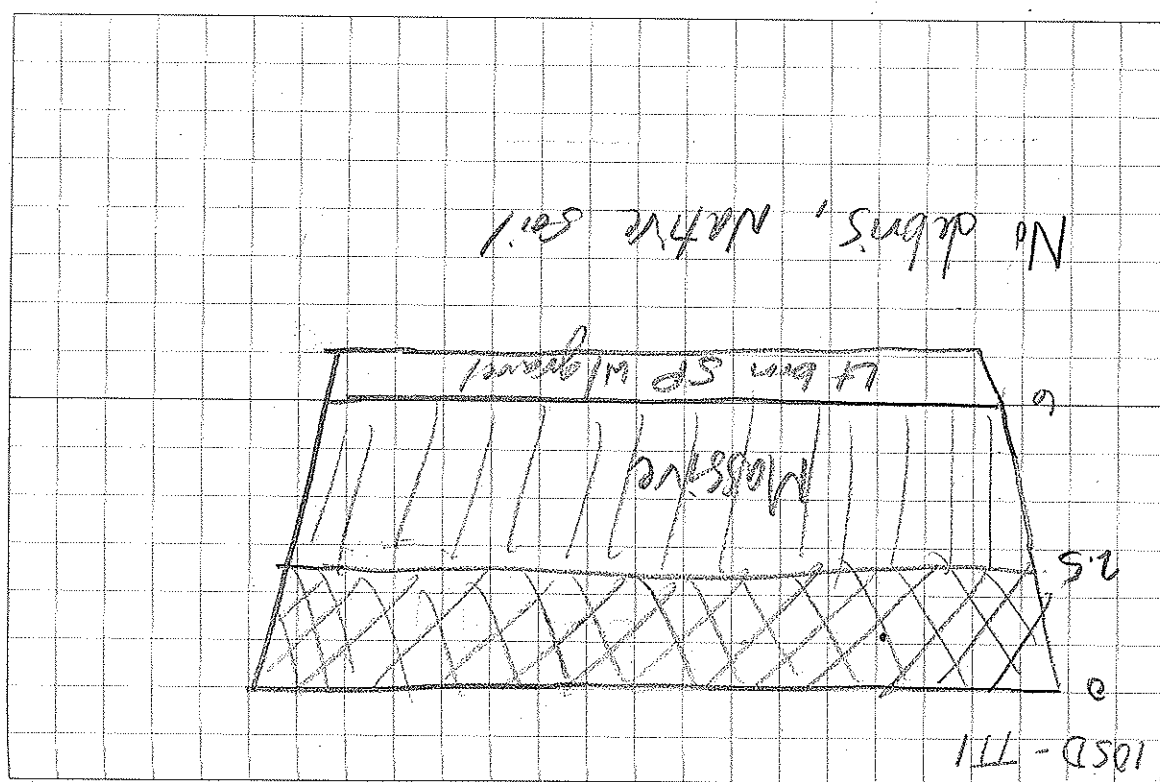
Project / Client

KUB

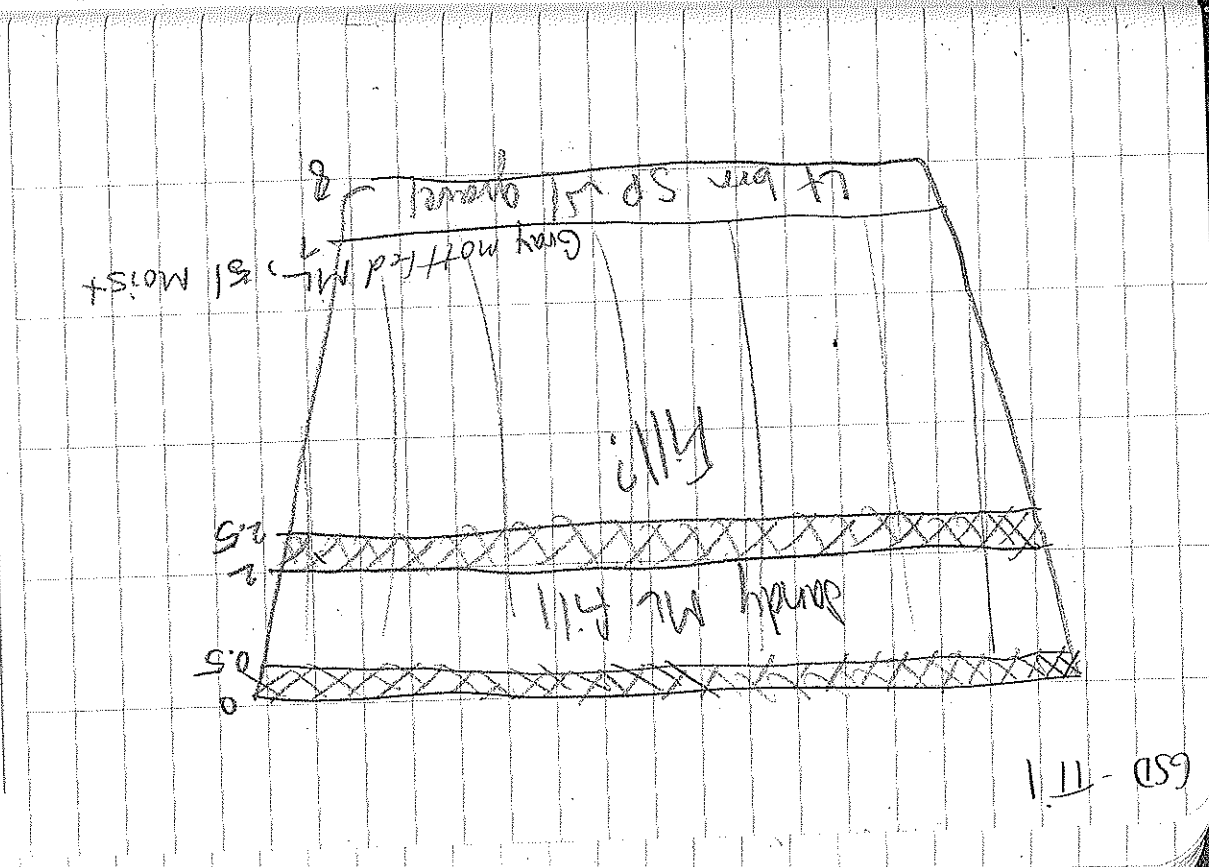


CH-112

KCB



KCB



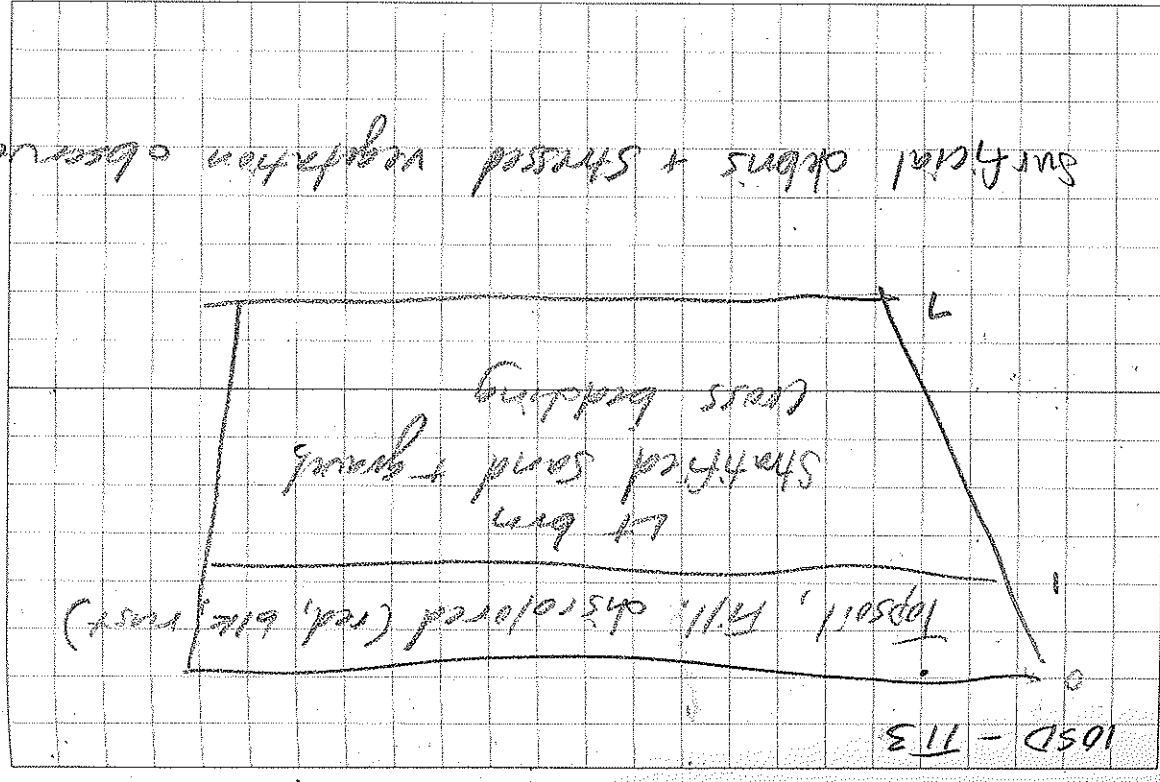
Location UMore East

Date 6/27/11

Project / Client

KUB

Surfaceal debris + stressed vegetation observed

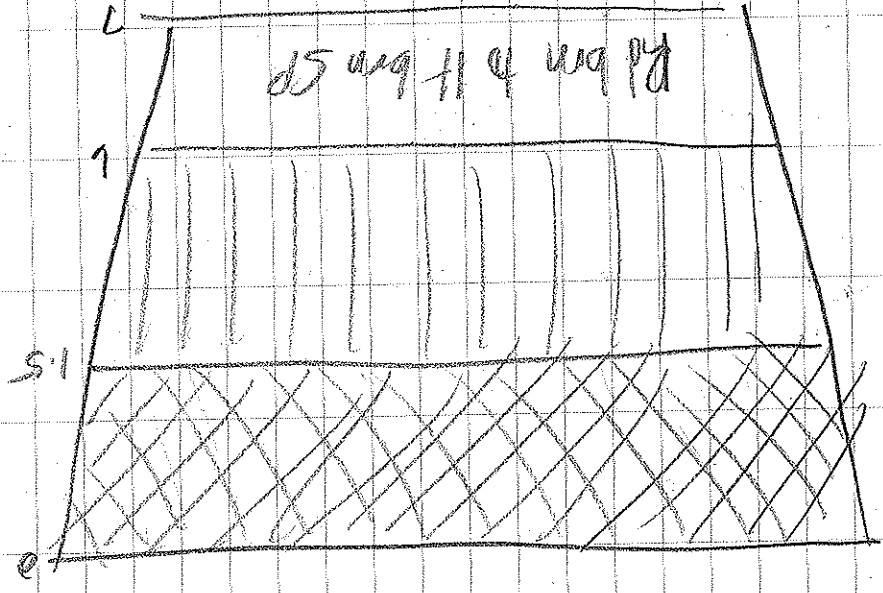


Location UMore East

Date 6/27/11

Project / Client

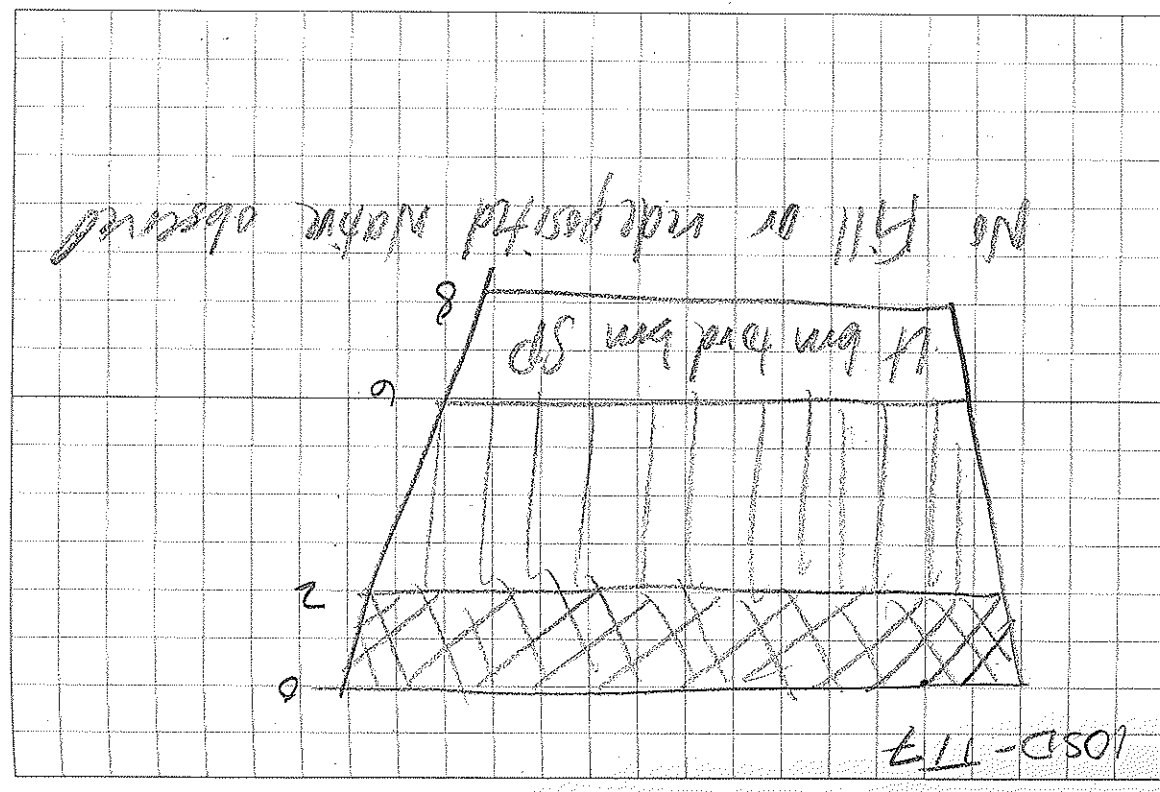
KUB



10SD-1134

Location W More East Date 6/27/11

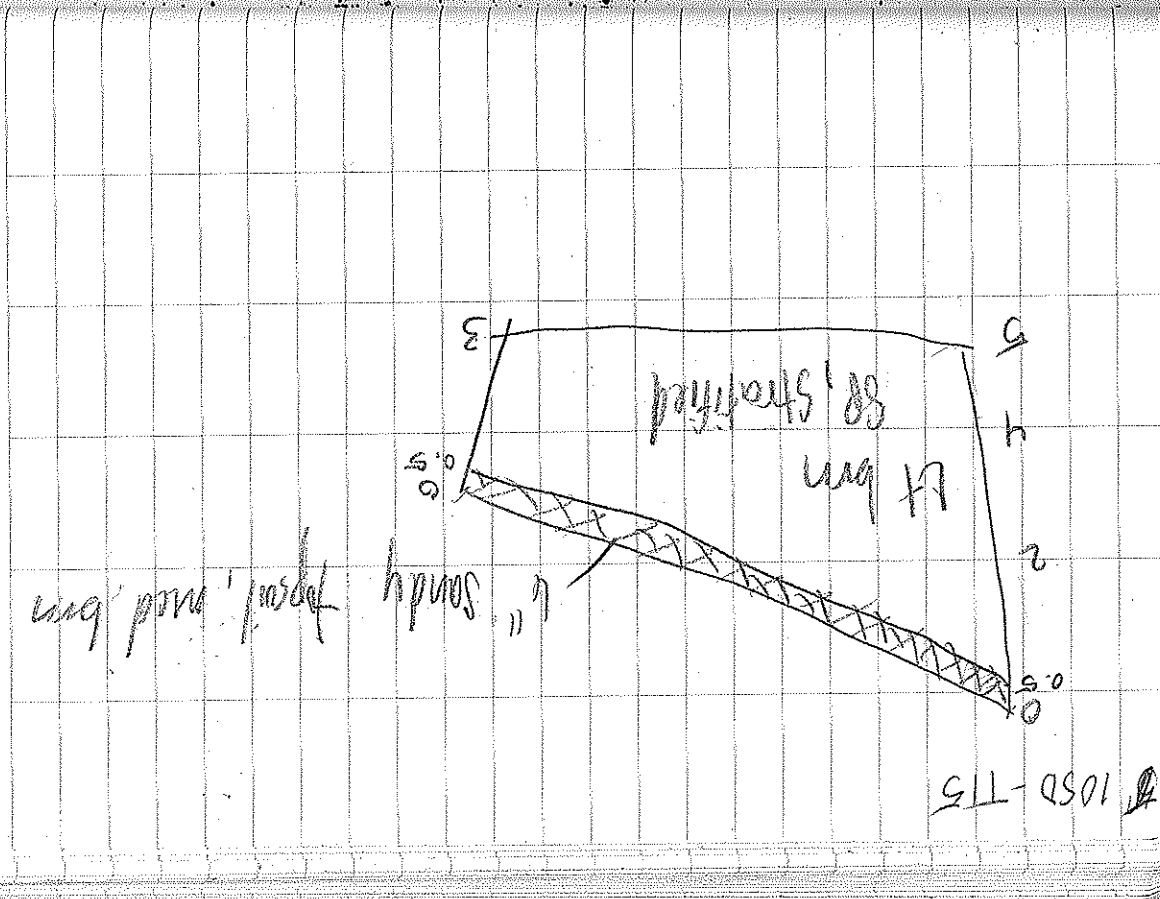
Project / Client KCB



No fill or wide graded slope observed

Location W More East Date 6/27/11

Project / Client KCB

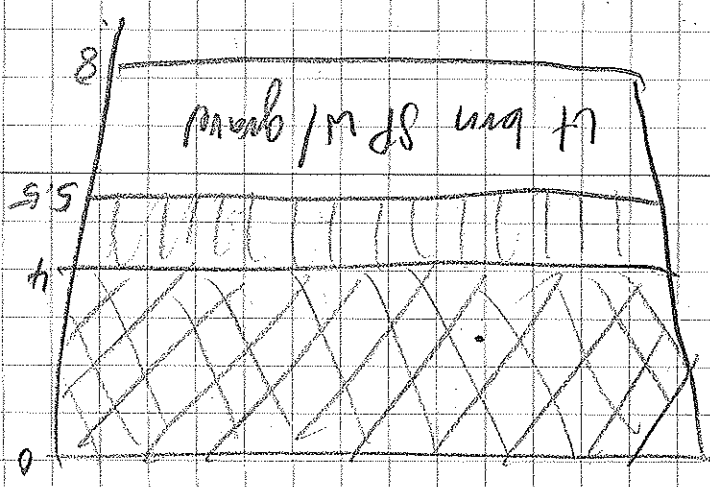


lt brn
ss stratified

Location WMore East

Date 6/27/11

Project / Client KUB

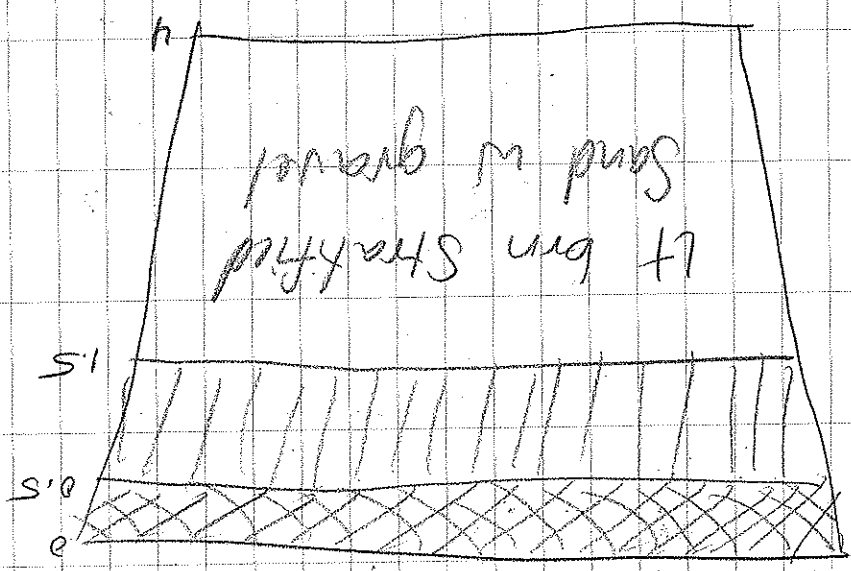


10SD-TT8

116 Location WMore East

Date 6/27/11

Project / Client KUB



10SD-TT6

Location W More East

Date 6/27/11

Project / Client KCB

ID	off.	PID
10SD-TT6-0.5	n/h	0.0
10SD-TT7-0.5	n/h	0.0
10SD-TT8-0.5	n/h	0.0
10SD-TT9-0.5	n/h	0.0
251A-TT11-0.5	n/h	0.0
251A-TT12-0.5	n/h	0.0
251A-TT13-0.5	n/h	0.0

Location W More East

Date 6/27/11

Project / Client KCB

Bldg	Description
0.0	DK bin, laundry topsoil

7:00 Onsite, safety meeting
7:30 Bob (Private Underground)
called.

- He's onsite to mark
last location

- KCS to help find
8:00 Bob offsite

8:00 Begin test trenching
at Burning Grounds

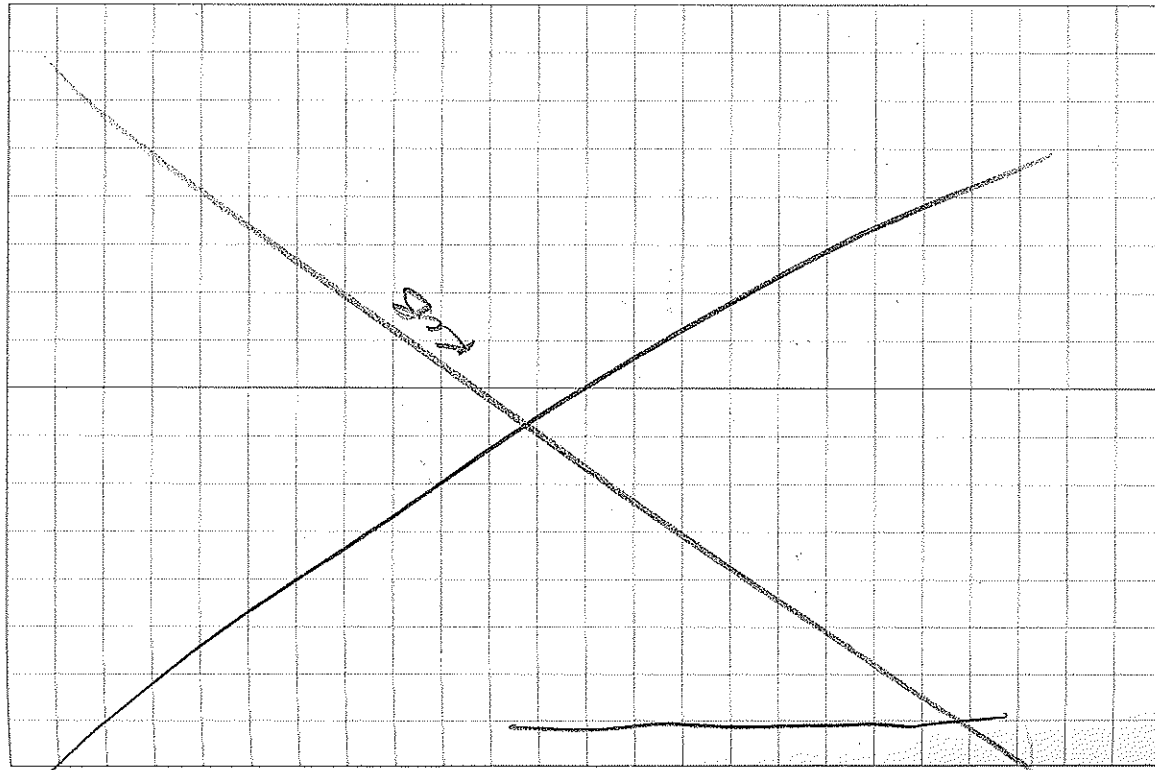
10:30 Moving from 251A-T13
to 251A-T12, the
excavator tire ran over
a piece of rebar and popped
tire

~~11:00~~

- Tim will get large
excavator

13:30 Resumed test trenching

17:00 Work ends

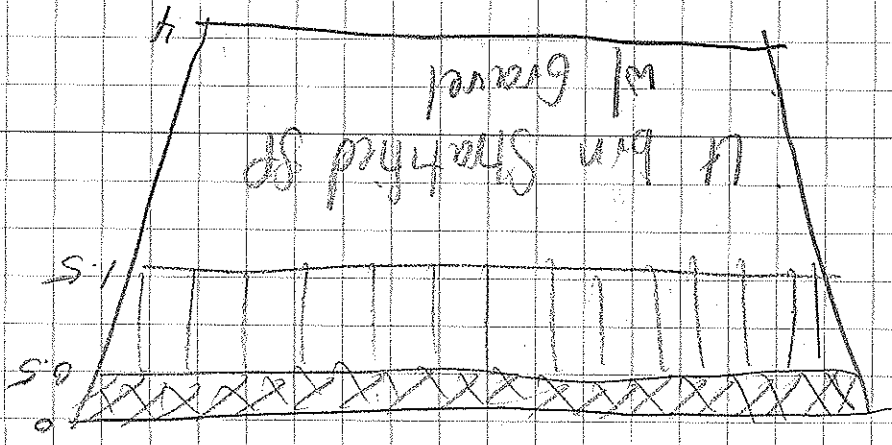


Location UMore East

Date 6/28/11

Project / Client

KCB



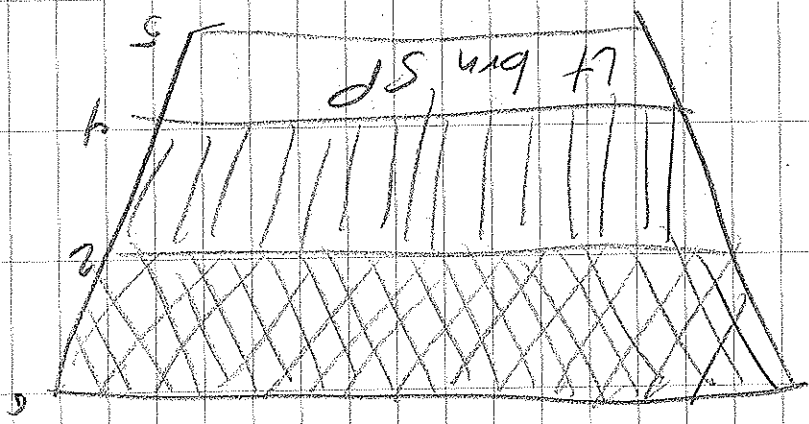
B6-112

Location UMore East

Date 6/28/11

Project / Client

KCB



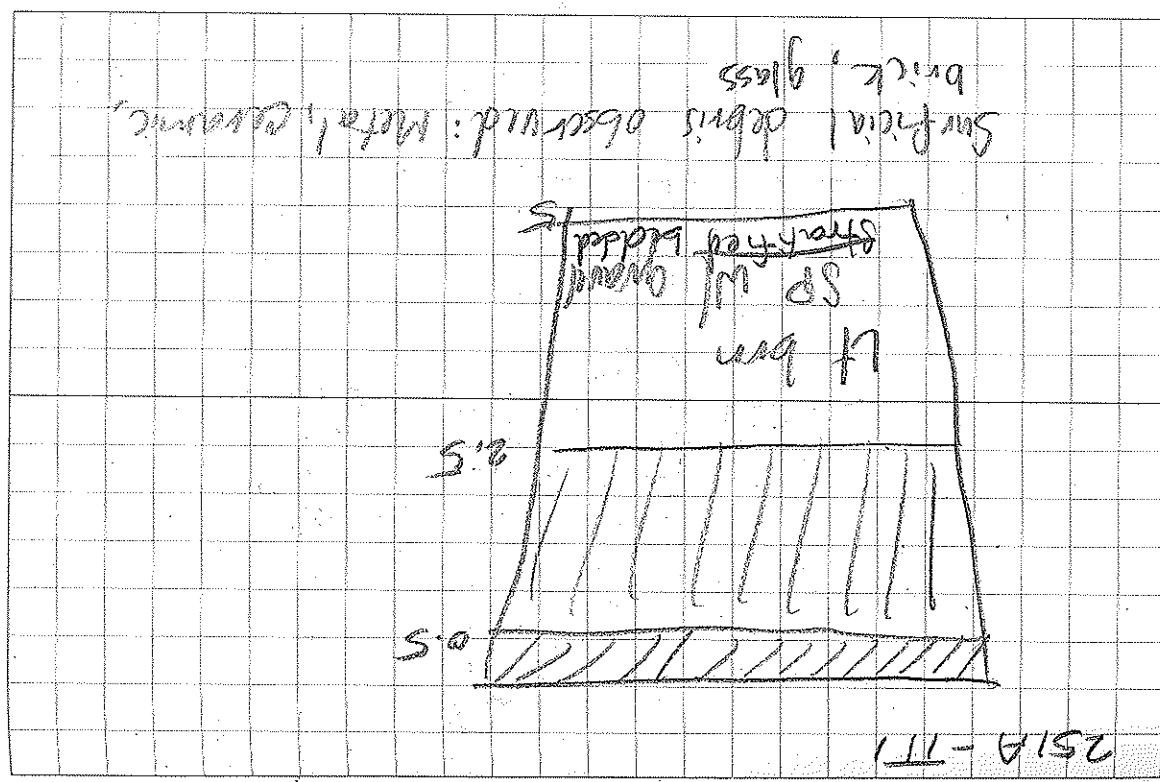
B6-111

124 Location UMore East Date 4/28/11 125
 Project / Client _____
 KCB

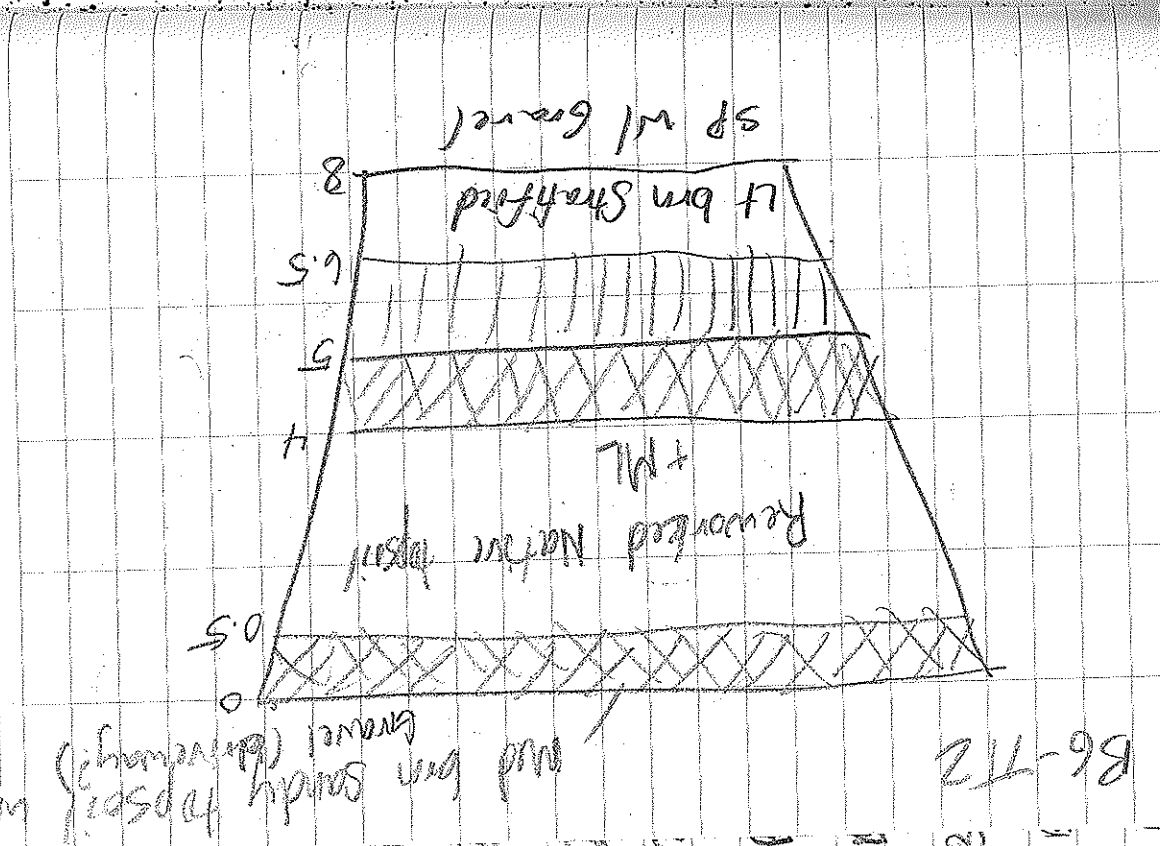
ID	o/d	PID
BG-TT1-0.5	n/a	0.0
BG-TT2-0.5	n/a	0.0
BG-TT3-0.5	n/a	0.0
257A-TT6-0.5	n/a	
257A-TT1-0.5	n/a	
261A-TT3-0.5	n/a	
257A-TT2-0.5	n/a	
BSD-TT10-0.5	n/a	6.0
BSD-TT3-0.5	n/a	0.0
BSD-TT7-0.5	n/a	0.0
BSD-TT8-0.5	n/a	0.0
BSD-TT9-0.5	n/a	0.8

Location UMore East Date 4/28/11
 Project / Client _____
 KCB

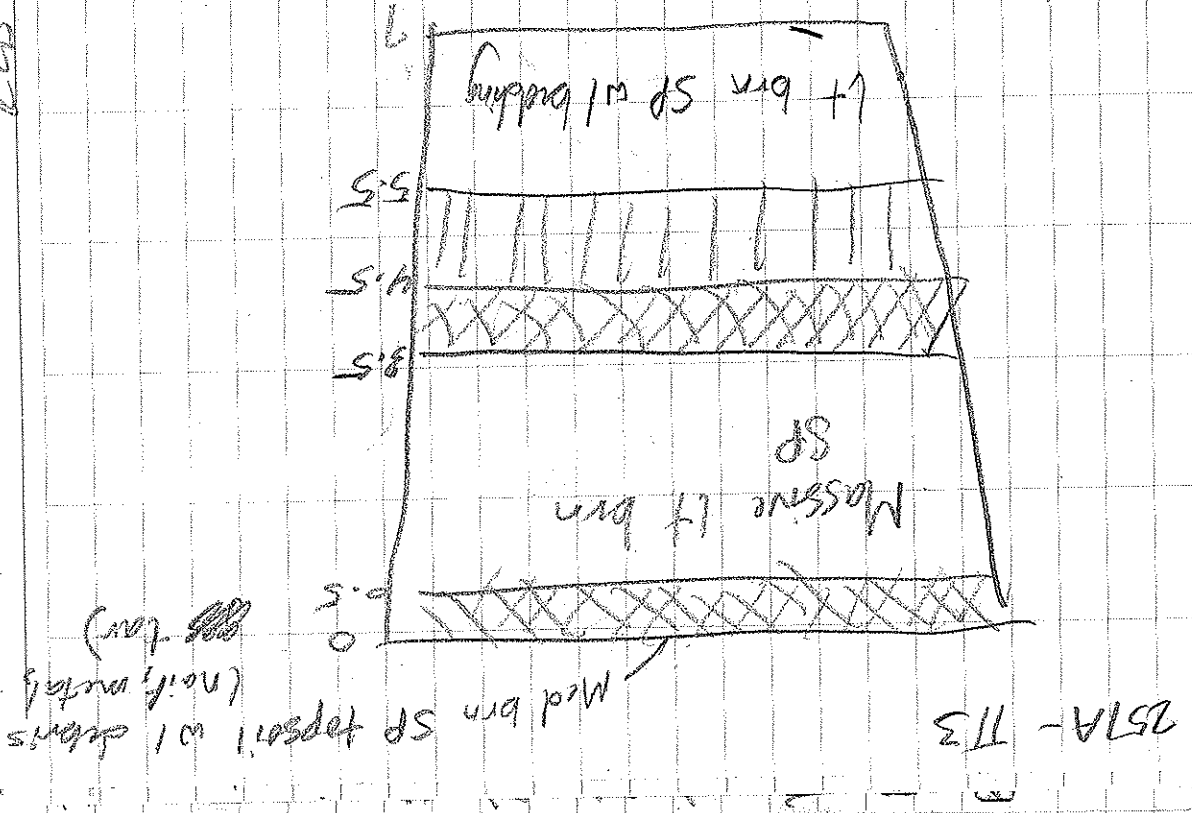
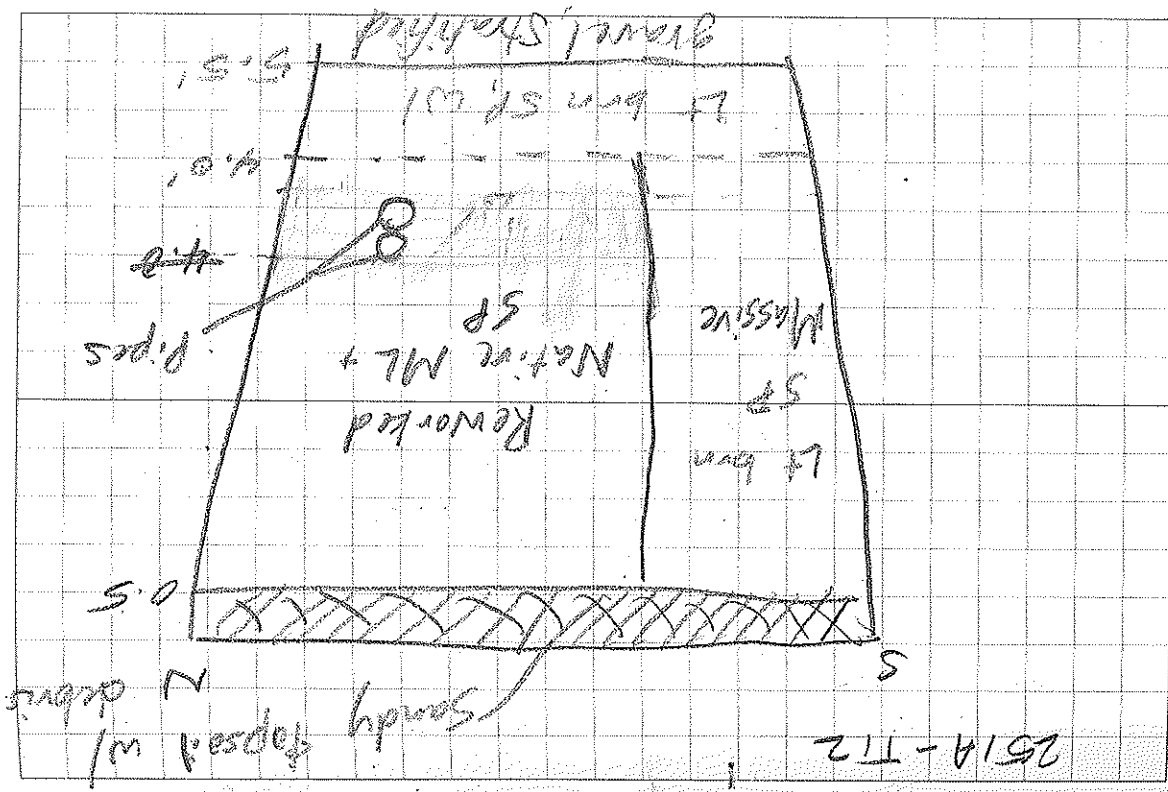
Bkgd	Description
0.0	DK brn loamy topsoil
	↓
	Sandy topsoil w/ fr debris
	↓
	Brn SP w/ fr gravel
	Brn topsoil
	DK brn loamy topsoil
	↓
	DK brn loamy topsoil

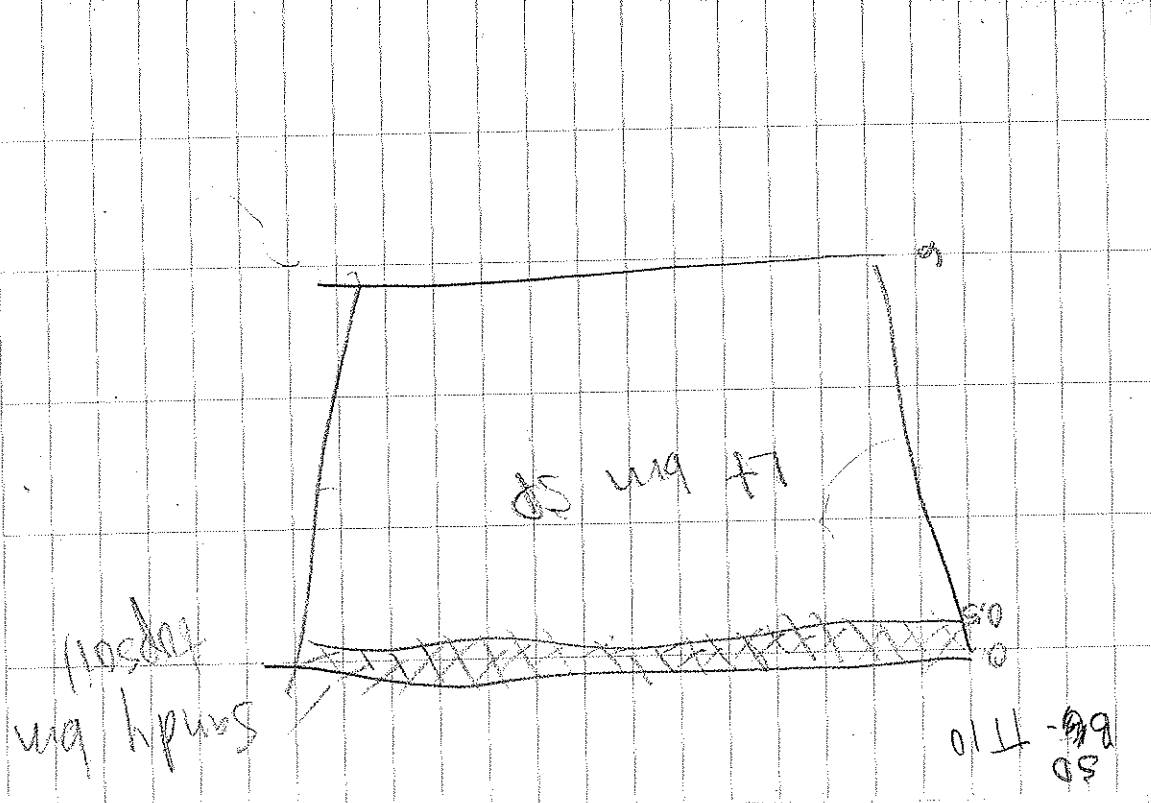
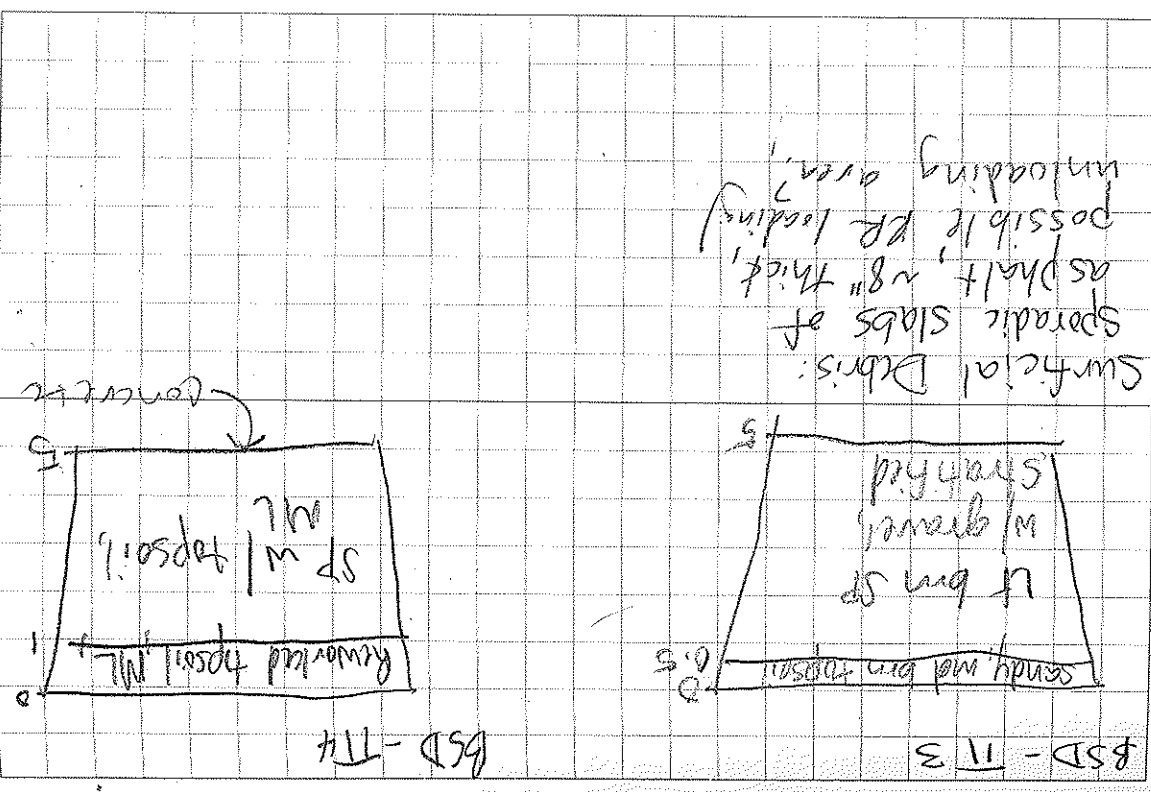


Surface debris observed: Metal, ceramic, brick, glass



mud brn sandy (possibly gravel) m





Date 6/28/11

Location W More East

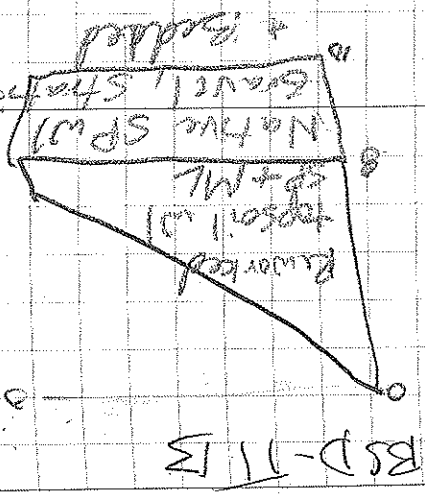
Project / Client

KCB

surface elevations
hill area W

W ~ 20' to
BSD-TT13

* Moved



AS ABOVE

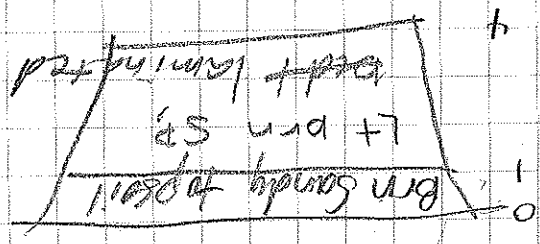
SAME AS

BSD-TT12

Above

SAME AS

BSD-TT7



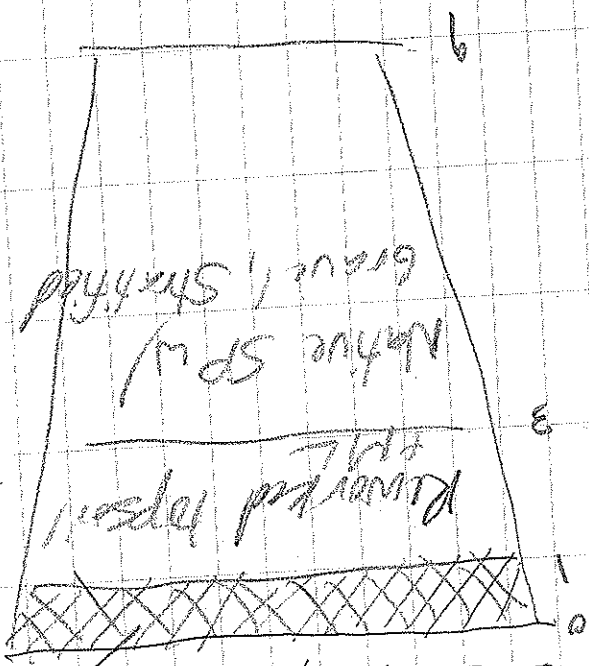
BSD-TT18

Location W More East

Project / Client

KCB

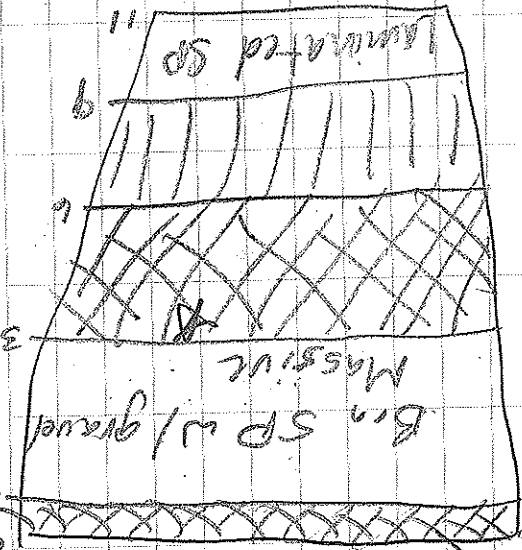
Silty sand topsoil



BSD-TT9

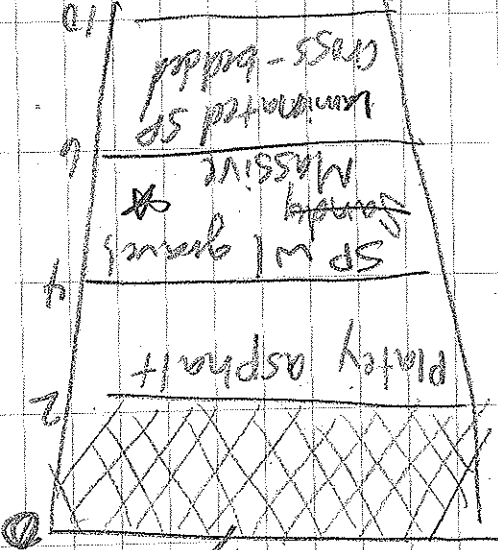
KCB

BSD-7111
Sandy and ben w/ gravel topsoil



Sandy

* = sample location



BSD-7114

KCB

715 KUB onsite
- safety mulching

8745 KCB + Keith (SDE)
at Geophysics area to
finish clearing
- trees will be placed
along western edge
east of road

820 Begin test trending
at B St Dump

1100 Keith has completed
clearing.
- AKB + Adrienne will
OK work

1130 Keith offsite

1700 Work ends

Date 10/29/11

Location _____

Project / Client _____

KEB

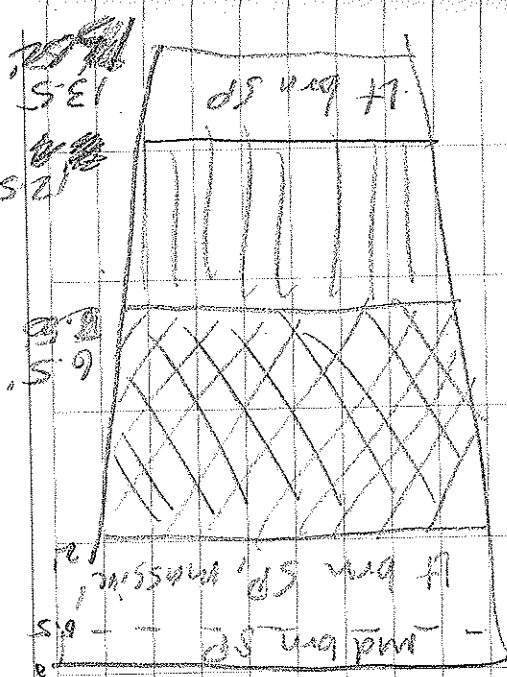
Bkgd	Description
0.0	Sandy topsoil
0.0	DK brn loamy topsoil
0.0	Sandy topsoil
0.0	SP w/ gravel

Date 11/23/11

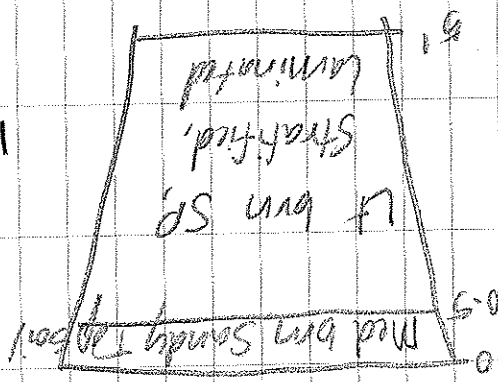
Location UMore East

Project / Client _____

ID	old	PID
<u>BSD-TT4</u>	n/n	0.0
<u>BSD-TT11-015</u>	n/n	0.0
<u>BSP-TT3-015</u>	n/n	0.0
<u>BSD-TT14-4</u>	n/n	0.0

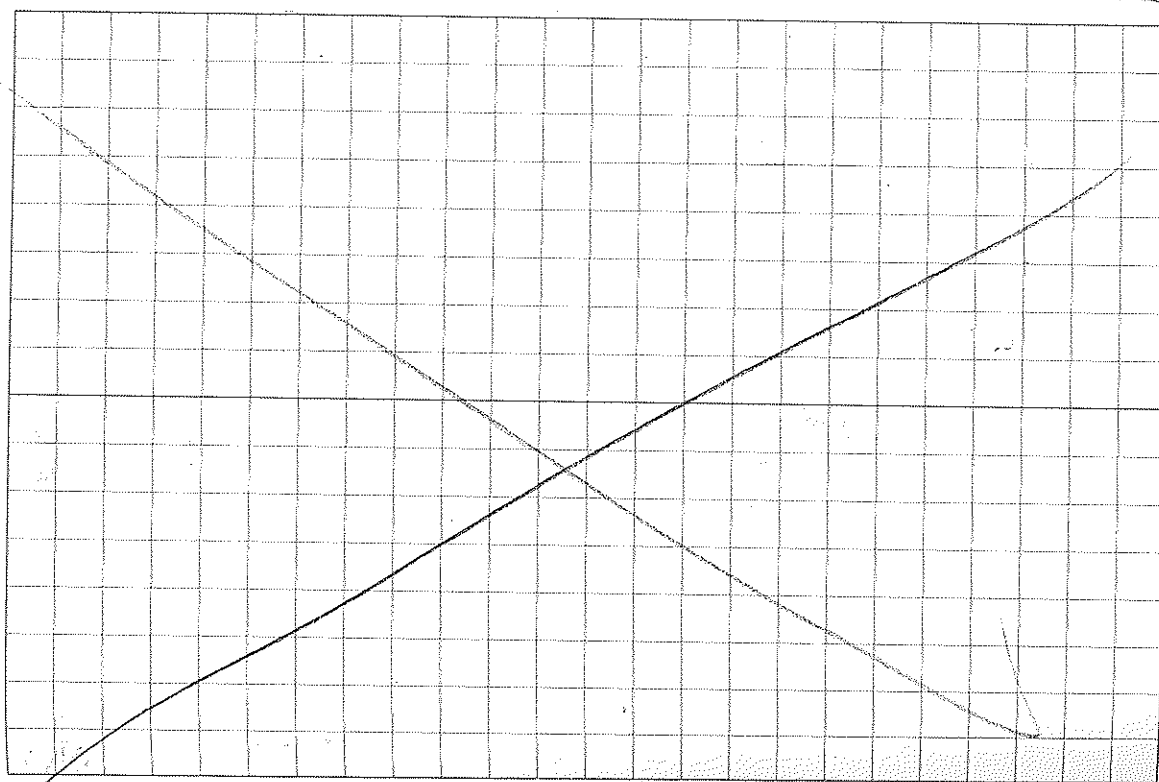


BSD-716



BSD-715

CSB



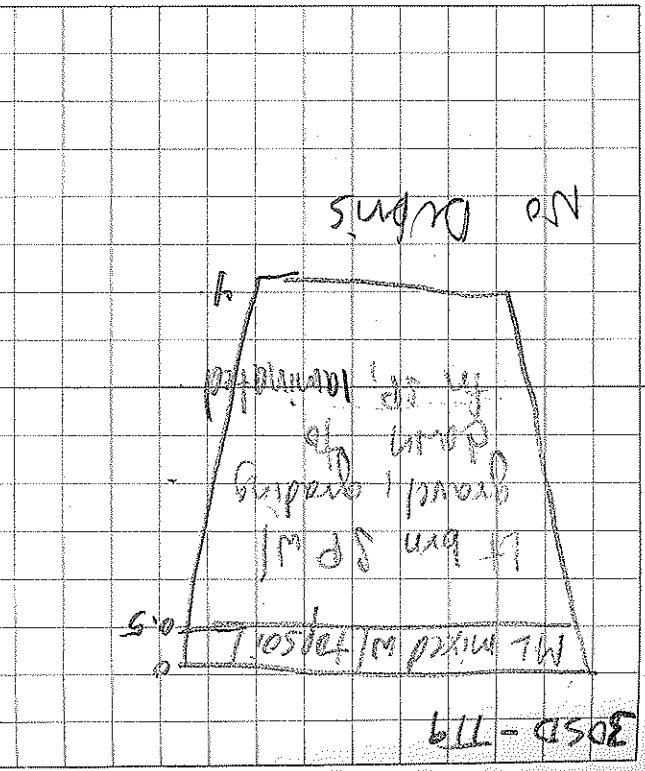
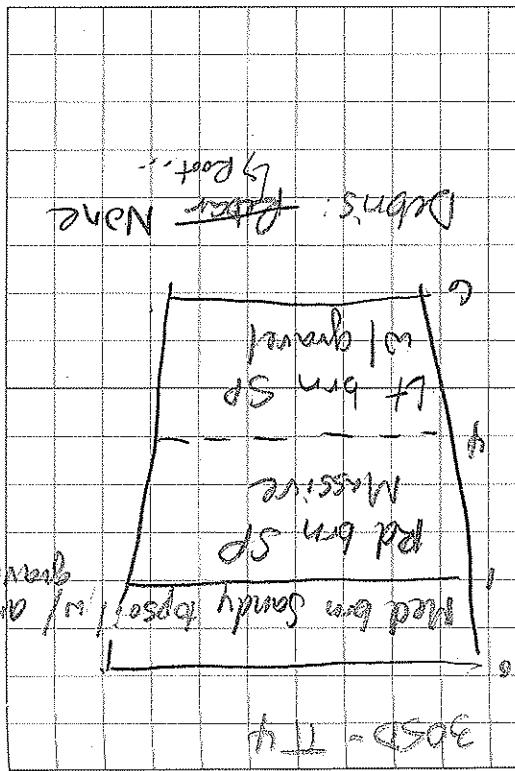
140 Location UMore East Date 6/29/11
 Project / Client XCB

ID	old	PID
BSD-TT05	n/a	6.4
BSD-TT6	n/a	0.0
BSD-TT2	n/a	0.4
BSD-TT1	n/a	0.1
30SD-TT9	n/a	0.0
30SD-TT4	n/a	0.0
30SD-TT5	n/a	0.0
30SD-TT8	n/a	0.5
30SD-TT7	^{lt} pine n/a	0.4

141 Location UMore East Date 6/29/11
 Project / Client XCB

Bkgd	Description
0.0	Sandy topsoil and brn
0.0	
0.0	
0.0	
0.0	Rd brn ML
0.0	med D# brn topsoil
0.0	
0.0	
0.0	Leamy topsoil

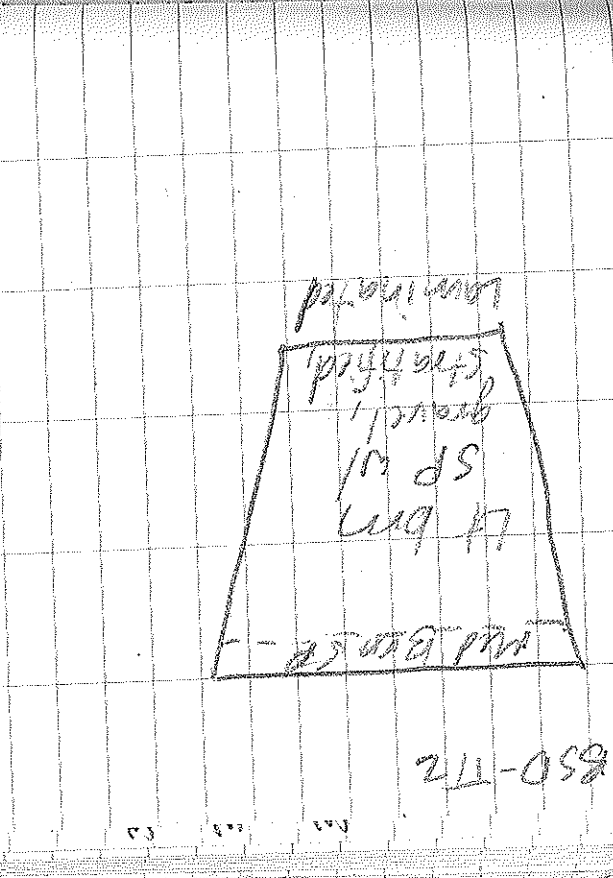
Location W More East Date 6/29/11 143
 Project / Client KEB

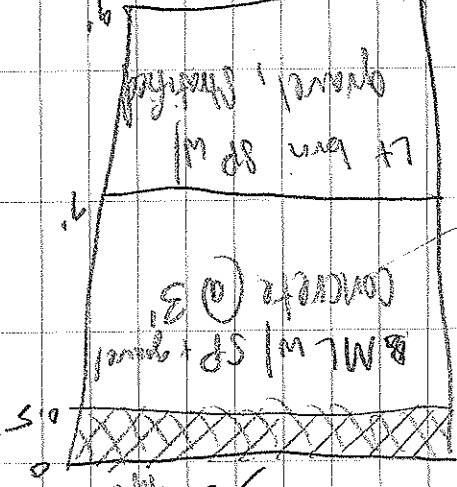


Location W More East Date 6/29/11
 Project / Client KEB

SAME

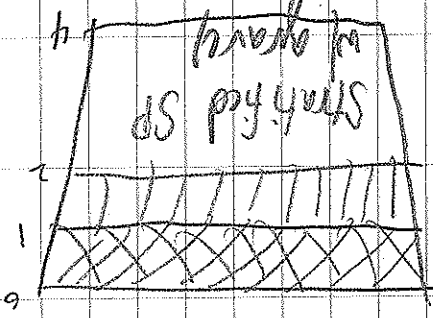
BSD-117



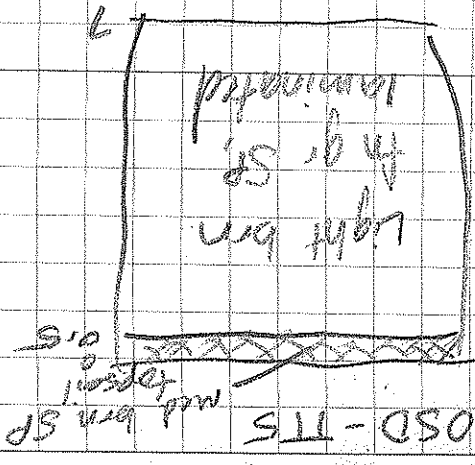


Diagrams of columns of concrete

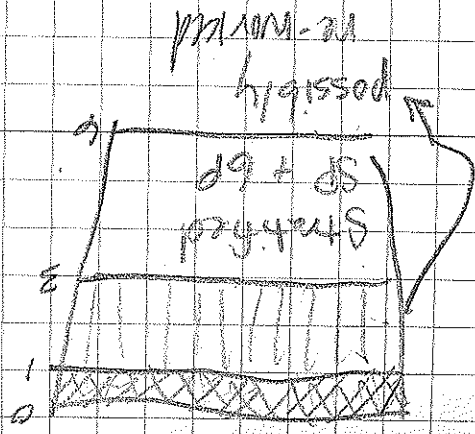
30SD-TT8



30SD-TT3



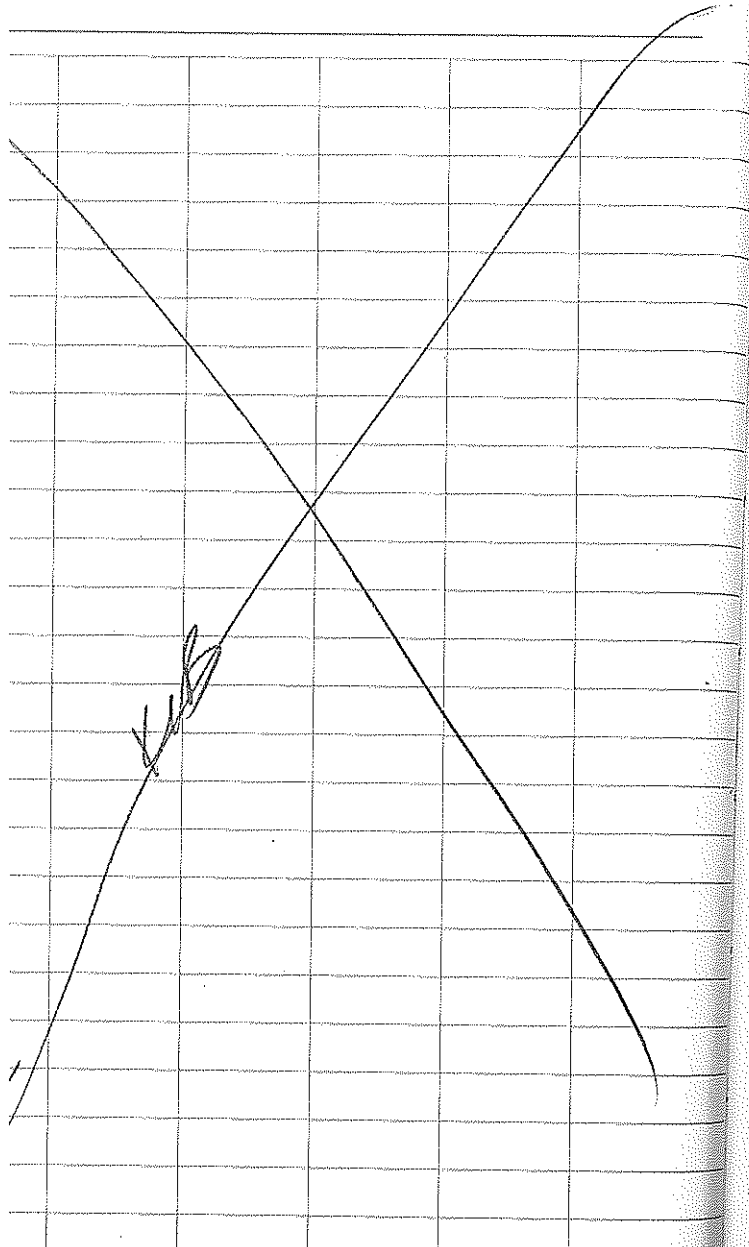
30SD-TT5



30SD-TT9

ation _____ Date _____

ject / Client _____



The manufacturers of numerous environmental products. Should you have any questions about this field book or have any suggestions, we welcome your input.

Although much effort has been put into these pages, the J. L. Darling Company is not responsible for any errors or omissions.

To provide input or suggestions, please contact the "Rite in the Rain" dealer nearest you.

www.RiteInTheRain.com

Code

Error codes are used to identify errors and are written above the error.

- Commonly used error codes:
- RE Recording Error
 - CE Calculation Error
 - TE Transcription Error
 - SE Spelling Error
 - CL Changed from Original
 - DC Original Sample Changed After Analysis
 - WO Write Over
 - NI Not Initialed
 - OB Not Recorded

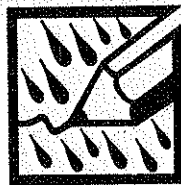
Note: Error code should be written above the error.

- Class 1 Explosives
- Class 2 Gas
- Class 3 Flammable Liquid
- Class 4 Flammable Solid
- Class 5 Oxidizing Substances
- Class 6 Toxic (poisonous)
- Class 7 Radioactive materials
- Class 8 Corrosives
- Class 9 Miscellaneous

Container type

- BR - Boston Round
- AWM - Amber Wide Mouth

UMore East
Remedial Investigation
Test Trenching
Book 2



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

6/29/2011 - 10/20/2011

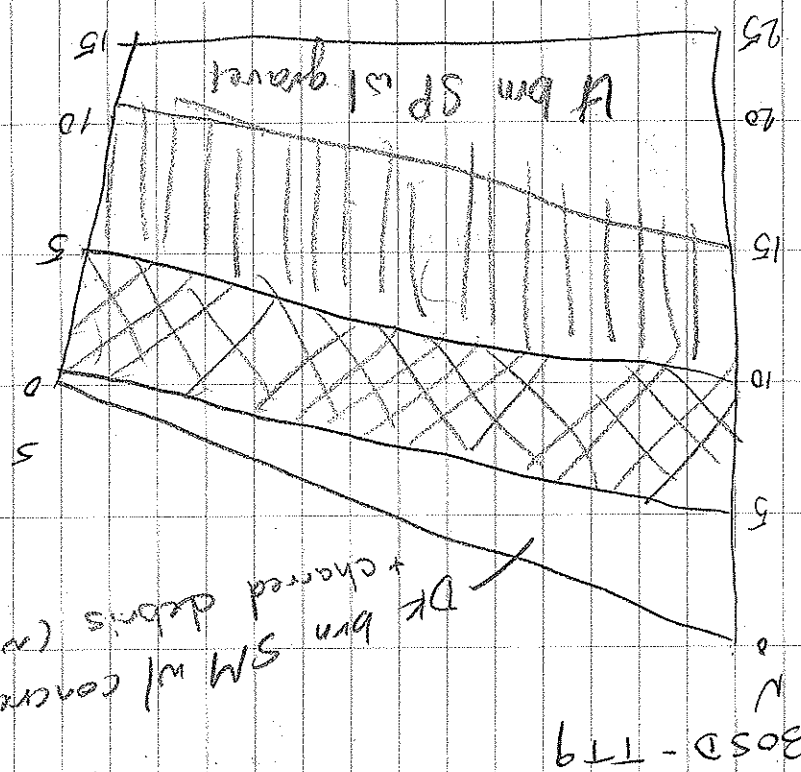
Location Umore East

Date 6/29/11

Project / Client

KCB

SM w/ concrete, clay tile
 DK brn + charred debris (motor debris)



30SD-TT9

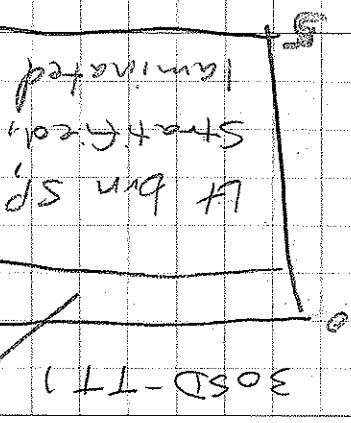
Location Umore East

Date 6/29/11

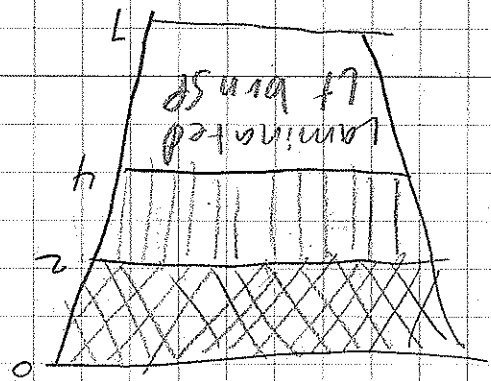
Project / Client

KCB

MD brn
 SP w/ asphalt
 0.5'



30SD-TT1



30SD-TT2

6 Location W More East Date 6/29/14
 Project / Client _____

KUB

ID	old	PID
30SD-TT9	n/a	0.8
30SD-TT2	¹⁴ Pine / n	15.2
→ Collected VOC Sample		
30SD-TT1	n/a	0.6
MSATC2-TT1-0.5	¹⁴ 0 / gry	0.5
MSATC2-TT1-0.5	14/n	0.4

Location W More East Date 6/29/14
 Project / Client _____

KUB

Bkgd	Description
0.0	SM topsoil, dk brn w/ tr debris (concrete)
0.0	DK brn loamy topsoil
6.0	Med Brn SP 0/5% asphalt
0.0	SM, brn gry, w/ discolored gry soil
0.0	SP, lt brn, oily sheen

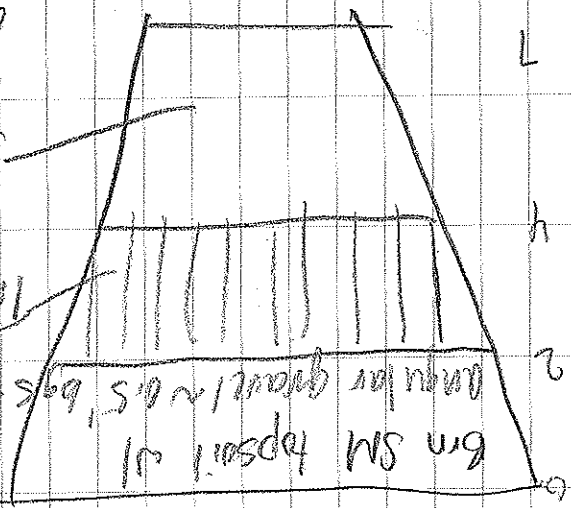
MSATC2-TT1-0.5 → Moved per Gene recheck of tank location

Bin SM top soil w/ angular gravel ~ 0.5' bags + grey discarded soil

1' discarded (grey soil)

Stratified sp + gp

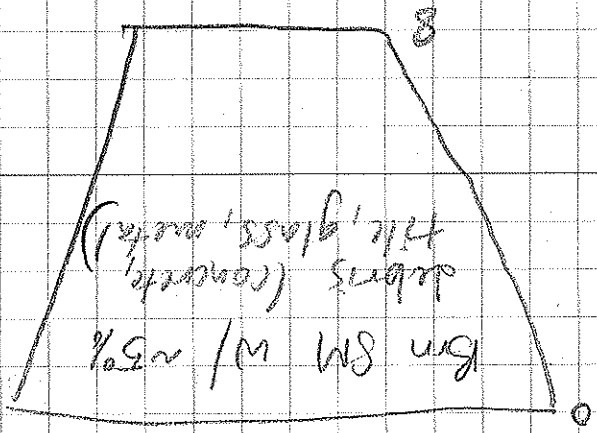
oily/greasy sludge on gloves when touching soil



MSATC2-TT2-0.5 → Moved to former house location

Bin SM w/ ~5%

debris (concrete, tile, glass, metal)



Location U More East

Date 6/30/11

Project / Client

KCB

700 KCB onsite

- Safety meeting

745 Begin test / trenching

→ Moved U17A-TT1 to area of vegetation distress appears to be over LWB sewer, moved back to original location

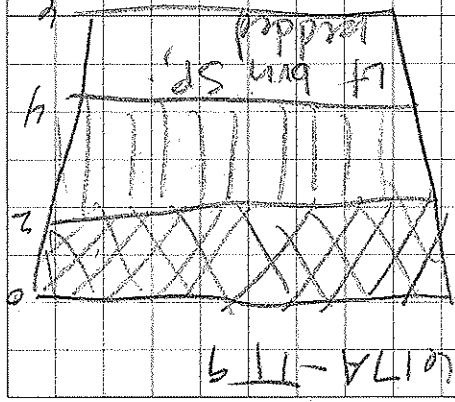
1300 Work ends

Location U More East

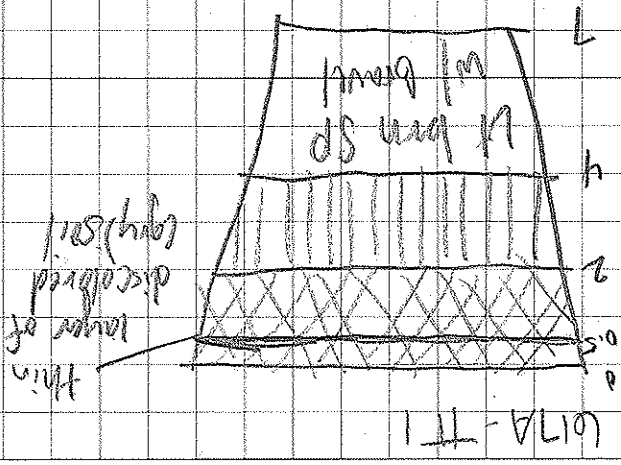
Date 6/30/11

Project / Client

KCB



* One concrete chunk at surface

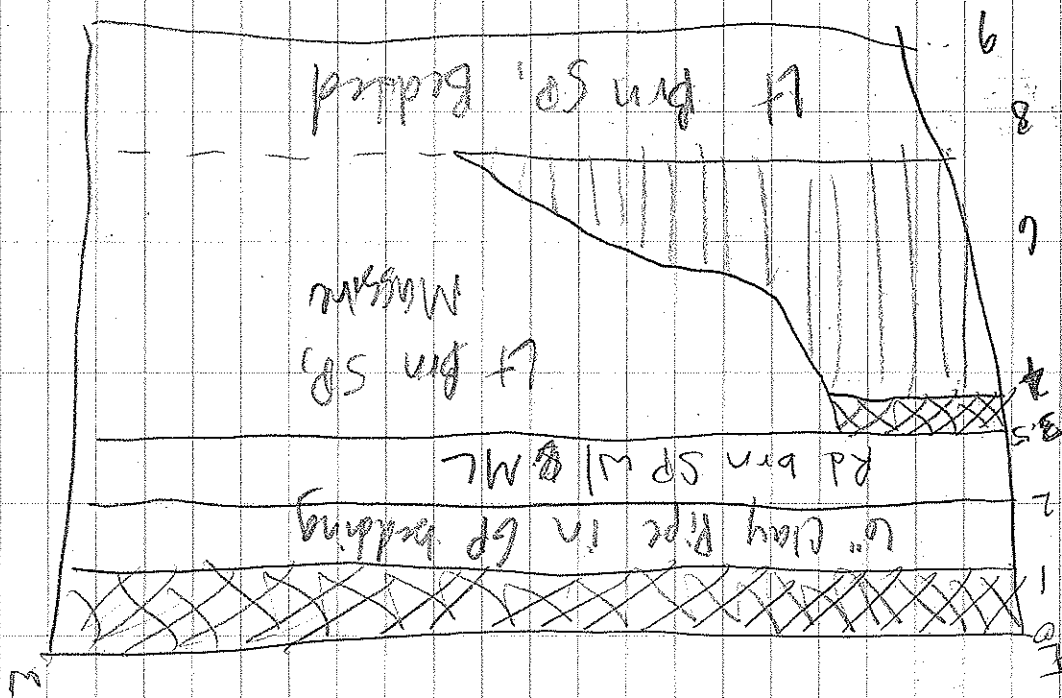


* No debris

12

Location UMore East Date 6/30/11

Project / Client KCB

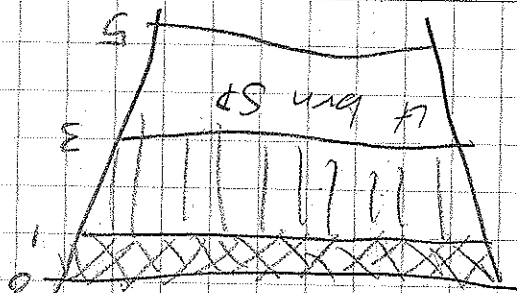


U17A-T12

13

Location UMore East Date 6/30/11

Project / Client KCB



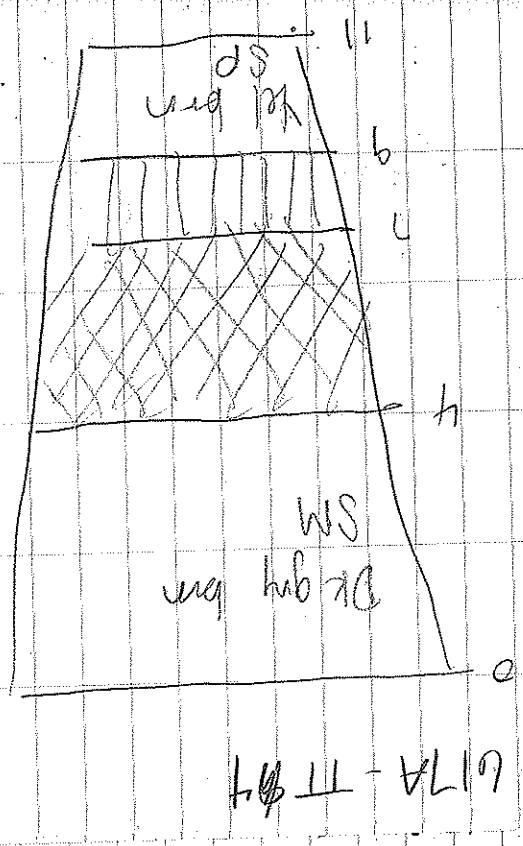
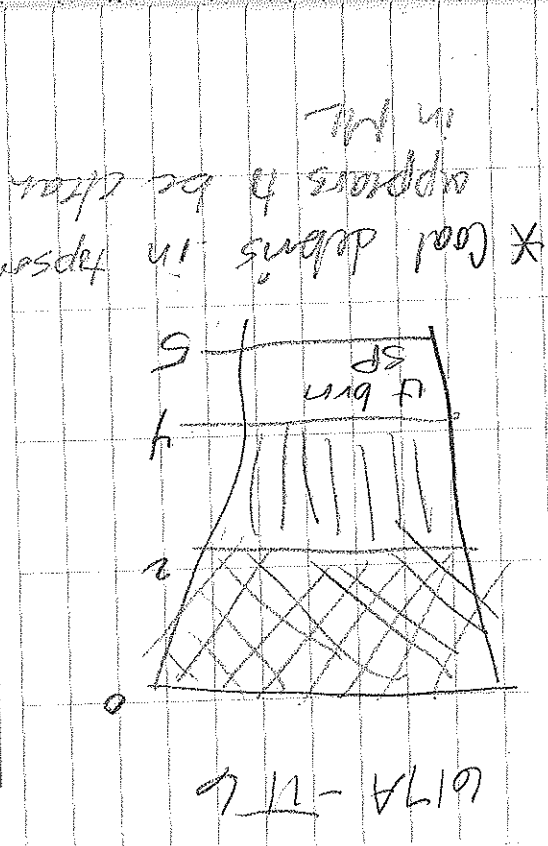
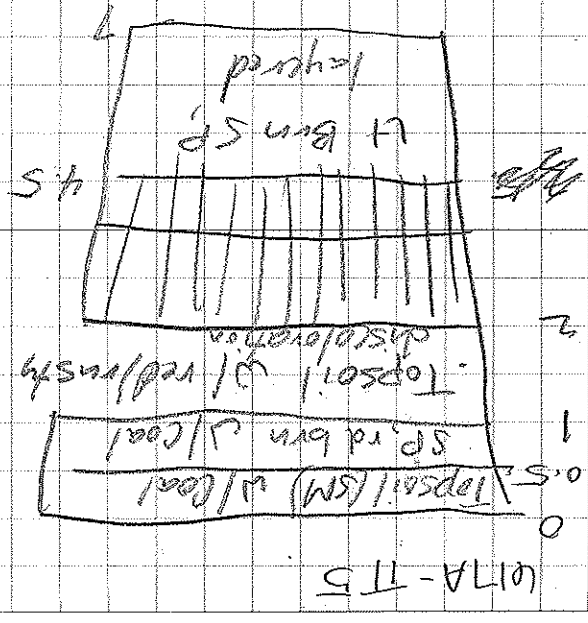
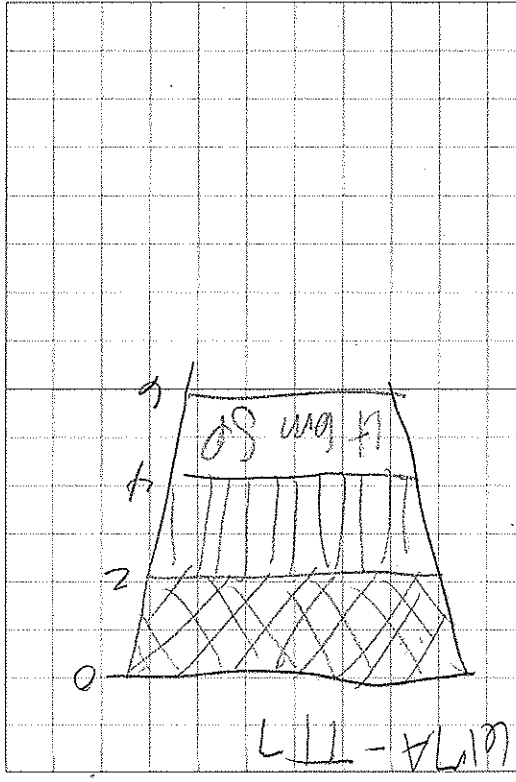
U17A-T13

Location Umore East Date 6/30/11
 Project / Client KCB

Bkgd	Description
0-20	DK brn sil gry discoloration, topsoil
	DK brn topsoil
	Rd brn SPW
	DK brn Topsoil
	DK gry brn SM

Location Umore East Date 6/30/11
 Project / Client KCB

ID	o/d	PID
U17A-TT1-0.5	n/a	0.4
U17A-TT2-0.5	n/a	0.8
U17A-TT2-2'	n/a	1.2
U17A-TT9-0.5	n/a	1.0
U17A-TT4-0.5	n/a	0.8
U17A-TT3-0.5	n/a	2.4
U17A-TT5	n/a	2.1
U17A-TT5	n/a	1.0
U17A-TT6	n/a	0.8
U17A-TT6	n/a	0.4
U17A-TT7	n/a	1.2
U17A-TT8	n/a	0.5
U17A-TT6	n/a	0.5



Location U More East Date 6/30/11

Project / Client KCB

7:00 KCB onsite
- Safety Meeting

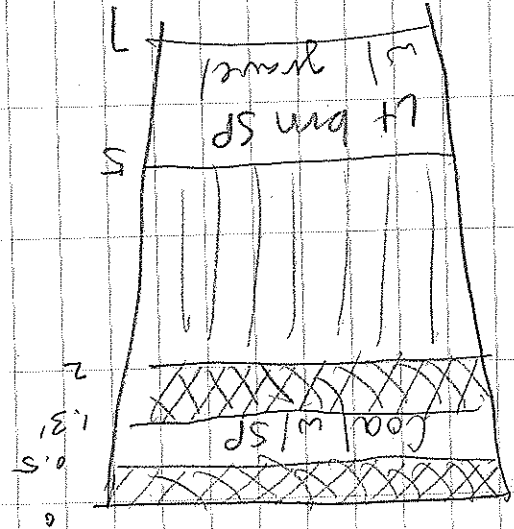
7:30 Begin digging in Main
shops area

11:00 Gene + Don (U of Mn) +
Arnie Jensen (Local Resident/
former tenant) onsite.
- Arnie described GOW
operations and areas
of concern

12:30 work ends due to
excessive heat + holiday
weekend

Location U More East Date 6/30/11

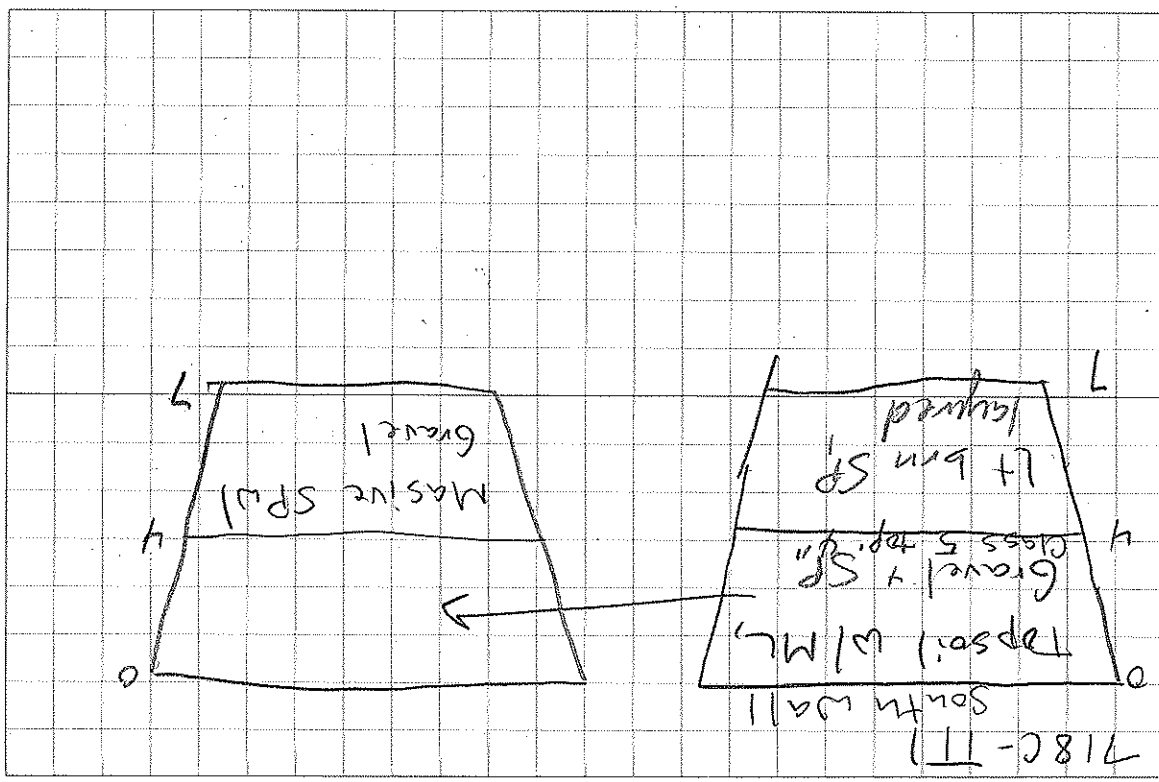
Project / Client KCB



617A-TT8

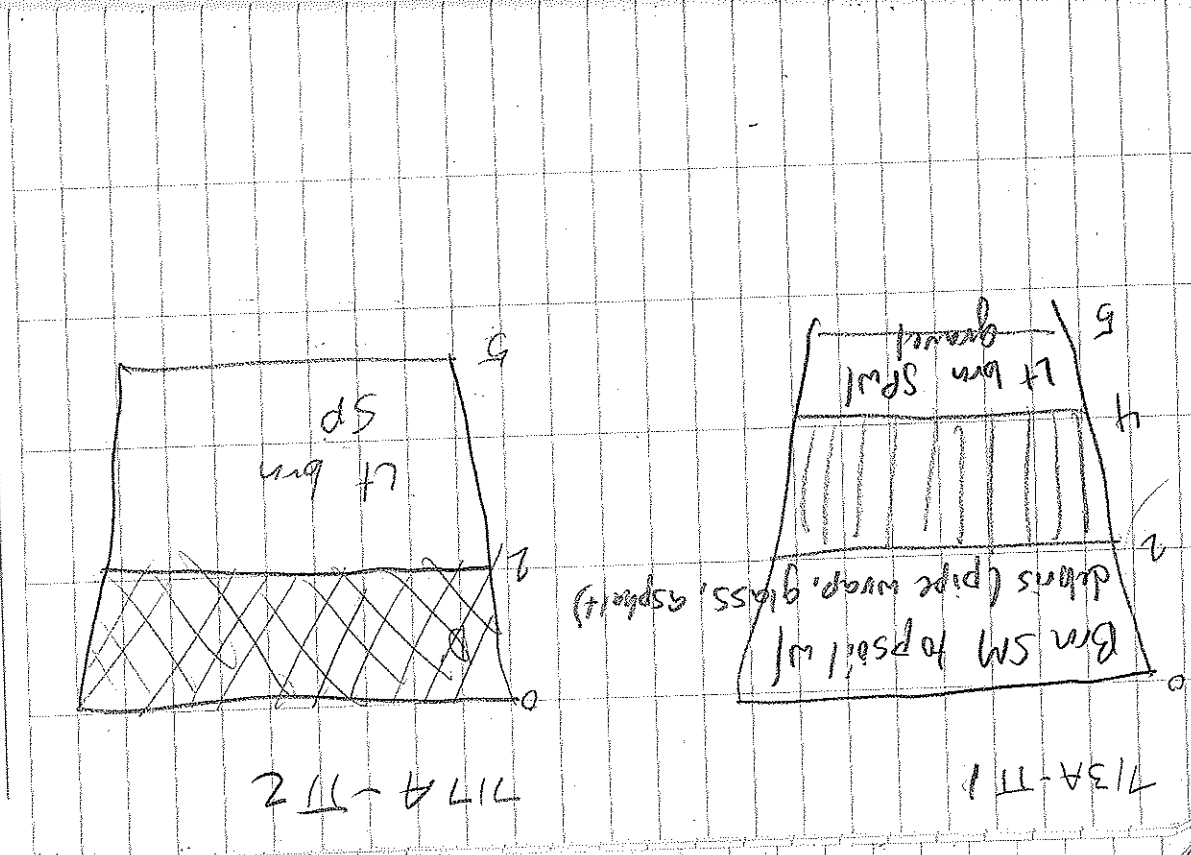
Location WMore East Date 7/1/11

Project / Client KCB



Location WMore East Date 7/1/11

Project / Client KCB



Location W More East

Date 7/1/11

Project / Client

KCB

ID

713A-T1-0.5

old

PID

0.0

717A-T12-0.5

n/a

0.0

718C-T1-0.5

n/
SI
rust

6.0

0.0

Location W More East

Date 7/1/11

Project / Client

KCB

Bkgd

0.0

Description

Brn SM topsoil

0.0

loamy topsoil

0.0

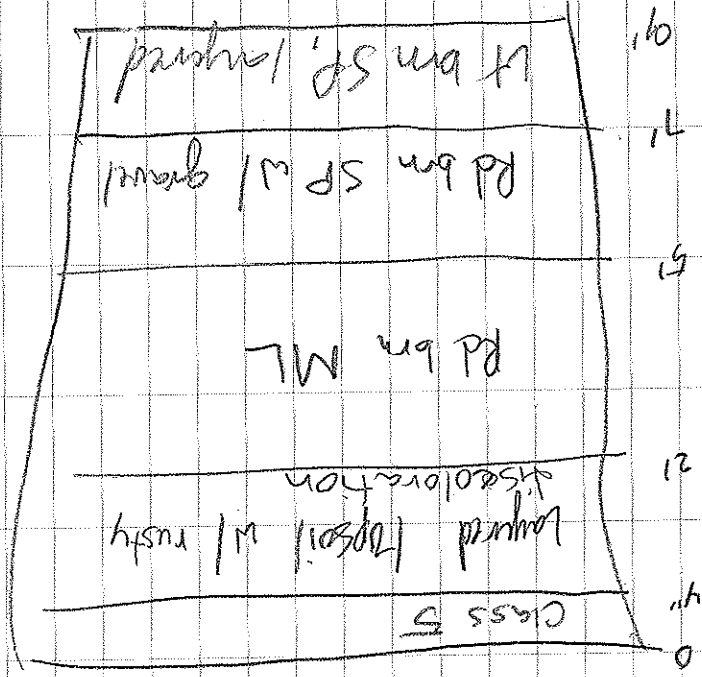
Platy dk brn topsoil

Location UMore East

Date 7/1/11

Project / Client

KCB



Location UMore East

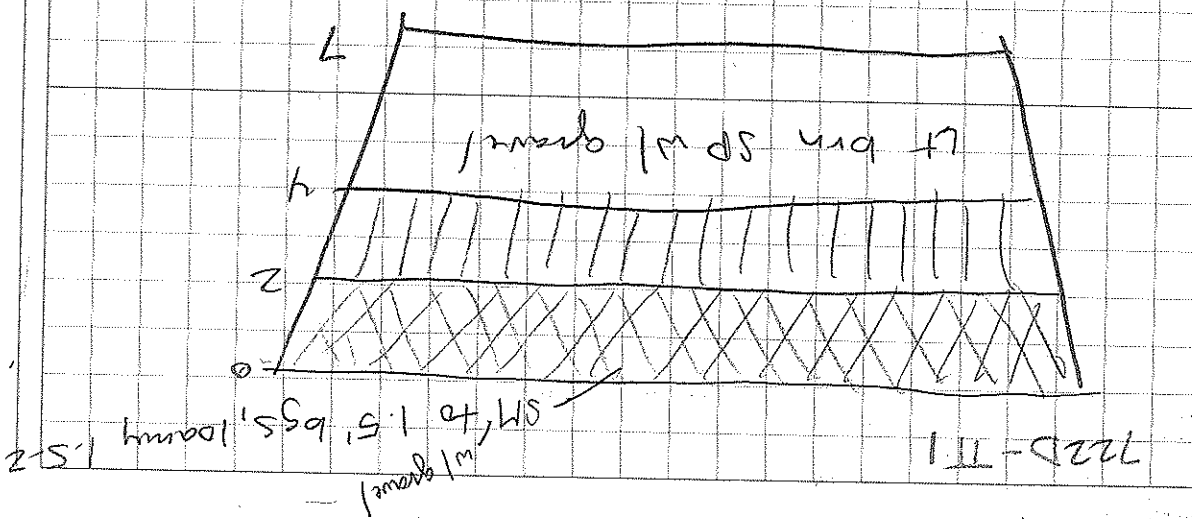
Date 7/1/11

Project / Client

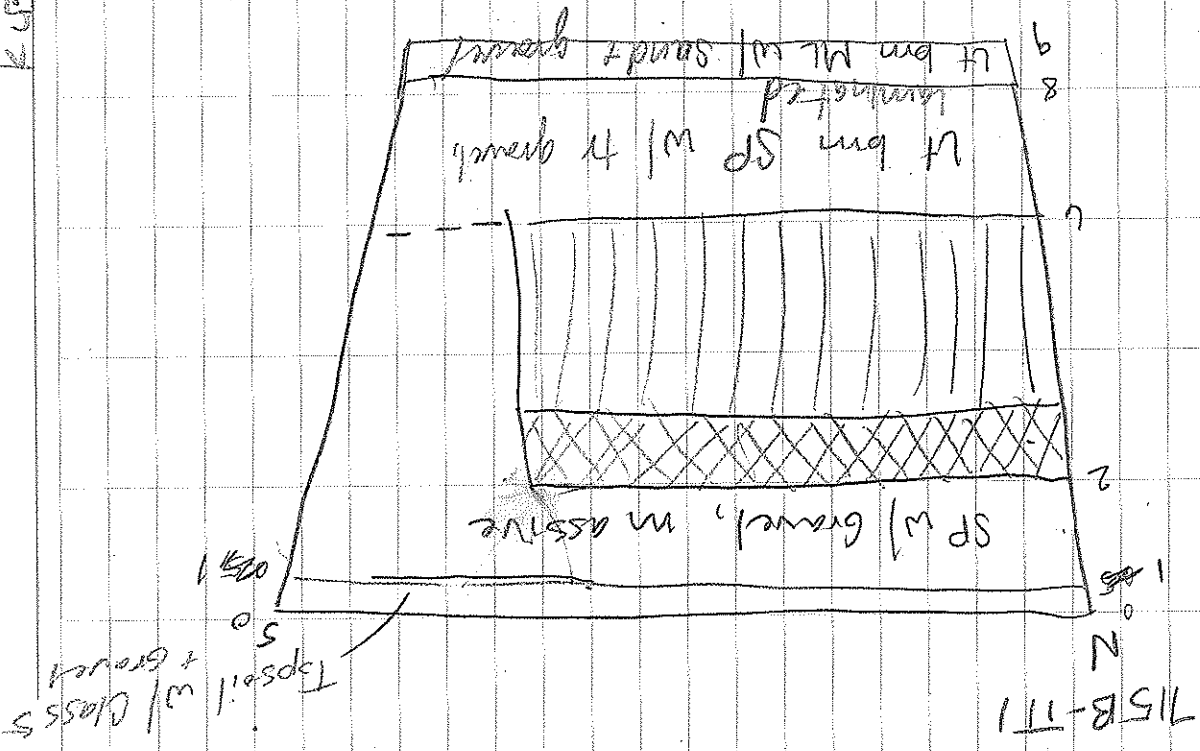
KCB

700 KCB onsite
 Safety Meeting
 1700 End work

KGS



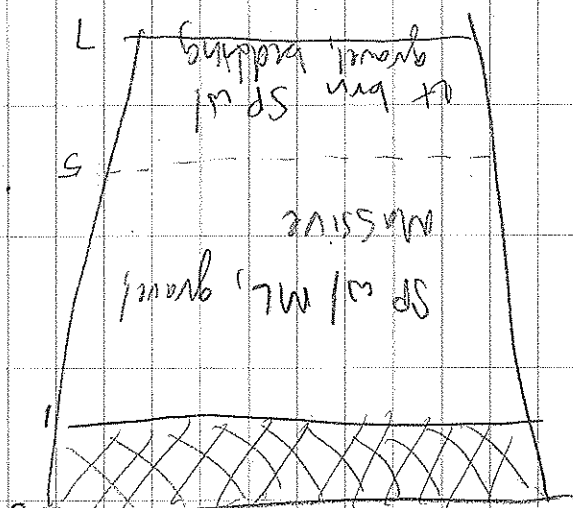
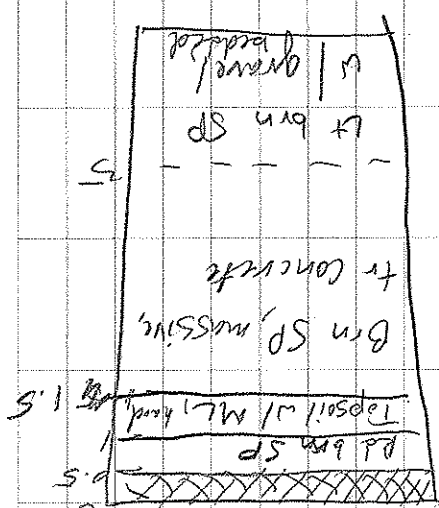
KGS



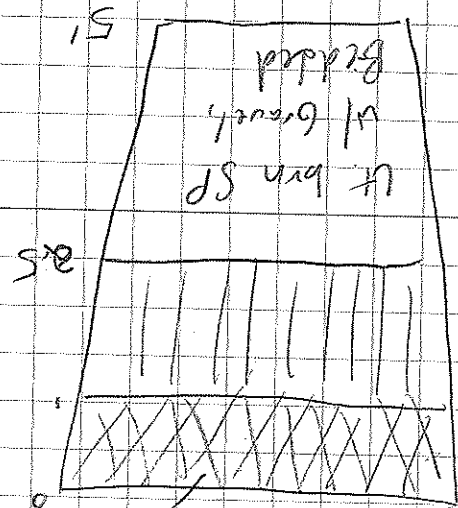
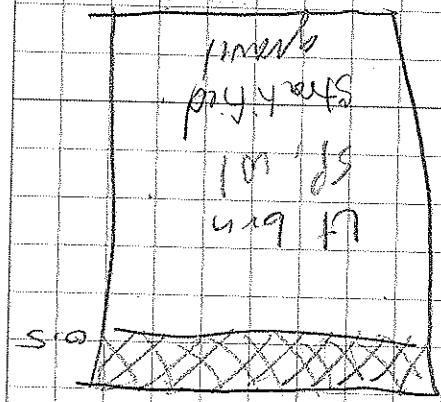
ID	o/d	PID
715B-TT1-0.5	n/a	0.0
MS/MSD vol, all parameters		
722D-TT1-0.5	n/a	0.8
MS/MSD vol, all parameters		
717A-TT1-0.5	n/a	0.8
MS/MSD vol, all parameters		
707L-TT1-0.5	n/a	0.5
MS/MSD vol, all parameters		
101C-TT1-0.5	n/a	0.4
MS/MSD vol, all parameters		
101B-TT2-0.5	n/a	0.7
MS/MSD vol, all parameters		
101B-TT1-0.5	n/a	1.7
MS/MSD vol, all parameters		
101A-TT1-0.5	n/a	0.0
MS/MSD vol, all parameters		
706A-TT2-0.5	n/a	0.8
MS/MSD vol, all parameters		
706A-TT1-0.5	n/a	0.0
MS/MSD vol, all parameters		
706D-TT1-0.5	n/a	0.0
MS/MSD vol, all parameters		
205A-TT2	n/a	0.0
205A-TT1	n/a	0.0

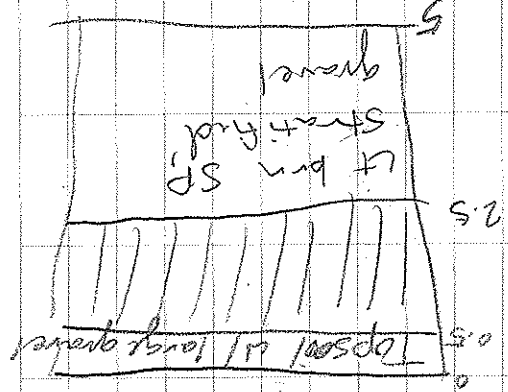
Bkgd	Description
0.0	Brn topsoil w/ gravel Sandy
0.1	↓
0.3	Leamy topsoil w/ gravel
0.1	Topsoil, ML, SP mixture
0.4	Leamy topsoil
0.0	Rd brn SP + ML w/ topsoil + gravel
0.3	Brn Sandy topsoil
0.0	↓
0.0	Dr brn leamy topsoil w/ sand
0.0	Sandy topsoil, brn
↓	DR brn topsoil

KCS

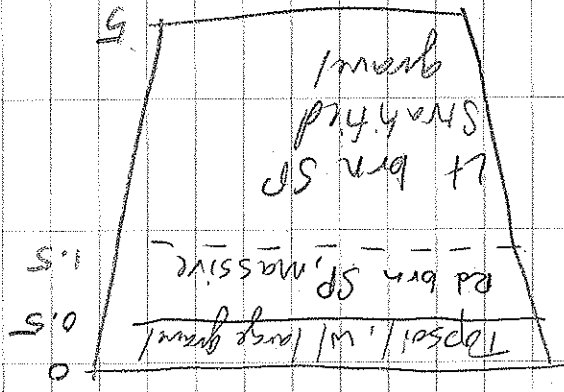


KCS

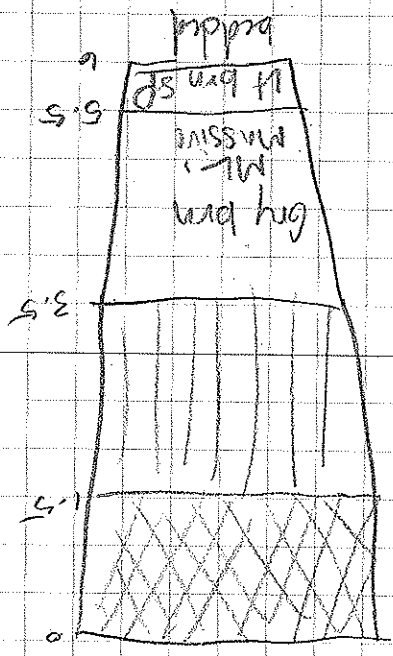




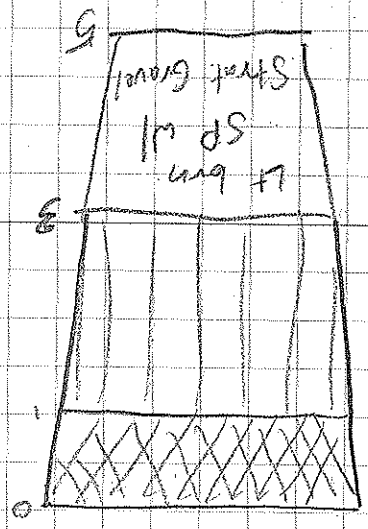
101B-TT1



101B-TT2

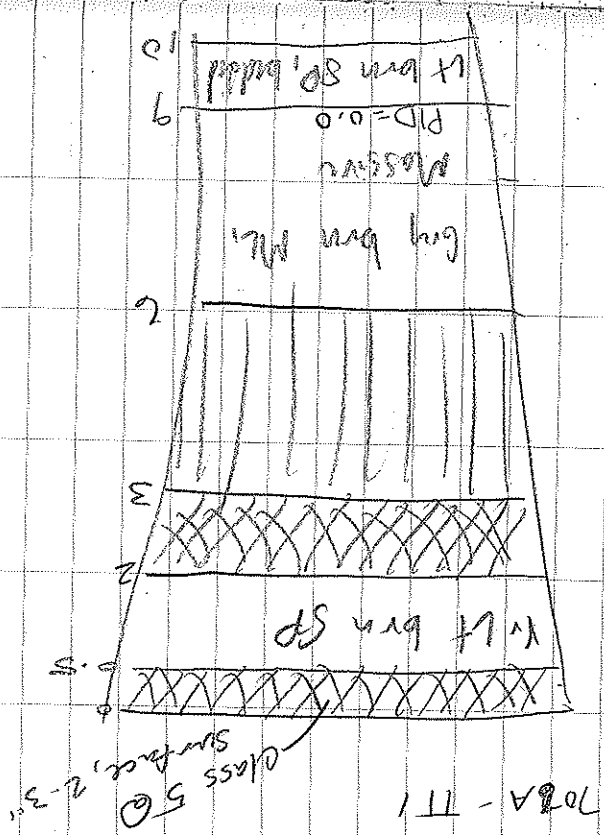
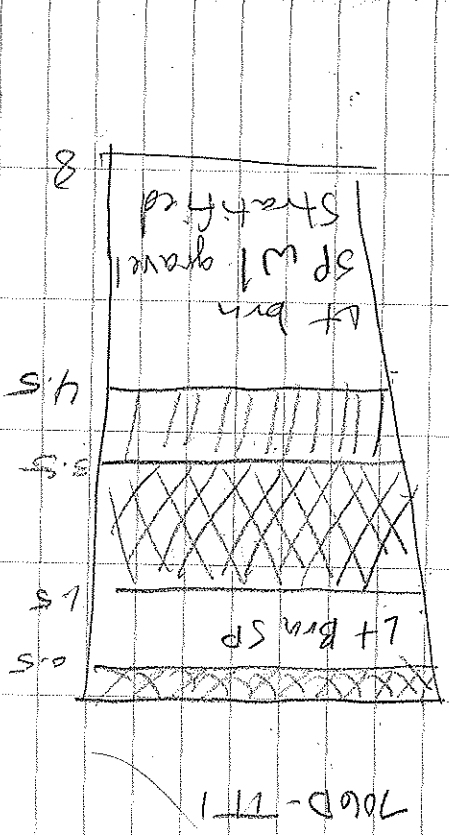


101A-TT2

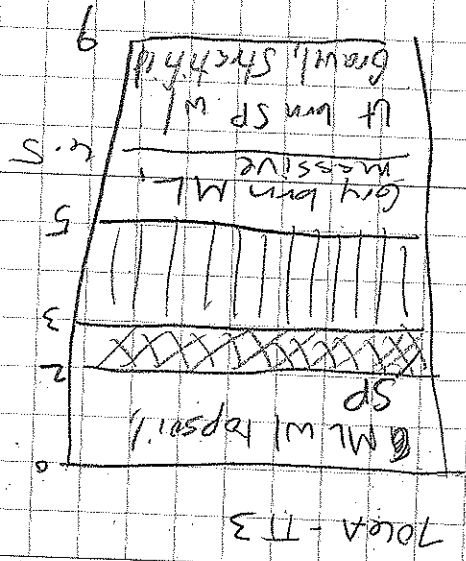
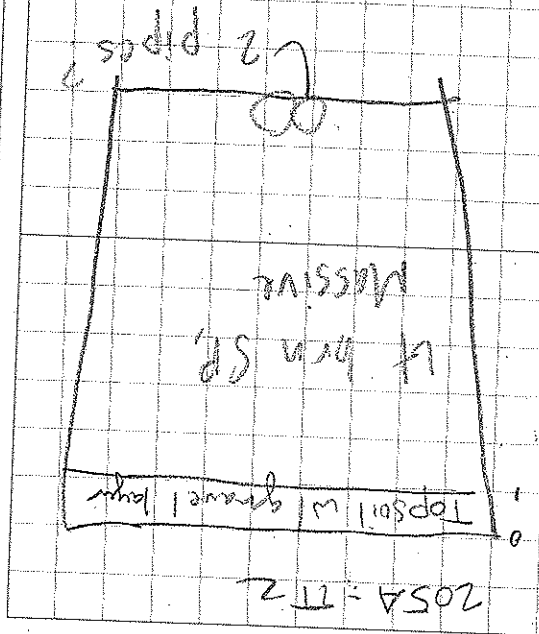


101A-TT1

KUB



KUB



Location UMore East

Date 7/12/11

Project / Client KUB

700 KUB onsite
Safety Meeting

Duplicates:

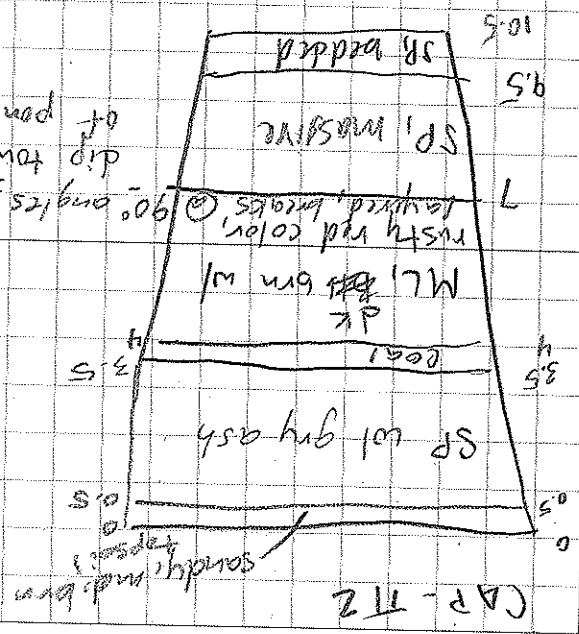
- M-1
- M-2
- M-3
- M-4

Field blanks

Location UMore East

Date 7/12/11

Project / Client KUB

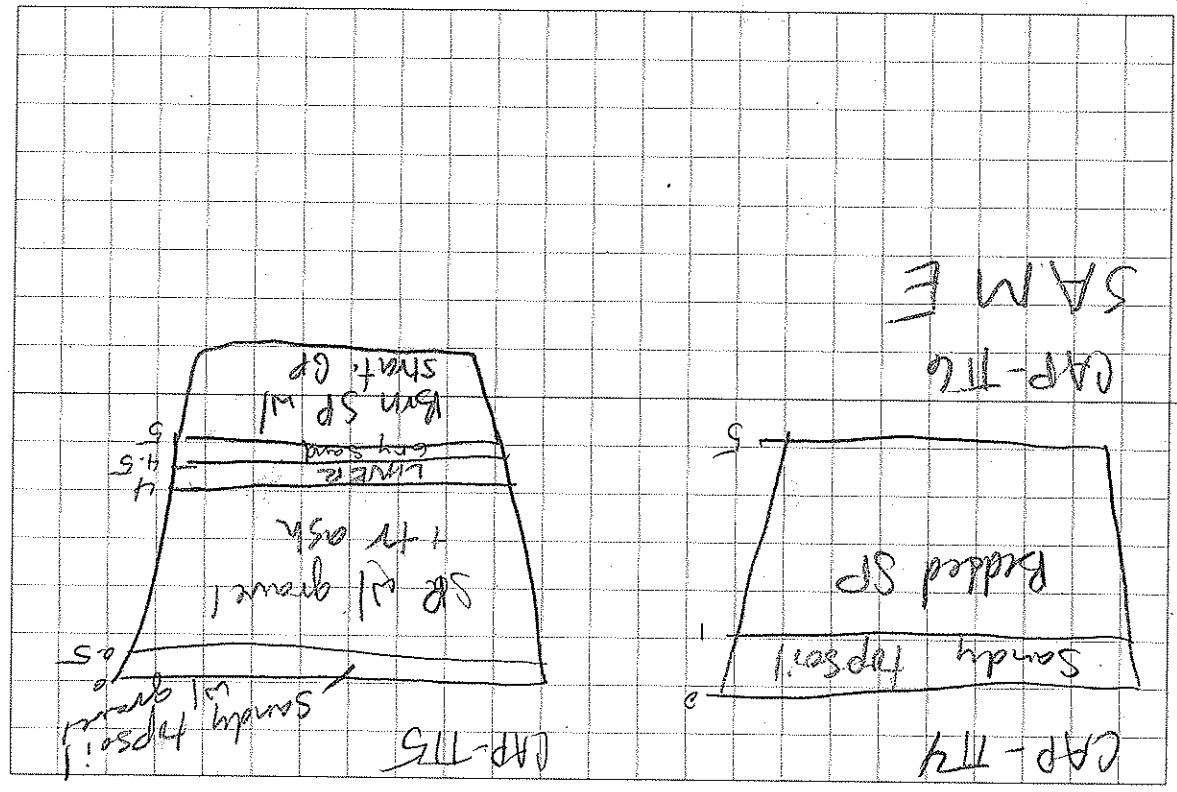


Date 7/12/11

Location UMore East

Project / Client

KCB

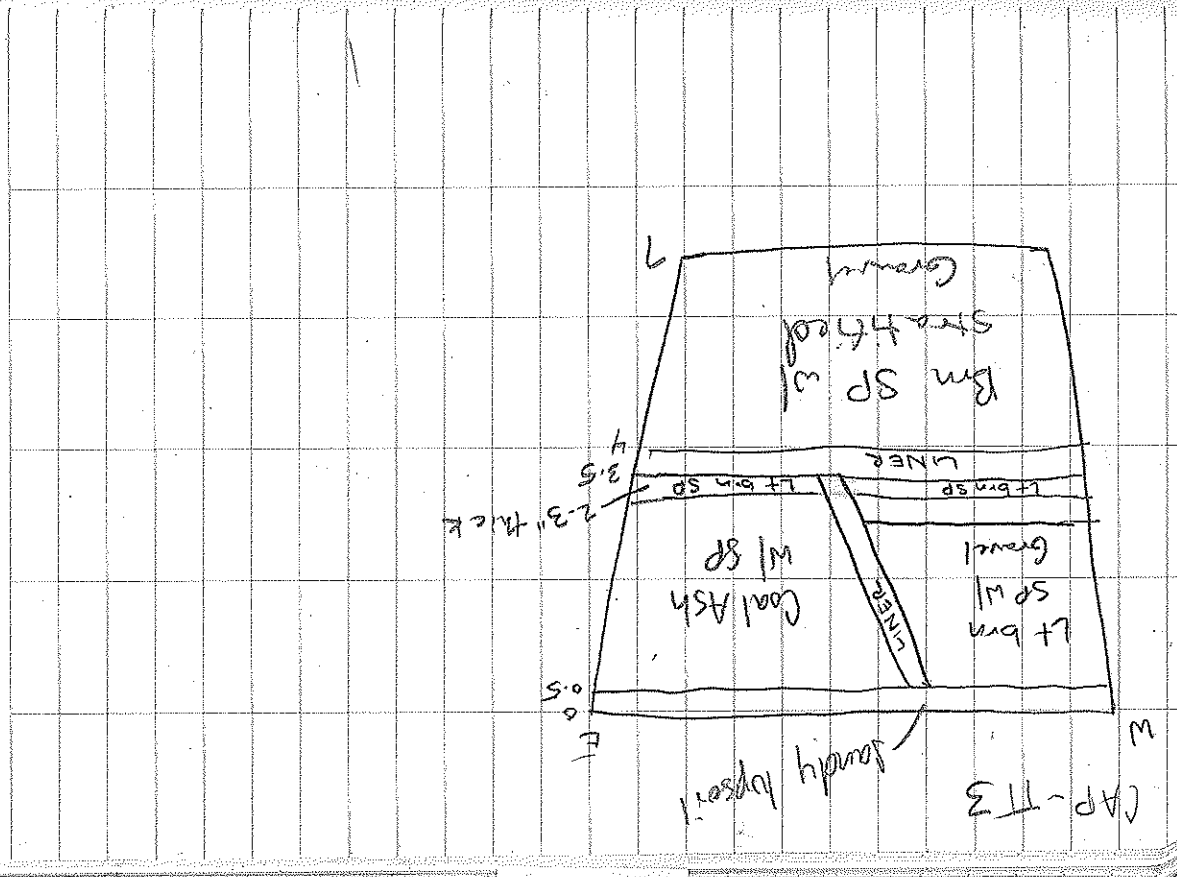


Date 7/12/11

Location UMore East

Project / Client

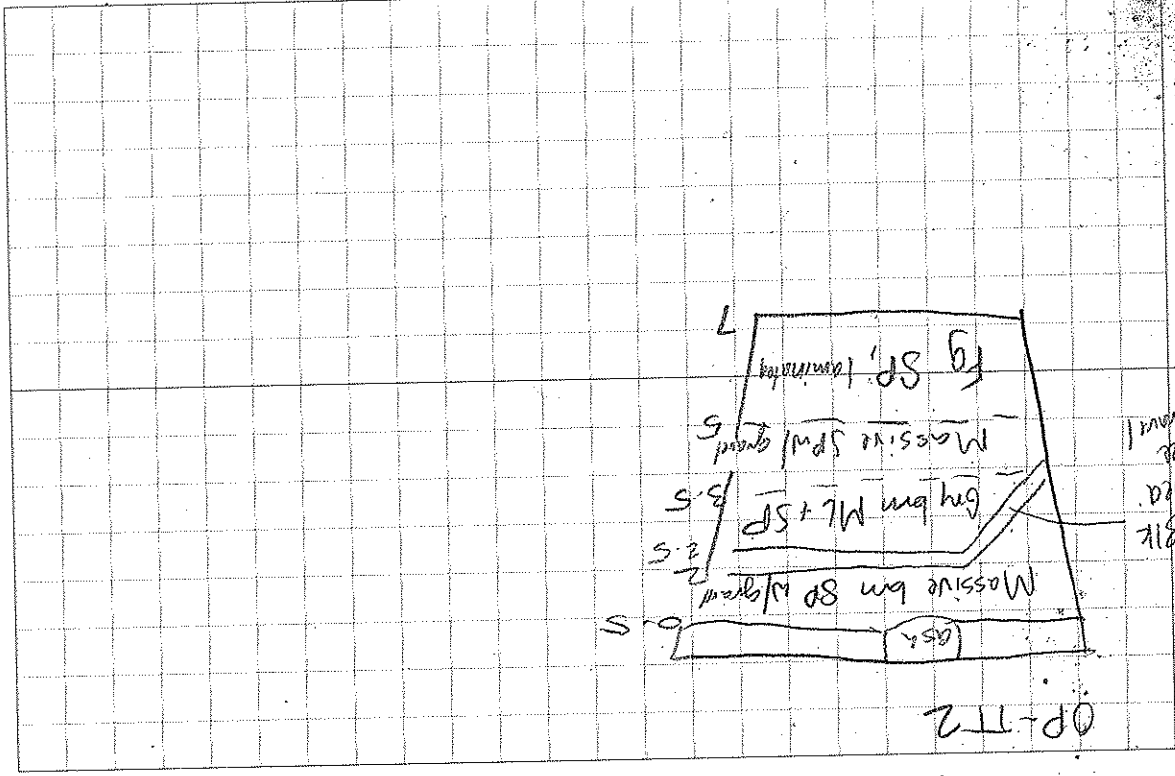
KCB



Date 7/12/11

Location UMore East

Project / Client KCB

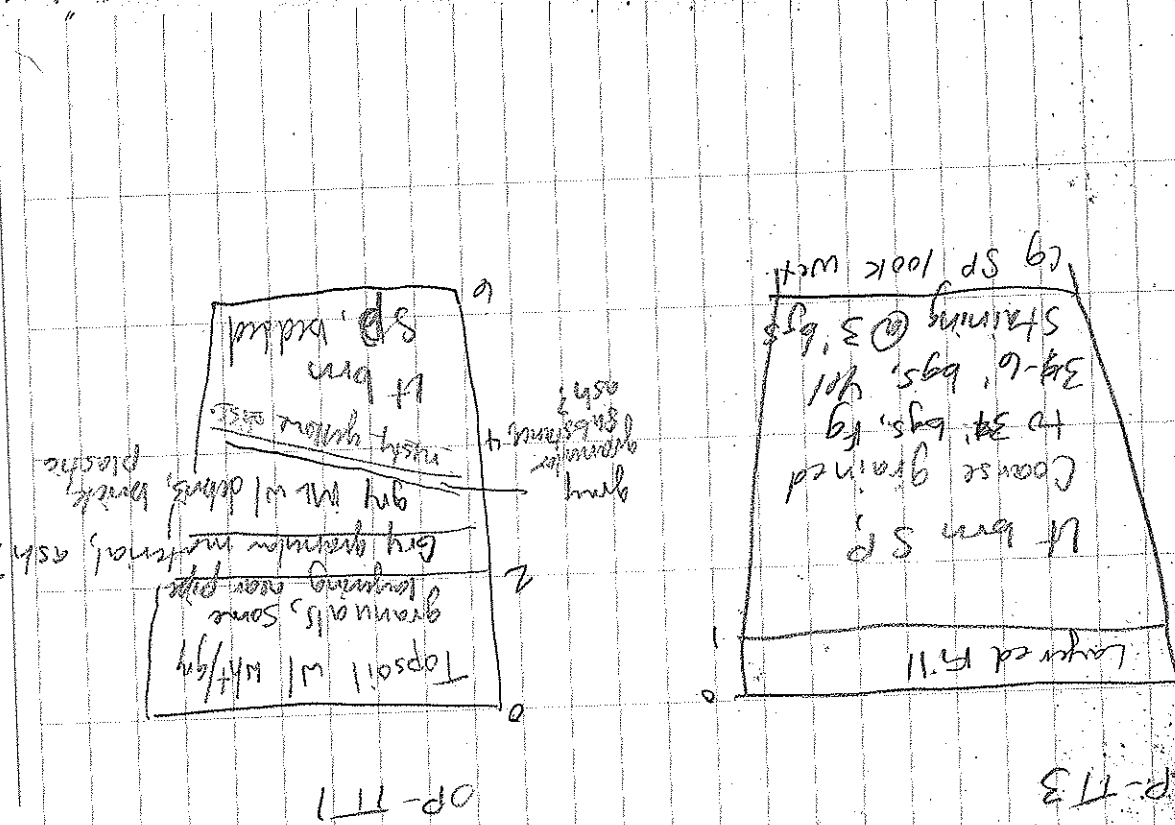


OP-TT2

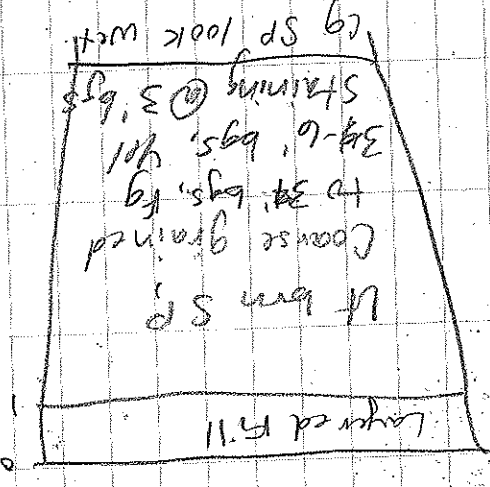
Date 7/12/11

Location UMore East

Project / Client KCB



OP-TT1

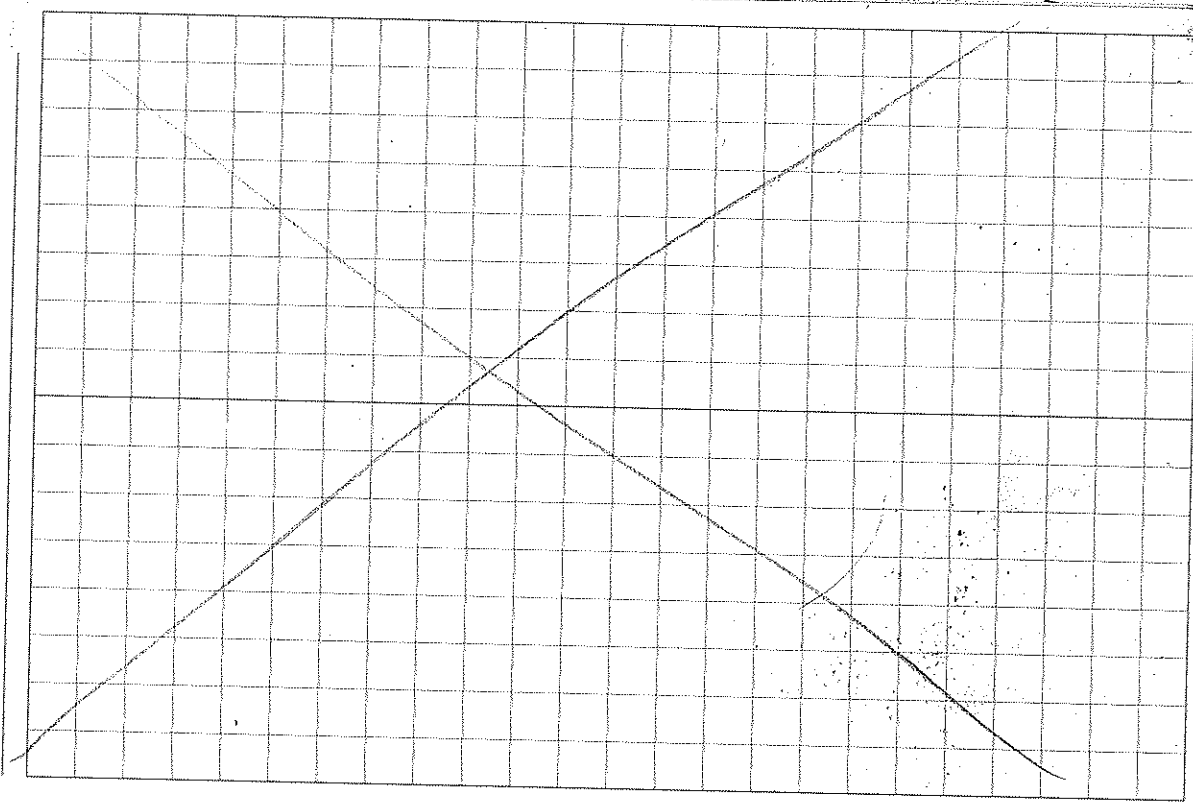


OP-TT3

Date _____

Location _____

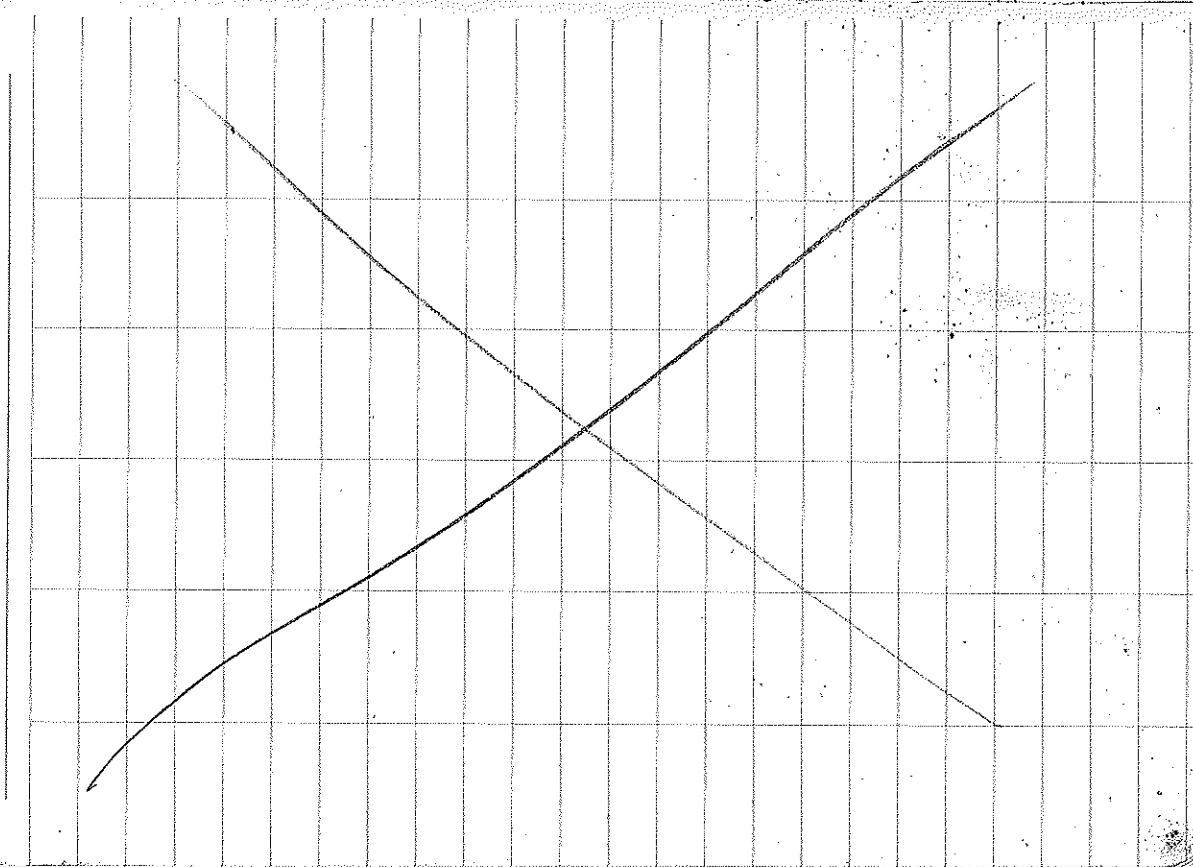
Project / Client _____



Date _____

Location _____

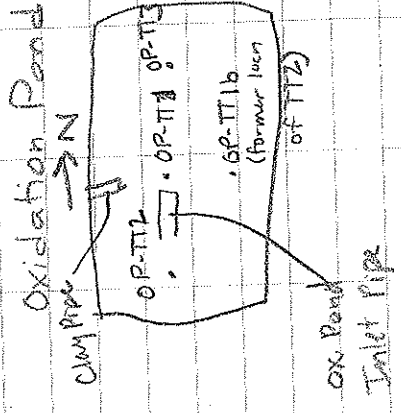
Project / Client _____



44 Location UMore East Date 7/13/11

Project / Client KCB

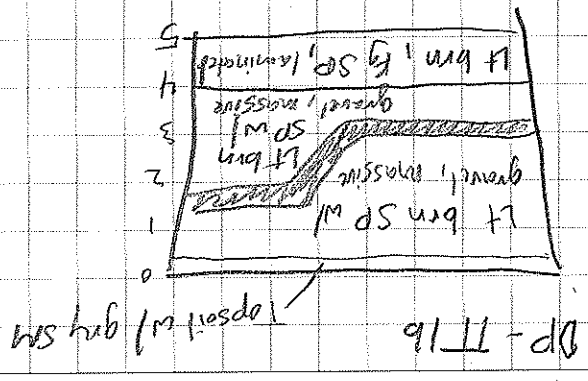
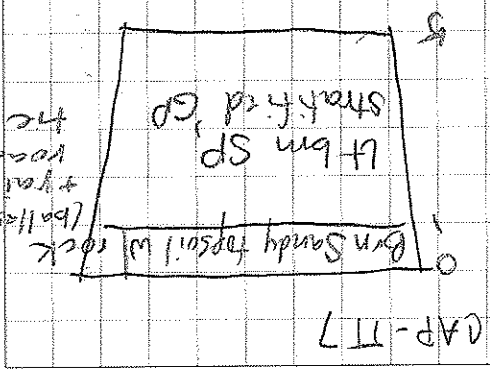
700 KCB onsite
- Safety Meeting



1700 Work ends

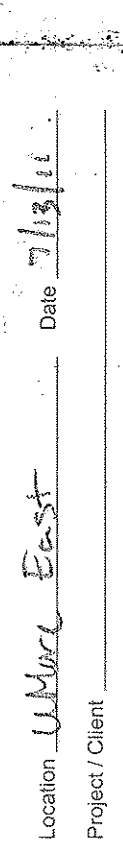
Location UMore East Date 7/13/11 45

Project / Client KCB



ID	o/d	PID
CAP-TT7-0.5	n/n	0.4
CAP-TT9-0.5	rusty n/n	0.5
OP-TT5-1'	n/n	0.7
OP-TT4-1'	rusty n/n	0.6
OP-TT6-0.5	n/n	1.1
OP-TT7-0.5	n/n	0.6
OP-TT8-0.5	n/n	0.4
228A-TT2-0.5	n/n	1.4
→ No Sample @ this locn		
228A-TT1-0.5	n/n	0.8
217A-TT4-0.1'	n/n	0.4
217A-TT3-0.5	n/n	0.4
217A-TT2-1'	76%ik	0.0

Bkgd	Description
0.4	Sandy, md brn stopsoil w/ rock
0.4	DK brn loamy topsoil
0.4	DK brn sandy topsoil
0.0	Lt brn SP w/ topsoil
0.0	DK brn topsoil w/
0.0	rock
0.0	DK brn loamy topsoil
0.4	
0.6	
0.2	DK brn SM w/ ML -tr concrete ↓
0.0	Foundry-like sand

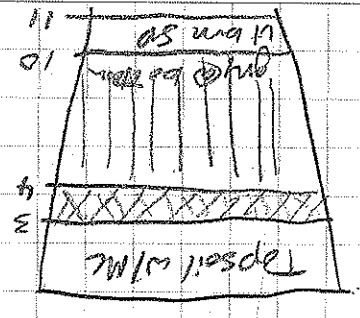


Date 7/13/11

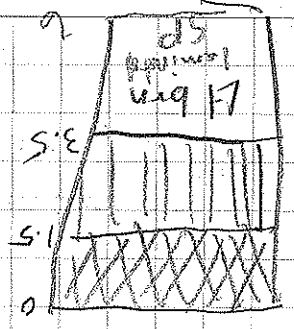
Location U More East

Project / Client

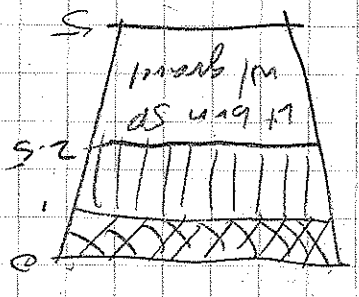
KUB



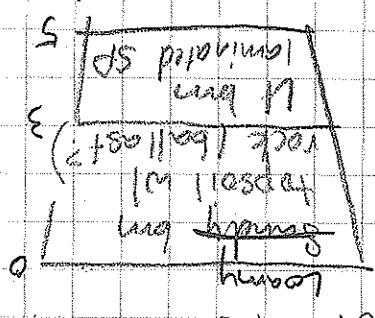
228 A-TT2



OP-TT8



OP-TT7



OP-TT6

Date 7/13/11

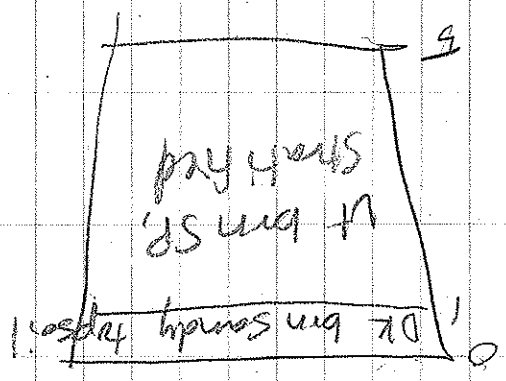
Location U More East

Project / Client

KUB

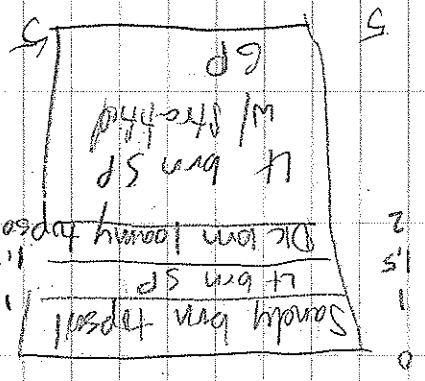
soil observed @ 0.5-1.5
rusty and discolored
SAME, veins of
eggs

OP-TT4

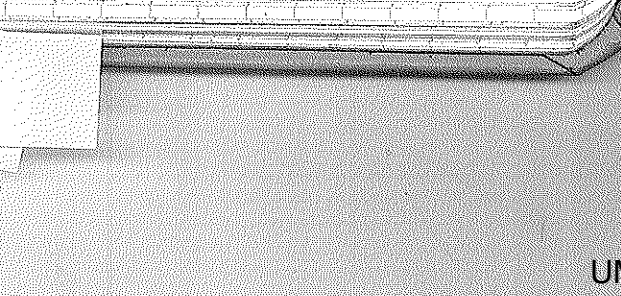
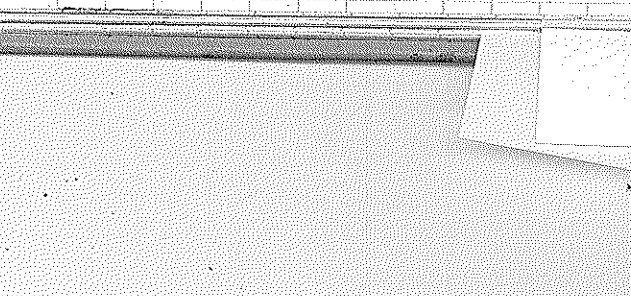
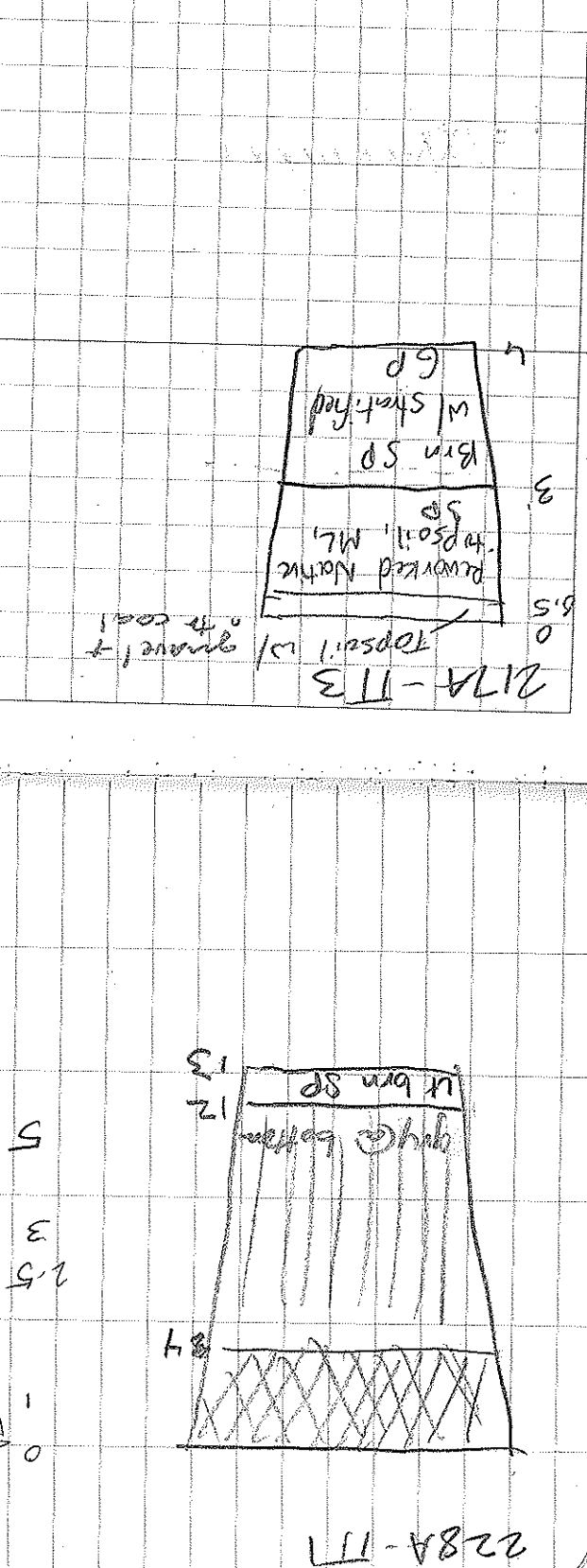
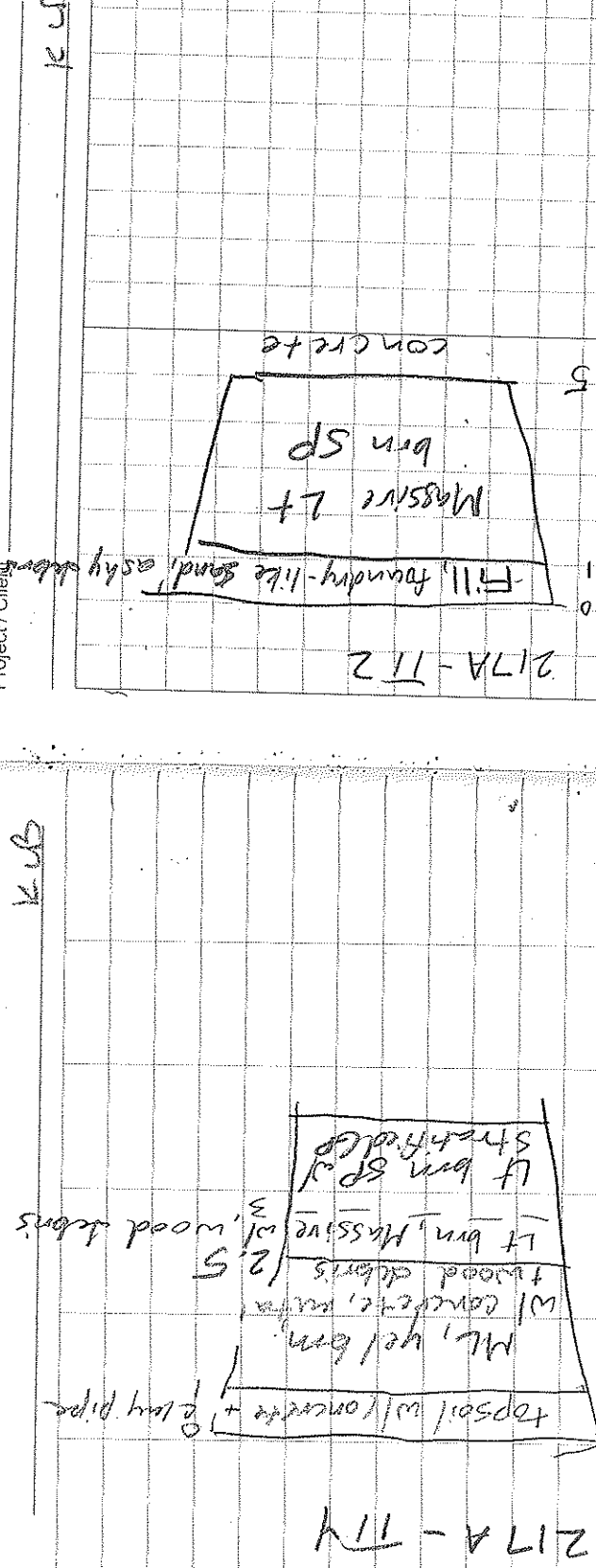


OP-TT5

Dr loamy tapsoil w/rusty
rd disc



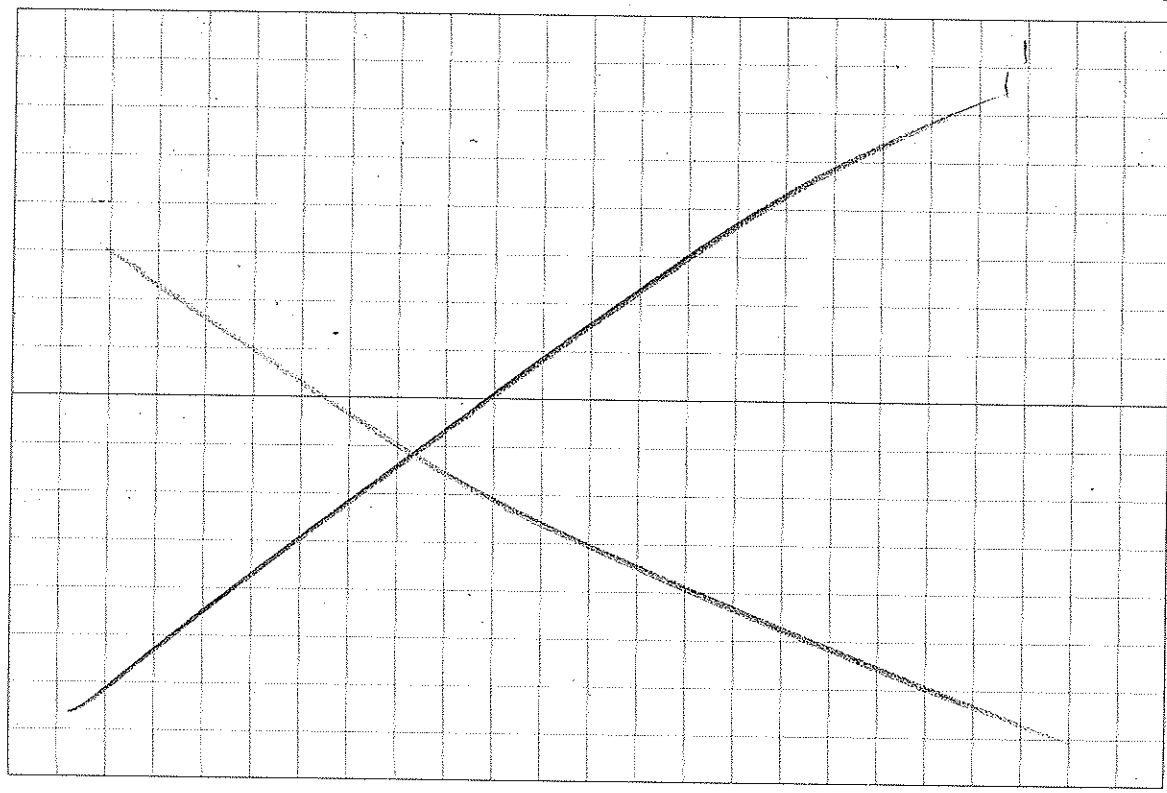
CAP-TT9



Date

Location

Project / Client

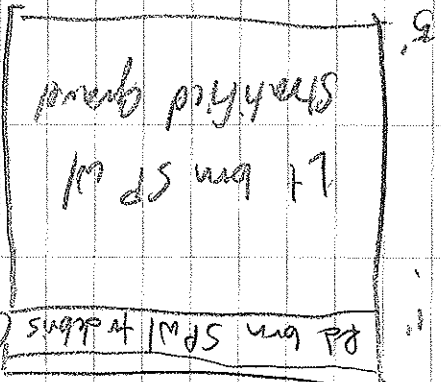


Date 7/13/11

Location Umore East

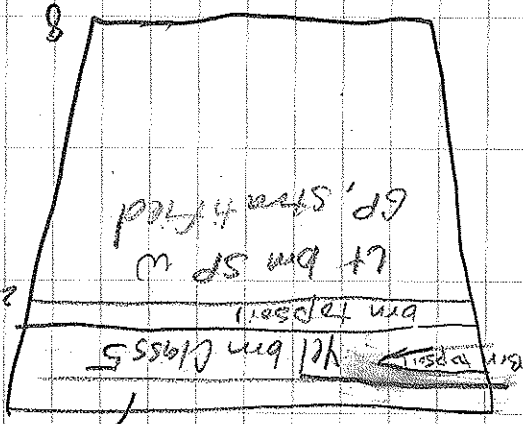
KCB

Project / Client
concrete
mail



209A-II1

2-3" brn topsoil



217A-II1

Location WMore East Date 7/13/11

Project / Client _____

KCS

Bkgd	Description
0.0	Sandy brn topsoil
0.0	Rd brn SP w/ br debris (nail)

Location WMore East Date 7/13/11

Project / Client _____

KCS

ID	old	PID
217A-T11-0.5	n/h	0.8
209A-T11-0.5	n/h	1.4

Location UMore EastDate 7/19/11

Project / Client

KCB

700 KCB onsite

- Safety Meeting

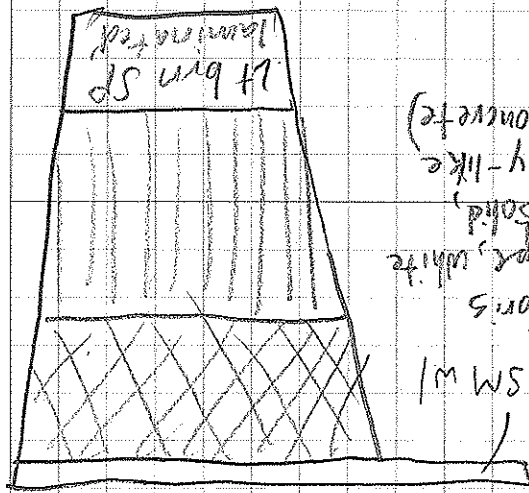
Encountered white material
 similar to sampled material
 in area @ E160D-TTZ-0.5

→ Collect Sample for
 Ni, RPA metals, SVOCs
 + Flashpt

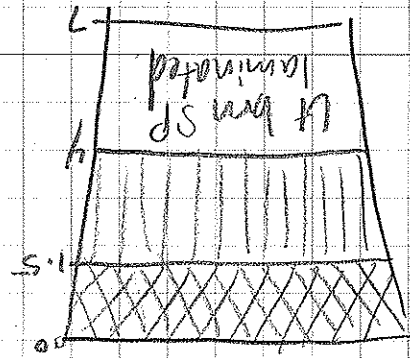
1030 Test trenching for Phase
 I complete

Location UMore EastDate 7/14/11

Project / Client

KCB

E160D-TTZ

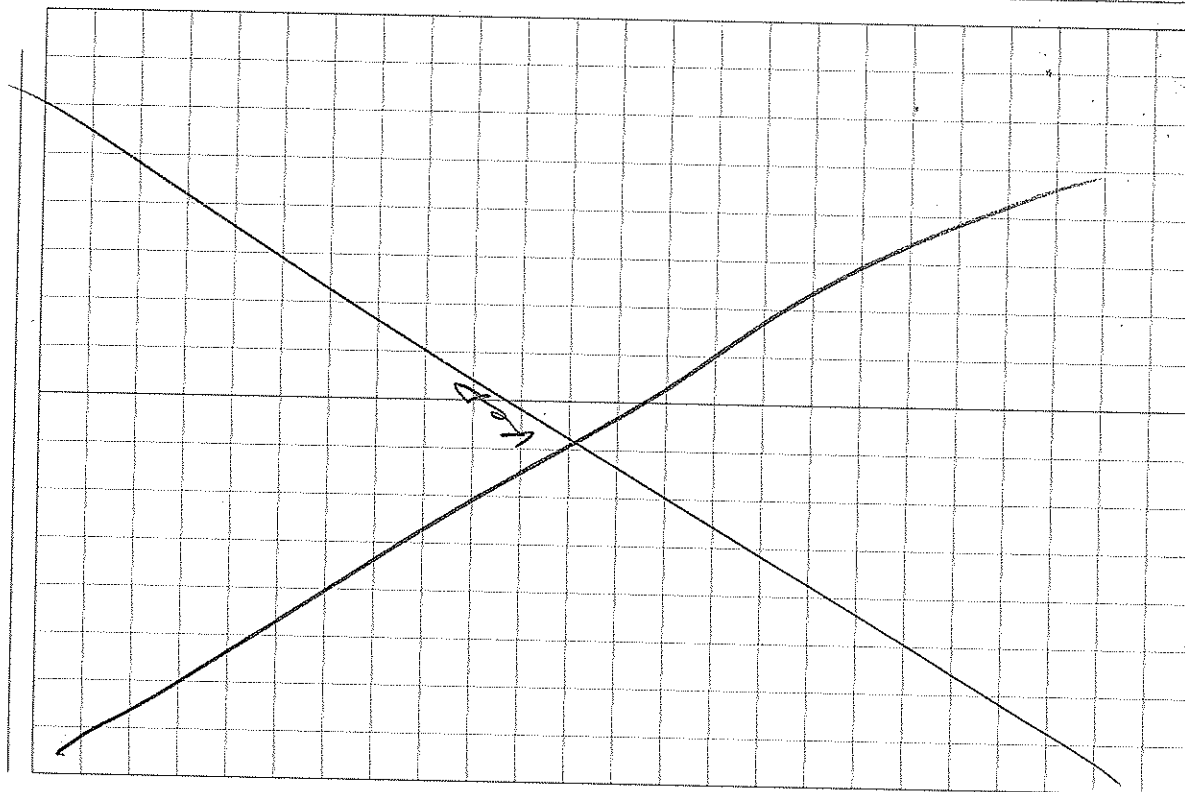


E160D-TT

Date

Location

Project / Client

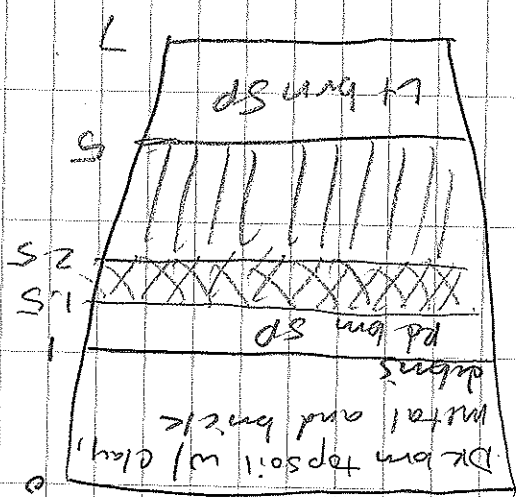


Location UMove East

Date 1/14/11

Project / Client

KCB



E160D-T13

Location UMore East

Date 7/14/11

Project / Client

KUB

IP o/d P10/Bkgd

E160D-T13-0.5 n/n 0.0/0.0

E160D-T12-0.5 n/n 0.0/0.0

→ collect M-1 for NC

E160D-T11-0.5 n/n 0.0/0.0

Location UMore East

Date 7/14/11

Project / Client

KUB

Description

Dk brn loamy topsoil

Rd brn SP w/ white material

Dk brn topsoil w/ 20% debris
→ clay tile, concrete

UMore East
Remedial Investigation
Test Trenching
Book 2



"Rite in the Rain"

ALL-WEATHER
ENVIRONMENTAL

No. 550F

6/29/2011 - 10/20/2011

Location WMore East

Date 10/10/11

Project / Client

KCB

700 KCB onsite, prep for work

730 Tim (SDE) onsite Safety Meeting

1200 Break
1230 Continue work

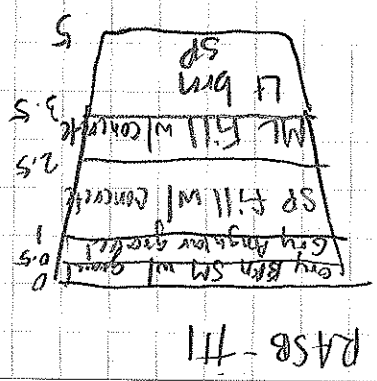
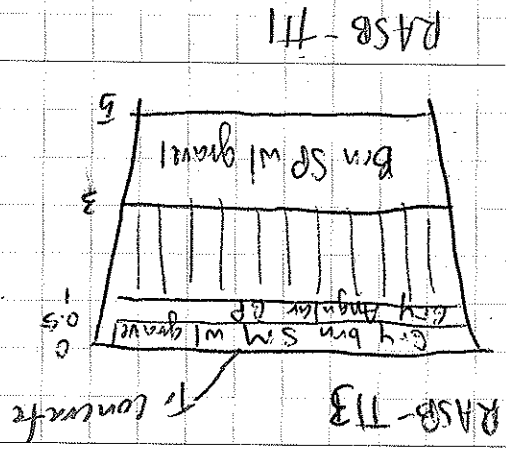
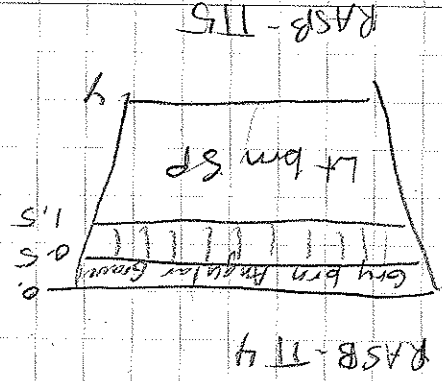
Discuss sampling w/ JME:

Date 10/10/11

Project / Client

KCB

SAMPLE
as
RASB-T14



Location UMore East

Date 10/20/11

Project / Client KoFS

PID	Bkgd	Description
0.0	0.0	Yel brn ML w/ gravel
0.0	0.0	Yel brn SP w/ ML ↓
0.0	0.0	Brn SM SP, fn sand
0.0	0.0	Lt brn SP w/ fn gravel
0.0		Lt brn SP, fn sand, tr Shiny blk ^{medium} (sand)
0.0		Lt brn SP w/ gravel
0.0		Ut brn SP
0.0		Rd brn ML
0.0		Dk brn loamy topsoil ↓
0.0		

Location UMore East

Date 10/20/11

Project / Client

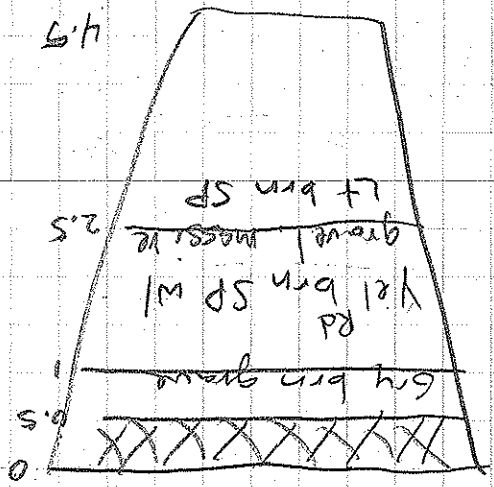
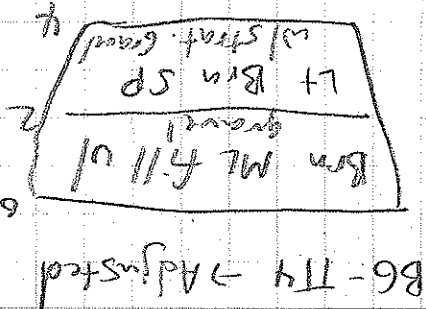
ID	c/d
RASB-TT3-1.5	n/n
RASB-TT4-1.5	n/n
RASB-TT5-1.5	n/n
RASB-TT1-1.5	n/n
AF12-TT2-2	n/n
AF12-TT1-6	n/n
RASB-TT6-1.5	n/n
BG-TT4-3'	n/n
RASB-TT7-1.5	n/n
10SD-TT14-0.5	n/n
10SD-TT13-0.5	n/n
10SD-TT15-0.5	n/n

Date 10/10/11

Location

Project / Client

KCB

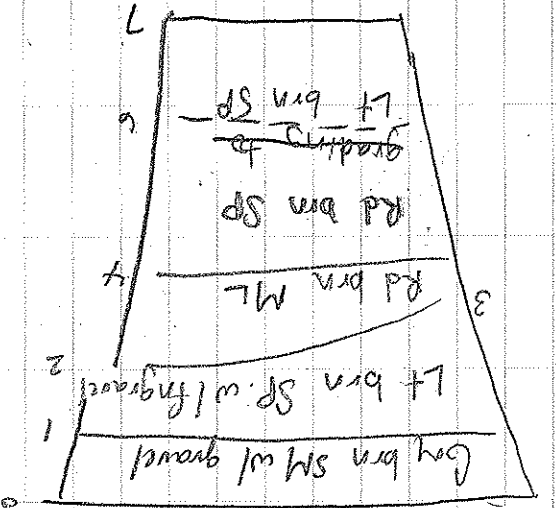
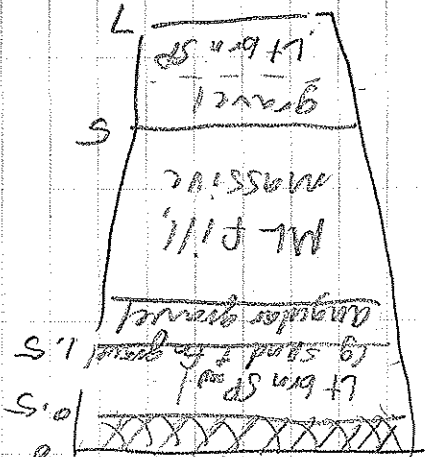


Location W More East

Date

66

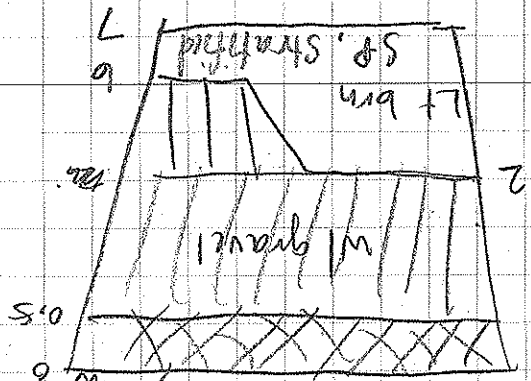
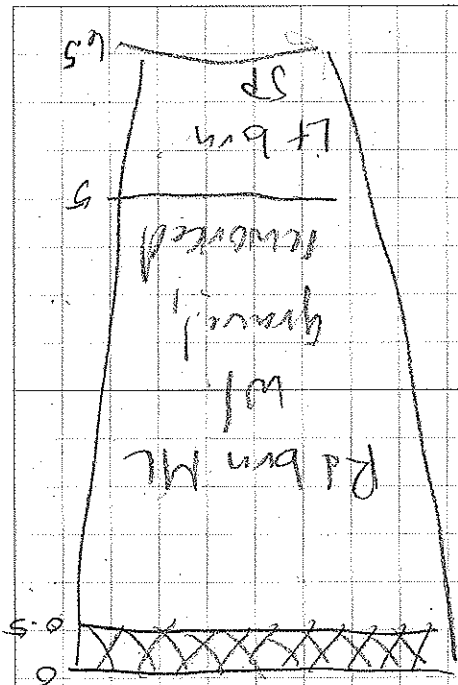
Project / Client



Date 10/10/11

Location
Project / Client

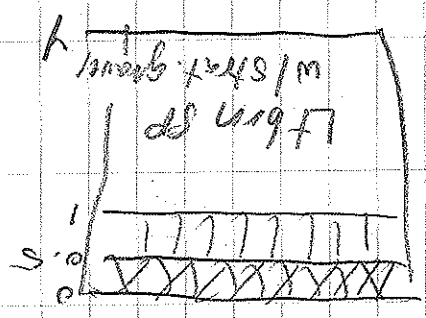
1000



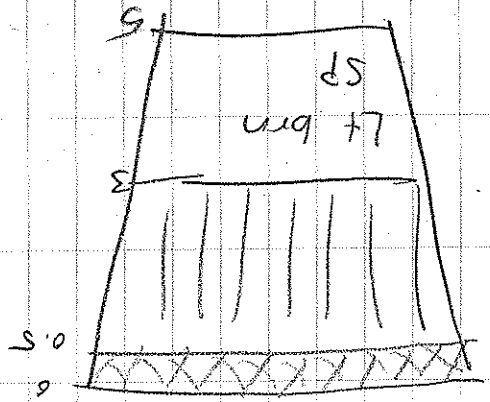
10SD-TT13
H. Chased wood

Location More East

Date
Project / Client



10SD-TT14



RASB-TT7

Location UMore East Date _____

Project / Client _____

ID o/d
n/n

10SD-TT9A-5

RASB-TT8-1.5 n/n

RASB-TT2-1.5 n/n

10SD-TT3-0.5 n/n

10SD-TT12-0.5 n/n

10SD-TT10-0.5 n/n

10SD-TT17-0.5 n/n

10SD-TT11-0.5 n/n

10SD-TT3A-2" n/n

911A-TT1-0.5 n/n

906A-TT1-0.5 n/n

~~501A2-TT10.2 n/n~~

Location _____ Date 10/20/11

Project / Client _____

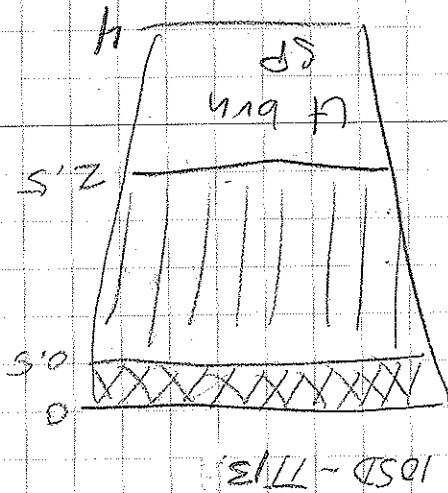
KCB

PID	Bkgd	Description
0.0		Lt brn SP
0.0		Rd brn MC
0.0		Rd brn ML+SP
0.0		Sandy topsoil, brn
0.0		Sandy brn Topsoil
0.0		↓
0.0		Lt brn SP
0.0		Sandy brn topsoil
0.0		Lt brn SP
0.0		↓
0.0		Dk brn loamy topsoil
0.0		↓

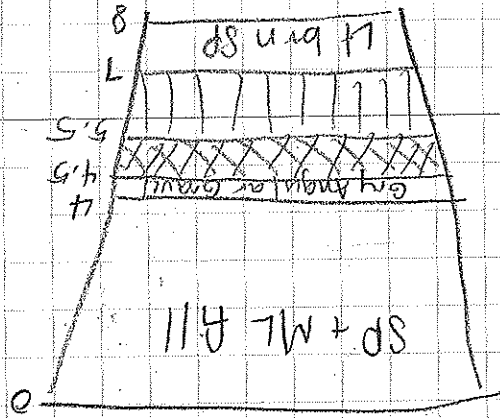
73 Date 10/10/11

KUB

Location Project / Client



10SD-1113

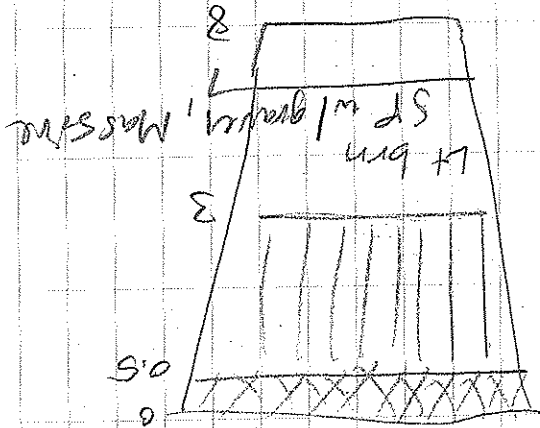


RASB-112

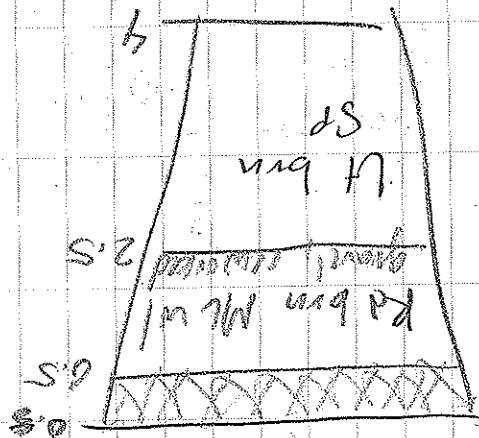
72 Location UMore East

Date

Project / Client



RASB-118



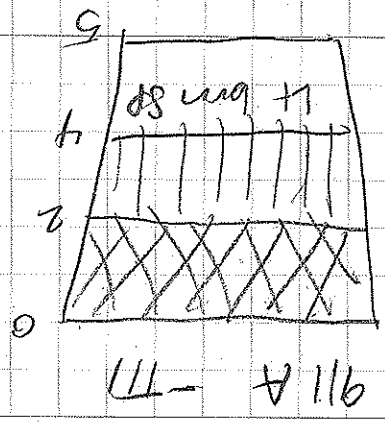
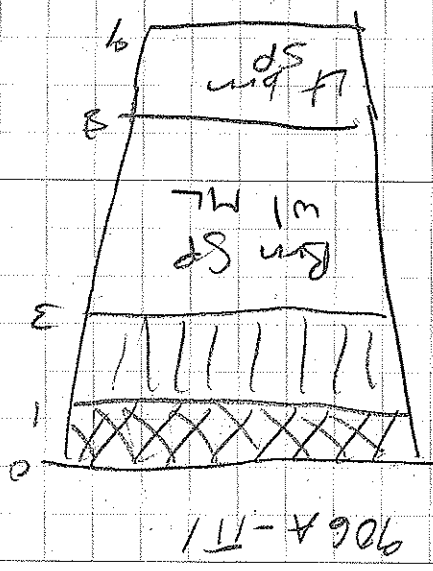
10SD-1119

Date: 10/10/11

Location

Project / Client

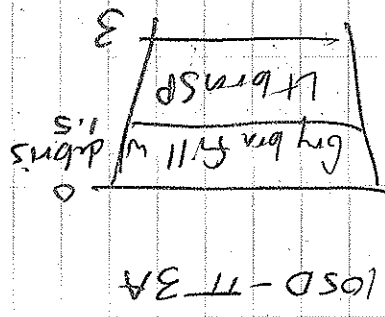
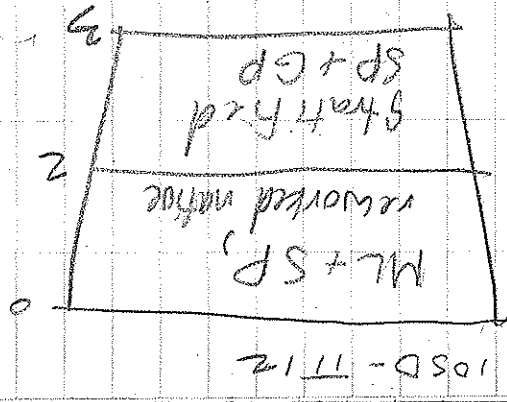
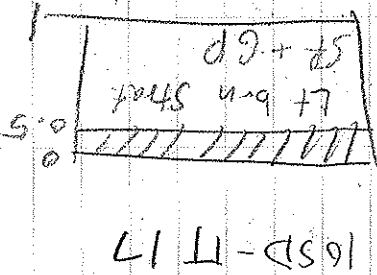
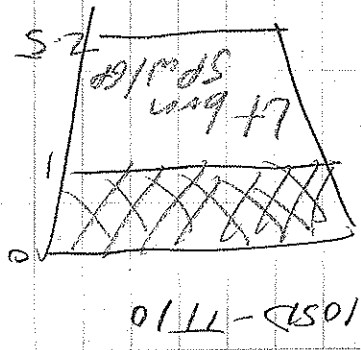
kub



74 Location U Move East

Date

Project / Client



Location UMore East

Date 10/4/11

Project / Client

700 KCB + Tim (SDE) onsite
Safety Meeting

800 Encountered coax cable
in 707FFF-T14

- stopped work
- SME called Steven (CoofMaj)
- Mike (CoofMaj) said no phone/cable connected to building, likely old line
- Did not continue to below 0.5'

303A-T13 Not accessible

1700 Work ends

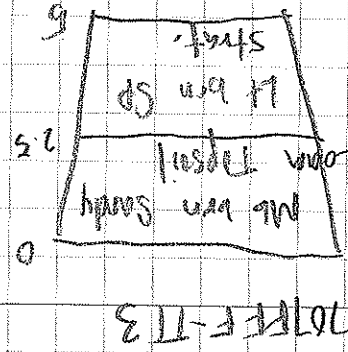
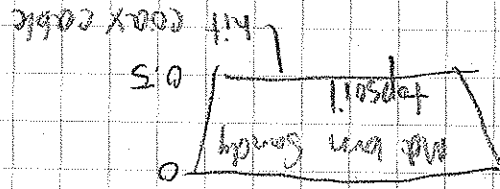
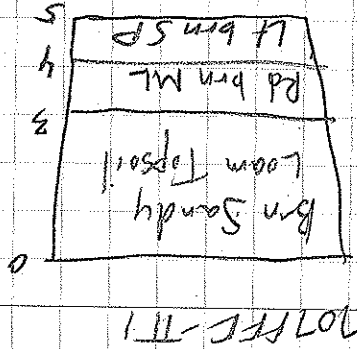
Location

Date 10/11/11

Project / Client

KCB

707FFF-T14 + 707FF-T2 (no case)



Location UMore East

Date _____

Project / Client _____

ID	off
707 PFF-TT1-1.5	n/a
707 PFF-TT2-0.5	n/a
707 PFF-TT3-0.5	n/a
707 PFF-TT4-0.5	n/a
717A-TT2A-0.2'	n/a
717A-TT1A-6'	n/a
M-1	n/a
5D1C-TT1-0.5	n/a
M-2	n/a
5D1C-TT1-3'	n/a
M-3	n/a
5D1FI-TT4-2'	n/a
5D1FI-TT3-0.5'	n/a
5D1FI-TT2A-0.5'	n/a
5D1PI-TT5-6.5'	n/a

Location _____ Date 10/11/11

Project / Client _____

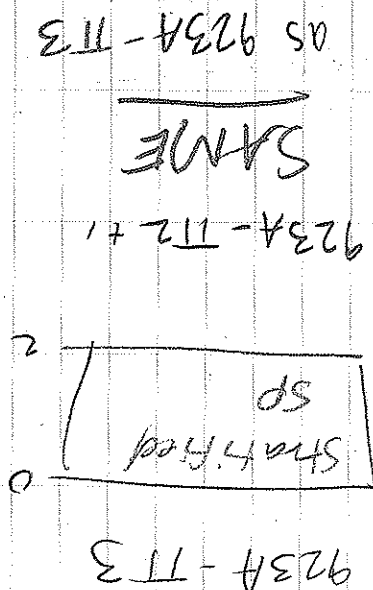
KOB

PID	Blgd	Description
0.0	6.0	Rd brn ML
		DK brn loamy topsoil
		SPJ brn SP
		Lt brn SP
		Dk brn loamy topsoil
		Lt brn SP
		Rd brn ML
		Gry brn SM w/ gravel
		Lt brn SP
		Gry brn SM w/ gravel

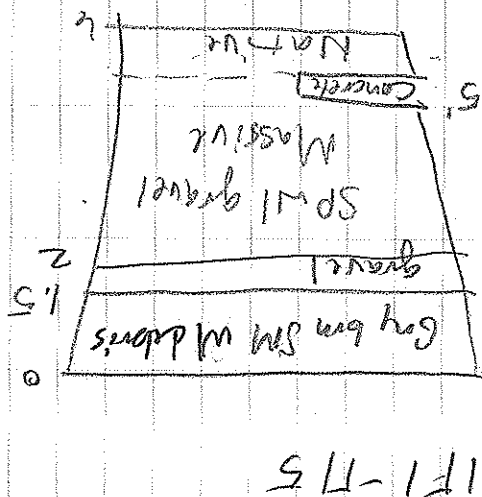
Location UMore East

Date _____

Project / Client _____



SAME
 as 923A-TT3

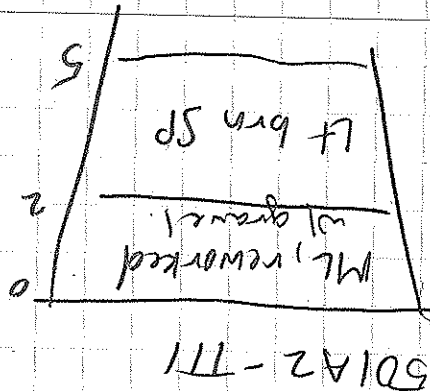
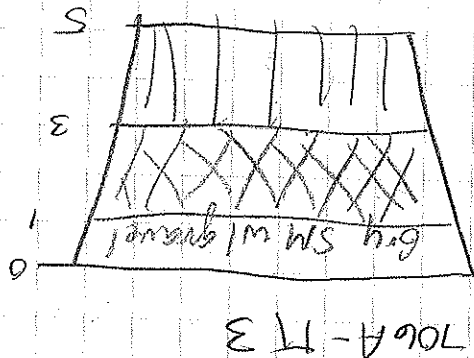


Location _____

Date 10/11/11

Project / Client _____

KCS



Location UnMove East

Date _____

Project / Client _____

ID	Notes
923A-TT3-0.5	n/h
923A-TT2-0.5	n/h
923A-TT1-0.5	n/h
501A2-TT1-2'	n/h
706A-TT3-3'	n/h
706A-TT3-6'	n/h
217A-TT2A-6'	n/h
217A-TT1A-5	n/h
217A-TT5-14'	n/h

Date 10/11/11

Location _____

Project / Client _____

PID	Description
010	Brn SP
	DK brn topsoil Plated
	Brn SP

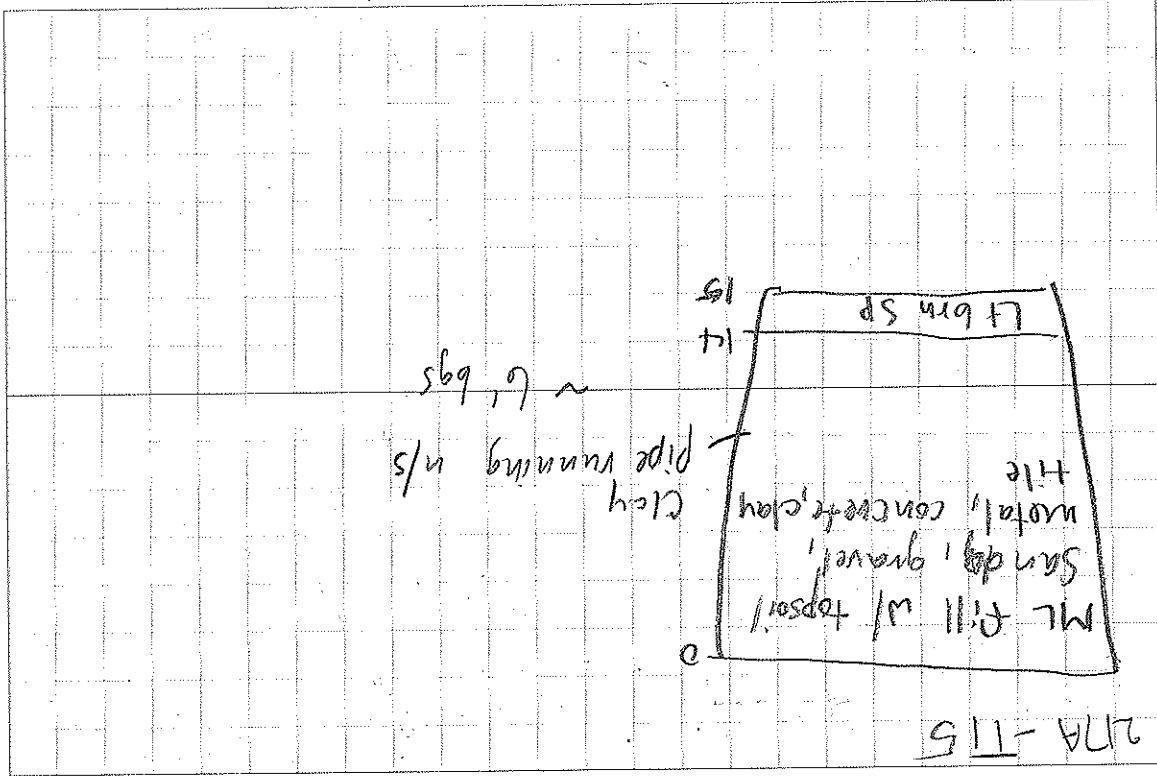
Brn SP

DK brn topsoil
Plated
Brn SP

Date 10/16/11

rcub

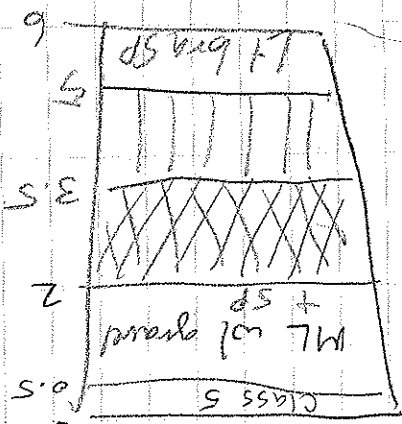
Location
Project / Client



Location UMore East

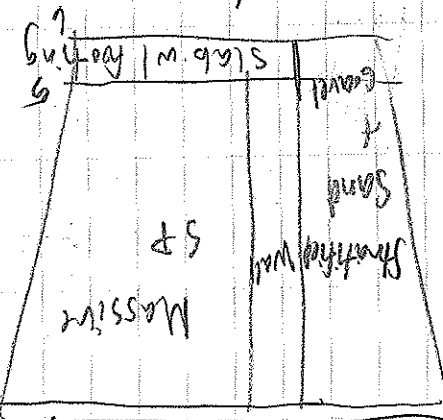
Date

Project / Client



sandy brown topsoil

Structure ~ 15' x 20' w/ room attached 10' x 10'



Location UMore East

Date 10/12/11

Project / Client _____

700 KCB onsite
715 Tim (SDE) onsite

- Due to utilities @ 217A,
will only TT on east side
of 217A-115, project fill
to ~~other~~ west side

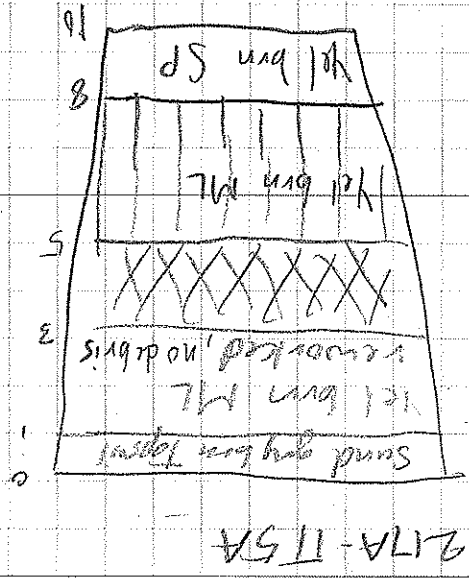
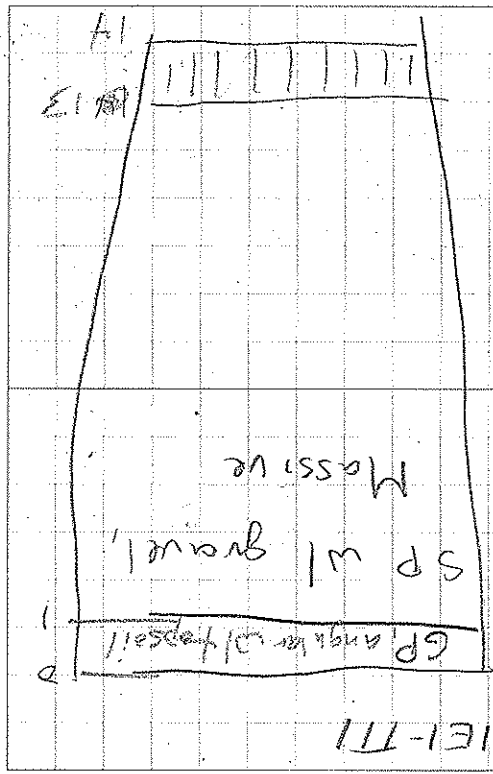
1700 Work Ends

Location _____

Date 10/14/11

Project / Client _____

KCB



Location UMore East

Date _____

Project / Client _____

IP	old	
5DIE1-111-1	n/h	
251A-113A-14	n/h	
251A-113A-3	n/h	
235A-114A-3.5	n/h	
235A 235A -114A-6 4A	n/h	
235A-117-3.5	n/h	
235A-117-6.1	n/h	
235A-112A-6	n/h	
235A-115-1"	n/h	
235A-115-3.5	n/h	
235A-116-2	n/h	
235A-116-3.5	n/h	

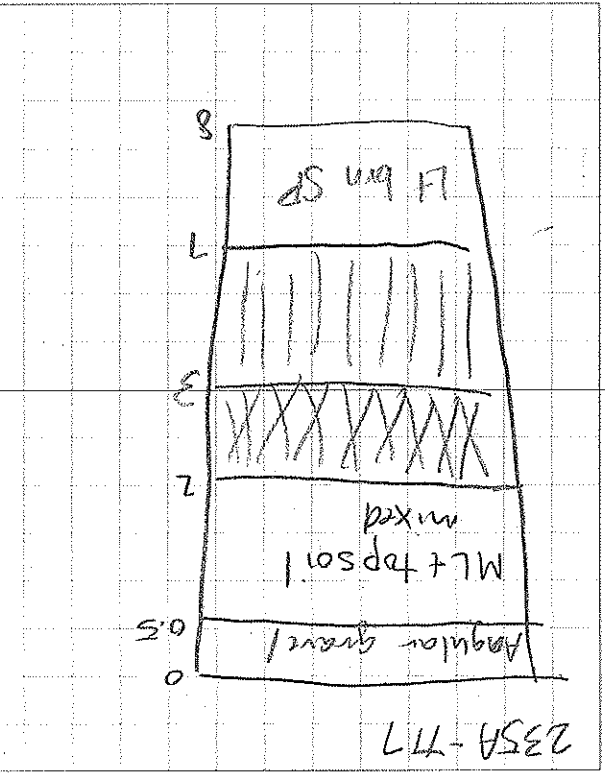
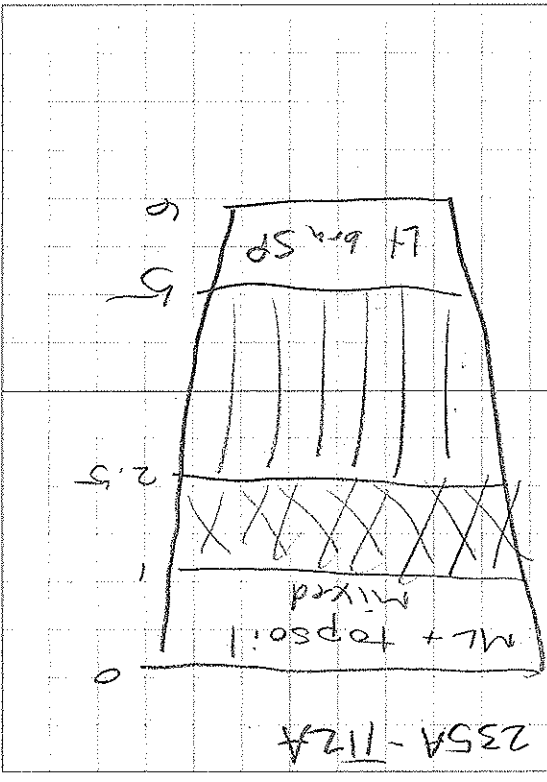
Date 10/12/11

Project / Client _____

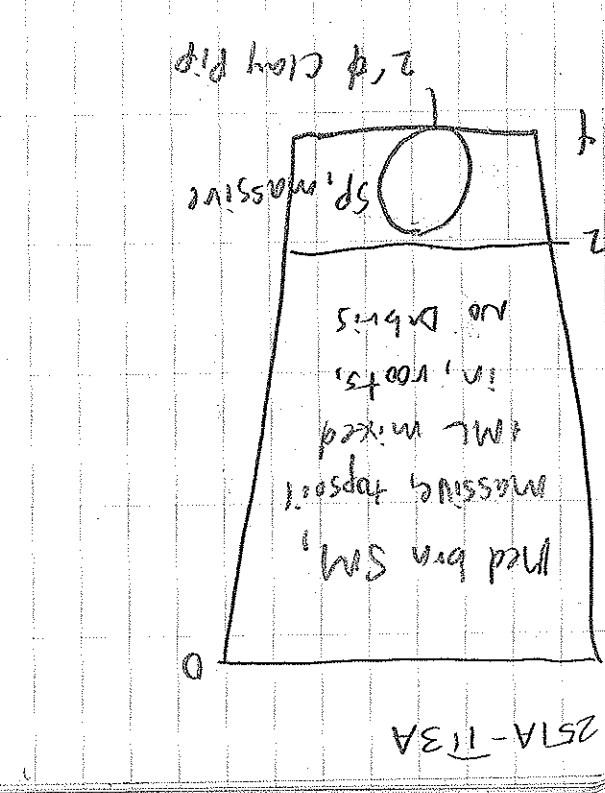
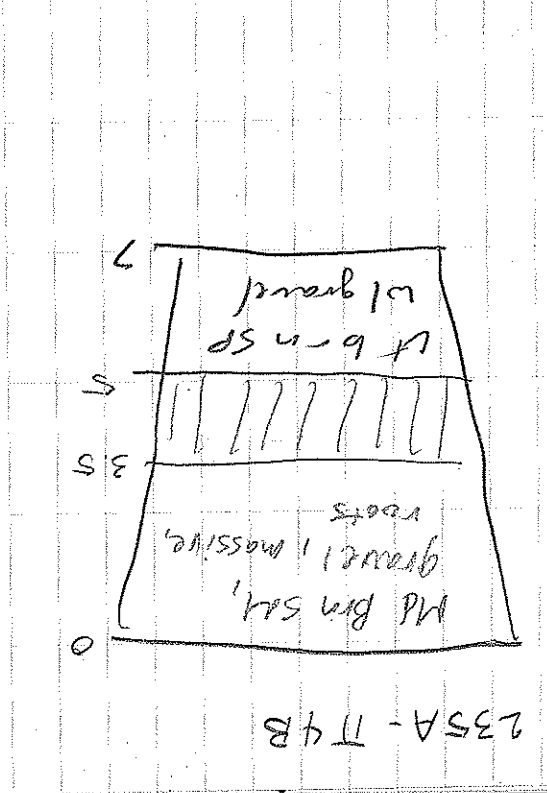
KUB

PIP	Description
0.0	Lt brn SP
0.0	↓
0.0	Med brn SM w/ topsoil, ML, + gravel
0.0	Yel brn ML
0.0	Lt brn SP
0.0	Yel brn ML
0.0	Topsoil/ML mix
0.0	Lt brn SP
0.0	ML + topsoil mix
0.0	Yel brn ML
0.0	Lt brn SP
0.0	Yel brn ML

Location U Move East Date 10/12/11 93
 Project / Client KCB



Location U Move East Date 10/12/11 92
 Project / Client KCB

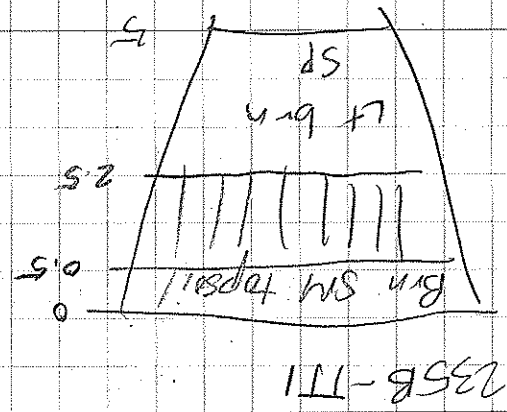
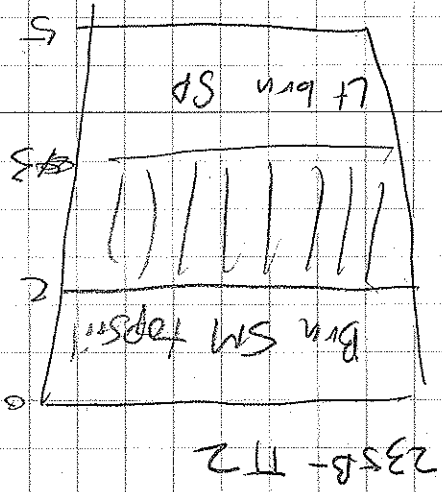


Date 10/12/11

Location

Project / Client

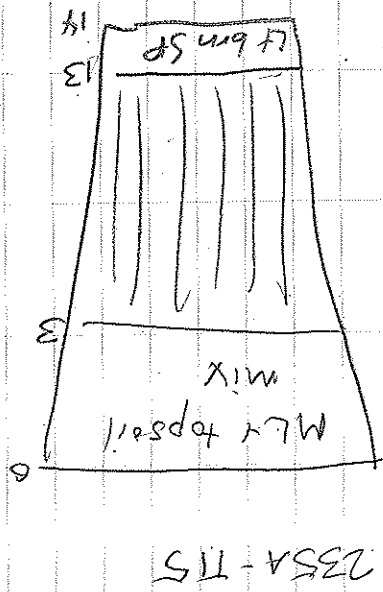
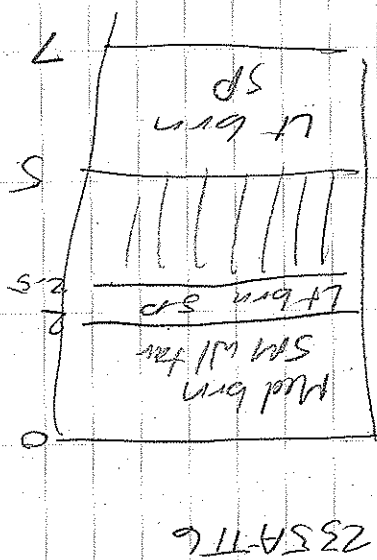
KUB



Location U Move East

Date

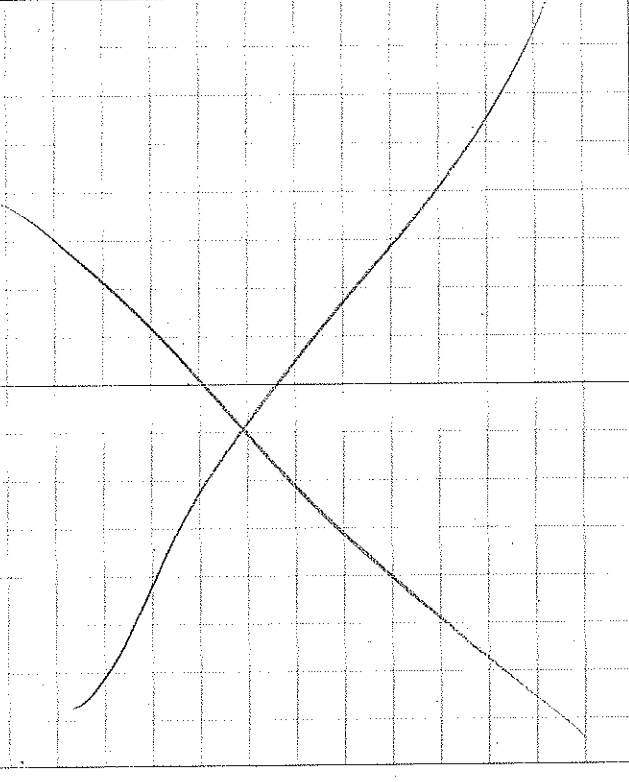
Project / Client



Location _____ Date 10/12/11

Project / Client _____ K&S

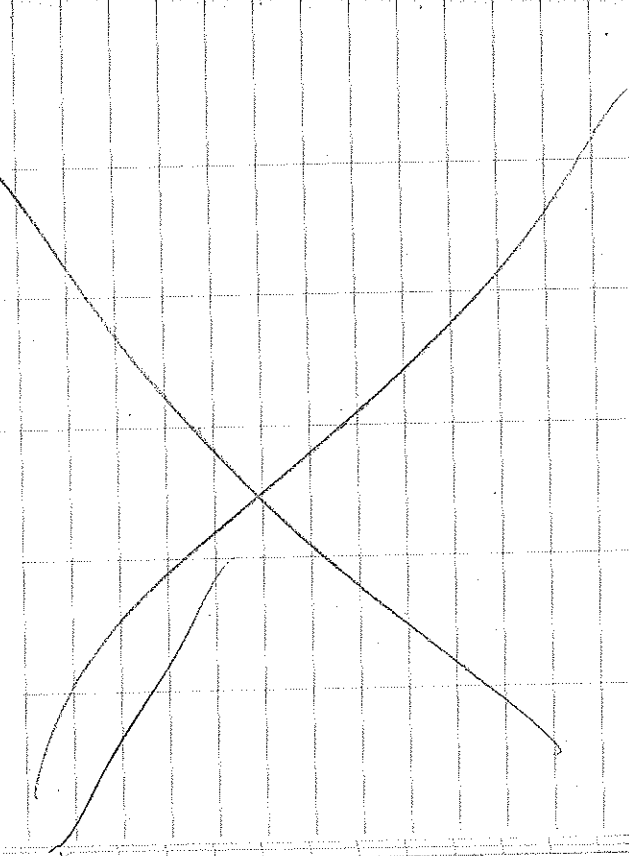
PID	Description
0.0	yeb brn ML
0.0	Lt brn SP
0.0	Sandy SM topsoil
0.0	Sandy ML
0.0	Brn SP w/ ML



Location UMore East Date _____

Project / Client _____

ID	o/d
235B-TT1-1	n/a
235B-TT1-3.5	n/a
235B-TT2-1	n/a
M-1	n/a
235B-TT2-3.5	n/a
235B-TT1-3'	n/a



Location U Move East Date 10/13/11

Project / Client

700 Safety Meeting, Tim (SDE)
onsite

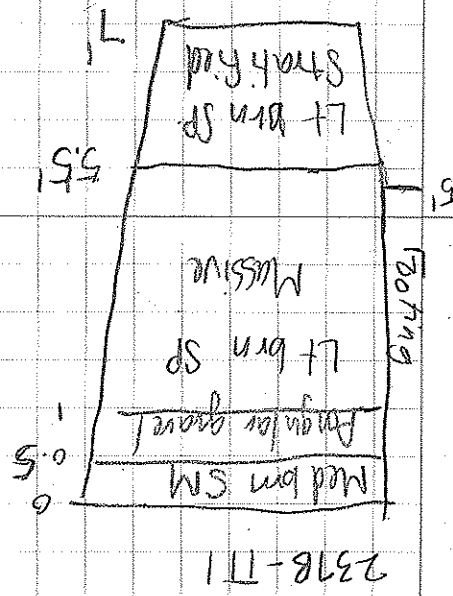
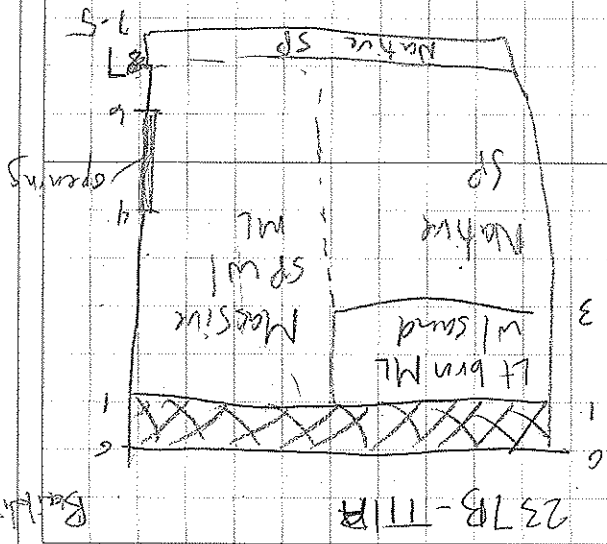
1700 Work ends

Location

Date 10/13/11

Project / Client

KCB



Date 10/13/11

Location

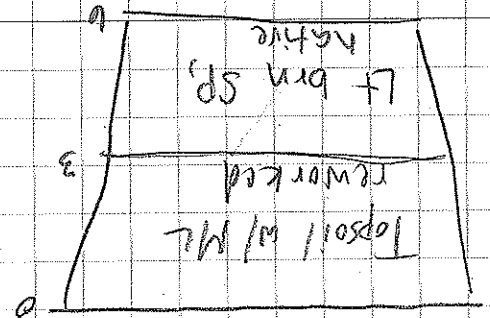
Project / Client

KCB

Collected sample of
 gray/white material for
 gun powder screening
 @ 239A + 238B
 → Both @ positive
 * collected small volume for
 University to analyze
 * stopped work @ 239A

spots of gray/white / as
 will soil w/ topsoil

239A-TT2



238B-TT1

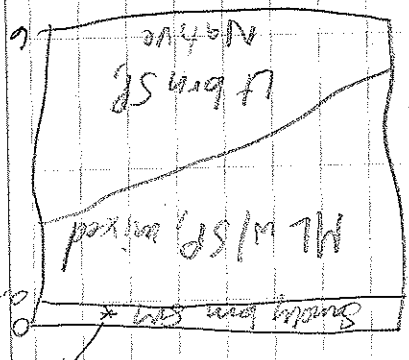
Date

U More East

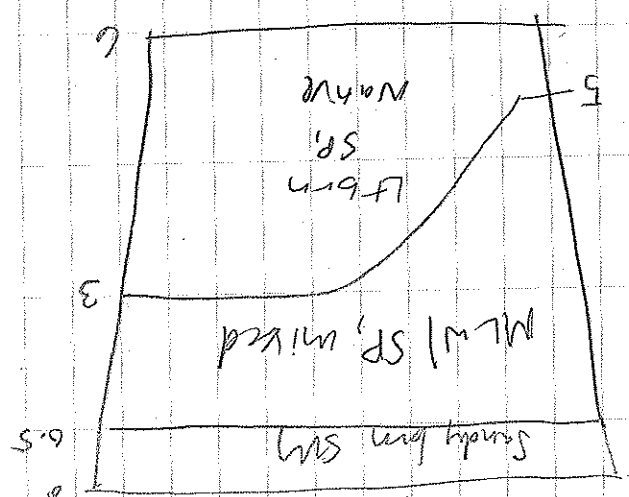
Location

Project / Client

* Small clump of white
 material w/ soil → looks like
 could be powder or decaying
 organics



238B-TT2



2376-TT1

Date 10/13/11

Location

Project / Client

ESB

PID	Description
0.0	Olive green sediment w/ sand, organic odor
0.0	Md brn SM
0.0	↓
0.0	Brn SP w/ ML

Location U More East

Date

Project / Client

ID	e/d
U-237B	organic/olive green
237G-TT1-0.5	n/n
238B-TT2	n/n
238B-TT1	n/n

Location UMore East

Date 10/13/11

Project / Client

KCB

222A-TII
→ SAME
→ smaller quantities

22926-TII
Encountered
gun soil similar to
239A+238B
→ tested positive
in gun powder
residue kit
→ stopped work,
collected SVOC
+ small volume
for university

Location UMore East

Date 10/14/11¹⁰⁵

Project / Client

KCB

700 Safety Meeting w/ KCB
+ Tim (SDE)

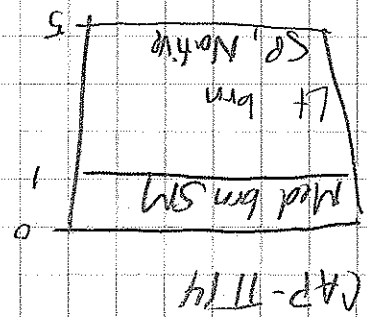
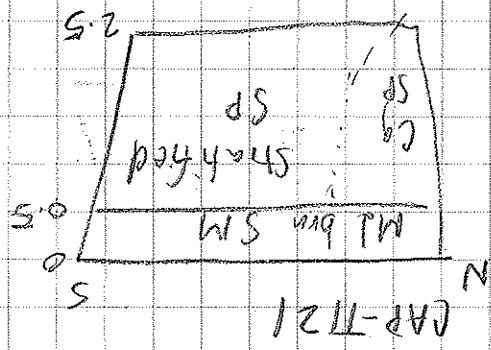
1000 Positive result on gun
powder kit @ test trench
CAP-TI21-1

→ work ends, KCB back to
Ohio's to further investigate
gun powder kit results

* Positive results @ test trenches
CAP-TI21, 22926-TII, 222A-TII,
238B-TII, 239A-TII determined
to be false positive from
Nitric glove
→ JME ordered vinyl glove
for testing

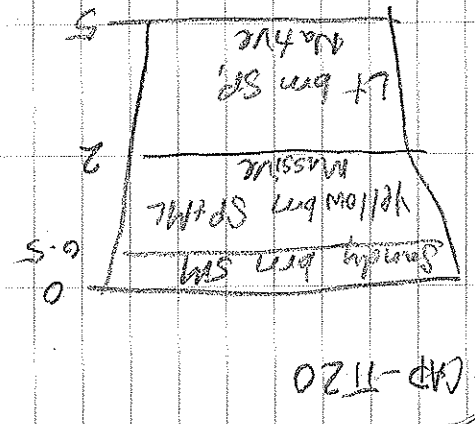
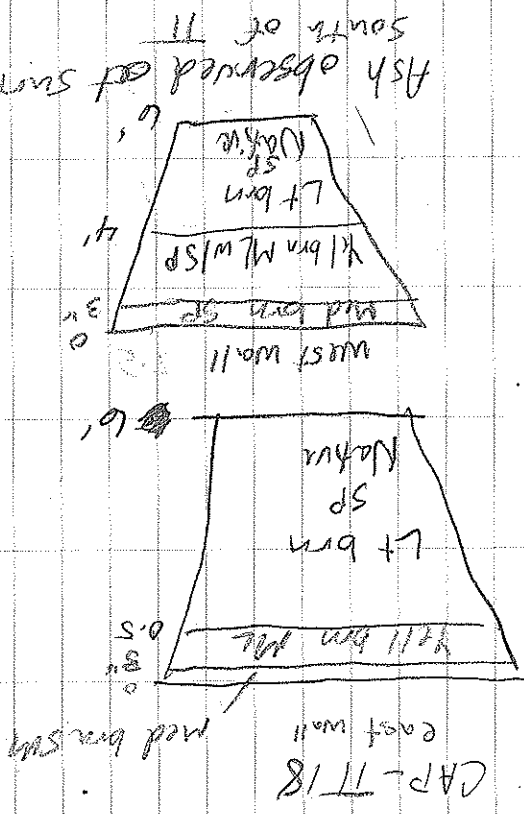
Location UMore East Date 10/14/11 107

Project / Client KCB



Location UMore East Date 10/14/11 106

Project / Client



Date 10/14/11

Location

Project / Client

KUB

PID	Description
0.6	Lt brn SP
0.0	Lt brn SP w/ tr ash
0.0	Lt brn SP w/ tr brn SM
0.0	Lt brn SP w/ tr ML

Location Umore East

Date

Project / Client

ID	old
CAP-IT20-1'	n/a
CAP-IT18-1'	n/a
CAP-IT14-1'	n/a
CAP-IT21-1'	n/a

110 Location uMore East Date 10/17/11

Project / Client

KCB

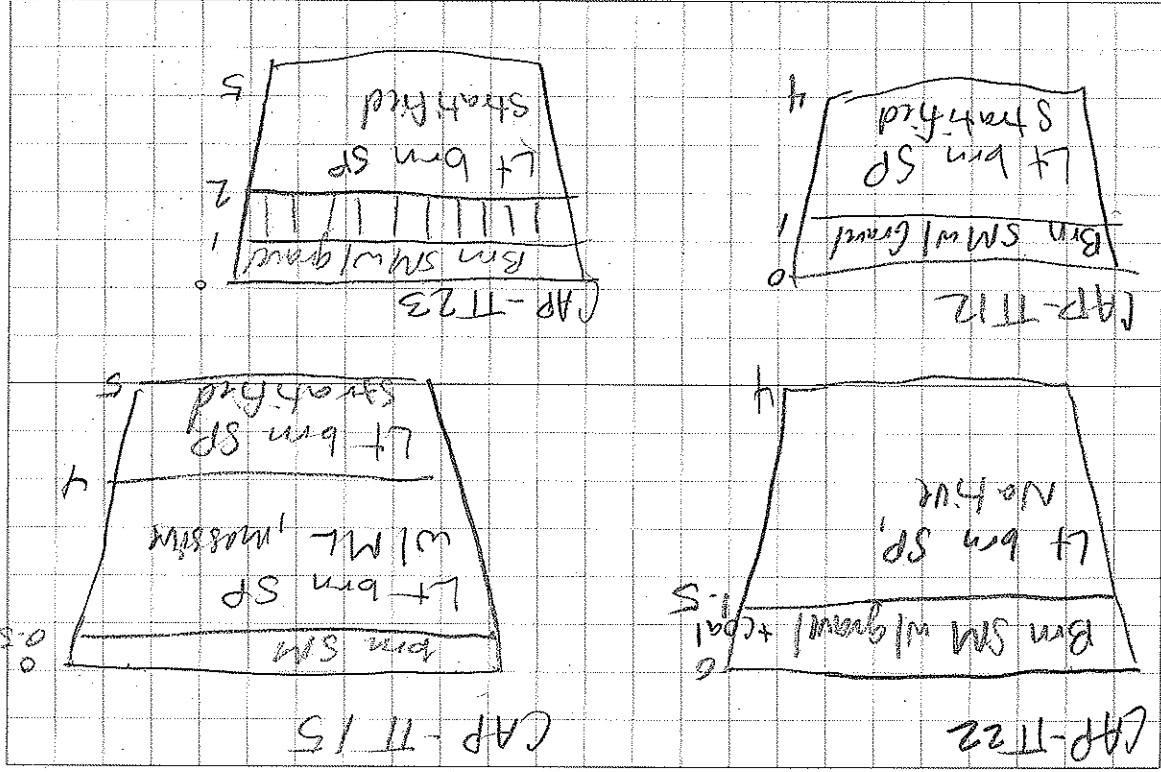
0700 Tim (SPE) onsite, Safety Meeting

0700 KCB + Tim offsite

Location uMore East Date 10/17/11

Project / Client

KCB



Date: 10/17/11

Location

Project / Client

KCB

PID	Description
0.0	eg. Lt brn SP
	Lt brn SP, fg
	Lt brn SP w/ SM
	Yel brn ML
	Lt brn SP w/ gravel, rusty orange disc. gravel
	Lt brn SP w/ gravel
	Lt brn SP w/ rusty org disc.
	Lt brn SP
	Yel brn ML
	Lt brn SP

Location: U More East

Date

Project / Client

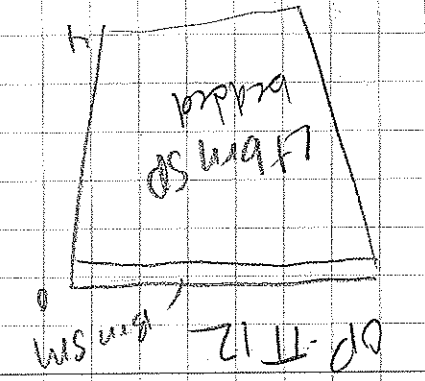
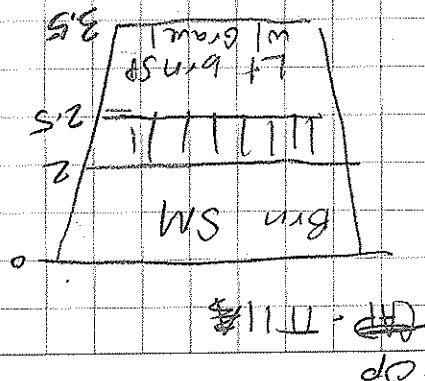
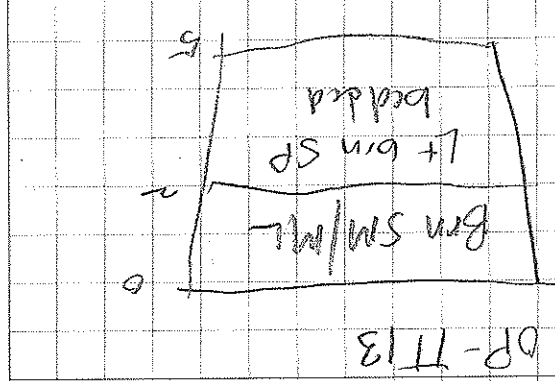
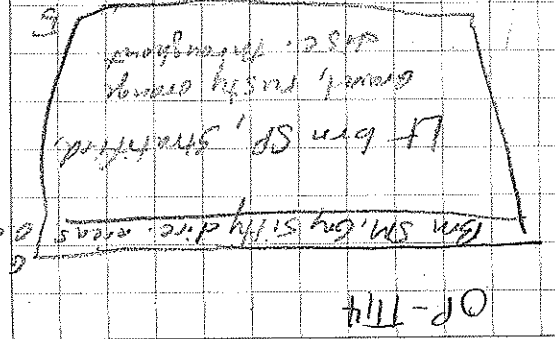
ID	o/p
CAP-TT22-2'	n/n
CAP-TT15-1'	n/n
CAP-TT12-1'	n/n
MS/MSD Metals	n/p
CAP-TT23-1'	n/n
CAP-TT13-1'	n/n
CAP-TT24-1'	n/n
OP-TT9-2'	n/rusty org
MD-1	n/a
OP-TT10-2'	n/a
OP	n/n
OP-TT11	n/rusty org
MS/MSD	n/n
OP-TT14-2'	n/n
OP-TT4-4	n/n
OP-TT12-2'	n/n
-4	n/n

Date 10/19/11

Location

Project / Client

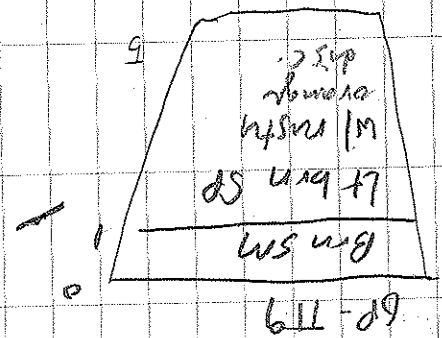
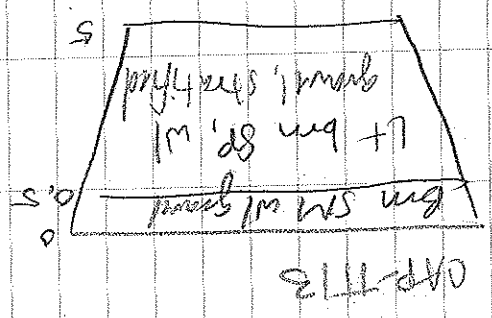
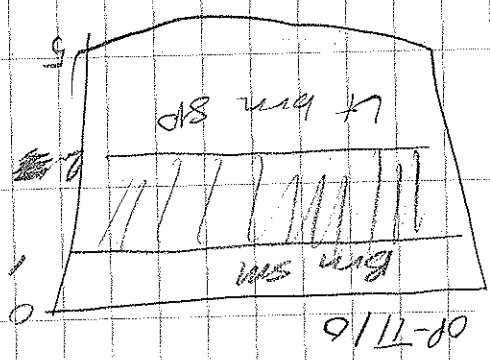
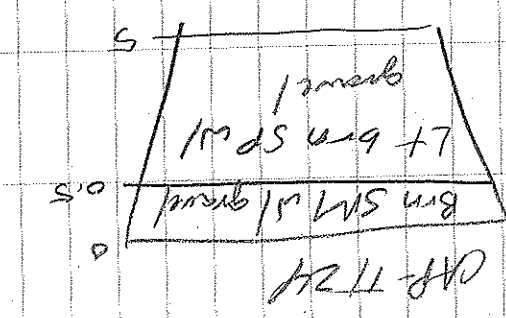
rcb

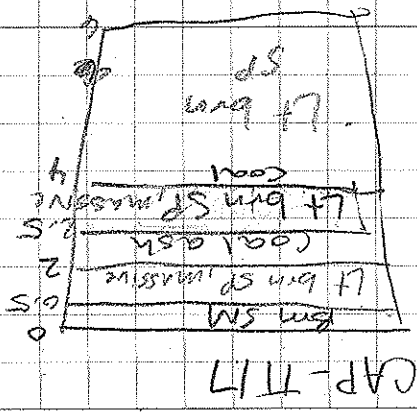


Location Umore East

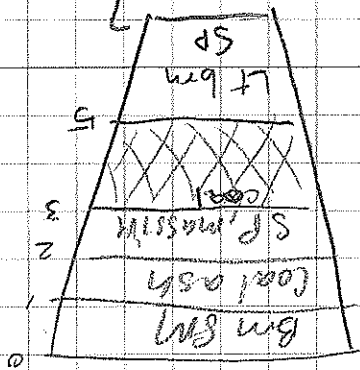
Date

Project / Client

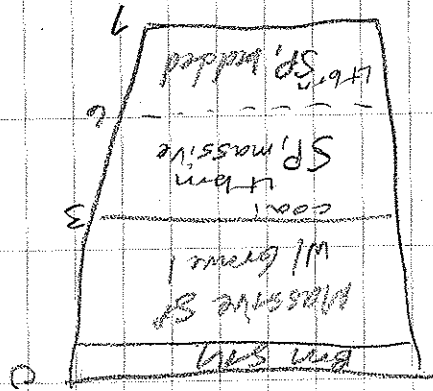




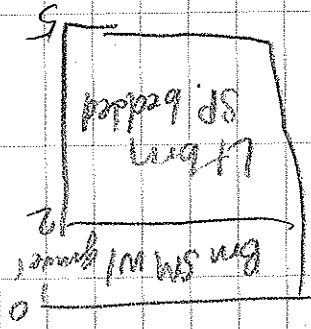
CAP-T117



CAP-T116



CAP-T125



CAP-T17A

Location W Moore East

Date _____

Project / Client _____

ID		
CAP-TT25-6'		n/n
CAP-TT ¹⁰ 25 -6'		n/n
CAP-TT ¹⁷ 25 -6'		n/n
CAP-TT19-1'		n/n
D7-TT3-0.5		n/h
D7-TT1-0.5 HOLD		n/n
D7-TT1-4'		rusty grey
D7-TT1-8'		n/n
D7-TT2-0.5		n/h

Date 10/17/11

Location _____

Project / Client _____

KUB

ID	Description
	Letken SP w/ gravel
	↓
	↓
	Yel brn SP / ML
	LT brn SP
	Md brn SM SM
	Sandy ML
	LT brn SP
	Brn Sandy ML

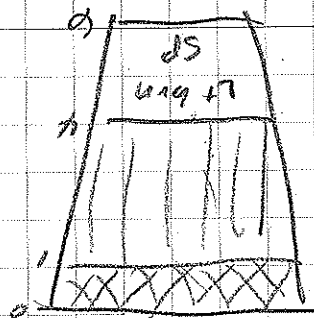
Date 10/17/11

Location

Project / Client

Red

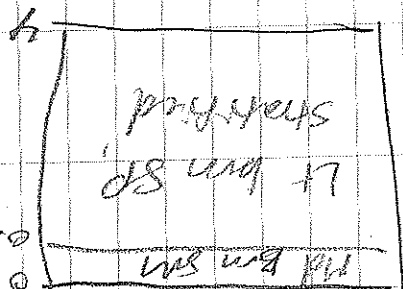
CRP-1126 (formerly double counted as 1120)



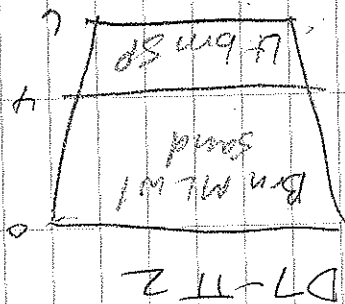
Date

Location U More East

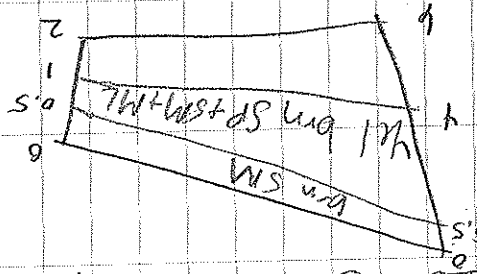
Project / Client



D7-113



D7-112



D7-111

CRP-1119 (moved to west side of path) (old)

Location UMore East Date 10/18/14

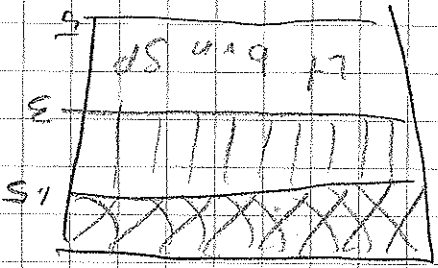
Project / Client _____

0700 KCB + Tim (SDE) onsite

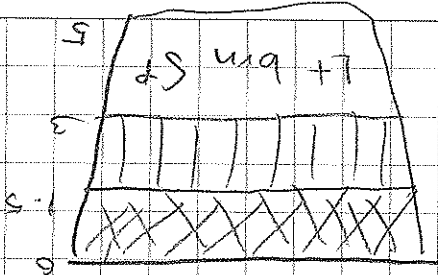
1700 Work ends

Project / Client _____

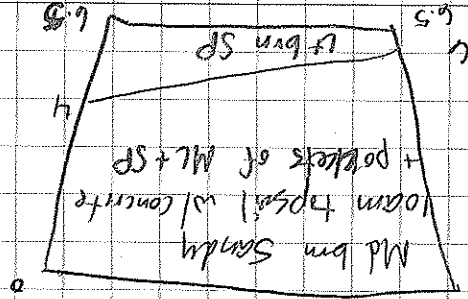
KCB



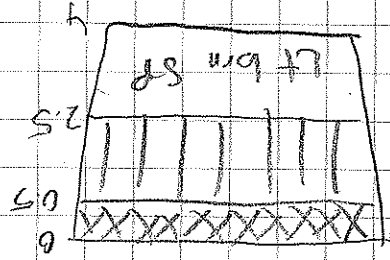
617A-TT21



617A-TT31



617A-TT22



617A-TT20

Date 10/18/11

Location _____

Project / Client _____

KCB

PID	Description
0.7	Med brn sandy loam w/ concrete
0.3	Brn Sandy loam
0.3	↓
0.2	Yel brn ML
0.3	Brn sandy SM w/ gravel
0.2	DK brn loamy topsoil w/ tr coal
0.0	Lt brn SP
0.0	↓
0.0	DK brn loamy topsoil w/ surficial coal
0.0	Lt brn SP w/ gravel
0.0	↓
↓	Lt brn SP

Location UMore East

Date _____

Project / Client _____

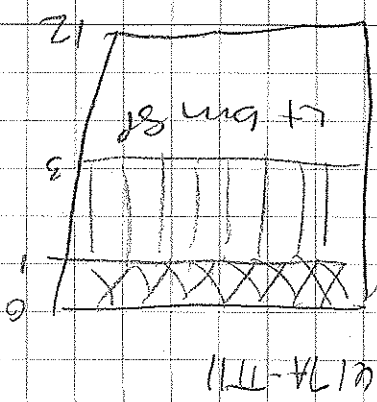
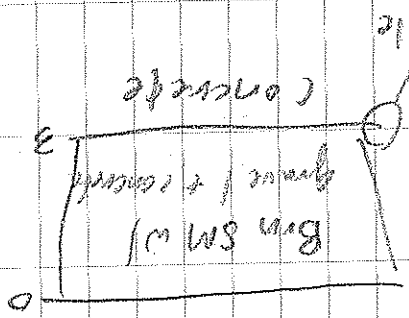
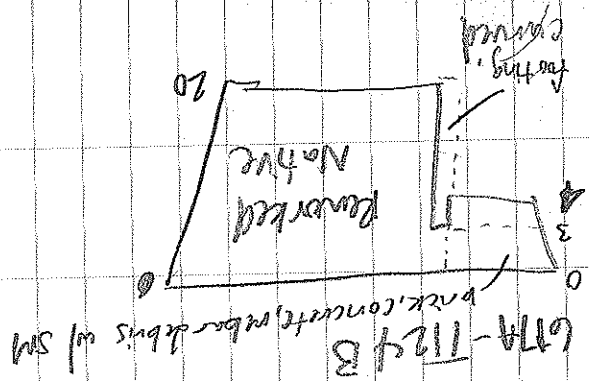
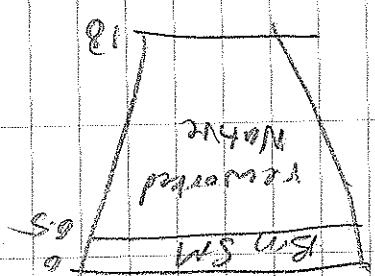
ID	o/d
617A-1122-0.5	n/n
617A-1121-0.5	n/n
617A-1120-0.5	n/n
617A-1124-2' ²³	n/n
617A-1124-2'	n/n
617A-1110-0.5	n/n
617A-1110-4'	n/n
617A-1110-12'	n/n
617A-1111-0.5	n/n
617A-1111-4	n/n
617A-1111-12	n/n
CAP-1111A-2.5'	n/n

Project / Client

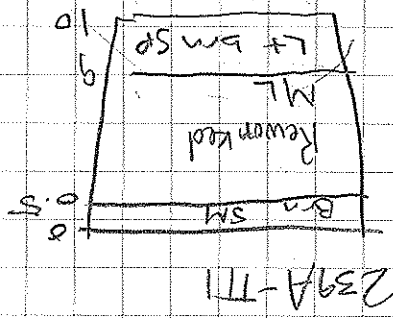
Project / Client

YCB

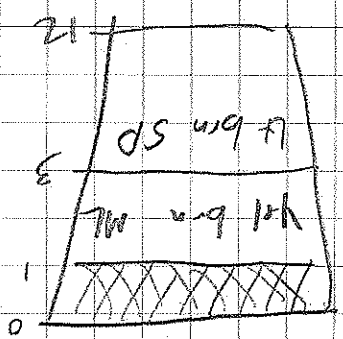
617A-T124A (~15' south of T124)



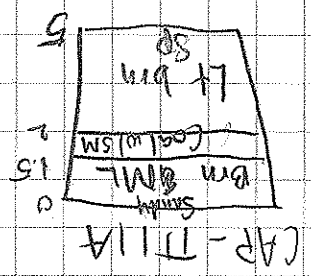
617A-T11



239A-T11



617A-T110



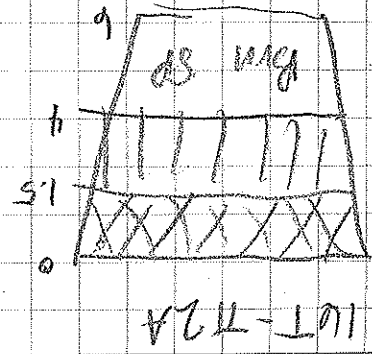
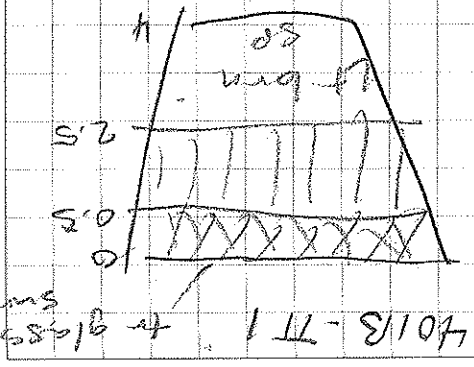
617A-T11A

Date 10/18/11

KCB

Location

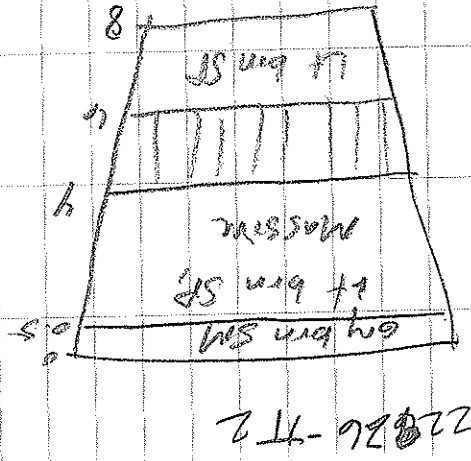
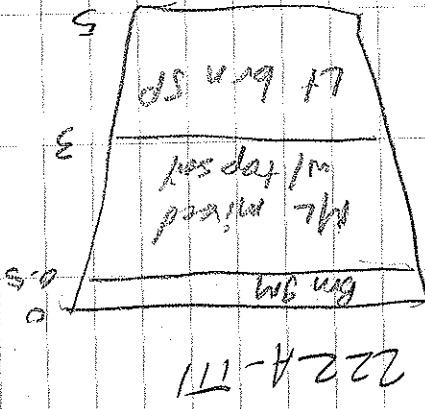
Project / Client



Location Umore East

Date

Project / Client



IP	o/r
222A-11-4	n/a
222A-11-3	n/a
16T-112A	n/a
401R-111-05	n/a
32T-112A-3	n/a
32T-112A-6	n/a

PID	Description
0.0	yel brn ML
0.0	lt brn SP
0.0	Yel brn ML
0.0	DK brn loamy topsoil
→	Yel brn & ML
	Lt brn SP

Location U More East

Date _____

Project / Client _____

0700 KCB onsite. Safety meeting w/ TIM(SOE)

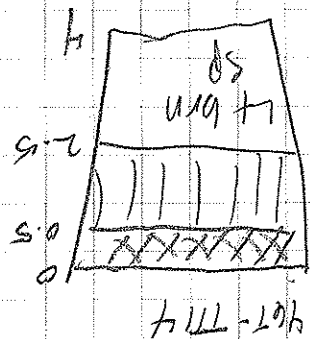
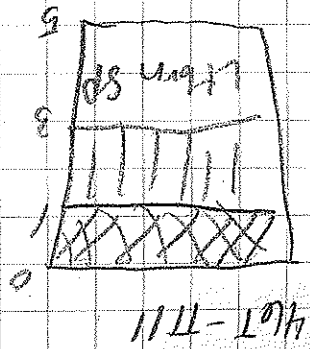
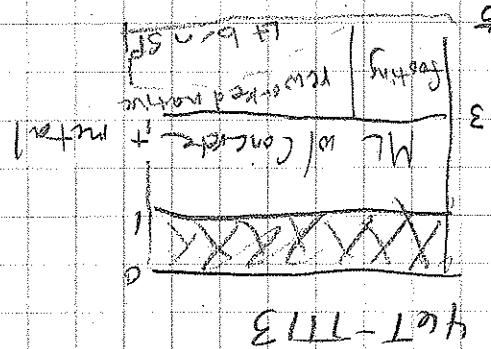
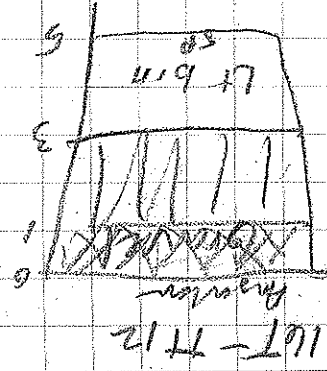
01700 Work ends

Date 10/19/11

KCB

Location _____

Project / Client _____



Date 10/19/11

Location

Project / Client

Description KUB

PID	Description
0.0	DK brn loamy topsoil
0.0	↓
0.0	↓
0.0	↓
0.0	Yel brn ML
0.0	Lt brn SP w/ gravel
0.0	DK brn loamy topsoil
0.0	Lt brn SP

Location Wren Est

Date

Project / Client

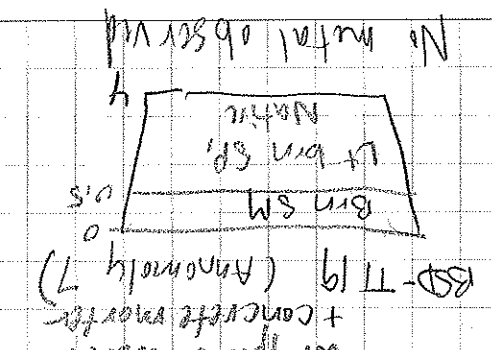
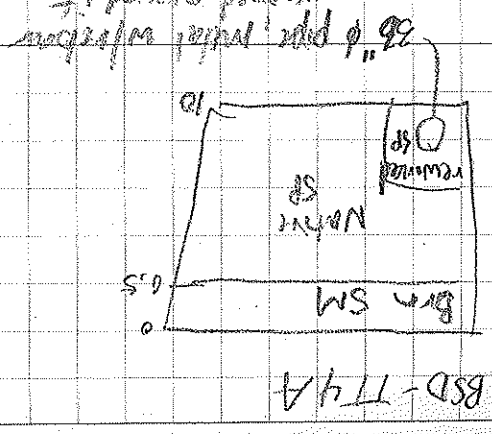
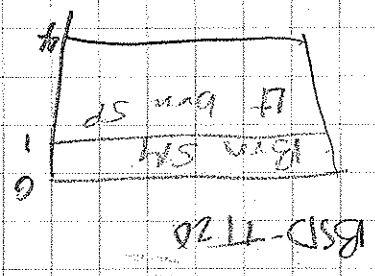
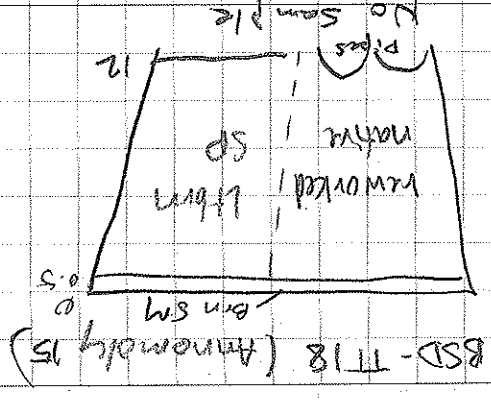
ID	old
46T-T11-0.5	n/a
46T-T12-0.5	n/a
46T-T14-0.5	n/a
46T-T13-0.5	n/a
46T-T10A-1	n/a
BSD-T14-10	n/a
BSD-T18 ²⁰ -0.5	n/a
BSD-T18 ¹⁹ -0.5	n/a

Date 10/19/11

Location

Project / Client

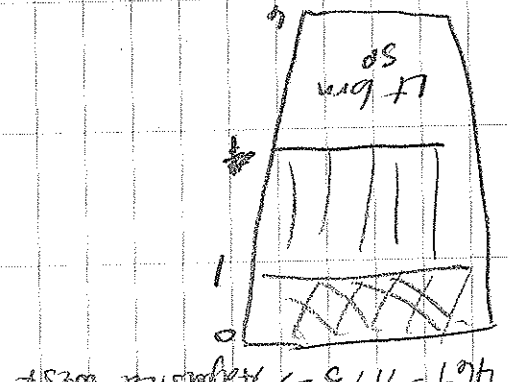
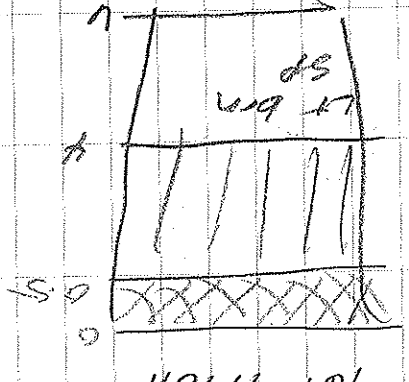
KEB



Date

Location U Move East

Project / Client



Location W More East Date 10/20/11

Project / Client

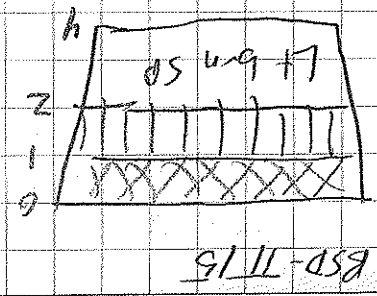
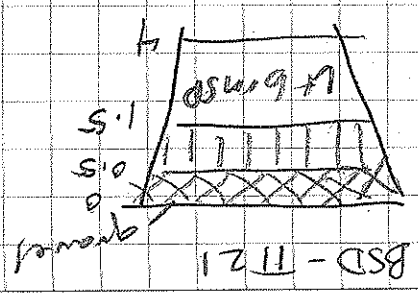
0700 KOB onsite, Safety meeting
w/ Tim (SDP)

1700 work ends

Date 10/20/11

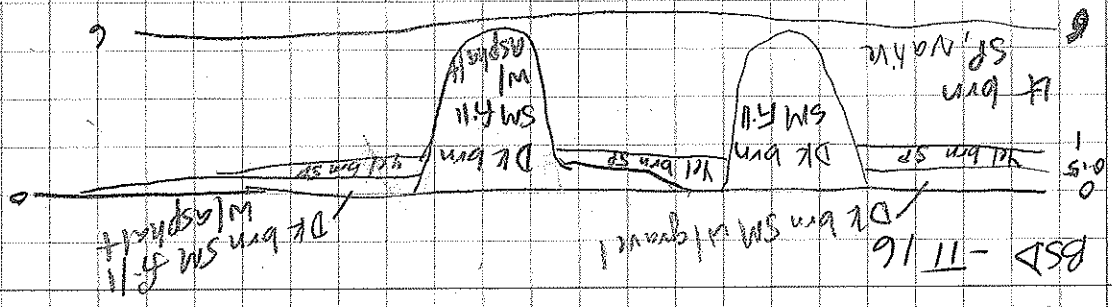
Project / Client

KOB



No. Debris

BSD-T116

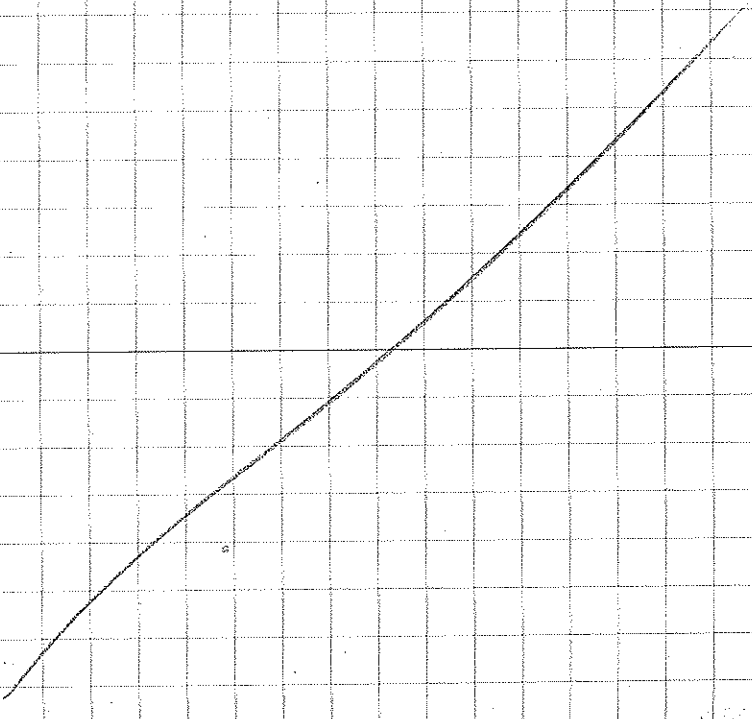


Location

Project / Client

KCB

PID	Description
0.0	DK brn lacrimy tops
0.0	↓
0.0	Lt brn SP

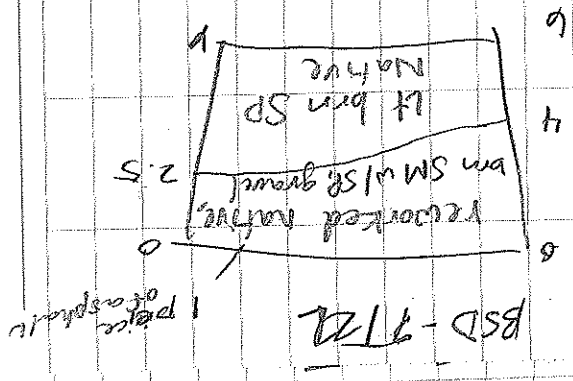


Project / Client

ID	Date
BSD-T115-0.5	o/d
BSD-T116-0.5	n/n
BSD-T114A-7	n/n

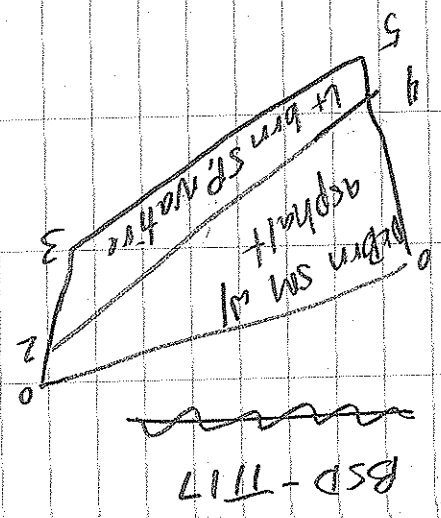


Project / Client



* Test trench through
piles on east side
→ 5' asphalt concrete
clay pipe will go

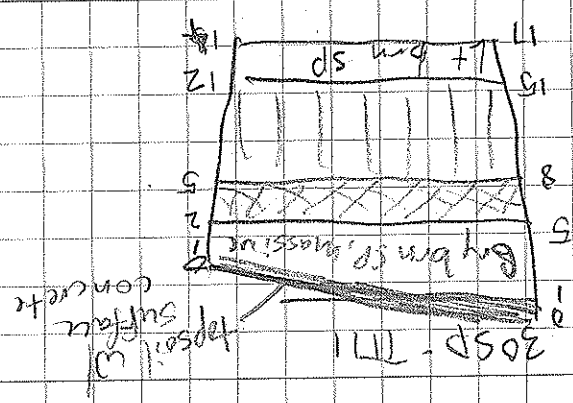
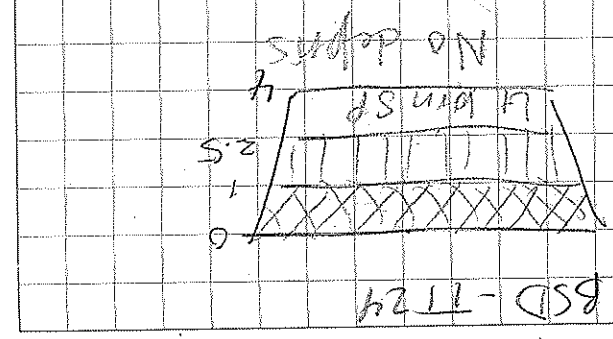
* Conducted two test
trenches to North in
brn/drainage, no debris



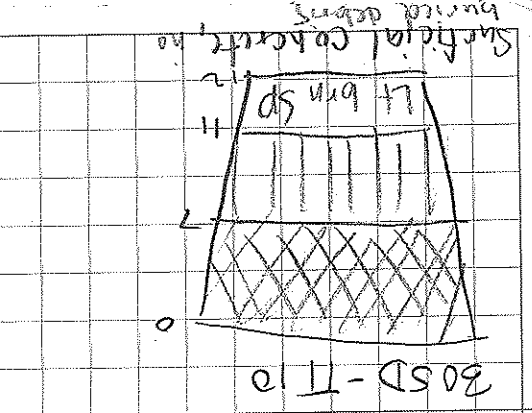
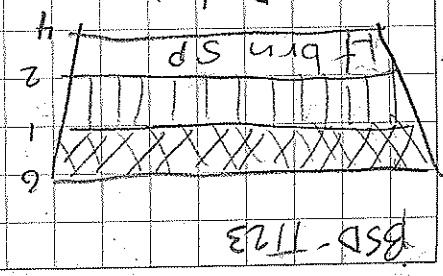
Location

Project / Client

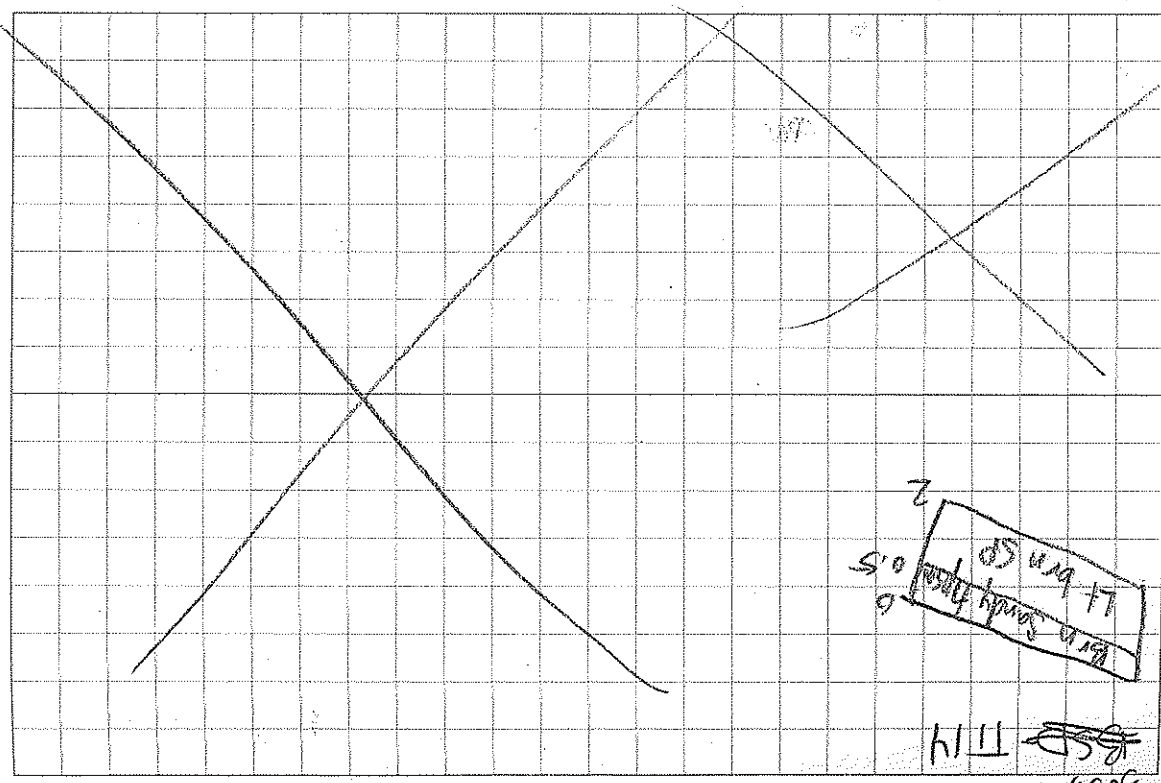
KCB



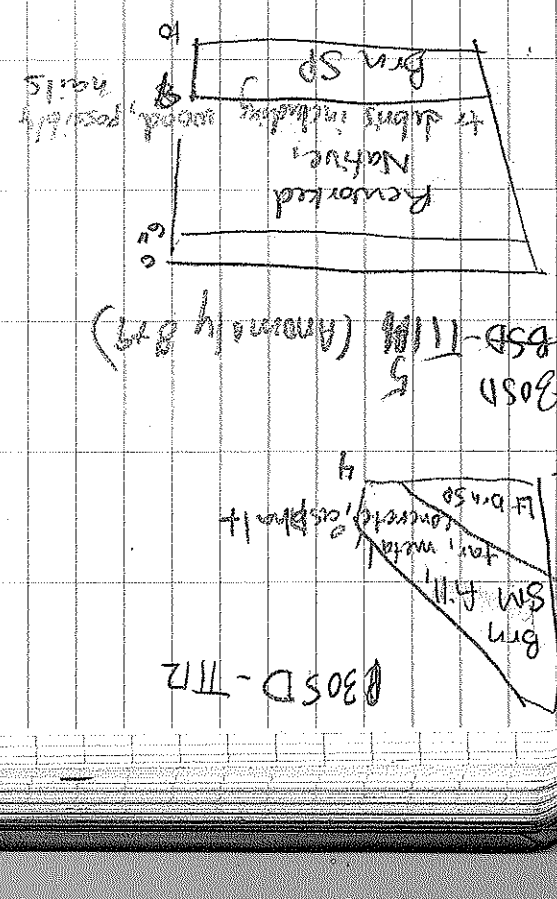
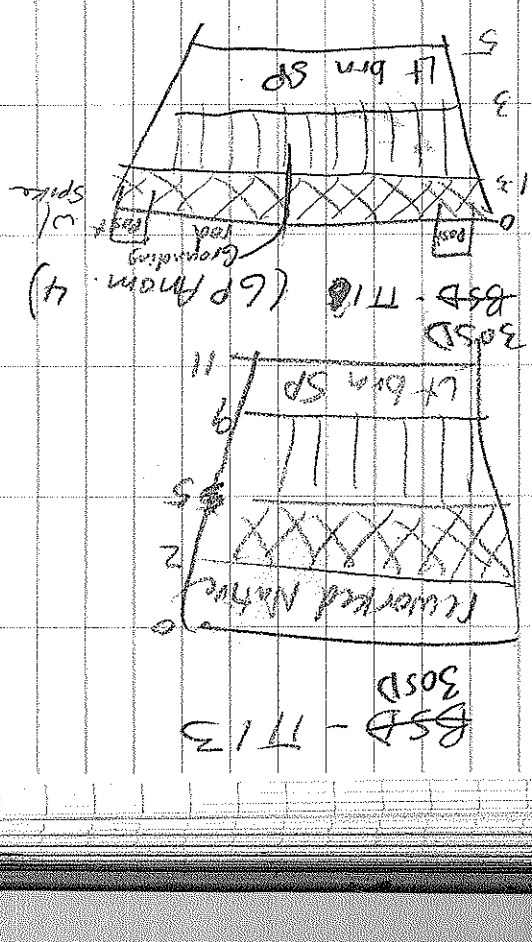
No Debris
Trench w/ half way w/ silt



Project / Client KUB



Project / Client KUB



UMore East
Remedial Investigation
Test Trenching # 3



Rite in the Rain
ALL-WEATHER
**ENVIRONMENTAL
FIELD BOOK**
No 550F

10/21/11 - 10/28/11

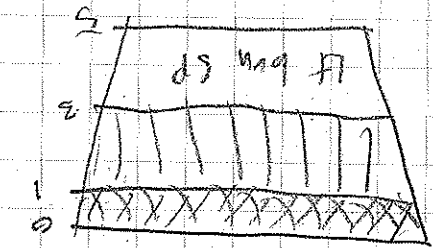
23/99-1092.00

Date: 10/21/11

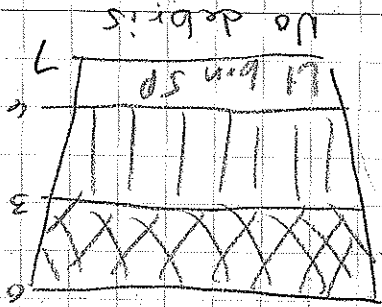
Location

Project / Client

KCB

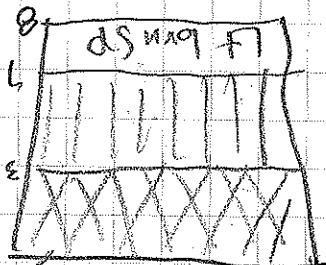


E160D-TL6 + TL5



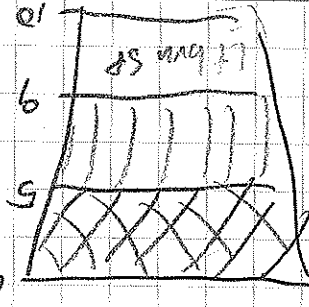
E160-TT7

No debris



No debris

No debris

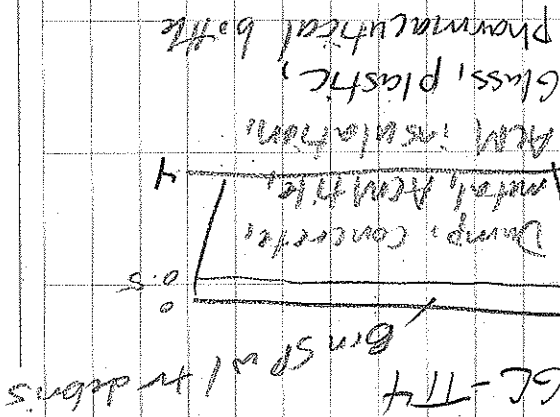


E160-TT8

Date

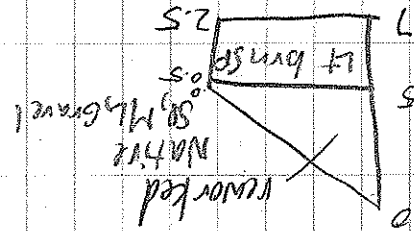
Location: UMore East

Project / Client



GC-TT4

Bin SP w/ no debris



GC-TT5

Location UMore East

Date

Project / Client

ID	o/d
<u>GC-TT5-0.5</u>	n/n
GC-TT4-0.5	n/blck
E160-TT8-0.5	n/n
E160-TT7-0.5	n/n
E160-TT2A-3	n/n
E160-TT6-0.5	n/n
E160-TT5-0.5	n/n
D3-TT5-0.5	n/n
D3-TT7-0.5	n/n
D3-TT8-0.5	n/n

Location _____ Date 10/21/11

Project / Client

KCB

P/D	Description
0.0	Brn SP w/ gravel
0.0	DK brn SM w/ blk disc. and concrete + metal debris
0.0	DK brn foamy topsoil
0.0	↓
0.0	Med brn ML
0.0	DK brn loamy topsoil
0.0	↓
0.0	↓
0.0	↓
0.0	↓

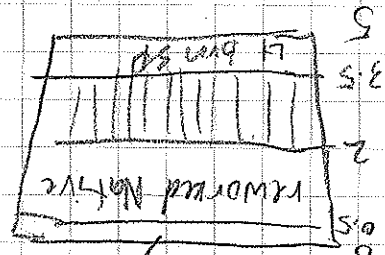
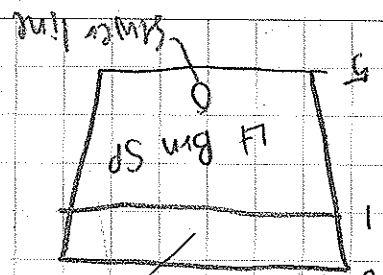
Date: 10/21/11

Location: _____
Project / Client: _____

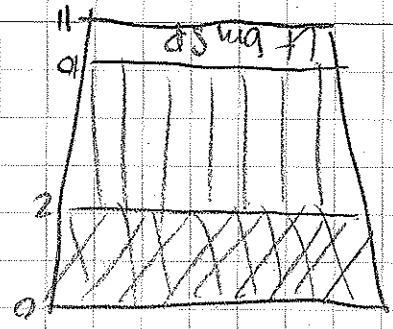
K-05

* Black wall, likely old farm wall, observed on west

D3-TT6
Bm SM w/ roofing tar + ch. ngl's



D3-TT7
Bm sandy deposit.

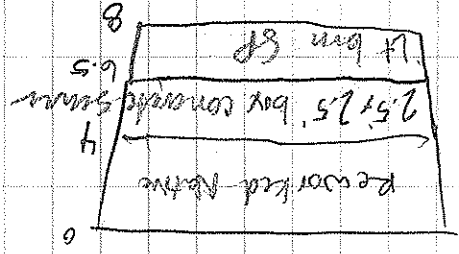


D3-TT5

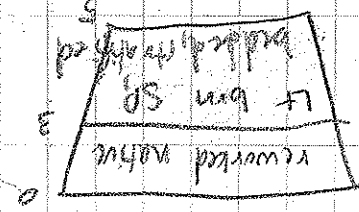
Location: U-Mare East

Date: _____

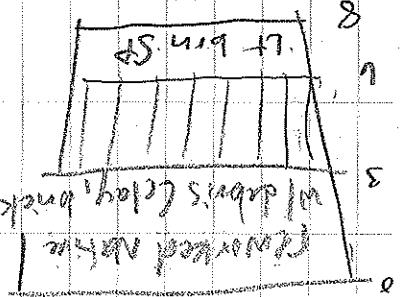
Project / Client: _____



U-Sanc4-TT1



U-PC4-TT1



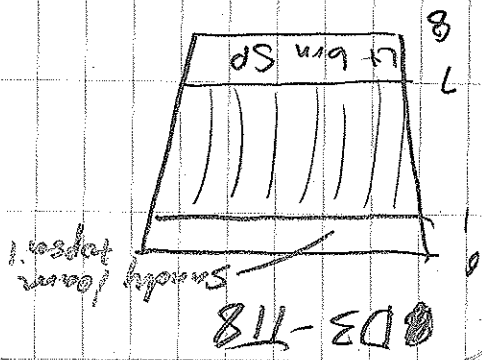
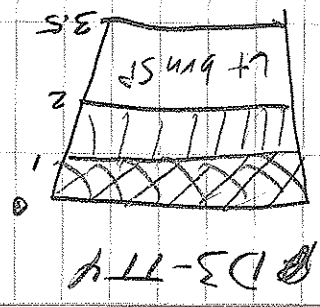
E100-TT1A + TT4 @ extent

Location: UMore East

Date: 10/21/11

Project / Client

KCB



Location: UMore East

Date: 10/24/11

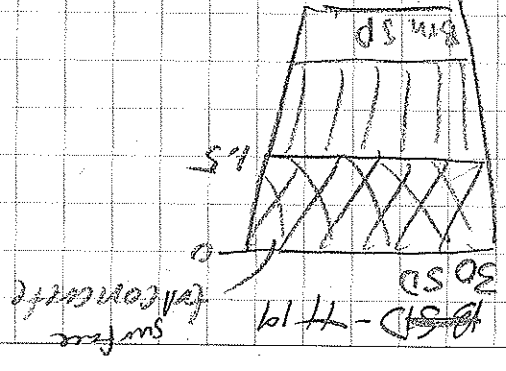
Project / Client

KCB

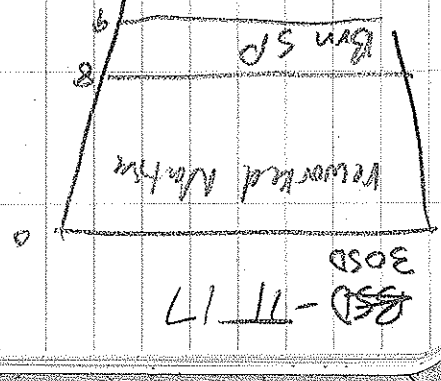
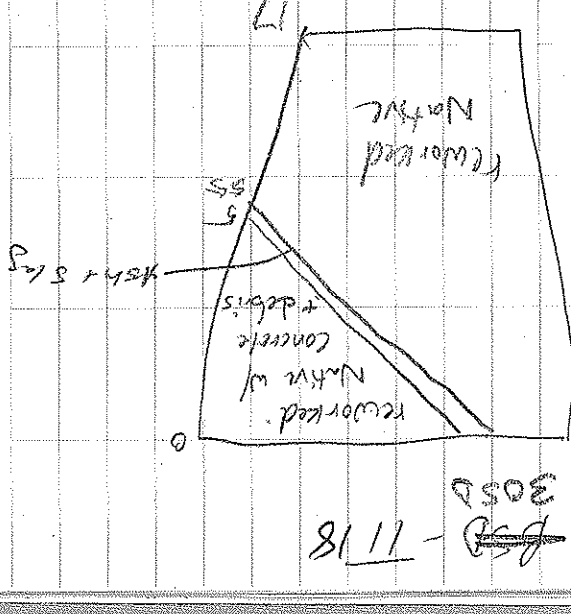
0700 KCB + SDE (Tim) onsite,
Safety meeting

1000 Work ends,
Stage 2 done

Project / Client KCB



Project / Client _____



14 Location UMore East Date 11/28/11
 Project / Client _____

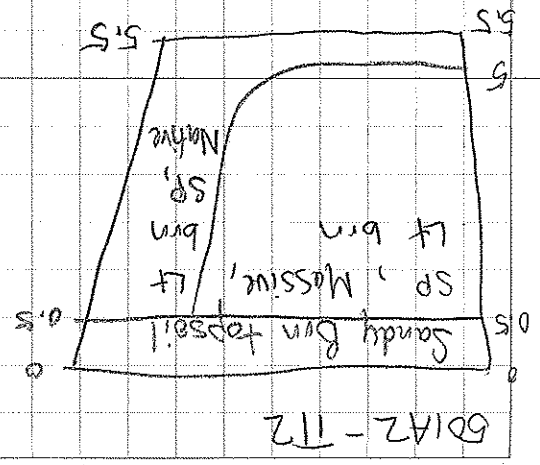
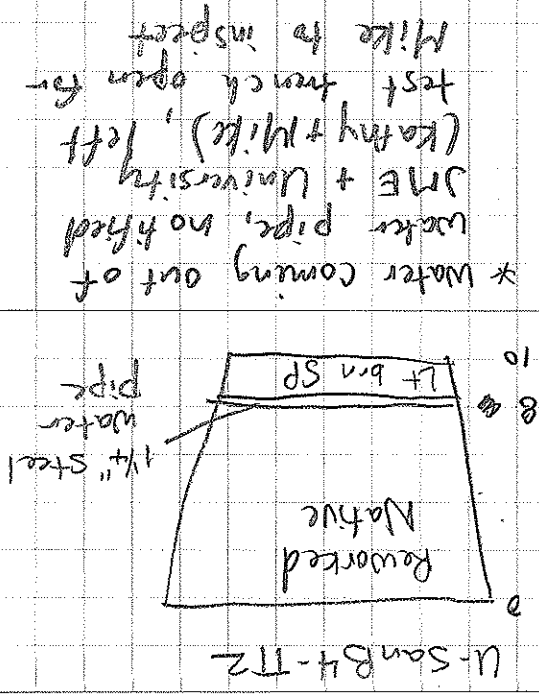
0700 @ K.B + SDE (TIM) on site
 safety meeting

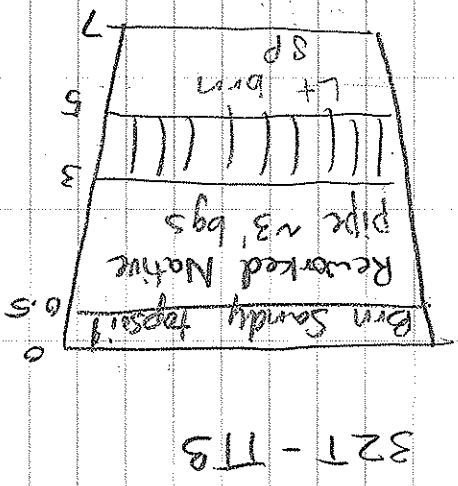
1600 work ends
 → stay 2.5 done

Spoke w/ Mike (U of M):
 - he saw water line at test trench U-san B4-TT2
 - Patched line
 - Will close up hole on Monday

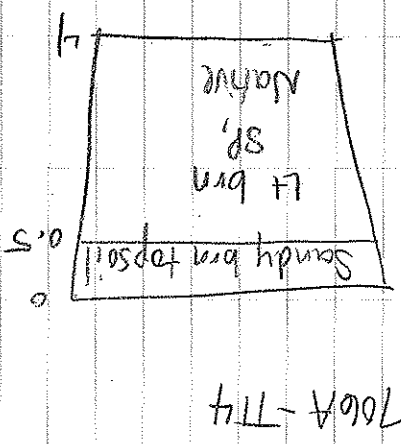
Location UMore East Date 10/28/11
 Project / Client _____

K.B

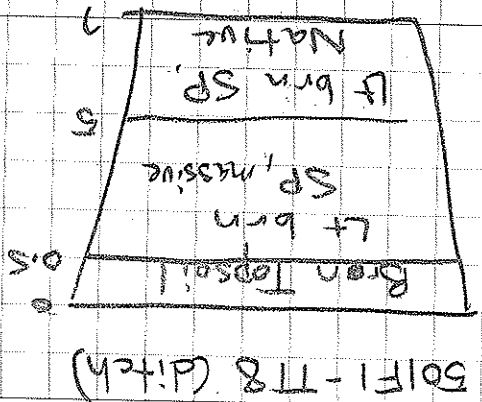




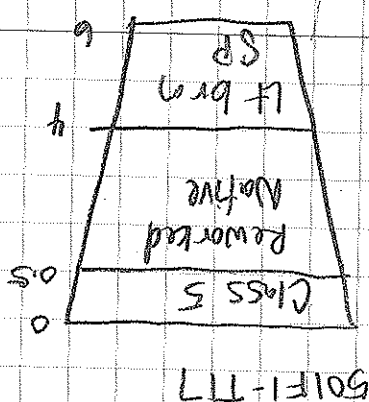
32T-TT9



706A-TT4

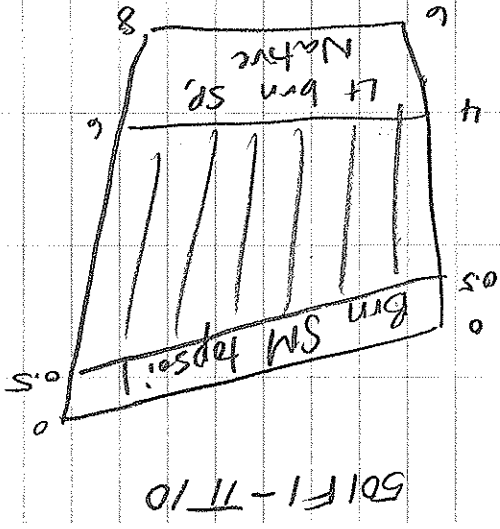


501F1-TT8 (ditch)

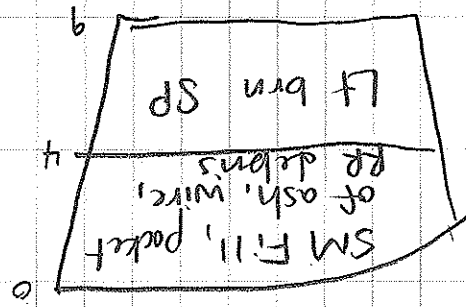


501F1-TT7

KCB

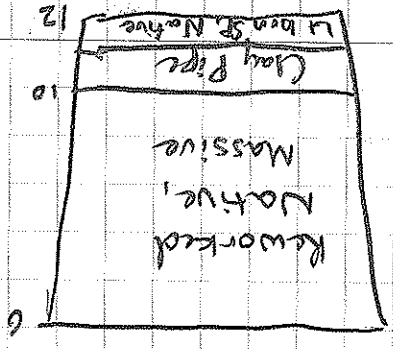


UMF1-TT10

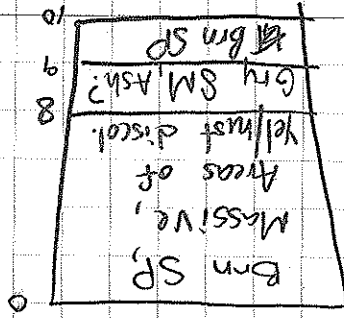


UMF1-TT9

KSB

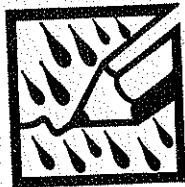


U-SPB-TT1



303A-TT3

Umore East RI



"Rite in the Rain"
ALL-WEATHER
ENVIRONMENTAL
No. 550F

Well Installation

Nov 21, 22 2011

23/19-1092.00

Location Unroe East RE Date 11/21/11

Project / Client U of M ADN

MW-EG-020 784734

	<u>EVN</u>	<u>O/DMS</u>	<u>PID</u>	<u>BLGD</u>
0-2 (1.5' Recovery)	N/N			
0-1'	N/N		0.1	0.1
1-1.5	N/N			
1.5-2	N/N			
2-4 (0.5' Recovery)	N/N		0.0	0.0
2-4	N/N		0.0	0.0
4-6 (0.5' Recovery)	N/N		0.0	0.3
4-6	N/N		0.0	0.3
6-8 (1.5' Recovery)	N/N		-	-
6-6.5	N/N		-	-
6.5-8	N/N		0.1	0.0
8-10 (Disturbance)	N/N		0.0	0.3
8-10	N/N		0.0	0.3
14-16 (2' Recovery)	N/N			
14-16'	N/N		0.0	0.0

Location Unroe East RE Date 11/21/11

Project / Client U of M ADN

<u>DESCRIPTION</u>	
Dark Brown @ LOAMY TOPSOIL w/ 20% SP	
Yellow Brown (10 YR 5/4) SILT w/ TRACE SAND	
Dark Yellow Brown (10 YR 4/6) SP - SW	
W/ BLK OBS ^{SILT} WITH EASY OXIDATION	
PARTICULATE WITHIN CLUMPS OF SILT	
Dark yellow brown (10 YR 4/4) SP SILT w/ TRACE GRAVEL (ACTIVE) LOW PLASTICITY	
BROWN ^{SP} LIGHT BROWN SP (TRANSITION) mg-Cg	
Light Brown SP w/ 20% GRAVEL mg-Cg	
Light Brown cg SP w/ 20% gravel (very coarse sand broken into gravel) ^{NOTE: DRAINING METHOD TOO OF SAMPLE, UNUSUAL}	

Location Unroe East RE

Date 11/21/11

Project / Client U of M

ADN

MW-CL6-020

QUN	O/D/S	PID	RESD
19-21 (0.3' Recovery)	N/A	0.0	0.0
19-21	N/A		
24-26 (0.3' Recovery)	N/A		
24-26	N/A		
29-31 (0.3' Recovery)	N/A		
29-31	N/A		
34-36 (0.9' Recovery)	N/A		
34-36	N/A		
39-41 (0.8' Recovery)	N/A		
39-41	N/A		
44-46 (0.5' Recovery)	N/A		
44-46	N/A		

Location Unroe East RE

Date 11/21/11

Project / Client U of M

ADN

DESCRIPTION
DIE BROWN LOAMY SAND, (CRACKY DRAIN HOLE) TRACE GRAVEL & 10% SAND
GRAVEL IN SAMPLE, NO SOIL RECOVERY ↳ GRAVEL,
MORE GRAVEL & PUWERIZED ROCK
MORE GRAVEL & PUWERIZED ROCK
MORE GRAVEL, PUWERIZED ROCK
* DRAINER INDICATED BY RYAN THURMAN AT CONE & DRAINER CONTAINERS ABOVE CLEAR
- FINE BROWN ng-cg SP, bedded, 20% - 30% GRAVEL

Location Umea East REI Date 11/21/11

Project / Client U of M

ADN

MW-C6-020

<u>RUN</u>	<u>Q/D</u>	<u>PID</u>	<u>PKGD</u>
49-51 (0.5' recovery)			
49-51	NIN	0.0	0.0
54-56 (2' recovery)			
54-56	NIN	0.0	0.0
59-61 (2' recovery)			
59-61	NIN	0.0	0.0
64-66 (2' recovery)			
64-66	NIN	0.0	0.0
65-66	NIN	0.0	0.0
69-71	NIN		
74-76 (recovery)			
74-76			

Location Umea East REI Date 11/21/11

Project / Client U of M

ADN

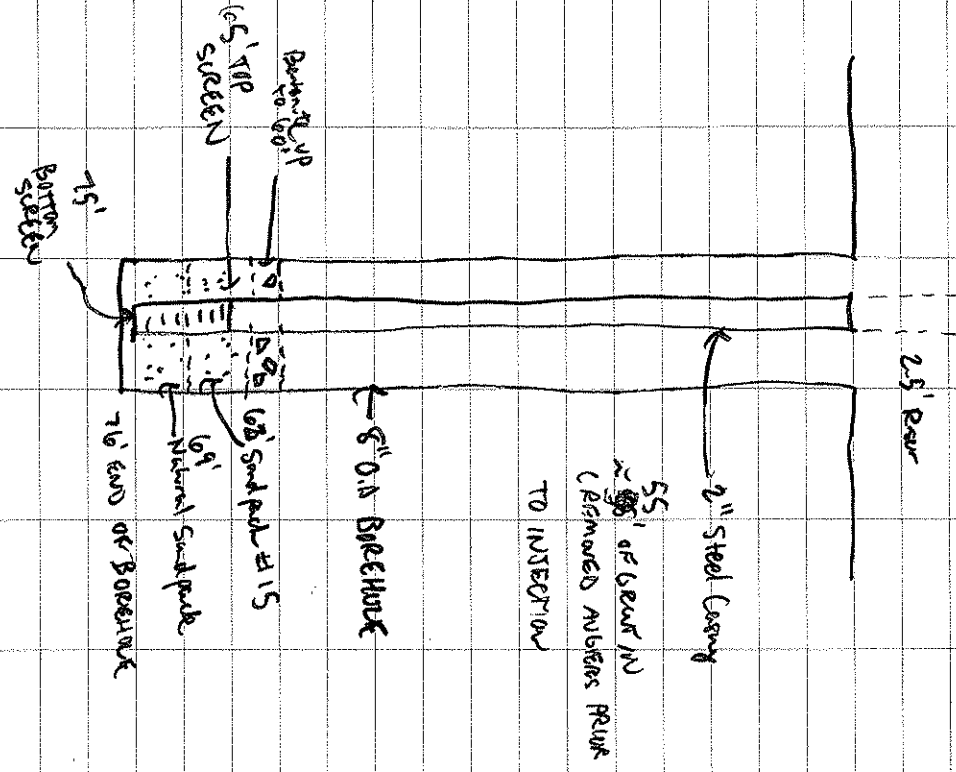
<u>DESCRIPTION</u>
BELOW
BELOW - YELLOW BROWN mg-cq SP w/ 20-30% gravel
BELOW ^{sample} @ SS BUS
BELOW TRANSITION TO LT BROWN SP w/ 20% gravel (concentrated @ center of sample intervals, BEDDEN
UPPER BROWN q-mg SP ^{60'} mg-cq LIGHT BROWN SP w/ FINE GRAVEL
YELLOW BROWN q SP, thin GRAY DISCOLOR FROM STONES
BROWN - LIGHT BROWN mg-cq SP w/ THREE GRAVEL
WATER @ 6' ^{bed} → 6.7' w/ W/C
BROWN cq SP SATURATED
BELOW mg-cq SP

Location Umare East RE Date 11/21/11

Project / Client U of M

ADN

MW-C6-020



17:30 ADN & SDE OFFSITE

Location Umare East RE Date 11/22/11

Project / Client U of M

ADN

17:30 ADN, SDE ONSITE

TO MOVE TO MW-87-019
ASBE FORM FOR SOIL CLASS & WELL DETAILS

11:30 BREAK FOR LUNCH

- WELL SCREEN NOT ONSITE

↳ HAVE TO WAIT UNTIL MID-AFTERNOON

FOR DELIVERY, RAINY (SDE) INDICATED

IT WAS A LIKELY SUPPLY PROBLEM

- ADN NOTIFIED TIME

16:00 WELL SCREEN ARRIVED, RESUMED WORK

- TO SET WELL FILTER PILE, BENTONITE SEAL

- LEAVE GRABBERS UNTIL MORNING DUE TO DARKNESS

17:00 ADN, SDE OFFSITE

LOG OF Boring

SHEET 1 OF


Client V of M
 Project Name Unsub East RE
 Number 1784729
 Location MW-B7-015

Drill Contractor SDE
 Drill Method HSA
 Drilling Started 11/29/11 Ended 11/30/11
 Logged By ADN

Elevation _____
 Total Depth _____
 Screened Interval 05-75

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
0		1	0.0	0-2 DARK BROWN LOAMY TOPSOIL, TRACE mg SAND		
		2	0.0	2-5 BROWNISH YELLOW (10-12 b/b) mg SP w/ TRACE GRAVEL		
5		3	0.0	5-6.5 LIGHT BROWN mg-cg SP w/ trace gravel		
		4	0.0	6.5-9.5 LIGHT BROWN fg-mg SP, DARK BROWN ^{BLACK} bedded STRIATIONS OR ORGANIC MATTER @ 7' BGS		
10		5	0.1	9.5-14 LIGHT BROWN mg-cg SP w/ TRACE GRAVEL		
15		6	0.0	14- LIGHT BROWN fg-mg SP		
20		7	0.0	19- LIGHT BROWN mg-cg SP GRAVEL * DRILLER DROVE MOSTLY ROCK DOWN IN THIS INTERVAL		
25		8	0.0	30% Gravel		
30				SEE NEXT PAGE		

SIMPLE ENVIRO LOG 5 TEST GPJ BARR LOG 6-28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 2 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-B7-015 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
30	9		* POOR RECOVERY DUE TO ↑ GRAVEL CONTENT (RED GRANITE)		
35	10	0.0	34- LIGHT BROWN mg-cq SP w/ 10% GRAVEL		
40	11		* POOR RECOVERY DUE TO ↑ GRAVEL CONTENT (LIMESTONE)		
45	12		* POOR RECOVERY DUE TO ↑ GRAVEL CONTENT		
50	13	0.0	49- LIGHT BROWN mg-cq SP w/ 20% GRAVEL		
55	14		* POOR RECOVERY DUE TO ↑ GRAVEL CONTENT (ROCK PLUG AND SPLIT SPOON)		
60			SEE NEXT PAGE		

SIMPLE ENVIRO LOG 5 TEST GPJ BARRLOG6 28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 3 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-B7-015 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
60	15		0.0	-59.5 LIGHT BROWN fq-mg SP w 120% GRAVEL 59.5- 616M BROWN mg-cy SP ↓ TRACE GRAVEL ↓ 10% Gravel ↓ 10% Gravel	60' Top of Bentonite Bentonite 62' TOP OF Sandpack Sandpack Screened Interval = 65-75' 74' Bottom TOP Natural Sandpack below 76' END OF BORING	
65	16		0.0			
70	17		0.0			
75	18		0.0			
80						
85						
90						

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6_28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

3 bags sand used
 ~10 bags cement used in grout mix

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

Client U of M Drill Contractor SDE
 Project Name Univ East RE Drill Method HSA
 Number 784727 Drilling Started 11/29 Ended 11/29
 Location MW-B7-013 Logged By ADN

SHEET 1 OF

Elevation
 Total Depth
 Screened Interval 50-60

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
0		1	0.0	0-1.5 DARK BROWN LOAMY TOPSOIL		
				1.5-2.5 YELLOWISH BROWN (10 YR 5/6) SILT		
		2	0.0	2.5-14 BROWNISH YELLOW (10 YR 6/6) fq-mg SP, trace gravel		
5		3	0.0			
		4	0.0			
		5	0.1	@ 9' BGS DARK BROWN THIN BEDDED STRIATIONS, NO GRAVEL (6' t)		
10						
		6	0.0	14-34.5 LIGHT BROWN mg-cg SP w/ 20% gravel		
15						
		7	0.0			
20						
		8	0.0			
25						
30						

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

SEE NEXT PAGE



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 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:


 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 2 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-B7-013 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET	
30	X	9	0.0	LT BROWN mg-cg SP w / 30% gravel	 <p>GROUT</p>		
35	X	10	0.4	^{(10YR 4/6) (fg)} 34.9 - 34.9 DARK YELLOWISH BROWN SM 34.9 - LIGHT BROWN fg mg SP			
40	X	11	—	39 - LIGHT BROWN mg-cg SP w / 30% gravel			
45	X	12	0.0	LIGHT BROWN mg SP w / 10% gravel		46' TOP OF BENTONITE	
50	X	13	0.0	*NO RECOVERY, PUSHED ROCK DOWN THE WHOLE WAY ✓ SWL @ 51.5		48' TOP OF SANDPACK	
55	X	14	0.0	LIGHT BROWN mg-cg SP w / trace gravel *SATURATED	SANDPACK (no natural) Screen Interval 50-60' BGS		
60	X	15		w / 20% gravel		61' END OF LOGGING	

SIMPLE ENVIRO LOG-5 TEST.GPJ BARRLOG6_28.GDT 12/15/08



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 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 BK6D 0-0.0 ppm
 8 Bags Sand Used 1 Bag Bentonite
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

Client UofM Drill Contractor SDE
 Project Name Umpire East RI Drill Method HSA
 Number 784732 Drilling Started 11/23 Ended 11/23
 Location MW-AS-018 Logged By ADN

SHEET 1 OF
 Elevation
 Total Depth
 Screened Interval 64-74

DEPTH FEET	SAMP. LENGTH & RECOVERY SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
0	1	0.0	0-0.5 DARK BRN LOAMY TOPSOIL w/ 20% mg SP sand		
			0.5-5 BRN mg-cq SP w/ 10% gravel (10 YR 5/8)		
	2	0.0			
5	3	0.0	5-20' LIGHT (7.5 YR 6/4) yellow BRN mg-cq SP w/ 30% gravel		
	4	0.0		DRAW INTO LARGE ROCK @ 26' BGS	
				20% gravel @ 6-8'	
10	5	0.0		Trace gravel @ 8-10'	
15	6	0.0		Trace gravel @ 14-16'	
20	7	0.0	10% gravel 20- LIGHT BRN mg-cq SP w/ 10% gravel (bedded contact layer in sample)		
25	8	0.0		@ 25' some oxidized mottling in sand, 20% gravel (some large gravel)	
30				SEE NEXT PAGE	

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

BARR Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

YBc 65

LOG OF Boring

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-AS-018 Logged By _____

SHEET 2 OF

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
30		9	0.0	10% gravel @ 30', transition to mac cg SP		
35		10	0.0	30% gravel @ 35' mg-cg		
40		11	0.0	Gravel in sample, little recovery (pulverized rock) (red granite)		
45		12	0.0	LT BRN mg-cg SP, 10% gravel		
50		13	0.0	LT BRN ^{fg} mg SP, 10% gravel		
55		14	0.0	↓ 20% gravel		
60				SEE NEXT PAGE		

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6_28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-A5-018 Logged By _____

SHEET 3 OF _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
60	15	0.0		LT BRN fq-mg SP, bedded layer of cq SP @ 60', 20% gravel	59' TOP OF BENTONITE SEAL	
65	16	0.0		LT BRN mg-cq SP, transitions to more cq with depth, True gravel *SWL @ 67.6' BGS	61' TOP OF SANDPACK 64-74 Screened	
70	17	0.0		LT BRN fq-mg SP, more cq @ top of sample, true gravel *SATURATED		
75	18	0.0		BRN mg-cq SP, 10% gravel *SATURATED	73' NATURAL SANDPACK 76' END OF BOREHOLE	
80						

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

BARR Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

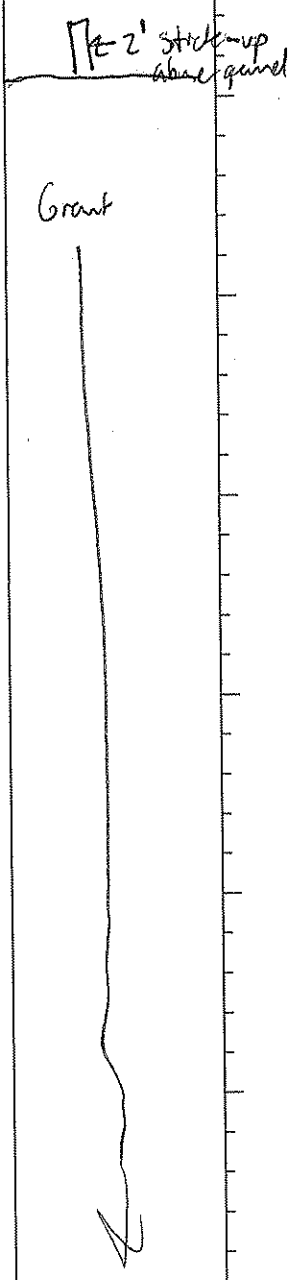
Remarks:

 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

Client V of M Drill Contractor SDE
 Project Name Vance East RI Drill Method Walter Stem Auger - 4.25" ID SHEET 1 OF
 Number 784728 Drilling Started 11/22 Ended 11/22 Elevation
 Location MW-57-014 Logged By ADN Total Depth
 Screened Interval 62-72

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	P10	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
0							
		1	0.0	3-1.5' DARK BROWN loamy TOPSOIL w/ 20% SAND	0.1		
		2	0.0	1.5-2.5 YELLOWISH BROWN SILT (10 12 7/6)	0.0		
		2	0.0	2.5-5' RED YELLOWISH BROWN mg SP w/ 20% gravel	0.0		
5		3	0.0	5-6' LIGHT BROWN mg SP w/ 10% gravel	0.0		
		4					
10		5	0.0	9-10' LIGHT BROWN mg SP	0.0		
				10' LIGHT BROWN mg-clay SP w/ 10% gravel			
15		6	0.0				
20		7	0.0				
25		8	0.0	@ 25' large gravel encountered with the light brown mg-clay SP			
30		9	0.0	SEE NEXT PAGE			



SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

BARR Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 Background P10 range =
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET **2** OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location **MW-87-014** Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
30		9	0.0	LT BRNW mg-cq SP w/ trace gravel	Gunk 	
35		10	0.0	LT BRNW mg-cq SP w/ 20% gravel		
40		11	0.0	LT BRW cq-mg SP LT BRNW mg-cq SP w/ 30% gravel, some trace gravel		
45		12		LT BRW fq-mg SP		
50		13		LT BRW mg-cq SP w/ 10% gravel		
55		14		LT BRW cq SP w/ 30% gravel		
60						

SIMPLE ENVIRO LOG 5 TEST.GPJ BARR LOG 6.28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 3 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-B7-014 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
60	X 15			LT BGN mg-cy slw/20% gravel	<p>Rebate Seal 58' (2 bags)</p>	60
65	X 16			LT BGN → BROWN SATURATED SP, HIT AQUIFER	<p>Sand Pack 60' - 72'</p>	60 - 72'
70	X 17				<p>Well Screen 62' BGS - 72'</p>	62' - 72'
75					<p>3' Natural Sand pack (to 69' BGS)</p> <p>72' END OF BORING 8" Borehole</p>	69' - 72'

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08



Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:

SWL @ 65' BGS
 63.8'

LEFT ABOVE DAMAGED OVERNIGHT JUST ↑ Bent with seal
 2' Rise

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Set screen @ 72' ± 8" out of water

UMP014236

LOG OF Boring

Client Uof M Drill Contractor SDF
 Project Name Umat East RI Drill Method HSA
 Number 784730 Drilling Started 11/28/11 Ended 11/28/11
 Location MW-CT-016 Logged By ADN/SRNZ

Elevation _____
 Total Depth _____
 Screened Interval 64-74

SHEET 1 OF _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
0				0-1.5 DARK BRN LOAMY TOPSOIL w/TRACE SAND		
1			1.7	1.5-2.5 DARK YELLOWISH BROWN (10 YR 4/6) SILT		
2				2.5-3 BROWN mg SP w/trace gray clay intermixed		
3			4.1	3-08 LIGHT BROWN mg SP (10% fines)		
4			3.7	LT BRN @ 7' bgs bedded cg SP		
5			0.8	8-14 LT BRN fg-mg SP		
6			0.6	14-19 LT BRN mg-cg SP w/10% gravel		
7			0.7	19-23 LT BRN mg SP w/trace gravel		
8				DRILLER INDICATED 0 RECOVERY, PUSHING ROCK DOWN whole way		
9			1.3	mg-cg SP 20% gravel (very coarse) darker sp layer mg (small gravel) bedded down 30-34 fg-mg SP lt brown		

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

BARR Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 Bkgd @ 0.5 ppm - 4.0 ppm
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 2 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-C7-016 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
30						
35	10	10	1.0	(no obvious trash) 34- LT BROWN cgy SP w/ 20% gravel, yellow brown clay chunks w/ some oxidation		
40	11	11	1.4	Placed gravel down the whole way according to driller		
45	12	12	0.0	LT BRN fq-mg SP w/ silt layer @ 45' bgs		
50	13	13	2.0	BROWN CLAY (very fq sand) medium plasticity		
55	14	14	3.6	51-SILT BRN fq-mg SP w/ trace gravel 54- REDDISH BRN SC (5YR4/4) low-medium plasticity SOFT-medium soft	755' Top of Bedrock	
60				See NEXT Page		

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6 28.GDT 12/15/08

BARR Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

LOG OF Boring

SHEET 3 OF

Client _____ Drill Contractor _____
 Project Name _____ Drill Method _____
 Number _____ Drilling Started _____ Ended _____
 Location MW-C7-016 Logged By _____

Elevation _____
 Total Depth _____
 Screened Interval _____

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	Headspace ppm	DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL AND DRILLING REMARKS	ELEVATION FEET
60	X	15	4.0	BROWN -60.5 fq SP (10YR5/3) w/ trace SC of low plasticity 60.5- YELLOWISH RED (10YR5/8) fq-mg SP (oxidation) w/ trace gravel abrasive texture	Behavite up to 55' bgs	-61'
65	X	16	5.2	64' → most submerged (red) BROWN ↓ w/ (10YR5/3) SC chunks intermed (medium-stuff)	← 61' top of well screen	
70	X	17	3.9	DTW = 64.3 most submerged 64- YELLOW SILT w/ some oxidation w/ LT GRAY mottling	← 72' TOP OF NATURAL SANDPACK	-72'
75	X	18	2.4	10% see large gravel Drilled very hard (Sandstone?)	← 74' Bottom of well screen 75' END OF BORING	

SIMPLE ENVIRO LOG 5 TEST.GPJ BARRLOG6.28.GDT 12/15/08

BARR Barr Engineering Co.
 4700 W. 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-832-2601

Remarks:
 - Set screen @ 74' due to non-typical geology @ water table, not as great conducive to recovery
 - 6 bgs sand used in BGS
 BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

- ~55' of gravel

Technical Memorandum

To: File
From: Tony Neuens, Kristen Schimpke, and Jim Eidem
Subject: UMore East Remedial Investigation Asbestos Summary
Date: December 23, 2011
Project: UMore East Remedial Investigation (Barr #23/19-1092)

Historically, asbestos containing materials (ACM) have been encountered at the University of Minnesota Outreach, Research, and Education property in Rosemount, MN. Due to the ACM previously identified on the property, certain precautions were taken as to avoid disturbing any ACM during the 2011 Umore East Remedial Investigation (RI) project. This memorandum provides a brief summary of pre-investigation asbestos related activities and RI asbestos sampling results.

In all areas where tree removal was necessary to access investigation locations, an initial inspection for ACM was conducted by a certified asbestos inspector and a confirmation inspection was conducted by University of Minnesota Facilities Management Hazardous Materials Program (FMHMP) staff. In areas where suspect ACM was encountered, the certified asbestos inspector (Barr representative) identified a pathway to the investigation location that was clear of suspect ACM as to avoid disturbance of the materials on the ground surface. All investigation locations were cleared by FMHMP staff prior to mobilizing heavy equipment for tree clearing and the investigation.

No visible surface suspect ACM was identified in the ingress/egress routes or investigation locations by FMHMP inspection. Complete results of the FMHMP inspection are included in Attachment 1 (Asbestos Hazardous Assessment – Selected Sites of Concern Areas of UMore Park East for the Planned Remedial Investigation by Barr Engineering).

Following the FMHMP asbestos inspection, tree and brush removal was conducted by Stevens Drilling and Environmental Services. Trees/brush was cut 2 to 6 inches above the ground surface, as described in the aforementioned document, under the supervision of an onsite certified asbestos inspector to avoid contacting potential subsurface ACM. A Barr asbestos inspector was present to oversee all investigation activities and verify that suspect ACM was not encountered.

To: File
From: Tony Neuens, Kristen Schimpke, and Jim Eidem
Subject: Umore East Remedial Investigation Asbestos Summary
Date: December 23, 2011
Page: 2
Project: Umore East Remedial Investigation (Barr #23/19-1092)

ACM identification and characterization were not a focus of the RI. However, in instances where unknown substances were encountered, ACM sampling analysis was conducted. During the RI, suspect ACM was sampled by a certified asbestos inspector at the five locations displayed on Figure 1. ACM samples were analyzed by Legend Technical Services in St. Paul, MN. Table 1 includes a summary of the results. Lab reports are located in Attachment 2. Two of the five samples analyzed were reported as ACM including soft, white material discovered at 237G and white pipe fitting gasket material at sample location U-111B-TT1-Pipe.

In addition to the locations that were sampled, suspect ACM was observed and not sampled in the following locations: the Temporary Shops area, the Railroad Viaduct Dump, at test trench 207-DD-TT1 (DEF Line subarea), and on former GOW building foundations within the ABC Line subarea

Attachments

Table 1: Asbestos Sampling Summary Table

Figure 1: Asbestos Sampling Locations

Attachment 1: *Asbestos Hazardous Assessment – Selected Sites of Concern Areas of UMore Park East for the Planned Remedial Investigation by Barr Engineering*

Attachment 2: Analytical Asbestos Lab Reports

Table 1
 Asbestos Sample Summary Table
 Umore East RI

Sample Location	Description	ACM (Y/N)
237G	Buried soft, white, pliable pipe wrap	Y - 15% Chrysotile, 5% Amosite
238B-West	White/gray powder in soil	N
GC-SS4	White with black/gray specs, hard	N
U-111B-TT1	White pipe gasket in subsurface process sewer (clay pipe gasket material)	Y - 97% Chrysotile
239A-South	White/gray powder in soil	N

UNIVERSITY OF MINNESOTA

Twin Cities Campus

*W-140 Boynton Health
Service 410 Church Street
S.E. Minneapolis, MN 55455*

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www.dehs.umn.edu

Email: dehs@umn.edu

June 9, 2011

REPORT: Asbestos Hazardous Assessment

TO: **Jim Eidem, Barr Engineering, 4700 West 77th Street,
Minneapolis, MN 55435-4803**

FROM: Michael Buck, DEHS, 410 Church Street SE, W-140 Boynton
Minneapolis, MN 55455

Sean J. Gabor, Facilities Management-Hazardous Materials
Program (FM-HMP), 1521 4th Street SE, Minneapolis, MN 55455

SUBJECT: Asbestos Hazardous Assessment – Selected Sites of Concern
areas of UMore Park East for the Planned Remedial Investigation by Barr
Engineering.

Barr PROJECT NUMBER: 23191092.00

Summary: An asbestos hazard assessment was requested by Janet Dalglish from DEHS. The tree clearing operation will be performed to access areas of concern demarcated by Barr Engineering in their Remedial Investigation of UMORE Park East. The asbestos hazard assessment is in part, being performed as a requirement of a Stipulation agreement between the University Of Minnesota and the Minnesota Pollution Control Agency (MPCA).

Discussion and Observations: The asbestos hazard assessment area is located in the UMORE East Subarea Boundary of the former Gopher Ordinance Works (GOW). The assessment included a visual inspection of the surface area to be cleared of brush, trees, and shrubs. The assessment also includes a visual inspection of land currently being farmed in that area (refer to attached Appendix D SOC Map Numbers and Figure D1-D37 in the Barr Remedial Investigation Work Plan Document).

A historical review of the GOW shows that the Remedial Investigation Sites of Concern focus on past GOW structures and other known activities that have been documented within the UMORE Park East boundaries.

A visual inspection was performed of the Barr Remedial Investigation areas. Asbestos containing materials (ACM's) that may have been used in the construction of GOW structures and infrastructure include transite, asbestos pipe insulation, and asbestos containing tars/adhesives. The visual inspection was conducted over a series of days: May 13th, 19th, and 27th, 2011.

During the inspections, no visible surface suspect ACM was observed in the approximate surface soil, test trench, or soil boring sites demarcated on the maps provided by Barr Engineering. However, visible suspect ACM debris was noted in areas adjacent to designated sampling locations. Barr field representatives should pay particular attention to: route of transport to sampling sites, access to sampling sites, and method of sampling. Asbestos-containing material removal may be required in some areas. (See notes of SOC Map Numbers)

During soil disturbance activities, please refer to the Asbestos Emission Control Plan UMORE Park May 2011 prepared by Barr Engineering for the University of Minnesota which describes the management of the three levels of environmental activities to be conducted during this investigation.

If there are any questions or comments regarding the information in this report, please contact Michael Buck at (612) 624-4715 or Sean Gabor at (612) 625-7547.

Written By:

Michael Buck

Michael Buck
University of Minnesota
DEHS
Safety and Health Compliance Specialist

Written By:

Sean J. Gabor

Sean J. Gabor
University of Minnesota
Facilities Management
Hazardous Material Program Manager

SOC
Map
Numbers

NOTES

D1	303ASS1-SS5 Transite adjacent to foundation
D1	707AS1-S3 Roofing material NE corner of foundation
D2	617ATT2-Transite observed in field; field planted
D2	617ATT4 – Coal ash observed in field
D2	OPTT1-TT8 – No visible debris. Known transite material in dump pile
D3	D7-SS1 – Roofing material (~6 dumpsters) adjacent D7-SS1 not part of investigation. FMHMP bulk sampled roofing material; does not contain asbestos.
D3	South of Brandel – No Visible Debris
D4	No Visible Debris
D5	No Visible Debris; Barr noted transite on north side
D6	No Visible Debris
D7	Surface sample – no visible debris
D8	No Visible Debris
D9	206B-TT3 has transite on foundation. The test trench equipment should approach the trench area from the north to avoid transite

***SOC
Map
Numbers***

NOTES

D10 238B-SS1-SS4 – Visible ACM debris on foundation
237F-SS1-SS3 – No Visible debris- surface samples
237G-SB1 and 237GTT1 – Visible ACM debris on foundation; possible ACM debris clean-up

D11 239ASS1-SS3 – No Visible debris; tree clearing needed

D12 235A-TT2 – Suspect roofing material noted

D13 217A-TT3 – Transite core-drilling wrap and roofing material on foundation
217A-TT2 – Transite debris on foundation
No visible debris observed in grass

D14 No visible debris adjacent 706A, 706B, and 205A. 209A – Transite debris and pink floor covering on foundation

D15 No Visible debris

D16 No visible debris – 251ATT1-TT3
251A-TT2 – Transite and roofing material on foundation

D17 No visible debris

D18 No visible debris - 704ESSS1 and 707XXSS1

***SOC
Map
Numbers***

NOTES

- D19 401B6TT1 and 401B7TT1 – No visible debris; mound adjacent to foundation may contain building debris
E160DTT1-TT3 – No visible debris; known ACM debris just below surface
E160DDB1-SB2 – Visible debris on surface; building rubble ect....
- D20 222A SS1-SS6 – Visible ACM debris on foundation and adjacent to foundation
- D21 RRDS TT1 and RRE5TT1 – no visible debris; tree clearing needed
- D22 202C SS1-SS5 – Visible ACM debris on foundation
- D23 No visible debris
- D24 No sampling indicated on diagram
- D25 No visible debris; tree clearing needed to access GSD-TT1
- D26 Visible debris on ground D4-TT1
207DD-TT1, 225T-TT1 – tree clearing needed
D3TT1-TT3 – tree clearing needed; garbage debris observed – no visible ACM
D4TT2, D4TT3, D4TT4 – No visible debris, foundations nearby with transite
- D27 No visible debris; 305D-TT1 – brick, mortar and concrete debris visible
- D28 No visible debris

***SOC
Map
Numbers***

NOTES

D29	No visible debris
D30	Grid Spaces A2, A3, B3
D31	No visible ACM debris - former Betts residence – garbage pile – 46T-TT1-TT9 no visible debris
D32	No visible debris
D33	Video – no soil disturbance
D34	No visible debris for Test Trench 501F1-TT1-3 Surface soil samples covered by other SOC figure maps
D35	Same as D10 and D11
D36	DNR fenced area
D37	Well locations

Certifications

Michael Buck

Asbestos Inspector No. AI2321

Asbestos Contractor Supervisor No. AS2321

Sean J. Gabor

Asbestos Inspector No. AI2276

Asbestos Contractor Supervisor No. AS2276

BULK MATERIAL ASBESTOS ANALYSIS REPORT

Client: Ms. Andrea Nord
 Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803

Report Date: 7/27/11

Project No.: 1103418

Client Project: 23191092 - 48RI 810 - Umore East RI ABC Line

Date Received: 7/26/11

Date Analyzed: 7/27/11

SAMPLE NO.	LAB NO.	SAMPLE DESCRIPTION	ASBESTOS TYPE (%)	OTHER MATERIAL (%)
U-111B-TT1-Pipe	1103418 - 1	U-111B-TT1-Pipe Gray, Fibrous Homogeneous	97% Chrysotile	3% Cellulose

The analysis was performed in accordance with current U.S. Environmental Protection Agency (USEPA) protocols, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600/R-93/116, 1993. All reported percentages are by visual estimates. In the case of nonhomogeneous samples, each material or layer is analyzed separately and the reported percentages are based on the total sample as received, unless other instructions are received from the client. The samples were received in acceptable condition.

NVLAP Laboratory Accreditation Number: 102081-0

ANALYST:



Todd Giorgi
 Microscopist

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- This report relates only to the above items tested.

Chain of Custody

4700 West 77th Street
 Minneapolis, MN 55435-4803
 (952) 832-2600

1103418

Project Number: 2319-1092 48RI 810

Project Name: Umore East RE-ABC Line

Sample Origination State MN (use two letter postal state abbreviation)

COC Number: **NO 36484**

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix			OC
						Water	Soil	Grab	
1. U-11B-TT1-Pipe	4'	4'	FT	9/23/2011	8:30	X		X	
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									

Common Parameter/Container - Preservation Key

- #1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
- #2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
- #3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
- #4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Number of Containers/Preservative		Total Number Of Containers
Water	Soil	
VOCs (HCl) #1	VOCs (unpreserved) #2	11
Dissolved Metals (HNO3)	DRO (tared unpreserved)	
Total Metals (HNO3)	GRO, BTEX (tared MeOH) #1	
General (unpreserved) #3	Metals (unpreserved)	
Diesel Range Organics (HCl)	SVOCS (unpreserved) #2	
Nutrients (H2SO4) #4	? Solids (plastic vial, unpres.)	
	Asbestos	

COC 1 of 1

Project Manager: JME

Project OC Contact: AAN

Sampled by: ADN

Laboratory: Legend

Analyze for Asbestos

Received by:	Date	Time
Received by: [Signature]	10/6/11	15:05

Relinquished by: [Signature]

Relinquished by:

Samples Shipped VJA: Air Freight Federal Express Sampler Other:

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

RR

BULK MATERIAL ASBESTOS ANALYSIS REPORT

Client: Mr. Jim Eidem
Barr Engineering Co.
4700 West 77th Street
Minneapolis, MN 55435-4803

Report Date: 7/1/11

Project No.: 1102959

Client Project: 23191092.00 48R1 810 - UMORE EAST R1

Date Received: 6/30/11

Date Analyzed: 7/1/11

SAMPLE NO.	LAB NO.	SAMPLE DESCRIPTION	ASBESTOS TYPE (%)	OTHER MATERIAL (%)
237G	1102959 - 1	237G White, Cementitious/Fibrous Heterogeneous	15% Chrysotile 5% Amosite	62% Nonfibrous 15% Glass Fibers 3% Cellulose

The analysis was performed in accordance with current U.S. Environmental Protection Agency (USEPA) protocols, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600/R-93/116, 1993. All reported percentages are by visual estimates. In the case of nonhomogeneous samples, each material or layer is analyzed separately and the reported percentages are based on the total sample as received, unless other instructions are received from the client. The samples were received in acceptable condition.

NVLAP Laboratory Accreditation Number: 102081-0

ANALYST:



Todd Giorgi
Microscopist

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Chain of Custody

4700 West 77th Street
 Minneapolis, MN 55435-4803
 (952) 832-2600



Project Number: 23191092.00 487-I 810

Project Name: UMOKE East PI

Sample Origination State MN (use two letter postal state abbreviation)

COC Number: **No 37367**

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix			Type	OC
						Water	Soil	Grab		
1. 237G	0.5	0.5	f	6/28/2011	11:00	X		X		
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Number of Containers/Preservative

Water

Soil

VOCs (HCl) #1	
SVOCS (unpreserved) #2	
Dissolved Metals (HNO ₃)	
Total Metals (HNO ₃)	
General (unpreserved) #3	
Diesel Range Organics (HCl)	
Nutrients (H ₂ SO ₄) #4	
VOCs (tared MeOH) #1	
GRO, BTEX (tared MeOH) #1	
DRO (tared unpreserved)	
Metals (unpreserved)	
SVOCS (unpreserved) #2	
% Solids (plastic vial, unpres.)	
Asbestos	X
Total Number Of Containers	2

COC 1 of 1

Project Manager: JME

Project QC Contact: AAN

Sampled by: JME

Laboratory: Legend

Relinquished By: [Signature] Date: 6-30-11 Time: 16:15

Relinquished By: [Signature] Date: 6/30/11 Time: 1615

Received by: [Signature] Date: 6/30/11 Time: 1615

Air Bill Number: on ice

Samples Shipped VIA: Air Freight Federal Express Sampler Other: _____

- Common Parameter/Container - Preservation Key
- #1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
 - #2 - Semivolatile Organics = PAHs, PCB, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
 - #3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
 - #4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

BULK MATERIAL ASBESTOS ANALYSIS REPORT

Client: Ms. Andrea Nord
Barr Engineering Co.
4700 West 77th Street
Minneapolis, MN 55435-4803

Report Date: 7/27/11

Project No.: 1103118

Client Project: 23191092.00 48RI 510

Date Received: 7/8/11

Date Analyzed: 7/13/11

SAMPLE NO.	LAB NO.	SAMPLE DESCRIPTION	ASBESTOS TYPE (%)	OTHER MATERIAL (%)
GC-SS4	1103118 - 1	GC-SS4 (Soil) Black/White, Cementitious/Fibrous Heterogeneous	None Detected	95% Nonfibrous 5% Cellulose

Revised Report to change sample name from GC-554 to GC-SS4

The analysis was performed in accordance with current U.S. Environmental Protection Agency (USEPA) protocols, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600/R-93/116, 1993. All reported percentages are by visual estimates. In the case of nonhomogeneous samples, each material or layer is analyzed separately and the reported percentages are based on the total sample as received, unless other instructions are received from the client. The samples were received in acceptable condition.

NVLAP Laboratory Accreditation Number: 102081-0

ANALYST:



Todd Giorgi
Microscopist

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- This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- This report relates only to the above items tested.

BULK MATERIAL ASBESTOS ANALYSIS REPORT

Client: Ms. Andrea Nord
 Barr Engineering Co.
 4700 West 77th Street
 Minneapolis, MN 55435-4803

Report Date: 10/18/11

Project No.: 1105007

Client Project: 23191092.00 48RI 820 - UMORE RI - ABC LINE

Date Received: 10/17/11

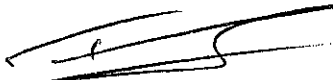
Date Analyzed: 10/18/11

SAMPLE NO.	LAB NO.	SAMPLE DESCRIPTION	ASBESTOS TYPE (%)	OTHER MATERIAL (%)
238B-West	1105007 - 1	238B - West White/Brown, Cementitious/Fibrous Heterogeneous	None Detected	85% Nonfibrous 15% Cellulose
239A - South	1105007 - 2	239A - South White/Brown, Cementitious/Fibrous Heterogeneous	None Detected	90% Nonfibrous 10% Cellulose

The analysis was performed in accordance with current U.S. Environmental Protection Agency (USEPA) protocols, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600/R-93/116, 1993. All reported percentages are by visual estimates. In the case of nonhomogeneous samples, each material or layer is analyzed separately and the reported percentages are based on the total sample as received, unless other instructions are received from the client. The samples were received in acceptable condition.

NVLAP Laboratory Accreditation Number: 102081-0

ANALYST:


 Todd Giorgi
 Microscopist

- This document cannot be duplicated, except in its entirety, without the express written authorization from LEGEND TECHNICAL SERVICES, INC.
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- This report relates only to the above items tested.

Technical Memorandum

To: File
From: Tony Neuens, Kristen Schimpke, and Jim Eidem
Subject: UMore East Remedial Investigation Nitrocellulose Summary
Date: December 23, 2011
Project: UMore East Remedial Investigation (Barr #23/19-1092)

During the course of the 2011 UMore East Remedial Investigation (RI) project, unknown substances were encountered in the field which had an appearance similar to that of the cotton gunpowder (nitrocellulose) which was produced onsite during Gopher Ordnance Works (GOW) operations. This memorandum provides a brief summary of activities related to characterizing soil potentially containing nitrocellulose during the course of the RI.

When an unknown white material or suspect gray discolored soil was encountered, activities in the area stopped and a sample of the material was collected and screened using a *BlueView Gunpowder Particle Test Kit*. A small sample of the suspect material was collected using an adhesive strip and placed inside of a plastic pouch (provided in the kit). A 2 ml capsule of diphenylamine (DPA) (provided in the kit) is added to the pouch. If nitrocellulose is present, the material in the pouch turns blue and the material is assumed to test positive for gunpowder. Test trenching activities were then ceased at the location. A subsample was then collected for hazardous materials testing by the University and eventually tested for nitrocellulose.

During the course of the RI, it was determined that the blue nitrile gloves being used to handle the material in the field was resulting in false positive tests in most instances. See Photos 3 and 4 in Attachment 2 for some sample locations that tested as false positives. Subsequently, vinyl gloves were used to handle the samples and a number of samples were sent to the University of Minnesota for analysis. Additionally, a number of samples were sent to TestAmerica for nitrocellulose laboratory analysis or viewed under a microscope to verify soil mineralogy.

Table 1 summarizes the results at sample locations that were screened by using the gunpowder test kit, analyzed by TestAmerica for nitrocellulose, or characterized by the University of Minnesota. One

To: File
From: Tony Neuens, Kristen Schimpke, and Jim Eidem
Subject: Umore East Remedial Investigation Nitrocellulose Summary
Date: December 23, 2011
Page: 2
Project: Umore East Remedial Investigation (Barr #23/19-1092)

sample, GC-SS4 in GOW Central, tested positive for nitrocellulose. The location of GC-SS4 and other samples submitted to TestAmerica for nitrocellulose analysis are shown in Figure 1. At a concentration of 9.1 mg/kg, GC-SS4 was collected from the soil matrix and included a fraction of the white substance that contained gray/black flecs found in a 3 foot by 3 foot area(Photos 1 and 2 in Attachment 2).

A small subsample of the white solid substance was also analyzed using a Smiths Detection HazMatID 360 by the University of Minnesota Waste Management laboratory. The laboratory analysis determined that the sample was calcium sulfate (gypsum board). All other testing performed by the University of Minnesota yielded results indicated the sample was not flammable or an oxidizer. No further analysis of the material was performed following the wallboard determination by the university. Three step-out surface soil samples were collected at GC-SS12, GC-SS13, and GC-SS14 and analyzed for nitrocellulose in an attempt to delineate the initial nitrocellulose detection at GC-SS4. Each step out sample was reported as non-detect for nitrocellulose and no additional material similar to that found at GC-SS4 was observed during the RI.

Attachments

Table 1: Nitrocellulose Sampling and Field Screening Summary Table

Figure 1: Nitrocellulose Sampling Locations

Attachment 1: Analytical Nitrocellulose Lab Reports

Attachment 2: Photolog

Table 1
Nitrocellulose Sample Summary Table
Umore East RI

Sample Location	Description	Gunpowder Test Kit Result	U of M Testing Result	Analytical Laboratory Nitrocellulose Concentration
E-160D-TT2	Encountered with white, porous, solid material, and gray ash soil	--	Pipewrap	Non Detect
GC-SS4	3' by 3' deposit of dry, solid, friable chunks of white material with gray/black flecs (Photos 1 and 2 in Attachment 2)	Positive	Wallboard	9.1 mg/kg ¹
GC-SS12	Dark brown loamy topsoil with trace coal present - to delineate GC-SS4 nitrocellulose detection	--	--	Non Detect
GC-SS13	Dark brown loamy topsoil with trace coal present - to delineate GC-SS4 nitrocellulose detection	--	--	Non Detect
GC-SS14	Dark brown loamy topsoil with trace coal present - to delineate GC-SS4 nitrocellulose detection	--	--	Non Detect
U-238B	White material looked similar to watered down, white paint that was spilled on the soil	False Positive	--	Non Detect
239A-South	A gray, discolored soil with white to gray, fibrous material encountered at the ground surface (Photo 3 in Attachment 2)	False Positive	--	--
22926-TT2 ²	Clear fine grains appearing similar to salt grains (Photo 4 in Attachment 2)	False Positive	--	--
222A-TT1 ²	Clear fine grains appearing similar to salt grains (Photo 4 in Attachment 2)	False Positive	--	--



Notes:

-- = Analysis not performed

¹ = Concentration reflects soil matrix with particles of the white solid intermixed

² = Samples were inspected under a microscope and confirmed the suspect grains consisted of quartz. No further testing was conducted.



-  1948 GOW Parcel Area Boundary
-  GOW Heavy Gauge Railroad
-  Nitrocellulose Sampling Location

*Red symbols indicate locations where nitrocellulose was detected by the laboratory

Data Sources: Barr Engineering Company, University of Minnesota, Dakota County.

Background: 2009 Aerials Express Photography (Twin Cities)

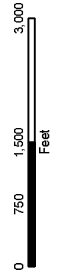


Figure 1
 NITROCELLULOSE ANALYTICAL
 SAMPLE LOCATIONS
 Umore East RI Nitrocellulose Summary
 Dakota County, MN

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: G1G150429
Client Project Description: UMore Park

For:
Barr Engineering Company
4700 West 77th Street
Minneapolis, MN 55435-4803

Attn: Andrea Nord



*Authorized for release by:
07/27/2011 09:20:23 AM*

Karen Sellers
Project Manager
karen.sellers@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

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Case Narrative

TestAmerica West Sacramento Project Number G1G150429

SOLID, TAL-SOP WS-WC-0050, Nitrocellulose

Sample: 1

This sample was reported on a wet weight or “as received” basis due to the level of nitrocellulose detected.

There are no other anomalies associated with this project.

Detection Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Client Sample ID: GC-SS4

Lab Sample ID: G1G150429001

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrocellulose	9.1		5.0		mg/kg	1		WS-WC-0050	Total

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Client Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Client Sample ID: GC-SS4

Lab Sample ID: G1G150429001

Date Collected: 07/07/11 16:00

Matrix: Solid

Date Received: 07/15/11 09:10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	9.1		5.0		mg/kg		07/22/11 10:00	07/25/11 15:41	1

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QC Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G1G22000070B
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 1203070_P

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrocellulose	ND		5.0		mg/kg		07/22/11 10:00	07/25/11 15:37	1

Lab Sample ID: G1G22000070C
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 1203070_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Nitrocellulose	50.7	37.0		mg/kg		73	34 - 115	

Lab Sample ID: G1G150429001D
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: GC-SS4
Prep Type: Total
Prep Batch: 1203070_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	% Rec	% Rec.		RPD Limit
									Limits	RPD	
Nitrocellulose	9.1		50.7	30.2		mg/kg		42	34 - 115	1.6	71

Lab Sample ID: G1G150429001S
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: GC-SS4
Prep Type: Total
Prep Batch: 1203070_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	% Rec	% Rec.	
									Limits	
Nitrocellulose	9.1		50.6	30.7		mg/kg		43	34 - 115	

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QC Association Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

General Chemistry

Analysis Batch: 1203070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G220000070B	Method Blank	Total	Solid	WS-WC-0050	
G1G220000070C	Lab Control Sample	Total	Solid	WS-WC-0050	
G1G150429001	GC-SS4	Total	Solid	WS-WC-0050	
G1G150429001S	GC-SS4	Total	Solid	WS-WC-0050	
G1G150429001D	GC-SS4	Total	Solid	WS-WC-0050	

Prep Batch: 1203070_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G220000070B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1G220000070C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1G150429001	GC-SS4	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1G150429001S	GC-SS4	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1G150429001D	GC-SS4	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

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Lab Chronicle

Client Sample ID: GC-SS4

Date Collected: 07/07/11 16:00

Date Received: 07/15/11 09:10

Lab Sample ID: G1G150429001

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1203070_P	07/22/11 10:00	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	1203070	07/25/11 15:41	JR	TAL WSC

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Certification Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento		USEPA UCMR		CA00044
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Method	Method Description	Protocol	Laboratory
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

TAL-SOP = TAL-SOP

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G150429

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G1G150429001	GC-SS4	Solid	07/07/11 16:00	07/15/11 09:10

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Chain of Custody

4700 West 77th Street
 Minneapolis, MN 55435-4803
 (952) 832-2600

BARR

Project Number: 23/19-1092 48RF 810

Project Name: Vince Rd - Cow Central

Sample Origination State: MN (use two letter postal state abbreviation)

COC Number: **NO 36506**

Location	Start Depth	Stop Depth	Depth Unit (m/ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix			Type
						Water	Soil	Grab	
1. <u>GL-SS4</u>	<u>0.5</u>	<u>0.5</u>	<u>FT</u>	<u>7/7/2011</u>	<u>16:00</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	OC
2.									
3.									
4.									
5.									
6.									
7.									
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Number of Containers/Preservative		COC <u>1</u> of <u>1</u>	
Water		Project Manager: <u>JME</u>	
SOIL		Project OC Contact: <u>ADN</u>	
VOCs (HCl) #1		Sampled by: <u>ADN</u>	
Dissolved Metals (HNO ₃)		Laboratory: <u>TestAmerica</u>	
Total Metals (HNO ₃)		Total Number Of Containers	
General (unpreserved) #3		1	
Diesel Range Organics (HCl)		X	
Nutrients (H ₂ SO ₄) #4		X	
VOCs (tared MeOH) #1		X	
GRO. BTEX (tared MeOH) #1		X	
DRO (tared unpreserved)		X	
Metals (unpreserved)		X	
SVOCS (unpreserved) #2		X	
% Solids (plastic vial. unpres.)		X	
Nitrocellulose / Flashpoint		X	

Relinquished By: [Signature] Date: 7/13/2011 Time: 09:45

Received by: [Signature] Date: 7/13/11 Time: 09:45

Relinquished By: [Signature] Date: 7/13/11 Time: 16:30

Received by: [Signature] Date: 7/15/11 Time: 11:10

Samples Shipped VIA: Air Freight Federal Express Sampler Other: _____

Bill Number: _____

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List

#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs

#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator



CLIENT Barr PM KMS LOG # 71670

LOT# (QUANTIMS ID) G1G150429 QUOTE# 83148 LOCATION W2B

DATE RECEIVED 7/15/11 TIME RECEIVED 9:10 Checked (✓)

DELIVERED BY FEDEX ON TRAC OTHER
 GOLDENSTATE UPS EZ PARCEL
 TAL COURIER TAL SF CLIENT

SHIPPING CONTAINER(S) TAL CLIENT N/A Missoula

CUSTODY SEAL STATUS INTACT BROKEN N/A

CUSTODY SEAL #(S) uf

COC #(S) uf

TEMPERATURE BLANK Observed: 1 Corrected: 2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 6 Average 6 Corrected Average 6

LABORATORY THERMOMETER ID:

IR UNIT: #4 #5 OTHER

JS 7/15/11
Initials Date

pH MEASURED YES ANOMALY N/A

LABELED BY.....

LABELS CHECKED BY.....

PEER REVIEW NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM N/A

VOA-ENCORES N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH N/A

APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES

CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C)*1 N/A

WET ICE BLUE ICE GEL PACK NO COOLING AGENTS USED PM NOTIFIED

JS 7/15/11
Initials Date

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

Lot ID: GIG150429

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VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: G1G160422
Client Project Description: UMore Park

For:
Barr Engineering Company
4700 West 77th Street
Minneapolis, MN 55435-4803

Attn: Andrea Nord



Authorized for release by:
07/28/2011 04:17:43 PM

Karen Sellers
Project Manager
karen.sellers@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

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Detection Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Client Sample ID: E160D-TT2

Lab Sample ID: G1G160422001

No Detections.

Client Sample ID: E160D-TT2 DUP

Lab Sample ID: G1G160422001X

No Detections.

Client Sample ID: M-1

Lab Sample ID: G1G160422002

No Detections.

Client Sample ID: FB-E160D-TT2

Lab Sample ID: G1G160422003

No Detections.

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Client Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Client Sample ID: E160D-TT2

Lab Sample ID: G1G160422001

Date Collected: 07/14/11 08:00

Matrix: Solid

Date Received: 07/16/11 08:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.0		0.10		%			07/28/11 11:42	1
Nitrocellulose	ND		6.0		mg/kg	☼	07/22/11 10:00	07/25/11 15:47	1

Client Sample ID: M-1

Lab Sample ID: G1G160422002

Date Collected: 07/14/11 00:00

Matrix: Solid

Date Received: 07/16/11 08:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.1		0.10		%			07/28/11 11:43	1
Nitrocellulose	ND		5.9		mg/kg	☼	07/22/11 10:00	07/25/11 15:49	1

Client Sample ID: FB-E160D-TT2

Lab Sample ID: G1G160422003

Date Collected: 07/14/11 08:15

Matrix: Water

Date Received: 07/16/11 08:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	ND		2.0		mg/L		07/20/11 08:00	07/22/11 09:31	1



QC Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Method: D 2216-90 - Moisture, Percent (D2216-90) - AFCEE

Lab Sample ID: G1G160422001X
Matrix: Solid
Analysis Batch: 1208206

Client Sample ID: E160D-TT2 DUP
Prep Type: Total

Analyte	Sample Result	Sample Qualifier	LR1 Result	LR1 Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	16.0		16.2		%		1.1	20

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G1G200000024B
Matrix: Water
Analysis Batch: 1201024

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 1201024_P

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	ND		2.0		mg/L		07/20/11 08:00	07/21/11 13:23	1

Lab Sample ID: G1G200000024C
Matrix: Water
Analysis Batch: 1201024

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 1201024_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Nitrocellulose	5.07	4.58		mg/L		90	26 - 144

Lab Sample ID: G1G160422003D
Matrix: Water
Analysis Batch: 1201024

Client Sample ID: FB-E160D-TT2
Prep Type: Total
Prep Batch: 1201024_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Nitrocellulose	ND		5.07	4.30		mg/L		85	26 - 144	0.23	45

Lab Sample ID: G1G160422003S
Matrix: Water
Analysis Batch: 1201024

Client Sample ID: FB-E160D-TT2
Prep Type: Total
Prep Batch: 1201024_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	% Rec	% Rec. Limits
Nitrocellulose	ND		5.07	4.31		mg/L		85	26 - 144

Lab Sample ID: G1G220000070B
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 1203070_P

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	ND		5.0		mg/kg		07/22/11 10:00	07/25/11 15:37	1

Lab Sample ID: G1G220000070C
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 1203070_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Nitrocellulose	50.7	37.0		mg/kg		73	34 - 115

Lab Sample ID: G1G150429001D
Matrix: Solid
Analysis Batch: 1203070

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 1203070_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Nitrocellulose	9.1		50.7	30.2		mg/kg		42	34 - 115	1.6	71

QC Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050 (Continued)

Lab Sample ID: G1G150429001S
 Matrix: Solid
 Analysis Batch: 1203070

Client Sample ID: Matrix Spike
 Prep Type: Total
 Prep Batch: 1203070_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	% Rec	% Rec. Limits
Nitrocellulose	9.1		50.6	30.7		mg/kg		43	34 - 115

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QC Association Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

General Chemistry

Analysis Batch: 1201024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G200000024B	Method Blank	Total	Water	WS-WC-0050	
G1G200000024C	Lab Control Sample	Total	Water	WS-WC-0050	
G1G160422003	FB-E160D-TT2	Total	Water	WS-WC-0050	
G1G160422003S	FB-E160D-TT2	Total	Water	WS-WC-0050	
G1G160422003D	FB-E160D-TT2	Total	Water	WS-WC-0050	

Analysis Batch: 1203070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G220000070B	Method Blank	Total	Solid	WS-WC-0050	
G1G220000070C	Lab Control Sample	Total	Solid	WS-WC-0050	
G1G150429001S	Matrix Spike	Total	Solid	WS-WC-0050	
G1G150429001D	Matrix Spike Duplicate	Total	Solid	WS-WC-0050	
G1G160422001	E160D-TT2	Total	Solid	WS-WC-0050	
G1G160422002	M-1	Total	Solid	WS-WC-0050	

Analysis Batch: 1208206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G160422001	E160D-TT2	Total	Solid	D 2216-90	
G1G160422001X	E160D-TT2 DUP	Total	Solid	D 2216-90	
G1G160422002	M-1	Total	Solid	D 2216-90	

Prep Batch: 1201024_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G200000024B	Method Blank	Total	Water	EXTRACTION, SOLID PHASE	
G1G200000024C	Lab Control Sample	Total	Water	EXTRACTION, SOLID PHASE	
G1G160422003	FB-E160D-TT2	Total	Water	EXTRACTION, SOLID PHASE	
G1G160422003S	FB-E160D-TT2	Total	Water	EXTRACTION, SOLID PHASE	
G1G160422003D	FB-E160D-TT2	Total	Water	EXTRACTION, SOLID PHASE	

Prep Batch: 1203070_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1G220000070B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	
G1G220000070C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	
G1G150429001S	Matrix Spike	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	
G1G150429001D	Matrix Spike Duplicate	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	
G1G160422001	E160D-TT2	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	
G1G160422002	M-1	Total	Solid	EXTRACTION, SOLID/SOLVENT (Manual)	

Lab Chronicle

Client Sample ID: E160D-TT2

Date Collected: 07/14/11 08:00

Date Received: 07/16/11 08:40

Lab Sample ID: G1G160422001

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1203070_P	07/22/11 10:00	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	1203070	07/25/11 15:47	JR	TAL WSC
Total	Analysis	D 2216-90		1	1208206	07/28/11 11:42	KG	TAL WSC

Client Sample ID: M-1

Date Collected: 07/14/11 00:00

Date Received: 07/16/11 08:40

Lab Sample ID: G1G160422002

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1203070_P	07/22/11 10:00	HJA	TAL WSC
Total	Analysis	WS-WC-0050		1	1203070	07/25/11 15:49	JR	TAL WSC
Total	Analysis	D 2216-90		1	1208206	07/28/11 11:43	KG	TAL WSC

Client Sample ID: FB-E160D-TT2

Date Collected: 07/14/11 08:15

Date Received: 07/16/11 08:40

Lab Sample ID: G1G160422003

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION, SOLID PHASE			1201024_P	07/20/11 08:00	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	1201024	07/22/11 09:31	JR	TAL WSC

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Certification Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento		USEPA UCMR		CA00044
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Method	Method Description	Protocol	Laboratory
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM International
TAL-SOP = TAL-SOP

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1G160422

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G1G160422001	E160D-TT2	Solid	07/14/11 08:00	07/16/11 08:40
G1G160422002	M-1	Solid	07/14/11 00:00	07/16/11 08:40
G1G160422003	FB-E160D-TT2	Water	07/14/11 08:15	07/16/11 08:40

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Chain of Custody

4700 West 77th Street
 Minneapolis, MN 55435-4803
 (952) 832-2600

BARR

Project Number: 23/19-1092-00 48R1 810

Project Name: UMove East - Gow Central

Sample Origination State MN (use two letter postal state abbreviation)

COC Number: **No 36488**

Location	Start Depth	Stop Depth	Depth Unit (m, ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix			Collection Time (hh:mm)	Number of Containers/Preservative																		
						Water	Soil	Grab		OC	Water					Soil												
										VOCs (HCL) #1	SVOCS (unpreserved) #2	Dissolved Metals (HNO ₃)	Total Metals (HNO ₃)	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H ₂ SO ₄) #4	Nitrocellulose	VOCs (tared MeOH) #1	GRX, BTEX (tared MeOH) #1	DRG (tared unpreserved)	Metals (unpreserved)	SVOCS (unpreserved) #2	% Solids (plastic vial, unpres.)	Nitrocellulose	Total Number Of Containers			
E1600-T12	0.5	0.5	ft	07/14/2011	0800	X	X	X										Nitrocellulose										1
M-1	-	-	-	↓	-	X	X	X																				1
E1600-T12	-	-	-	↓	0815	X	X	X																				1

Analyze Nitrocellulose

↓

Common Parameter/Container - Preservation Key

- Volatile Organics = BTEX, GRX, TPH, 8260 Full List
- Semivolatile Organics = PAHs, PCF, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
- General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
- Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By: Pat Samples Date: 7/15/11 0600
 Relinquished By: Pat Samples Date: 7/15/11 1630

Received by: Pat Samples Date: 7/15/11 0600
 Received by: Pat Samples Date: 7/15/11 1015

Samples Shipped Via: Air Freight Federal Express Sampler Other: _____

CLIENT BARZ PM KS LOG # 71690

LOT# (QUANTIMS ID) G12160422 QUOTE# 83148 LOCATION W10C

DATE RECEIVED 16 July 11 TIME RECEIVED 0840 Checked (✓)

DELIVERED BY FEDEX ON TRAC OTHER

GOLDENSTATE UPS EZ PARCEL

TAL COURIER TAL SF CLIENT

SHIPPING CONTAINER(S) TAL CLIENT N/A

CUSTODY SEAL STATUS INTACT BROKEN N/A

CUSTODY SEAL #(S) 2

COC #(S) 30488

TEMPERATURE BLANK Observed: 1 Corrected: 2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 4, 5, 5 Average 5 Corrected Average 5

LABORATORY THERMOMETER ID:

IR UNIT: #4 #5 OTHER

Initials [Signature] Date 16 July 11

pH MEASURED YES ANOMALY N/A

LABELLED BY.....

LABELS CHECKED BY.....

PEER REVIEW NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM N/A

VOA-ENCORES N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES N/A

CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C)*1 N/A

WET ICE BLUE ICE GEL PACK NO COOLING AGENTS USED PM NOTIFIED

Initials [Signature] Date 16 July 11

Notes _____

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

Lot

ID:

616160422

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VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
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125AGJ	/	/																		
___CGJ																				
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250PJna																				
250PJzn/na																				
Acetate Tube																				
___CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

ORIGIN ID: BBBA (952) 832-2600
PETE LAMLESS
BARR ENGINEERING CO.
7390 OHMS LANE

SHIP DATE: 15 JUL 11
ACTWGT: 21.8 LB
CAD: 687918/CAFE2472

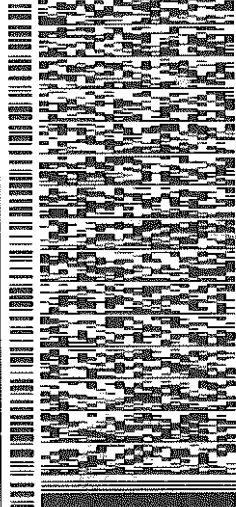
BILL SENDER

EDINA, MN 55439
UNITED STATES US

TO SAMPLE RECEIVING
TEST AMERICA
880 RIVERSIDE PARKWAY

WEST SACRAMENTO CA 95605

(916) 373-5600
REF: 2319092 48R1810



FedEx
Express



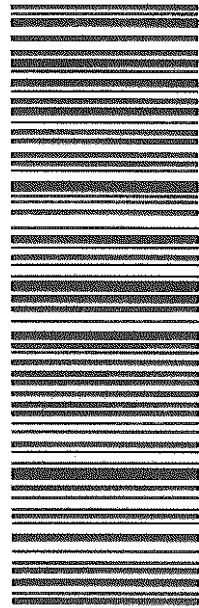
REL#
3785346

SATURDAY ### A1
PRIORITY OVERNIGHT

TRK# 4498 1974 9631

95605
CA-US
SMF

XO BLUA



505CZ/F555/DA47

Part # 155148-494 RIT2 04/10

ORIGIN ID: BBBA (952) 832-2600
PETE LAMLESS
BARR ENGINEERING CO.
7390 OHMS LANE

Ship Date: 15 JUL 11
ActWgt: 21.8 LB
CAD: 687918/CAFE2472

EDINA, MN 55439
UNITED STATES US

TO SAMPLE RECEIVING
TEST AMERICA
880 RIVERSIDE PARKWAY

WEST SACRAMENTO, CA 95605

(US)

(916) 373-5600

FedEx
Express



Trk# 4498 1974 9631

PRIORITY OVERNIGHT



880 RIVERSIDE PARKWAY

RT 127

72

9631
07.16

PLACE THIS LABEL ON PACKAGE
NEXT TO THE SHIPPING LABEL

Part # 156148-494 RIT2 04/10



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: G1J180483
Client Project Description: UMore Park

For:
Barr Engineering Company
4700 West 77th Street
Minneapolis, MN 55435-4803

Attn: Andrea Nord



Authorized for release by:
11/8/2011 9:46:04 AM

Karen Sellers
Project Manager
karen.sellers@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

UMP014297

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Definitions/Glossary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Qualifiers

General Chemistry

Qualifier	Qualifier Description
N	Spike sample recovery is outside control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Case Narrative

TestAmerica West Sacramento Project Number G1J180483

There were no anomalies associated with this project.

Detection Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Client Sample ID: GC-SS12

Lab Sample ID: G1J180483001

No Detections

Client Sample ID: GC-SS13

Lab Sample ID: G1J180483002

No Detections

Client Sample ID: GC-SS14

Lab Sample ID: G1J180483003

No Detections

Client Sample ID: U-238B

Lab Sample ID: G1J180483004

No Detections

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Client Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Client Sample ID: GC-SS12

Lab Sample ID: G1J180483001

Date Collected: 10/13/11 09:20

Matrix: Solid

Date Received: 10/18/11 09:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		0.10		%			10/21/11 06:20	1
Nitrocellulose	ND		5.4		mg/kg	☼	10/27/11 07:30	10/28/11 12:26	1

Client Sample ID: GC-SS13

Lab Sample ID: G1J180483002

Date Collected: 10/13/11 09:35

Matrix: Solid

Date Received: 10/18/11 09:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.0		0.10		%			10/21/11 06:20	1
Nitrocellulose	ND		5.8		mg/kg	☼	10/27/11 07:30	10/28/11 12:28	1

Client Sample ID: GC-SS14

Lab Sample ID: G1J180483003

Date Collected: 10/13/11 10:00

Matrix: Solid

Date Received: 10/18/11 09:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.6		0.10		%			10/21/11 06:21	1
Nitrocellulose	ND		5.7		mg/kg	☼	10/27/11 07:30	10/28/11 12:30	1

Client Sample ID: U-238B

Lab Sample ID: G1J180483004

Date Collected: 10/13/11 10:30

Matrix: Solid

Date Received: 10/18/11 09:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21.9		0.10		%			10/21/11 06:21	1
Nitrocellulose	ND		6.4		mg/kg	☼	10/27/11 07:30	10/28/11 12:32	1

QC Sample Results

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Method: D 2216-90 - Moisture, Percent (D2216-90) - AFCEE

Lab Sample ID: G1J040499028X
Matrix: Solid
Analysis Batch: 1293159

Client Sample ID: Duplicate
Prep Type: Total

Analyte	Sample Result	Sample Qualifier	LR1 Result	LR1 Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	14.7		15.6		%		5.6	20

Method: WS-WC-0050 - Nitrocellulose as N by WS-WC-0050

Lab Sample ID: G1J270000037B
Matrix: Solid
Analysis Batch: 1300037

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 1300037_P

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrocellulose	ND		5.0		mg/kg		10/27/11 07:30	10/28/11 12:02	1

Lab Sample ID: G1J270000037C
Matrix: Solid
Analysis Batch: 1300037

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 1300037_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrocellulose	50.7	40.7		mg/kg		80	34 - 115

Lab Sample ID: G1J180464006D
Matrix: Solid
Analysis Batch: 1300037

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 1300037_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrocellulose	ND		48.0	13.2	N	mg/kg		21	34 - 115	6.6	71

Lab Sample ID: G1J180464006S
Matrix: Solid
Analysis Batch: 1300037

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 1300037_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrocellulose	ND		50.6	14.1	N	mg/kg		22	34 - 115

QC Association Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

General Chemistry

Analysis Batch: 1293159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1J040499028X	Duplicate	Total	Solid	D 2216-90	
G1J180483001	GC-SS12	Total	Solid	D 2216-90	
G1J180483002	GC-SS13	Total	Solid	D 2216-90	
G1J180483003	GC-SS14	Total	Solid	D 2216-90	
G1J180483004	U-238B	Total	Solid	D 2216-90	

Analysis Batch: 1300037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1J180464006D	Matrix Spike Duplicate	Total	Solid	WS-WC-0050	
G1J180464006S	Matrix Spike	Total	Solid	WS-WC-0050	
G1J180483001	GC-SS12	Total	Solid	WS-WC-0050	
G1J180483002	GC-SS13	Total	Solid	WS-WC-0050	
G1J180483003	GC-SS14	Total	Solid	WS-WC-0050	
G1J180483004	U-238B	Total	Solid	WS-WC-0050	
G1J270000037B	Method Blank	Total	Solid	WS-WC-0050	
G1J270000037C	Lab Control Sample	Total	Solid	WS-WC-0050	

Prep Batch: 1300037_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1J180464006D	Matrix Spike Duplicate	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J180464006S	Matrix Spike	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J180483001	GC-SS12	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J180483002	GC-SS13	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J180483003	GC-SS14	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J180483004	U-238B	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J270000037B	Method Blank	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	
G1J270000037C	Lab Control Sample	Total	Solid	EXTRACTION, SOLID/SOLVEN T (Manual)	

Lab Chronicle

Client Sample ID: GC-SS12

Date Collected: 10/13/11 09:20

Date Received: 10/18/11 09:30

Lab Sample ID: G1J180483001

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	D 2216-90		1	1293159	10/21/11 06:20	WS	TAL WSC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1300037_P	10/27/11 07:30	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	1300037	10/28/11 12:26	JB	TAL WSC

Client Sample ID: GC-SS13

Date Collected: 10/13/11 09:35

Date Received: 10/18/11 09:30

Lab Sample ID: G1J180483002

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	D 2216-90		1	1293159	10/21/11 06:20	WS	TAL WSC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1300037_P	10/27/11 07:30	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	1300037	10/28/11 12:28	JB	TAL WSC

Client Sample ID: GC-SS14

Date Collected: 10/13/11 10:00

Date Received: 10/18/11 09:30

Lab Sample ID: G1J180483003

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	D 2216-90		1	1293159	10/21/11 06:21	WS	TAL WSC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1300037_P	10/27/11 07:30	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	1300037	10/28/11 12:30	JB	TAL WSC

Client Sample ID: U-238B

Date Collected: 10/13/11 10:30

Date Received: 10/18/11 09:30

Lab Sample ID: G1J180483004

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	D 2216-90		1	1293159	10/21/11 06:21	WS	TAL WSC
Total	Prep	EXTRACTION, SOLID/SOLVENT (Manual)			1300037_P	10/27/11 07:30	TQP	TAL WSC
Total	Analysis	WS-WC-0050		1	1300037	10/28/11 12:32	JB	TAL WSC

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Method	Method Description	Protocol	Laboratory
D 2216-90	Moisture, Percent (D2216-90) - AFCEE	ASTM	TAL WSC
WS-WC-0050	Nitrocellulose as N by WS-WC-0050	TAL-SOP	TAL WSC

Protocol References:

ASTM = ASTM International

TAL-SOP = TAL-SOP

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Sample Summary

Client: Barr Engineering Company

TestAmerica Job ID: G1J180483

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G1J180483001	GC-SS12	Solid	10/13/11 09:20	10/18/11 09:30
G1J180483002	GC-SS13	Solid	10/13/11 09:35	10/18/11 09:30
G1J180483003	GC-SS14	Solid	10/13/11 10:00	10/18/11 09:30
G1J180483004	U-238B	Solid	10/13/11 10:30	10/18/11 09:30

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Chain of Custody

4700 West 77th Street
 Minneapolis, MN 55435-4803
 (952) 832-2600

BARR

Project Number: 2319-1092 48RI 820

Project Name: Umore East - RI

Sample Origination State MN (use two letter postal state abbreviation)

COC Number: No 37400

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix			On Ice? Y/N	Date	Time
						Water	Soil	Grab			
1. GC-SS12	.5	.5	ft	10/13/2011	9:20	X	X	X	Y	10/18/11	
2. GC-SS13	.5	.5	ft	10/13/2011	9:35	X	X	X	N		
3. GC-SS14	.5	.5	ft	10/13/2011	10:00	X	X	X	N		
4. 1-238B	-	-	-	10/14/2011	10:30	X	X	X	N		
5.											
6.											
7.											
8.											
9.											
10.											

Common Parameter/Container - Preservation Key
 1 - Volatile Organics = BTEX, GRQ, TPH, 8260 Full List
 2 - Semivolatile Organics = PAHs, PCB Dioxins, 8270
 3 - Full List, Herbicide/Pesticide/PCBs
 4 - General = pH, Chloride, Fluoride, Alkalinity, TSS, DO, TS, Sulfate
 5 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished by: [Signature]
 Relinquished By: Pete Hamer
 Samples Shipped VIA: Air Freight Federal Express Sampler Other: _____

Received by: Pete Hamer
 Received by: [Signature]
 Air Bill Number: _____

Date: 10/17/11 Time: 1000
 Date: 10/18/11 Time: 1110

COC 1 of 1
 Project Manager: JME
 Project OC Contact: AAN
 Sampled by: ADD/ACB
 Laboratory: Test Ammonia

Water	Soil	Total Number Of Containers
VOCs (HCl) #1		1
VOCs (unpreserved) #2		
Dissolved Metals (HNO ₃)		
Total Metals (HNO ₃)		
General (unpreserved) #3		
Diesel Range Organics (HCl)		
Nutrients (H ₂ SO ₄) #4		
VOCs (tared MeOH) #1		
GRQ, BTEX (tared MeOH) #1		
DRO (tared unpreserved)		
Metals (unpreserved)		
SVOCS (unpreserved) #2		
% Solids (plastic vial, unpres.)		
Mincelubse		

Analysis for mincelubse
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THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT BARR PM KS LOG # 73414
 LOT# (QUANTIMS ID) 61J180483 QUOTE# 83148 LOCATION 104D
 DATE RECEIVED 10/18/11 TIME RECEIVED 0930 Checked (✓)
 DELIVERED BY FEDEX ON TRAC OTHER
 GOLDENSTATE UPS EZ PARCEL
 TAL COURIER TAL SF CLIENT
 SHIPPING CONTAINER(S) TAL CLIENT N/A
 CUSTODY SEAL STATUS INTACT BROKEN N/A
 CUSTODY SEAL #(S) N/A
 COC #(S) 1 of 1
 TEMPERATURE BLANK Observed: N/A Corrected: N/A
 SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)
 Observed: 5, 6, 6 Average 6 Corrected Average 6
 LABORATORY THERMOMETER ID:
 IR UNIT: #4 #5 OTHER

Jen 10/18/11
Initials Date

PH MEASURED YES ANOMALY N/A
 LABELED BY..... NB
 LABELS CHECKED BY..... da
 PEER REVIEW NA
 SHORT HOLD TEST NOTIFICATION SAMPLE RECEIVING
 WETCHEM N/A
 VOA-ENCORES N/A
 METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL N/A
 COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH N/A
 APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES
 CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C)¹ N/A
 WET ICE BLUE ICE GEL PACK NO COOLING AGENTS USED PM NOTIFIED
JJ 10/18/11
Initials Date

Notes _____

¹ Acceptable temperature range for State of Wisconsin samples is ≤4°C.



Lot ID: 01J150483

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB																				
AGBs																				
250AGB																				
250AGBs																				
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500AGB																				
AGJ																				
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125AGJ																				
CGJ																				
500CGJ																				
250CGJ																				
125CGJ	HPL 10/18/11																			
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
AD Trap																				
iploc																				

Number of VOAs with air bubbles present / total number of VOA's



8508
1018

A 1 **362** RT

ORIGIN ID: BBBA (952) 832-2600
PETE LAWLESS
BARR ENGINEERING CO
7390 OHMS LANE

SHIP DATE: 17OCT11
ACTWGT: 9.6 LB
CAD: 687918/CAFE2473

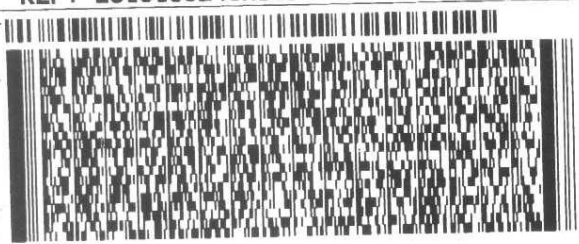
EDINA, MN 55439
UNITED STATES US

BILL SENDER

TO: **SAMPLE RECEIVING
TEST AMERICA
880 RIVERSIDE PARKWAY**

WEST SACRAMENTO CA 95605

(916) 373-5600
REF: 2319109248RI820



FedEx
Express



REL#
3785346

TRK# 5094 0929 8508
0201

**TUE - 18 OCT A1
PRIORITY OVERNIGHT**

XH BLUA

**95605
CA-US
SMF**

Part # 156146-434 RIT2 04/10



505C1/AB13/DA47

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Attachment 2
Photolog
UMore East Remedial Investigation Nitrocellulose Summary

Umore East
Dakota County, Minnesota
6/20/2011 to 12/8/2011

Photo #	Comments
1	Wallboard at GC-SS4 in GOW Central subarea.
2	Close-up of wallboard at GC-SS4.
3	White to gray, fibrous material encountered near 239A.
4	Soil collected at building 22926-TT2



Photo 1: Wallboard at GC-SS4 in GOW Central subarea.



Photo 2: Close-up of wallboard at GC-SS4.



Photo 3: White to gray, fibrous material encountered near 239A.



Photo 4: Soil collected at building 22926-TT2

SPATIAL DATA REPORTING FORM

Site Location Data Reporting Form

Background

Remediation Program:	Site Assessment Program
Site Program ID:	
Site Name:	UMore Park East

Site Location Data

Site Location Point Description	Center of Site
Latitude/Easting/X Coordinate	494558.005
Longitude/Northing/Y Coordinate	4952049.812
Collection Method	Interpolation-DOQ
Collection Date	12/28/2011
Organization Name	Barr Engineering
Organization Type	Consultant

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Boring	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	301ALP-SB1	301ALP-SS1	301ALP-SS2	301ALP-SS3	301ALP-SS4	301ALP-SS4
Latitude/Easting/X Coordinate	495932.7293	495926.7791	495938.2677	495929.2442	495910.324	495910.324
Longitude/Northing/Y Coordinate	4952669.108	4952671.802	4952674.262	4952657.67	4952670.478	4952670.478
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/18/2011	6/22/2011	6/22/2011	10/10/2011	10/10/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	301ALP-SS5	301ALP-TT1	302A-SS1	302A-SS2	302A-SS3
Latitude/Easting/X Coordinate	495924.8701	495908.2888	495817.8178	495820.8658	495815.3804
Longitude/Northing/Y Coordinate	4952683.953	4952651.383	4952784.952	4952781.907	4952780.074
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	6/20/2011	6/22/2011	6/22/2011	6/22/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Latitude/Easting/X Coordinate	Longitude/Northing/Y Coordinate	Collection Method	Collection Date	Organization Name	Organization Type	Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation	Comments
Test Trench Sample	303A2-TT1	495704.0114	4952783.877	GPS -Receiver	6/20/2011	Barr Engineering	Consultant					
Test Trench Sample	303A2-TT2	495693.649	4952783.859	GPS -Receiver	6/20/2011	Barr Engineering	Consultant					
Boring	303A-SB1	496059.2266	4952715.43	GPS -Receiver	10/18/2011	Barr Engineering	Consultant					
Surface Sample	303A-SS1	496058.4447	4952715.413	GPS -Receiver	6/22/2011	Barr Engineering	Consultant					
Surface Sample	303A-SS2	496058.3255	4952718.438	GPS -Receiver	6/22/2011	Barr Engineering	Consultant					

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	303A-SS3	303A-SS4	303A-SS5	303A-SS6	303A-SS8	Surface Sample
Latitude/Easting/X Coordinate	496061.3708	496058.3255	496055.2785	496067.5398	496039.2075	303A-SS8
Longitude/Northing/Y Coordinate	4952715.517	4952712.342	4952715.311	4952740.437	4952711.261	496039.2075
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	4952711.261
Collection Date	6/22/2011	6/22/2011	6/22/2011	10/10/2011	10/10/2011	GPS -Receiver
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	10/10/2011
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Barr Engineering
Ground Elevation						Consultant
Unique Well Number						Barr Engineering
Top Screen Elevation						Consultant
Bottom Screen Elevation						Barr Engineering

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	303A-SS9	303A-SS10	303A-SS11	303A-SS12	303A-SS13	Surface Sample
Latitude/Easting/X Coordinate	496054.7745	496070.6496	496033.8958	496026.6671	496112.0176	303A-SS13
Longitude/Northing/Y Coordinate	4952705.072	4952711.687	4952733.422	4952666.436	4952677.013	496112.0176
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	4952677.013
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/28/2011	10/28/2011	GPS -Receiver
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	10/28/2011
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Barr Engineering
Ground Elevation						Consultant
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	303A-SS14	303A-TT1	303A-TT2	303A-TT3
Latitude/Easting/X Coordinate	496120.3805	496060.901	496035.3168	496058.8249
Longitude/Northing/Y Coordinate	4952773.924	4952749.5	4952759.641	4952720.939
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/28/2011	6/20/2011	6/20/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	303SAAB-TT1	303SAAB-TT2	707A-SS1	707A-SS2	707A-SS3
Latitude/Easting/X Coordinate	496008.2737	496008.0438	495652.3555	495648.8264	495652.4732
Longitude/Northing/Y Coordinate	4952729.395	4952744.972	4952772.334	4952767.601	4952762.924
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/20/2011	6/20/2011	6/30/2011	6/30/2011	6/30/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	722Y-TT1	722Y-TT2	722Y-TT3	NATP3-A
Latitude/Easting/X Coordinate	495740.8825	495784.564	495844.1045	495710.3378
Longitude/Northing/Y Coordinate	4952708.911	4952708.077	4952725.883	4952856.287
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/20/2011	6/20/2011	6/20/2011	6/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				
Comments	Analytical data not collected	Analytical data not collected	Analytical data not collected	Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Latitude/Easting/X Coordinate	Longitude/Northing/Y Coordinate	Collection Method	Collection Date	Organization Name	Organization Type	Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation	Comments
Test Trench Sample	NATP3-B	495710.3378	4952850.191	GPS -Receiver	6/20/2011	Barr Engineering	Consultant					Analytical data not collected
Test Trench Sample	150107-TT1	496066.7017	4952835.948	GPS -Receiver	6/20/2011	Barr Engineering	Consultant					
Boring	CAP-SB1	496276.07	4951910.15	GPS -Receiver	10/18/2011	Barr Engineering	Consultant					
Boring	CAP-SB2	496242.5691	4951880.669	GPS -Receiver	10/18/2011	Barr Engineering	Consultant					
Surface Sample	CAP-SS1	496024.9718	4952393.669	GPS -Receiver	10/10/2011	Barr Engineering	Consultant					

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample
Station Name	CAP-SS2	CAP-SS3	CAP-SS4	CAP-SS5	CAP-TT1	
Latitude/Easting/X Coordinate	496229.5504	496143.3415	496092.8669	496125.9211	496297.5844	
Longitude/Northing/Y Coordinate	4952177.03	4952366.868	4952346.321	4952261.452	4952027.163	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/10/2011	6/20/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT2	CAP-TT3	CAP-TT4	CAP-TT5
Latitude/Easting/X Coordinate	496255.4195	496242.6745	496184.8068	496279.7851
Longitude/Northing/Y Coordinate	4951910.558	4951887.959	4951867.757	4951872.73
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/12/2011	7/12/2011	7/12/2011	7/12/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT6	CAP-TT7	CAP-TT7A	CAP-TT8
Latitude/Easting/X Coordinate	496211.1545	496183.6824	496191.7226	496280.7077
Longitude/Northing/Y Coordinate	4951824.934	4951789.872	4951788.979	4951798.387
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/12/2011	7/13/2011	10/17/2011	6/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT9	CAP-TT10	CAP-TT11	CAP-TT11A
Latitude/Easting/X Coordinate	496229.739	496170.8993	496095.5469	496095.5469
Longitude/Northing/Y Coordinate	4951763.125	4952265.983	4952367.315	4952367.315
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/13/2011	6/20/2011	6/20/2011	10/18/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT12	CAP-TT13	CAP-TT14	CAP-TT15
Latitude/Easting/X Coordinate	496246.7281	496209.2607	496210.5351	496251.8257
Longitude/Northing/Y Coordinate	4951785.876	4951774.917	4951902.357	4951831.5
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/14/2011	10/17/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT16	CAP-TT17	CAP-TT18	CAP-TT19
Latitude/Easting/X Coordinate	496265.8441	496242.3951	496246.1937	496311.1841
Longitude/Northing/Y Coordinate	4951898.788	4951910.258	4951938.985	4951792.176
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/14/2011	10/17/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program

Site Program ID:

Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	CAP-TT20	CAP-TT21	CAP-TT22	CAP-TT23
Latitude/Easting/X Coordinate	496309.622	496212.6928	496225.6465	496209.5661
Longitude/Northing/Y Coordinate	4951935.858	4951946.132	4951865.73	4951797.388
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/14/2011	10/14/2011	10/17/2011	10/17/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	CAP-TT24	CAP-TT25	CAP-TT26	617A-SS1
Latitude/Easting/X Coordinate	496193.9324	496272.101	496265.5891	495814.7956
Longitude/Northing/Y Coordinate	4951760.761	4951923.798	4951564.524	4951992.401
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/17/2011	10/17/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	617A-SS2	617A-SS3	617A-SS4	617A-SS5	617A-SS6	617A-SS6
Latitude/Easting/X Coordinate	495815.8539	495835.9623	495851.8373	495861.8915	495935.975	495935.975
Longitude/Northing/Y Coordinate	4951916.73	4951977.585	4952026.797	4952190.31	4952180.785	4952180.785
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/17/2011	10/14/2011	10/14/2011	10/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
	617A-SS7	617A-SS8	617A-SS9	617A-SS10	617A-SS11	
Latitude/Easting/X Coordinate	495939.6792	496007.9418	495730.1287	495779.2923	495768.0918	
Longitude/Northing/Y Coordinate	4952119.931	4952111.993	4952061.722	4952080.348	4952048.783	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/14/2011	10/14/2011	10/17/2011	10/17/2011	10/17/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample
Station Name	617A-SS12	617A-SS13	617A-SS14	617A-SS15	617A-TT1	
Latitude/Easting/X Coordinate	495803.7298	495847.6752	495804.2485	495815.4795	495714.0153	
Longitude/Northing/Y Coordinate	4952071.693	4951943.685	4951965.024	4951832.497	4952151.773	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/17/2011	10/17/2011	10/17/2011	10/17/2011	6/30/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	617A-TT2	617A-TT3	617A-TT4	617A-TT5
Latitude/Easting/X Coordinate	495743.4461	495877.7241	495805.9866	495915.7389
Longitude/Northing/Y Coordinate	4952105.175	4952140.124	4952034.05	4952042.634
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/30/2011	6/30/2011	6/30/2011	6/30/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	617A-TT6	617A-TT7	617A-TT8	617A-TT9
Latitude/Easting/X Coordinate	495877.7241	495821.3151	495768.5849	495752.6432
Longitude/Northing/Y Coordinate	4951977.641	4951877.086	4951946.984	4952001.554
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/30/2011	6/30/2011	6/30/2011	6/30/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	617A-TT10	617A-TT11	617A-TT20	617A-TT21
Latitude/Easting/X Coordinate	495848.7173	495832.2581	495743.8871	495769.8163
Longitude/Northing/Y Coordinate	4952006.807	4951953.772	4952123.106	4952099.293
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/30/2011	6/30/2011	10/18/2011	10/18/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	617A-TT22	617A-TT23	617A-TT24	C7-COAL
Latitude/Easting/X Coordinate	495724.3079	495745.272	495731.4355	495828.9345
Longitude/Northing/Y Coordinate	4952109.877	4952144.803	4952085.439	4952069.758
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/18/2011	10/18/2011	10/18/2011	6/30/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Boring	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	OP-SB1	OP-TT1	OP-TT2	OP-TT3
Latitude/Easting/X Coordinate	496170.578	496162.6134	496164.5685	496148.3774
Longitude/Northing/Y Coordinate	4951775.25	4951775.588	4951795.138	4951815.078
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/18/2011	7/12/2011	7/12/2011	7/12/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	OP-TT4	OP-TT5	OP-TT6	OP-TT7
Latitude/Easting/X Coordinate	496133.9396	496132.6362	496128.0745	496032.2778
Longitude/Northing/Y Coordinate	4951859.002	4951930.035	4951782.104	4951883.115
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	OP-TT8	OP-TT9	OP-TT10	OP-TT11
Latitude/Easting/X Coordinate	496107.2208	496180.2623	496186.3994	496184.2213
Longitude/Northing/Y Coordinate	4952005.63	4951739.254	4951728.165	4951816.851
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/13/2011	10/17/2011	10/17/2011	10/17/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	OP-TT12	OP-TT13	OP-TT14	C7-SS1
Latitude/Easting/X Coordinate	496136.9345	496160.6085	496175.9064	496347.391
Longitude/Northing/Y Coordinate	4951769.628	4951762.034	4951775.999	4952232.579
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/17/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Latitude/Easting/X Coordinate	Longitude/Northing/Y Coordinate	Collection Method	Collection Date	Organization Name	Organization Type	Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation	Comments
Surface Sample	C7-SS2	496347.3906	4951641.005	GPS -Receiver	6/29/2011	Barr Engineering	Consultant					
Test Trench Sample	228A-TT1	495935.0697	4951665.628	GPS -Receiver	7/13/2011	Barr Engineering	Consultant					
Boring	228-SB1	495806.2862	4951759.901	GPS -Receiver	6/28/2011	Barr Engineering	Consultant					
Test Trench Sample	228-TT2	495829.4336	4951637.851	GPS -Receiver	7/13/2011	Barr Engineering	Consultant					
Surface Sample	D7-SS1	495960.7256	4951303.503	GPS -Receiver	6/30/2011	Barr Engineering	Consultant					

Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	D7-TT1	D7-TT2	D7-TT3	E7-SS1
Latitude/Easting/X Coordinate	496135.0864	496248.5929	496274.4518	495910.483
Longitude/Northing/Y Coordinate	4951258.524	4951215.926	4951262.306	4949988.486
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/17/2011	10/17/2011	10/17/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample
Station Name	E7-SS2	E7-SS3	14T-TT1	16T-SS1	16T-SS2
Latitude/Easting/X Coordinate	495878.5849	496269.853	494729.7975	494726.683	494738.9647
Longitude/Northing/Y Coordinate	4950171.9	4950207.722	4953031.795	4952947.843	4952947.864
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	6/23/2011	6/22/2011	10/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	16T-SS3	16T-TT1	16T-TT2	16T-TT2A
Latitude/Easting/X Coordinate	494731.7095	494731.5251	494731.5251	494732.3196
Longitude/Northing/Y Coordinate	4952934.025	4952977.811	4952944.19	4952942.003
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	6/22/2011	6/22/2011	10/18/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	229T-TT1	229T-TT2	230T-TT1	24T-TT1
Latitude/Easting/X Coordinate	494922.1565	494921.3707	494899.751	494795.7932
Longitude/Northing/Y Coordinate	4952944.806	4952971.088	4952907.396	4952976.896
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/22/2011	6/21/2011	6/22/2011	6/22/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	29T-TT1	29T-TT2	32T-SS1	32T-SS2	32T-SS3
Latitude/Easting/X Coordinate	495006.0449	494876.3897	495124.948	495131.4064	495114.2652
Longitude/Northing/Y Coordinate	4953038.22	4953039.388	4952969.969	4952951.731	4952948.554
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/21/2011	6/21/2011	10/11/2011	10/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
		32T-SS4	32T-SS5	32T-SS6	32T-TT1	32T-TT2	
Latitude/Easting/X Coordinate		495106.8703	495146.2446	495133.8881	495123.4355	495124.0195	
Longitude/Northing/Y Coordinate		4952964.258	4952965.563	4952929.335	4952993.833	4952959.375	
Collection Method		GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date		10/28/2011	10/28/2011	10/28/2011	6/21/2011	6/21/2011	
Organization Name		Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type		Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation							
Unique Well Number							
Top Screen Elevation							
Bottom Screen Elevation							

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	32T-TT2A	32T-TT3	411B-TT1	MSA8-TT1
Latitude/Easting/X Coordinate	495124.0195	495124.948	494663.2173	495080.2171
Longitude/Northing/Y Coordinate	4952959.375	4952969.969	4952943.013	4952966.384
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/18/2011	10/28/2011	10/18/2011	6/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	MSATC4-TT1	EEA5-TT1	EEA5-TT2	EEA5-TT3
Latitude/Easting/X Coordinate	494534.3488	495600.0431	495550.5091	495566.5618
Longitude/Northing/Y Coordinate	4953010.761	4952856.586	4952856.127	4952875.391
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/22/2011	6/21/2011	6/21/2011	6/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	46T-TT1	46T-TT2	46T-TT3	46T-TT4
Latitude/Easting/X Coordinate	495616.6548	495573.1586	495597.0815	495603.7204
Longitude/Northing/Y Coordinate	4952928.762	4952924.298	4952922.924	4952934.714
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/21/2011	6/21/2011	6/21/2011	6/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	46T-TT5	46T-TT6	46T-TT7	46T-TT8
Latitude/Easting/X Coordinate	495591.8162	495600.7444	495590.3282	495570.4115
Longitude/Northing/Y Coordinate	4952934.142	4952945.932	4952944.444	4952948.45
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/21/2011	6/21/2011	6/21/2011	6/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	46T-TT9	46T-TT10	46T-TT11	46T-TT12
Latitude/Easting/X Coordinate	495586.5587	495601.8454	495585.9503	495613.4443
Longitude/Northing/Y Coordinate	4952965.314	4952945.285	4952908.334	4952917.753
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/21/2011	10/19/2011	10/19/2011	10/19/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	46T-TT13	46T-TT14	101C-TT1	101C-TT2
Latitude/Easting/X Coordinate	495611.7679	495632.2298	495025.7713	495120.1159
Longitude/Northing/Y Coordinate	4952964.355	4952944.212	4952840.268	4952855.829
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/19/2011	10/19/2011	7/11/2011	7/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Boring	Surface Sample	Surface Sample	Surface Sample
Station Name	101A-SB2	101A-SS1	101A-SS2	101A-SS3
Latitude/Easting/X Coordinate	495408.4408	495345.9992	495514.6487	495387.6484
Longitude/Northing/Y Coordinate	4952807.037	4952822.341	4952880.285	4952862.293
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/18/2011	7/7/2011	10/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	101A-SS4	101A-TT1	101B-TT1	101B-TT2
Latitude/Easting/X Coordinate	495377.065	495390.3817	495218.6925	495209.3921
Longitude/Northing/Y Coordinate	4952837.422	4952839.482	4952815.028	4952868.568
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	7/11/2011	7/11/2011	7/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	108B-SS1	108B-SS2	108B-SS3	108B-SS4	108B-SS5	108B-SS5
Latitude/Easting/X Coordinate	495214.8364	495219.7466	495219.9657	495246.5041	495254.3922	495254.3922
Longitude/Northing/Y Coordinate	4952679.7	4952685.899	4952674.348	4952720.511	4952675.443	4952675.443
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/7/2011	6/22/2011	7/7/2011	6/22/2011	6/22/2011	6/22/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	111B-TT1	111B-TT2	113B-SS1	113B-SS2	113B-SS3
Latitude/Easting/X Coordinate	495218.5622	495209.9451	495242.4251	495242.4251	495262.3108
Longitude/Northing/Y Coordinate	4952501.955	4952499.083	4952535.098	4952499.966	4952509.467
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	6/23/2011	6/23/2011	6/23/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Latitude/Easting/X Coordinate	Longitude/Northing/Y Coordinate	Collection Method	Collection Date	Organization Name	Organization Type	Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation	Comments
Test Trench Sample	113B-TT1	495213.1344	4952525.191	GPS -Receiver	6/23/2011	Barr Engineering	Consultant					
Test Trench Sample	113B-TT2	495212.7699	4952516.974	GPS -Receiver	6/23/2011	Barr Engineering	Consultant					
Boring	716A-SB5	494767.845	4952577.449	GPS -Receiver	10/18/2011	Barr Engineering	Consultant					
Boring	716A-SB6	494828.8281	4952564.227	GPS -Receiver	10/18/2011	Barr Engineering	Consultant					
Surface Sample	716A-SS1	494913.5031	4952758.613	GPS -Receiver	6/24/2011	Barr Engineering	Consultant					

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Boring
Station Name	716A-SS2	716A-SS3	716A-SS4	716A-SS5	716A-SS5	716B-SB1
Latitude/Easting/X Coordinate	494999.2283	495116.7035	495127.2869	495293.4456	495293.4456	494892.3283
Longitude/Northing/Y Coordinate	4952737.976	4952822.113	4952608.329	4952729.509	4952729.509	4952680.909
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/14/2011	10/14/2011	10/14/2011	10/14/2011	10/14/2011	10/18/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Boring	Boring	Test Trench Sample	Boring	Boring
Station Name	227A-SB1	713A-SB1	713A-TT1	717A-SB1	717A-SB2
Latitude/Easting/X Coordinate	494781.203	494753.8333	494728.7698	494715.1974	495030.7088
Longitude/Northing/Y Coordinate	4952444.106	4952818.38	4952770.005	4952752.875	4952614.136
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/19/2011	6/28/2011	7/1/2011	6/29/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Station Name	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Latitude/Easting/X Coordinate	717A-SS1	717A-SS2	717A-SS3	717A-SS4	717A-SS5	717A-SS5
Longitude/Northing/Y Coordinate	494894.4974	494909.0495	494903.0435	494784.7037	494779.3271	494779.3271
Collection Method	4952713.591	4952704.331	4952682.438	4952774.036	4952761.829	4952761.829
Collection Date	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Organization Name	10/13/2011	10/13/2011	10/13/2011	10/13/2011	10/13/2011	10/13/2011
Organization Type	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Ground Elevation	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program

Site Program ID:

Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	717A-SS6	717A-SS7	717A-TT1	717A-TT1A
Latitude/Easting/X Coordinate	494792.4712	494883.868	494899.955	494903.9352
Longitude/Northing/Y Coordinate	4952761.672	4952731.251	4952704.741	4952691.093
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/13/2011	10/28/2011	7/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Boring	Test Trench Sample
Station Name	717A-TT2	717A-TT2A	718A-SB1	718A-SB1	718A-TT1
Latitude/Easting/X Coordinate	494784.6806	494785.3264	494884.2995	494884.2995	494918.6189
Longitude/Northing/Y Coordinate	4952765.449	4952765.499	4952875.023	4952875.023	4952847.139
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/1/2011	10/11/2011	6/28/2011	6/28/2011	7/1/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	718A-TT2	718C-TT1	722D-TT1	715B-TT1
Latitude/Easting/X Coordinate	494915.1089	494879.8478	494736.6382	494720.7238
Longitude/Northing/Y Coordinate	4952818.084	4952847.15	4952692.664	4952703.436
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/1/2011	7/1/2011	7/11/2011	7/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	707FFF-SS1	707FFF-SS2	707FFF-SS3	707FFF-SS4	707FFF-SS5	707FFF-SS5
Latitude/Easting/X Coordinate	494672.7281	494677.213	494693.819	494656.5555	494690.9132	494690.9132
Longitude/Northing/Y Coordinate	4952866.053	4952831.734	4952828.266	4952847.991	4952851.765	4952851.765
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/24/2011	6/24/2011	10/13/2011	10/13/2011	10/13/2011	10/13/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	707FFF-SS6	707FFF-SS7	707FFF-TT1	707FFF-TT2
Latitude/Easting/X Coordinate	494677.2098	494678.9972	494677.213	494681.1818
Longitude/Northing/Y Coordinate	4952884.136	4952820.982	4952831.734	4952865.865
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/13/2011	10/13/2011	10/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Surface Sample	Surface Sample
Station Name	707FFF-TT3	707FFF-TT4	746B-SS1	746B-SS2
Latitude/Easting/X Coordinate	494664.2484	494663.1901	494888.5779	494883.3015
Longitude/Northing/Y Coordinate	4952867.188	4952832.792	4952705.388	4952697.737
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	10/11/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	707LL-TT1	206B-TT1	206B-TT2	206B-TT3
Latitude/Easting/X Coordinate	494742.4408	495291.9853	495294.2	495312.8124
Longitude/Northing/Y Coordinate	4952849.227	4952284.49	4952279.176	4952287.888
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/11/2011	6/23/2011	6/23/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample
Station Name	208C-SS1	208C-SS2	208C-TT1
Latitude/Easting/X Coordinate	495260.903	495258.6341	495269.7173
Longitude/Northing/Y Coordinate	4952294.882	4952231.31	4952263.372
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	6/23/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant
Ground Elevation			
Unique Well Number			
Top Screen Elevation			
Bottom Screen Elevation			

Comments

SPATIAL DATA REPORTING FORM

Site Location Data Reporting Form

Background

Remediation Program:	Site Assessment Program
Site Program ID:	
Site Name:	UMore Park East

Site Location Data

Site Location Point Description	Center of Site
Latitude/Easting/X Coordinate	494558.005
Longitude/Northing/Y Coordinate	4952049.812
Collection Method	Interpolation-DOQ
Collection Date	12/28/2011
Organization Name	Barr Engineering
Organization Type	Consultant

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample
Station Name	208D-SS1	208D-SS2	208E-SS1	208F-SS1	237B-TT1	
Latitude/Easting/X Coordinate	495218.9563	495208.5431	495080.903	495036.903	495429.7851	
Longitude/Northing/Y Coordinate	4952295.829	4952228.875	4952294.882	4952294.882	4951390.946	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/13/2011	10/13/2011	10/28/2011	10/28/2011	10/13/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Boring
Station Name	237F-SS1	237F-SS2	237F-SS3	237G	237G	237G-SB1
Latitude/Easting/X Coordinate	495321.0378	495324.4892	495292.8019	495300.4769	495300.4769	495300.8163
Longitude/Northing/Y Coordinate	4951491.879	4951484.143	4951480.346	4951388.953	4951388.953	4951397.876
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/24/2011	6/24/2011	6/24/2011	6/28/2011	6/28/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Other	Surface Sample	Surface Sample
Station Name	237G-TT1	237G-TT2	U-237B	238B-SS1	238B-SS2
Latitude/Easting/X Coordinate	495300.4769	495317.8255	495417.8756	495429.6148	495427.7946
Longitude/Northing/Y Coordinate	4951388.953	4951389.326	4951385.673	4950900.828	4950891.727
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	6/28/2011	10/13/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Sample collected directly from utility

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Surface Sample	Test Trench Sample	Surface Sample	Test Trench Sample
Station Name	238B-SS3	238B-SS4	238B-TT1	238B-TT2	238B-WEST	
Latitude/Easting/X Coordinate	495418.4661	495404.8146	495422.7269	495422.7269	495417.4642	
Longitude/Northing/Y Coordinate	4950896.96	4950894.684	4950864.779	4950894.623	4950890.032	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	6/27/2011	6/27/2011	10/13/2011	10/13/2011	10/13/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Other	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	U-238B	235A-SS2	235A-SS3	235A-SS4	235A-SS5
Latitude/Easting/X Coordinate	495425.0784	495583.5472	495571.881	495585.4142	495603.2812
Longitude/Northing/Y Coordinate	4950890.48	4951624.882	4951597.518	4951575.364	4951571.248
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/13/2011	10/13/2011	10/13/2011	10/13/2011	10/13/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Sample collected directly from utility

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	235A-SS6	235A-TT2	235A-TT2A	235A-TT3
Latitude/Easting/X Coordinate	495610.4129	495582.1885	495584.9569	495587.1421
Longitude/Northing/Y Coordinate	4951604.932	4951610.039	4951609.933	4951607.643
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/13/2011	6/23/2011	10/12/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	235A-TT4	235A-TT4A	235A-TT5	235A-TT6
Latitude/Easting/X Coordinate	495590.518	495592.5585	495575.1272	495581.9653
Longitude/Northing/Y Coordinate	4951581.671	4951581.26	4951611.215	4951603.416
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	10/12/2011	10/12/2011	10/12/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	235A-TT7	235B-TT1	235B-TT2	217A-SS1
Latitude/Easting/X Coordinate	495583.4611	495504.6732	495500.6565	495150.5328
Longitude/Northing/Y Coordinate	4951615.489	4951579.231	4951608.352	4952256.646
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/12/2011	10/12/2011	10/12/2011	10/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	217A-SS2	217A-SS3	217A-SS4	217A-SS5	217A-SS6	217A-SS6
Latitude/Easting/X Coordinate	495145.1447	495120.9602	495133.5723	495109.4249	495126.6394	495126.6394
Longitude/Northing/Y Coordinate	4952248.058	4952253.444	4952246.087	4952245.188	4952232.815	4952232.815
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/14/2011	10/14/2011	10/14/2011	10/14/2011	10/14/2011	10/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	217A-TT1	217A-TT1A	217A-TT2	217A-TT2A
Latitude/Easting/X Coordinate	495156.2822	495158.6978	495124.1184	495125.6572
Longitude/Northing/Y Coordinate	4952244.543	4952244.61	4952243.929	4952243.787
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/13/2011	10/11/2011	7/13/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	217A-TT3	217A-TT4	217A-TT5	706A-SS1
Latitude/Easting/X Coordinate	495127.5363	495174.2472	495186.5564	494720.1377
Longitude/Northing/Y Coordinate	4952289.194	4952335.384	4952240.3	4952098.153
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/13/2011	7/13/2011	10/11/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	706A-SS2	706A-SS3	706A-SS4	706A-SS5	706A-SS6	
Latitude/Easting/X Coordinate	494695.7919	494714.2703	494704.3546	494722.8794	494705.3436	
Longitude/Northing/Y Coordinate	4952133.752	4952142.345	4952150.947	4952132.104	4952063.288	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/11/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	706A-SS7	706A-SS8	706A-TT1	706A-TT2
Latitude/Easting/X Coordinate	494680.863	494654.5194	494704.934	494662.699
Longitude/Northing/Y Coordinate	4952063.028	4952063.226	4952126.272	4952135.784
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/28/2011	10/28/2011	7/11/2011	7/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	706A-TT3	706A-TT4	706D-TT1	209A-SS1
Latitude/Easting/X Coordinate	494703.8004	494705.3436	494702.1538	494857.2368
Longitude/Northing/Y Coordinate	4952138.699	4952063.288	4952160.283	4952181.451
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/11/2011	10/28/2011	7/11/2011	6/23/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	209A-SS2	209A-TT1	205A-TT1	205A-TT2
Latitude/Easting/X Coordinate	494867.0023	494861.418	494721.5362	494711.6815
Longitude/Northing/Y Coordinate	4952155.651	4952165.244	4951833.136	4951827.386
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	7/13/2011	7/11/2011	7/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample
Station Name	251A-SS1	251A-SS2	251A-SS4	251A-SS5	251A-TT1	
Latitude/Easting/X Coordinate	495558.3772	495580.3616	495577.7552	495567.227	495612.6309	
Longitude/Northing/Y Coordinate	4952183.394	4952162.424	4952211.783	4952194.853	4952185.667	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/13/2011	10/13/2011	10/13/2011	10/13/2011	6/28/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	251A-TT2	251A-TT3	251A-TT3A	220A-SS1
Latitude/Easting/X Coordinate	495595.5017	495566.1894	495567.7497	494880.1366
Longitude/Northing/Y Coordinate	4952186.783	4952180.651	4952180.734	4951373.273
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	10/12/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Name	Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
220C-SS1	220C-SS1	220C-SS2	220C-SS2	220C-SS2	220C-SS2	220C-SS3	220C-SS4
494891.3483	494891.3483	494879.3062	494890.5308	494884.6631	494879.0199	494884.6631	494879.0199
4951068.218	4951068.218	4951231.483	4951063.04	4951063.786	4951082.488	4951063.786	4951082.488
GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
10/11/2011	6/27/2011	10/11/2011	6/27/2011	6/27/2011	6/27/2011	6/27/2011	6/27/2011
Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Consultant	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation	Ground Elevation	Ground Elevation	Ground Elevation	Ground Elevation	Ground Elevation	Ground Elevation	Ground Elevation
Unique Well Number	Unique Well Number	Unique Well Number	Unique Well Number	Unique Well Number	Unique Well Number	Unique Well Number	Unique Well Number
Top Screen Elevation	Top Screen Elevation	Top Screen Elevation	Top Screen Elevation	Top Screen Elevation	Top Screen Elevation	Top Screen Elevation	Top Screen Elevation
Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation	Bottom Screen Elevation

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	220C-SS5	707X-SS1	707XX-SS1	704E-SS1	E160D-SS1	
Latitude/Easting/X Coordinate	494890.2582	495597.4575	495620.6865	495573.3449	494265.6045	
Longitude/Northing/Y Coordinate	4951082.389	4950861.012	4950790.722	4950873.671	4951869.825	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	6/27/2011	6/27/2011	6/27/2011	6/27/2011	10/12/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	E160D-SS2	E160D-SS5	E160D-SS6	E160D-SS8	E160D-SS9	E160D-SS9
Latitude/Easting/X Coordinate	494256.4682	494253.1295	494291.6813	494290.7282	494278.9404	494278.9404
Longitude/Northing/Y Coordinate	4951851.069	4951807.678	4951824.598	4951799.055	4951847.821	4951847.821
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	E160D-SS10	E160D-TT1	E160D-TT1A	E160D-TT2
Latitude/Easting/X Coordinate	494268.7285	494235.6295	494234.6271	494224.701
Longitude/Northing/Y Coordinate	4951824.842	4951897.885	4951896.561	4951845.892
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/12/2011	7/14/2011	10/21/2011	7/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	E160D-TT2A	E160D-TT4	E160D-TT5	E160D-TT6
Latitude/Easting/X Coordinate	494224.9266	494228.0622	494224.7254	494222.477
Longitude/Northing/Y Coordinate	4951846.374	4951891.847	4951891.901	4951861.264
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/21/2011	10/21/2011	10/21/2011	10/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Surface Sample	Station Name	Test Trench Sample	Surface Sample	Station Name	Surface Sample
Station Name	E160D-TT7	E160D-TT8	GC-SS1	GC-SS2	GC-SS3	GC-SS1	GC-SS2
Latitude/Easting/X Coordinate	494219.262	494227.6522	494092.7951	494196.7084	494181.393	494092.7951	494196.7084
Longitude/Northing/Y Coordinate	4951841.168	4951840.855	4951795.716	4951854.251	4951967.716	4951795.716	4951854.251
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/21/2011	10/21/2011	6/29/2011	6/29/2011	7/14/2011	6/29/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation							
Unique Well Number							
Top Screen Elevation							
Bottom Screen Elevation							

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	GC-SS4	GC-SS5	GC-SS6	GC-SS7	GC-SS8	
Latitude/Easting/X Coordinate	494103.3955	494117.9176	494108.6463	494131.7067	494166.4816	
Longitude/Northing/Y Coordinate	4951791.131	4951851.769	4951839.787	4952125.852	4951767.282	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	7/7/2011	10/13/2011	10/13/2011	10/12/2011	10/12/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	GC-SS9	GC-SS10	GC-SS11	GC-SS12	GC-SS13	
Latitude/Easting/X Coordinate	494176.1453	494142.8736	494138.0173	494112.0488	494102.4154	
Longitude/Northing/Y Coordinate	4951761.23	4951904.396	4951968.724	4951784.785	4951796.791	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/12/2011	10/12/2011	10/12/2011	10/13/2011	10/13/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Surface Sample	Surface Sample
Station Name	GC-SS14	GC-TT4	GC-TT5	222A-SS1	222A-SS2
Latitude/Easting/X Coordinate	494097.5886	494157.1463	494131.7204	494572.5883	494572.588
Longitude/Northing/Y Coordinate	4951784.984	4951725.191	4952125.417	4950896.169	4950907.466
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/13/2011	10/21/2011	10/21/2011	6/28/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	222A-SS3	222A-SS4	222A-SS5	222A-SS6	222A-SS7	Surface Sample
Latitude/Easting/X Coordinate	494580.6342	494678.3955	494686.5227	494678.8599	494687.6229	494687.6229
Longitude/Northing/Y Coordinate	4950924.335	4950913.971	4950903.057	4950893.072	4950913.863	4950913.863
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/29/2011	6/29/2011	6/29/2011	6/29/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample
Station Name	222A-SS8	222A-SS9	222A-TT1	222B-SS1	22919-SS1
Latitude/Easting/X Coordinate	494680.237	494670.7118	494678.8731	494673.86	493557.1795
Longitude/Northing/Y Coordinate	4950924.311	4950915.275	4950913.963	4950691.998	4950222.949
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	10/11/2011	10/18/2011	10/11/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	22919-SS2	22919-SS3	22919-SS4	22926-SS1	22926-SS2	22926-SS2
Latitude/Easting/X Coordinate	493640.7411	493697.7344	493641.1696	494333.1137	494333.1137	494333.1137
Longitude/Northing/Y Coordinate	4950291.512	4950222.52	4950154.814	4950056.371	4950056.371	4950095.833
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	6/28/2011	6/27/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	22926-SS3	22926-SS4	22926-SS5	22926-TT1	22926-TT2
Latitude/Easting/X Coordinate	494339.4703	494343.4475	494347.9621	494344.3879	494332.7706
Longitude/Northing/Y Coordinate	4950059.648	4950079.192	4950067.679	4950063.349	4950073.965
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	10/11/2011	10/11/2011	6/24/2011	10/18/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	D5-SS1	D5-SS2	D5-TT2	E5-SS1
Latitude/Easting/X Coordinate	494152.565	494432.2358	494171.9676	494383.7253
Longitude/Northing/Y Coordinate	4951474.847	4951494.326	4951201.953	4950767.742
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/29/2011	6/24/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				
				207T-TT1
				494104.7443
				4952418.533
				GPS -Receiver
				6/22/2011
				Barr Engineering
				Consultant

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	208T-TT1	209T-TT1	209T-TT2	209T-TT2A
Latitude/Easting/X Coordinate	494031.5567	494161.8214	494210.6131	494210.6131
Longitude/Northing/Y Coordinate	4952435.104	4952407.486	4952406.105	4952406.105
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/22/2011	6/22/2011	6/22/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	236T-TT1	906A-TT1	909A-TT1	911A-TT1
Latitude/Easting/X Coordinate	493801.4072	493929.7234	493820.7398	494044.1562
Longitude/Northing/Y Coordinate	4952401.502	4952550.847	4952498.625	4952548.576
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/22/2011	10/10/2011	6/22/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	914A-TT1	915A-TT1	920A-TT1	921A-TT1
Latitude/Easting/X Coordinate	494134.0006	494056.4129	494115.3312	493917.8629
Longitude/Northing/Y Coordinate	4952534.75	4952456.278	4952453.516	4952453.056
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/22/2011	6/22/2011	6/22/2011	6/22/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	207-DD-SS1	207-DD-SS2	207-DD-SS3	207-DD-TT1	225T-TT1	
Latitude/Easting/X Coordinate	493160.8429	493162.0752	493144.9075	493151.5778	493092.0441	
Longitude/Northing/Y Coordinate	4951764.351	4951789.679	4951787.135	4951779.316	4951796.012	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	10/10/2011	10/10/2011	10/10/2011	6/24/2011	6/27/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	D3-TT1	D3-TT2	D3-TT3	D3-TT4
Latitude/Easting/X Coordinate	493120.1459	493135.4929	493087.5384	493092.2697
Longitude/Northing/Y Coordinate	4951400.124	4951486.333	4951485.506	4951497.65
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/24/2011	6/24/2011	6/24/2011	10/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	D3-TT5	D3-TT6	D3-TT7	D3-TT8
Latitude/Easting/X Coordinate	493110.9229	493083.1416	493096.9	493095.5771
Longitude/Northing/Y Coordinate	4951453.994	4951406.104	4951437.061	4951475.954
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/21/2011	10/21/2011	10/21/2011	10/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	GSD-TT1	GSD-TT2	GSD-TT3	GSD-TT4
Latitude/Easting/X Coordinate	493810.5994	493783.452	493796.8954	493809.2845
Longitude/Northing/Y Coordinate	4951921.078	4951998.601	4952062.392	4952099.823
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/27/2011	6/27/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	C4-TT1	C4-TT2	C4-TT3	D4-TT1
Latitude/Easting/X Coordinate	493648.0081	493909.4971	493374.6869	493778.161
Longitude/Northing/Y Coordinate	4952326.171	4952102.545	4951908.499	4951536.971
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/27/2011	6/27/2011	6/27/2011	6/24/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Boring
Station Name	D4-TT2	D4-TT3	D4-TT4	BG-SB1
Latitude/Easting/X Coordinate	493459.8779	493980.4896	493422.0153	493622.3937
Longitude/Northing/Y Coordinate	4951182.009	4950964.299	4950941.818	4953234.711
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/24/2011	6/24/2011	6/24/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Boring	Boring	Boring	Boring	Surface Sample	Surface Sample
Station Name	BG-SB2	BG-SB3	BG-SB4	BG-SS1	BG-SS2	BG-SS2
Latitude/Easting/X Coordinate	493652.0909	493733.872	493755.4049	493672.7512	493776.4883	493776.4883
Longitude/Northing/Y Coordinate	4953235.576	4953234.213	4953263.546	4953287.609	4953285.559	4953285.559
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	6/28/2011	6/28/2011	6/28/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	BG-SS3	BG-SS4	BG-SS5	BG-SS6	BG-SS7	
Latitude/Easting/X Coordinate	493854.3263	493910.9616	493627.8785	493667.3248	493724.3027	
Longitude/Northing/Y Coordinate	4953359.442	4953259.528	4953305.767	4953302.219	4953292.827	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	6/28/2011	6/28/2011	10/10/2011	10/10/2011	10/10/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BG-SS8	BG-TT1	BG-TT2	BG-TT3
Latitude/Easting/X Coordinate	493697.3791	493697.4257	493610.7572	493812.454
Longitude/Northing/Y Coordinate	4953280.304	4953168.981	4953202.161	4953223.239
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	6/28/2011	6/28/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BG-TT4	923A-TT1	923A-TT2	923A-TT3
Latitude/Easting/X Coordinate	493667.3275	493925.7967	493988.985	494035.1511
Longitude/Northing/Y Coordinate	4953195.82	4952785.541	4952778.061	4952769.292
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/11/2011	10/11/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-SS1	10SD-SS5	10SD-TT1	10SD-TT2
Latitude/Easting/X Coordinate	493555.6675	493692.7814	493502.4447	493653.3514
Longitude/Northing/Y Coordinate	4952888.272	4952851.462	4952952.264	4952914.301
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/28/2011	6/28/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-TT3	10SD-TT3A	10SD-TT4	10SD-TT5
Latitude/Easting/X Coordinate	493559.6849	493557.6255	493512.5802	493595.4527
Longitude/Northing/Y Coordinate	4952881.628	4952881.838	4952849.253	4952846.948
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/27/2011	10/10/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-TT6	10SD-TT7	10SD-TT8	10SD-TT9
Latitude/Easting/X Coordinate	493734.9739	493795.2417	493752.5323	493878.9488
Longitude/Northing/Y Coordinate	4952989.754	4953053.344	4953142.084	4953040.258
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/27/2011	6/27/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-TT9A	10SD-TT10	10SD-TT11	10SD-TT12
Latitude/Easting/X Coordinate	493880.0654	493540.7414	493532.6033	493494.0672
Longitude/Northing/Y Coordinate	4953040.383	4952887.878	4952927.372	4952923.303
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-TT13	10SD-TT14	10SD-TT15	10SD-TT16
Latitude/Easting/X Coordinate	493885.9826	493874.7775	493878.7318	493564.8115
Longitude/Northing/Y Coordinate	4953044.412	4953044.442	4953033.825	4952888.272
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	10/10/2011	10/10/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	10SD-TT17	10SD-TT18	10SD-TT19	BSD-TT1
Latitude/Easting/X Coordinate	493547.8147	493555.4599	493699.1488	494557.8789
Longitude/Northing/Y Coordinate	4952890.075	4952870.305	4952968.182	4952653.022
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/10/2011	10/11/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT2	BSD-TT3	BSD-TT4	BSD-TT4A
Latitude/Easting/X Coordinate	494461.4019	494530.8284	494476.6261	494478.5154
Longitude/Northing/Y Coordinate	4952673.698	4952781.211	4952783.148	4952785.747
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/29/2011	6/28/2011	6/28/2011	10/19/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT5	BSD-TT6	BSD-TT7	BSD-TT8
Latitude/Easting/X Coordinate	494434.6567	494388.5726	494418.1514	494433.4223
Longitude/Northing/Y Coordinate	4952764.22	4952764.632	4952829.069	4952800.429
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	6/28/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments	Analytical data not collected	Analytical data not collected	Analytical data not collected	Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT9	BSD-TT10	BSD-TT11	BSD-TT12
Latitude/Easting/X Coordinate	494466.3395	494549.4554	494360.593	494410.7917
Longitude/Northing/Y Coordinate	4952824.294	4952863.795	4952830.878	4952854.331
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	6/28/2011	6/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT13	BSD-TT14	BSD-TT14A	BSD-TT15
Latitude/Easting/X Coordinate	494415.1326	494363.4195	494364.4815	494362.9457
Longitude/Northing/Y Coordinate	4952878.191	4952857.333	4952857.808	4952850.723
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/28/2011	6/28/2011	10/21/2011	10/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT16	BSD-TT17	BSD-TT18	BSD-TT19
Latitude/Easting/X Coordinate	494359.7028	494376.3332	494482.6953	494444
Longitude/Northing/Y Coordinate	4952874.201	4952874.671	4952751.076	4952667
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/21/2011	10/20/2011	10/19/2011	10/19/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	BSD-TT20	BSD-TT22	BSD-TT23	30SD-TT1
Latitude/Easting/X Coordinate	494587.7107	494350.168	494397.0511	494367.5879
Longitude/Northing/Y Coordinate	4952596.178	4952890.256	4952827.288	4952913.994
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/19/2011	10/20/2011	10/20/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments Analytical data not collected Analytical data not collected Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	30SD-TT2	30SD-TT3	30SD-TT4
Latitude/Easting/X Coordinate	494319.035	494316.5662	494366.3535
Longitude/Northing/Y Coordinate	4952958.432	4953018.094	4953037.022
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/29/2011	6/29/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant
Ground Elevation			
Unique Well Number			
Top Screen Elevation			
Bottom Screen Elevation			

Comments	Analytical data not collected	Analytical data not collected	Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	30SD-TT5	30SD-TT6	30SD-TT7	30SD-TT8
Latitude/Easting/X Coordinate	494254.435	494302.9879	494209.9968	494178.4931
Longitude/Northing/Y Coordinate	4953056.36	4953163.341	4953126.31	4953066.773
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/29/2011	6/29/2011	6/29/2011	6/29/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments	Analytical data not collected	Analytical data not collected	Analytical data not collected	Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	30SD-TT9	30SD-TT10	30SD-TT11	30SD-TT12
Latitude/Easting/X Coordinate	494275.9832	494286.4966	494265.1401	494252.5601
Longitude/Northing/Y Coordinate	4952937.633	4952931.843	4952952.407	4952962.401
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/29/2011	10/20/2011	10/20/2011	10/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments	Analytical data not collected	Analytical data not collected	Analytical data not collected	Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	30SD-TT13	30SD-TT14	30SD-TT15	30SD-TT16
Latitude/Easting/X Coordinate	494252.2996	494221.3579	494325.8651	494324
Longitude/Northing/Y Coordinate	4952950.67	4952975.18	4953083.372	4953083
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/20/2011	10/20/2011	10/20/2011	10/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Analytical data not collected

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	30SD-TT17	30SD-TT18	30SD-TT19	AF12-TT1
Latitude/Easting/X Coordinate	494274.9371	494312.6605	494309.4054	493706.9182
Longitude/Northing/Y Coordinate	4952940.013	4952938.088	4952954.227	4953110.853
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/24/2011	10/24/2011	10/24/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	AF12-TT2	RASB-TT1	RASB-TT2	RASB-TT3
Latitude/Easting/X Coordinate	493706.9182	493669.0946	493666.7977	493562.0465
Longitude/Northing/Y Coordinate	4953101.353	4953094.935	4953030.621	4953103.254
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	RASB-TT4	RASB-TT5	RASB-TT6	RASB-TT7
Latitude/Easting/X Coordinate	493561.5413	493561.5413	493701.2416	493758.3917
Longitude/Northing/Y Coordinate	4953071.519	4953032.228	4953122.319	4953112
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/10/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	RASB-TT8	SR06-SS1	SR21-SS1	SR41-SS1	TR16-SS1
Latitude/Easting/X Coordinate	493751.2479	493799.8571	493836.8117	493971.4973	493904.0985
Longitude/Northing/Y Coordinate	4953036.991	4953127.789	4952984.246	4953170.852	4952889.978
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/28/2011	10/28/2011	10/28/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	A3-SS1	A3-SS2	B3-SS1	MSATC2-TT1	MSATC2-TT2	
Latitude/Easting/X Coordinate	492417.9626	493003.7133	493207.5516	495542.3601	495576.7913	
Longitude/Northing/Y Coordinate	4953756.756	4953805.993	4952395.503	4953093.499	4953094.161	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	6/28/2011	6/28/2011	7/20/2011	6/29/2011	6/29/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Name	Station Type	Boring	Surface Sample	Surface Sample	Surface Sample	Boring
A5-SB1	Boring	A5-SB1	A5-SS3	A6-SS1	A6-SS2	A7-SB1
494589.1763		494549.2097	495135.565	495203.9432	495684.3249	
4953291.328		4953784.357	4953800.538	4953320.121	4953258.881	
GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
6/28/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/28/2011	
Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Consultant	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation			

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Name	Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
A7-SS1	Surface Sample	RR-A5-SS1	RR-A5-SS2	RR-A7-SS1	RR-C5-SS1	
495837.8661		494695.5578	494513.0484	496020.6141	494510.5469	
4953739.534		4953541.792	4953286.913	4953293.239	4952301.155	
GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
6/30/2011	6/30/2011	6/30/2011	6/30/2011	6/30/2011	7/20/2011	
Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Consultant	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation	Unique Well Number	Top Screen Elevation	Bottom Screen Elevation			

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Surface Sample	Test Trench Sample
Station Name	RR-D5-SS3	RR-D5-TT1	RR-E4-SS1	RR-E5-TT1
Latitude/Easting/X Coordinate	494389.5257	494500.5304	493616.4351	494496.6023
Longitude/Northing/Y Coordinate	4951426.51	4950869.888	4950619.209	4950703.871
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/29/2011	6/24/2011	6/28/2011	6/24/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Boring	Other	Boring	Other
Station Name	U-111B-TT1	U-LWBB7-SB1	U-LWBC5-1	U-LWBC6-SB1	U-LWBC7-1
Latitude/Easting/X Coordinate	495218.5622	495654.7821	494736.9901	495041.2156	496173.733
Longitude/Northing/Y Coordinate	4952501.955	4952533.498	4951881.656	4951883.244	4951710.607
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	10/19/2011	10/20/2011	10/19/2011	10/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Sewer sediment sample from manhole location

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Other	Boring	Boring	Boring	Other	Test Trench Sample
Station Name	U-LWBC7-3	U-LWBC7-SB1	U-LWBC7-SB3	U-LWBC7-SB3	U-PB6-1	U-PB6-TT1
Latitude/Easting/X Coordinate	495650.635	495686.2552	496173.3588	496173.3588	495469.9637	495470.041
Longitude/Northing/Y Coordinate	4952328.522	4951868.649	4951706.036	4951706.036	4952722.662	4952725.665
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/20/2011	10/19/2011	10/18/2011	10/18/2011	7/15/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Sewer sediment
 sample from
 manhole location

Sewer sediment
 sample from
 manhole location

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Other	Test Trench Sample	Other	Surface Sample
Station Name	U-SANC4-1	U-SANB4-TT1	U-SANC5-1	U-SANC7-1
Latitude/Easting/X Coordinate	493772.6311	494738.8031	494738.803	495685.5488
Longitude/Northing/Y Coordinate	4951785.643	4952092.58	4952092.58	4952224.38
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/20/2011	10/21/2011	7/15/2011	7/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Sewer sediment sample from manhole location	Sewer sediment sample from manhole location
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SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Test Trench Sample	Test Trench Sample
Station Name	501A2-SS2	501A2-SS3	501A2-SS4	501A2-TT1	501A2-TT2	501A2-TT2
Latitude/Easting/X Coordinate	493677.8249	493661.6151	493672.8939	493668.7371	493661.7707	493661.7707
Longitude/Northing/Y Coordinate	4952091.416	4952086.181	4952069.941	4952079.896	4952077.197	4952077.197
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/10/2011	10/10/2011	10/10/2011	10/11/2011	10/28/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	501A-SS1	501B2-SS1	501B-SS1	501B-SS2	501C2-SS1	
Latitude/Easting/X Coordinate	495387.8808	493475.2596	495223.5166	495223.389	493293.9505	
Longitude/Northing/Y Coordinate	4952605.51	4952077.462	4952612.12	4952600.18	4952079.896	
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	
Collection Date	6/23/2011	6/29/2011	6/23/2011	6/23/2011	6/29/2011	
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	501C-SS1	501C-SS2	501C-SS3	501C-SS4	501C-SS5	501C-SS5
Latitude/Easting/X Coordinate	495023.3033	495023.3033	495014.6017	495020.1135	495029.3692	495029.3692
Longitude/Northing/Y Coordinate	4952605.51	4952610.082	4952604.498	4952597.477	4952604.715	4952604.715
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/7/2011	10/14/2011	10/14/2011	10/14/2011	10/14/2011	10/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	501C-SS6	501C-TT1	501E1-SS1	501E1-SS2	501E1-SS3
Latitude/Easting/X Coordinate	495038.5132	495024.2068	495338.1696	495332.6802	495326.8031
Longitude/Northing/Y Coordinate	4952604.715	4952605.554	4952253.778	4952264.539	4952255.449
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/28/2011	10/11/2011	6/23/2011	10/14/2011	10/14/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample	Test Trench Sample
Station Name	501E1-SS4	501E1-TT1	501E2-SS1	501F1D-SS1	501F1-TT1
Latitude/Easting/X Coordinate	495332.169	495338.5928	493592.175	493886.8639	495892.5835
Longitude/Northing/Y Coordinate	4952249.027	4952253.758	4951728.26	4951741.921	4952808.655
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/14/2011	10/12/2011	6/29/2011	6/29/2011	6/20/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	501F1-TT2	501F1-TT2A	501F1-TT3	501F1-TT4
Latitude/Easting/X Coordinate	495914.3219	495913.7188	495922.0278	495922.9218
Longitude/Northing/Y Coordinate	4952829.669	4952827.407	4952809.879	4952825.677
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/20/2011	10/11/2011	6/20/2011	10/11/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Test Trench Sample
Station Name	501F1-TT5	501F1-TT6	501F1-TT7	501F1-TT8
Latitude/Easting/X Coordinate	495908.7054	495911.2572	495900.5945	495923.2129
Longitude/Northing/Y Coordinate	4952833.752	4952816.627	4952838.708	4952849.887
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/11/2011	10/11/2011	10/28/2011	10/28/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Test Trench Sample	Test Trench Sample	Test Trench Sample	Surface Sample
Station Name	501F1-TT9	501F1-TT10	501F1-TT11	501FL1-SS1
Latitude/Easting/X Coordinate	495938.5074	495931.9486	495947.6824	496296.1633
Longitude/Northing/Y Coordinate	4952836.434	4952841.109	4952829.679	4951848.333
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/28/2011	10/28/2011	10/28/2011	7/7/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant
Ground Elevation				
Unique Well Number				
Top Screen Elevation				
Bottom Screen Elevation				

Comments Analytical data not collected

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	501FLS-SS1	501F-SS1	B5-SS1	B5-SS2	B6-SS1
Latitude/Easting/X Coordinate	495694.7939	494036.0501	494474.4244	494476.319	495628.5296
Longitude/Northing/Y Coordinate	4952064.668	495277.769	4952597.184	4952567.812	4952601.059
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	7/7/2011	7/20/2011	10/28/2011	10/28/2011	10/21/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	C6-SS1	C6-SS2	C6-SS3	239A-SOUTH	239A-SS1	239A-SS1
Latitude/Easting/X Coordinate	495624.141	494989.7398	495239.0768	495397.7142	495387.1308	495387.1308
Longitude/Northing/Y Coordinate	4952157.371	4952351.045	4952351.657	4950776.274	4950775.216	4950775.216
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	10/21/2011	10/21/2011	10/21/2011	10/13/2011	6/27/2011	6/27/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Test Trench Sample	Surface Sample	Surface Sample
Station Name	239A-SS2	239A-SS3	239A-TT1	240B-SS1	240C-SS1
Latitude/Easting/X Coordinate	495420.8493	495437.2648	495410.1496	495257.1301	495042.1301
Longitude/Northing/Y Coordinate	4950796.068	4950777.434	4950789.503	4950134.693	4950134.693
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/27/2011	6/27/2011	10/18/2011	10/28/2011	6/24/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation					
Unique Well Number					
Top Screen Elevation					
Bottom Screen Elevation					

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Surface Sample
Station Name	240C-SS2	240C-SS3	240D-SS1	224A-SS1	224A-SS2	224A-SS2
Latitude/Easting/X Coordinate	495052.3689	495061.9049	494813.1301	495421.9161	495370.3296	495370.3296
Longitude/Northing/Y Coordinate	4950141.412	4950235.894	4950134.693	4950037.911	4950039.742	4950039.742
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/24/2011	6/24/2011	10/28/2011	6/24/2011	6/24/2011	6/24/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number						
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Surface Sample	Surface Sample	Surface Sample	Surface Sample	Well	Well
Station Name	E7-SS1	E7-SS2	E7-SS3	E7-SS3	MW-B7-013	MW-B7-014
Latitude/Easting/X Coordinate	495910.483	495878.5849	496269.853	496269.853	495677.9008	496153.2296
Longitude/Northing/Y Coordinate	4949988.486	4950171.9	4950207.722	4950207.722	4953120.778	4953106.667
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	6/23/2011	6/23/2011	6/23/2011	6/23/2011	12/1/2011	12/1/2011
Organization Name	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering	Barr Engineering
Organization Type	Consultant	Consultant	Consultant	Consultant	Consultant	Consultant
Ground Elevation						
Unique Well Number					784727	784728
Top Screen Elevation						
Bottom Screen Elevation						

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Well	Well	Well	Well	Well
Station Name	MW-B7-015	MW-C7-016	MW-A5-018	MW-C6-020	425291
Latitude/Easting/X Coordinate	496235.8022	496310.5817	494413.8552	495292.3315	495660.385
Longitude/Northing/Y Coordinate	4952710.248	4951962.153	4953317.452	4952294.402	4952385.98
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	12/1/2011	12/1/2011	12/1/2011	12/1/2011	Unknown
Organization Name	Barr Engineering Consultant	Barr Engineering Consultant	Barr Engineering Consultant	Barr Engineering Consultant	Unknown
Organization Type	Consultant	Consultant	Consultant	Consultant	
Ground Elevation					
Unique Well Number	784729	784730	784732	784734	425291
Top Screen Elevation					
Bottom Screen Elevation					

Other names include PDC-C7-425291, MW-28

Comments

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
 Site Program ID:
 Site Name: UMore Park East

Feature Location Data

Station Type	Well	Well	Well	Well	Well
Station Name	MW-C7-004	MW-E4-010	T00022	T00006	T00020
Latitude/Easting/X Coordinate	495656.4414	493300.3505	497165.0483	494556.9873	497188.7851
Longitude/Northing/Y Coordinate	4952105.992	4949961.453	4954171.252	4952338.66	4953177.85
Collection Method	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver	GPS -Receiver
Collection Date	Unknown	Unknown	Unknown	Unknown	Unknown
Organization Name	Unknown	Unknown	Unknown	Unknown	Unknown
Organization Type					
Ground Elevation					
Unique Well Number	769484	769487	19W0000842	T00006	507992
Top Screen Elevation					
Bottom Screen Elevation					
Comments			Other names include PDC-T00022	Other names include PDC-C5-T00006	Other names include PDC-T00020

SPATIAL DATA REPORTING FORM

Feature Location Data Reporting Form

Background

Remediation Program: Site Assessment Program
Site Program ID:
Site Name: UMore Park East

Feature Location Data

	Station Type	Well	Well
Station Name	MW-A6-006	T00019	T00019
Latitude/Easting/X Coordinate	495008.7588	495666.4191	495666.4191
Longitude/Northing/Y Coordinate	4953340.335	4952215.628	4952215.628
Collection Method	GPS - Receiver	GPS - Receiver	GPS - Receiver
Collection Date	Unknown	Unknown	Unknown
Organization Name	Unknown	Unknown	Unknown
Organization Type	Unknown	Unknown	Unknown
Ground Elevation			
Unique Well Number	769491		T00019
Top Screen Elevation			
Bottom Screen Elevation			

Other names
include PDC-
C7-T00019

Comments