

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W18R
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	LT.RAIN	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.37
NO. DIST.	N/A US.	TEMP.	50°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	1130/2-11-09
						COMPLETED	1150/2-11-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-4.0'	NA	1	DO	3.3 4.0		0.0	SA-1 0.0-4.0 Ft. Loose, coarse GRAVEL, fine to coarse SAND and SILT fill, some fine gravel, slight odor present, with olive-green, fine to coarse sand at bottom of interval, some blackish staining from approx. 3.5-4.0 ft. bgs., odor present, very moist to slightly wet. (GM-SM)
4							0.0	
6	UPPER CLAY TILL	NA	2	DO	2.0 4.0		0.0	SA-2 4.0-8.0 Ft. Firm to soft, multi-colored SILTY CLAY, little fine gravel, ash-like material and odor present, blackish-staining throughout, very moist to wet. (CL)
8							0.0	
10	GLACIOLACUSTRINE CLAY	NA	3	DO	3.8 4.0		0.0	SA-3 8.0-12.0 Ft. Soft, brown CLAYEY SILT to SILTY CLAY, trace to little fine gravel, very soft from approx. 8.0-9.5 ft. bgs., slightly plastic to approx. 11.2 ft. bgs., with increasing softness, increasing plasticity towards bottom, wet. (ML to CL)
12	END OF BORING 12.0' bgs.						0.0	Glaciolacustrine clay (GC) beginning at approx. 11.2 ft. bgs.
								1145 - Collect soil sample 6.0-8.0 ft. bgs. for VOCs.
								1350 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

FIELD BORING LOG

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DEPTH HOLE	8.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19R
DEPTH SOIL DRILL	8.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320
NO. DIST.	N/A	US.	N/A	TEMP.	20F	DRILL RIG	BOBCAT MT52
DRILLER	P. ORSI	DATUM	SITE				
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
STARTED	0840/2-16-09						
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
COMPLETED	0850/2-16-09						

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-2.8'	NA	1	DO	4.0 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to approx. 0.2 ft., then loose, coarse GRAVEL and SILT to 2.8 ft., some clay content (GM), then firm, brown SILTY CLAY, little coarse gravel, slight petroleum odor, very moist. (CL)
4	UPPER CLAY TILL	NA	2	DO	3.7 4.0		0.2	
6							0.4	
8							0.1	
							1.2	SA-2 4.0-8.0 Ft. Loose, olive-green to brown SILT, some fine sand, wet, becoming saturated from approx. 5.2 to 6.3 ft. bgs. (ML), then stiff, brown SILTY CLAY, trace coarse gravel, very moist, with approx. 2 to 3-inch interval of petroleum-like stained (blackish/sheen) coarse gravel and sand from approx. 6.8 to 7.0 ft. bgs., wet. (CL)
							4.8	
							10.7	
							6.3	
	END OF BORING 8.0' bgs.							0.5 ppm in borehole at end of drilling activities.
								NOTE: Borehole offset approx. 0.5 ft. to the west of original boring RMU2-W19; drilled to approx. 8.0 ft. bgs. to collect Total Petroleum Hydrocarbon (TPH) sample at request of CWM.
								0900 - Collect soil sample 6.0-8.0 ft. bgs. for TPH.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

FIELD BORING LOG

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DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-E1
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	LT.RAIN	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.7
NO. DIST.	N/A	US.	N/A	TEMP.	50°F	DRILL RIG	BOBCAT MT52
DRILLER	P. ORSI	DATUM	SITE				
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
STARTED	1415/2-11-09						
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
COMPLETED	1435/2-11-09						

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	ORG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	OG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-4.0'	NA	1	DO	2.4 4.0		0.0	SA-1 0.0-4.0 Ft. Loose, coarse GRAVEL, SILT and fine to coarse SAND fill, slight petroleum-like odor present near bottom of interval, moist. (GP-SM)
							0.0	
							0.0	
							0.2	
4	UPPER CLAY TILL	NA	2	DO	3.2 4.0		7.7	SA-2 4.0-8.0 Ft. Firm, brown to olive-brown CLAYEY SILT and dense, brown SILT, occasional pockets of red-brown silt, occasional coarse gravel, little fine gravel, light petroleum-like odor present, with multicolored SILTY CLAY near bottom, light petroleum-like odor present. (ML-CL)
6							5.4	
							14.1	
							21.7	
8	GLACIOLACUSTRINE CLAY	NA	3	DO	3.7 4.0		4.1	SA-3 8.0-12.0 Ft. Stiff to firm, brown CLAYEY SILT, little fine gravel, petroleum-like odor, moist, to approx. 10.6 ft. bgs. (ML), then firm to soft, brown to gray-brown SILTY CLAY, trace fine gravel, petroleum-like odor present within the soil media, slightly plastic, very moist. (CL)
10							6.6	
							11.1	Glaciolacustrine clay (GC) beginning at approx. 10.6 ft. bgs.
							13.8	
12	END OF BORING 12.0' bgs.							6.0 ppm in borehole at end of drilling activities.
								1430 - Collect soil sample 6.0-8.0 ft. bgs. for VOCs.
								1530 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

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DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-E3
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320
NO. DIST.	N/A US.	TEMP.	28°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	1420/2-16-09
						COMPLETED	1455/2-16-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-2.6'	NA	1	DO	3.5 4.0		0.0	SA-1 0.0-4.0 Ft. Loose, coarse GRAVEL and SILT fill, moist, to approx. 2.6 ft. bgs.(GM), then firm, brown CLAYEY SILT, trace to little fine gravel, trace fine sand, moist to very moist. (ML)
4	UPPER CLAY TILL	NA	2	DO	3.4 4.0		0.0	SA-2 4.0-8.0 Ft. Firm to soft, brown to dark brown CLAYEY SILT, little to some very fine to fine gravel, very moist, with zone of black-stained woody material from approx. 6.2-6.6 ft. bgs.(ML), becoming very soft, gray-brown fine-SANDY SILT, little fine gravel, some clay content from approx. 6.6-8.0 ft. bgs., very moist. (ML)
10	GLACIOLACUSTRINE CLAY	NA	3	DO	3.6 4.0		0.0	SA-3 8.0-12.0 Ft. As above, with CLAY, little f-gravel, very slight petroleum-like odor at top of interval, moist, to 9.6 ft. bgs. (CL), then firm to soft, brown SILTY CLAY, little to trace f-gravel, becoming soft, brown CLAY, slightly plastic, moist. (CL)
12	END OF BORING 12.0' bgs.							0.0 ppm in borehole at end of drilling activities. 1515/1520 - Collect soil sample 6.0-8.0 ft. bgs. for VOCs/TPH. 1540 - Collect groundwater sample for VOCs. NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	8.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-W1
DEPTH SOIL DRILL	8.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.66
NO. DIST.	N/A	US.	N/A	TEMP.	20F	DRILL RIG	BOBCAT MT52
DRILLER	P. ORSI	DATUM	SITE				
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
STARTED	0855/2-16-09						
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
COMPLETED	0910/2-16-09						

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-2.8'	NA	1	DO	4.0 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to approx. 0.2 ft., then loose, coarse GRAVEL and SILT to 2.8 ft., some clay content (GM), then firm, brown SILTY CLAY, little coarse gravel, slight petroleum odor, moist to very moist. (CL)
4	UPPER CLAY TILL	NA	2	DO	3.7 4.0		0.0	SA-2 4.0-8.0 Ft. Loose, olive-green to brown SILT, some fine sand, wet, becoming saturated from approx. 5.2 to 6.3 ft. bgs. (ML), then stiff, brown SILTY CLAY, trace coarse gravel, very moist, with approx. 2 to 3-inch interval of petroleum-like stained (blackish/sheen) coarse gravel and sand from approx. 6.8 to 7.0 ft. bgs., wet. (CL)
6							15.9	
8	END OF BORING 8.0' bgs.						2.7	
								0.9 ppm in borehole at end of drilling activities.
								0910/0915 - Collect soil sample 6.0-8.0 ft. bgs. for VOCs/TPH.
								1030 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

~~NYSDEC OHMS Document No. 201469232-00007~~

Golder Associates

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FIELD BORING LOG

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DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-W4
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	P.SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320
NO. DIST.	N/A US.	TEMP.	25°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	1055/2-16-09
						COMPLETED	1115/2-16-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILT	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-7.8'	NA	1	DO	3.8 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to approx. 0.2 ft., then loose,
							0.0	coarse GRAVEL, SILT and fine to medium SAND fill to
							0.0	0.9 ft., very moist (GW-SM), then firm, brown to dark
							0.1	brown CLAYEY SILT, trace fine gravel, very moist,
4								some partially decomposed woody material at approx.
								2.3-2.4 ft. bgs., some ash-like staining and slag
								material from approx. 2.4-2.7 ft. bgs., moist. (ML)
6		NA	2	DO	3.3 4.0		0.0	SA-2 4.0-8.0 Ft. As above to approx. 4.3 ft. bgs., very moist,
							0.0	then loose to compact, brown SILT and fine to
							30.3	medium-SAND, some clay content, saturated,
							11.6	liquefaction observed, to approx. 6.4 ft. bgs.(SM), then
8	GLACIOLACUSTRINE CLAY	NA						loose, coarse to fine-GRAVEL, SILT and fine to
								medium- SAND, with petroleum-like black product
								within soil media to approx. 7.8 ft. bgs. (GW-SM), then
								stiff to firm, brown CLAYEY SILT to SILTY CLAY.
10			3	DO	3.3 4.0		8.6	SA-3 8.0-12.0 Ft. As above, little fine gravel, occasional
							5.4	coarse gravel, some silt content. (ML-CL) becoming
							4.4	soft and slightly plastic from approx. 11.6 ft. bgs.
							1.0	Glaciolacustrine clay (GC) beginning at approx. 8.0 ft.
12	END OF BORING 12.0' bgs.							bgs.
								1120/1125 - Collect soil sample 6.0-7.8 ft. bgs. for
								VOCs/TPH.
								1120 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not
								provide blow counts, soil consistency was determined
								in the field by physical (hand) observation.

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DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-W4-N1
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320
NO. DIST.	N/A	US.	N/A	TEMP.	27°F	DRILL RIG	BOBCAT MT52
				DRILLER	P. ORSI	DATUM	SITE
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
				STARTED	1234/2-16-09		
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
				COMPLETED	1250/2-16-09		

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	CONSISTENCY
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	LS LOOSE
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	CP COMPACT
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	DN DENSE
		LI	LITTLE	RX	ROCK	Y	YELLOW	V VERY
								S SOFT
								FM FIRM
								ST STIFF
								H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-9.0'	NA	1	DO	3.7 4.0	0.0 0.0 0.0 0.2	SA-1	0.0-4.0 Ft. Asphalt to approx. 0.2 ft., then loose, coarse to fine GRAVEL and SILT fill to 1.9 ft., slight chemical odor near top of core sample, to approx 2.0 ft. bgs., (GW-SM) then soft, brown to discolored CLAYEY SILT, coarse GRAVEL and SAND, SILT fill, significant chemical/organic odor present, occasional woody material, wet. (ML to GM)
4								
6							SA-2	4.0-8.0 Ft. Loose, fine to coarse SAND, occasional coarse gravel, wet, to approx. 4.6 ft. bgs., then very coarse, porous rocky fragments and fine to coarse gravel, with blackish, organic like liquid/odor in core sample, wet. (GP)
8								
10	GLACIOLACUSTRINE CLAY	NA	3	DO	4.0 4.0	459	SA-3	8.0-12.0 Ft. As above to approx. 9.0 ft., chemical odor present, then very soft, SILTY CLAY and SILT, saturated, (CL-ML), becoming compact, brown SILT, trace fine gravel from 10.5 ft. bgs., wet. (ML)
12						117		Glaciolacustrine clay (GC) beginning at approx. 9.0 ft. bgs.
	END OF BORING 12.0' bgs.					68.7		
						44.9		
								4.9 ppm in borehole at end of drilling activities
								1250/1255 - Collect soil sample 8.0-11.0 ft. bgs. for VOCs/TPH.
								1425 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	24.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	W19-W4-N2
DEPTH SOIL DRILL	24.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	OVERCAST	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.05
NO. DIST.	N/A US.	TEMP.	36°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	0900/4-22-09
						COMPLETED	1000/4-22-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	
								CONSISTENCY
								LS LOOSE CP COMPACT DN DENSE V VERY S SOFT FM FIRM ST STIFF H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID* (ppm)		
2	FILL 0.0-2.4'	NA	1	DO	3.6 4.0		0.0	SA-1 0.0-4.0 Ft. Dense, coarse GRAVEL and SILT, some fine to coarse sand, very moist, to approx. 2.4 ft. bgs., (GM), then firm, dark gray-brown to blackish, CLAYEY SILT, little fine gravel, with blackish, organic-like liquid and odor present from approx. 3.1-4.0 ft. bgs. (ML)
4	UPPER CLAY TILL	NA	2	DO	4.0 4.0		0.0	SA-2 4.0-8.0 Ft. As above, with zone of black-stained, SILTY CLAY from approx. 4.4-4.7 ft. bgs., pockets of coarse sand and fine to coarse gravel, blackish staining, to approx. 5.2 ft. bgs., very moist, then stiff, brown SILTY CLAY, little to some fine gravel, slightly laminated, wet. (CL)
6							0.0	
8							0.0	
9							0.0	
10	UPPER SILT TILL	NA	3	DO	3.1 4.0		0.0	SA-3 8.0-12.0 Ft. As above to approx. 9.3 ft. bgs. (CL), then compact, brown-gray fine SAND, little silt content, trace fine gravel, saturated, with increasing gravel and sand coarseness towards bottom. (SM)
11							0.0	
12							0.0	
14							0.0	SA-4 12.0-16.0 Ft. Compact, gray brown to brown, gravelly, silty, fine to coarse SAND, little to some clay content, saturated. (SM)
16	GLACIOLACUSTRINE CLAY	NA	5	DO	3.4 4.0		0.0	SA-5 16.0-20.0 Ft. As above, with increasing clay content to approx. 18.9 ft. bgs., saturated (SM), then firm to soft, brown SILTY CLAY, trace fine gravel, trace to little fine sand, becoming slightly plastic from approx. 19.3 ft. bgs., very moist. (CL)
18							0.0	
20							0.0	SA-6 20.0-24.0 Ft. As above to approx. 20.4 ft. bgs., then very soft, brown-gray to brown SILTY CLAY to CLAY, trace fine gravel to approx. 21.2 ft. (CL), becoming firm to stiff, brown SILTY CLAY, little fine gravel, occasional coarse gravel, slightly laminated, turning back to compact SILT, little fine gravel, some clay content, wet to saturated. (CL-ML)
21.2							0.0	
22	END OF BORING 24.0' bgs.	NA	6	DO	3.5 4.0		0.0	1025 - Collect soil sample 4.0 to 5.0 ft. bgs. for VOCs.
22							0.0	1145 - Collect groundwater sample for VOCs.
22							0.0	NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.
24							0.0	Glaciolacustrine clay (GC) beginning at approx. 19.3 ft. bgs.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W19-W4-S1
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	SUNNY	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320
NO. DIST.	N/A	US.	N/A	TEMP.	27°F	DRILL RIG	BOBCAT MT52
DRILLER	P. ORSI	DATUM	SITE				
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
STARTED	1255/2-16-09						
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
COMPLETED	1315/2-16-09						

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	ORG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	OG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

CONSISTENCY

LS	LOOSE	S	SOFT
CP	COMPACT	FM	FIRM
DN	DENSE	ST	STIFF
V	VERY	H	HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-2.6'	NA	1	DO	3.6 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to approx. 0.3 ft., then loose, coarse GRAVEL, fine to coarse SAND and SILTY CLAY fill, to 2.6 ft. bgs, wet from 1.5-2.0 ft. (GW-SC), then firm, multi-colored CLAYEY SILT, little coarse gravel. (ML)
4	UPPER CLAY TILL						0.0	
6		NA	2	DO	4.0 4.0		0.0	SA-2 4.0-8.0 Ft. As above, trace fine gravel, to approx. 5.2 ft. bgs. (ML), then firm to stiff, brown SILTY CLAY, little fine gravel, occasional coarse gravel, trace fine sand, very moist. (CL)
8							0.0	
10	GLACIOLACUSTRINE CLAY	NA	3	DO	3.7 4.0		0.0	SA-3 8.0-10.0 Ft. As above to approx. 9.1 ft., then stiff to firm, brown SILTY CLAY, little to trace fine gravel, very moist. (CL)
12	END OF BORING 12.0' bgs.						0.0	Glaciolacustrine clay (GC) beginning at approx. 9.1 ft. bgs.
								0.0 ppm in borehole at end of drilling activities
								1325/1330 - Collect soil sample 3.0-5.0 ft. bgs. for VOCs/TPH.
								1430 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

~~NYSDEC OHMS Document No. 201469232-00007~~

Golder Associates

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W21
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	OVERCAST	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.57
NO. DIST.	N/A	US.	N/A	TEMP.	36°F	DRILL RIG	BOBCAT MT52
				DRILLER	P. ORSI	DATUM	SITE
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
				STARTED	0830/2-12-09		
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
				COMPLETED	0850/2-12-09		

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-1.1'	NA	1	DO	4.0 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to approx. 0.3 ft., then loose,
							0.0	coarse GRAVEL and SILT fill to 1.1 ft. bgs., dry,
							0.0	(GP-SM) then firm, brown CLAYEY SILT, little fine
							0.0	gravel, occasional coarse gravel, moist, to approx. 2.0
4	UPPER CLAY TILL	NA	2	DO	3.2 4.0		0.0	ft. bgs. (ML), then firm, gray to discolored CLAYEY
							0.1	SILT, some multi-colored, SILTY CLAY from approx.
							0.0	3.6-4.0 ft. bgs, moist. (ML to CL)
6	UPPER CLAY TILL	NA	2	DO	3.2 4.0		0.0	SA-2 4.0-8.0 Ft. As above to approx. 4.2 ft. bgs., with black,
							0.4	ash-like staining at top of interval, then compact, brown
							0.1	SILT and fine to medium SAND, little fine gravel, some
							0.0	clay content, wet, to approx. 7.6 ft. bgs. (SM), then firm,
8	UPPER CLAY TILL	NA	2	DO	3.2 4.0		0.0	brown CLAYEY SILT, little fine gravel, very moist. (ML)
10	UPPER CLAY TILL	NA	3	DO	4.0 4.0		0.0	SA-3 8.0-12.0 Ft. As above, with zone of SILT and fine to
							0.0	medium SAND, saturated, from approx. 8.2-8.6 ft. bgs.,
							0.0	then firm, brown SILTY CLAY, little to trace fine gravel,
							0.0	occasional coarse gravel, very moist (ML-CL),
12	UPPER CLAY TILL	NA	3	DO	4.0 4.0		0.0	becoming very soft, brown-gray SILTY CLAY from
							0.0	approx. 10.5 ft. bgs, plastic, very moist. (CL)
12	GLACIOLACUSTRINE CLAY	NA	3	DO	4.0 4.0		0.0	Glaciolacustrine clay (GC) beginning at approx. 10.5 ft.
								bgs.
12	END OF BORING 12.0' bgs.	NA	3	DO	4.0 4.0			0850 - Collect soil sample 5.0-6.0 ft. bgs. for VOCs.
								1405 - Collect groundwater sample for VOCs.
12	END OF BORING 12.0' bgs.	NA	3	DO	4.0 4.0			NOTE: Since the Direct Push drilling method does not
								provide blow counts, soil consistency was determined
								in the field by physical (hand) observation.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE <u>28.0'</u>	JOB NO. <u>083-89111</u>	PROJECT <u>CWM/RMU-2 FOOTPRINT RELOCATION/NY</u>	BORING NO. <u>RMU2-W22</u>
DEPTH SOIL DRILL <u>28.0'</u>	GA INSP. <u>RJM</u>	DRILLING METHOD <u>DIRECT PUSH</u>	SHEET <u>1 of 2</u>
DEPTH ROCK CORE <u>N/A</u>	WEATHER <u>OVERCAST</u>	DRILLING CO. <u>ZEBRA ENVIRONMENTAL DRILLING</u>	SURFACE EL. <u>320.37</u>
NO. DIST. <u>N/A</u> US. <u>N/A</u>	TEMP. <u>40F-WINDY</u>	DRILL RIG. <u>BOBCAT MT52</u>	DRILLER <u>P. ORSI</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			DATUM <u>SITE</u>
			STARTED <u>0900/2-12-09</u>
			COMPLETED <u>1020/2-12-09</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	ORG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	OG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL/ RE-WORKED SOILS	NA	1	DO	4.0 4.0		0.0	SA-1 0.0-4.0 Ft. Asphalt to 0.2 ft., then loose, coarse GRAVEL, SILT and fine to medium SAND fill to approx. 1.1 ft. (GM), then firm, brown CLAYEY SILT to SILTY CLAY, occasional coarse gravel, little to some fine gravel, little fine sand, occasional thin silt pockets, increasing clay content towards bottom, moist to very moist. (ML to CL)
4		NA	2	DO	4.0 4.0		0.0	
6							1.7	SA-2 4.0-8.0 Ft. Firm to stiff, brown CLAYEY SILT to SILTY CLAY, little to some fine gravel, trace fine sand, very very slight chemical odor present, moist to very moist. (ML to CL)
8							0.4	
10							1.6	
12		NA	3	DO	4.0 4.0		3.8	
14								
16								
18								
20		NA	5	DO	4.0 4.0		10.1	SA-3 8.0-12.0 Ft. Firm, brown CLAYEY SILT, little fine gravel, little fine gravel, some slightly discolored soil media near top of interval, slight chemical odor present, very moist, to approx. 10.1 ft. bgs., then compact, brown SILT, little fine sand, trace to little fine gravel, occasional coarse gravel, wet to slightly saturated, slight chemical odor present, moist. (ML)
22							7.6	
24							14.1	
							9.7	
		NA	4	DO	3.9 4.0			
		NA	6	DO	4.0 4.0		0.1	SA-4 12.0-16.0 Ft. As above, fine gravel, some clay content, no chemical odor, slightly wet throughout. (ML)
							0.0	
							0.0	
							0.0	
		NA	5	DO	4.0 4.0			
		NA	6	DO	4.0 4.0		0.0	SA-5 16.0-20.0 Ft. Compact, brown CLAYEY SILT to SILT, little fine gravel, wet to saturated. (ML)
							0.0	
							0.0	
							0.0	
		NA	6	DO	4.0 4.0			
		NA	6	DO	4.0 4.0		0.0	SA-6 20.0-24.0 Ft. As above, some clayey silt, some slag-like material at approximately 20.4 ft. bgs., several large rock fragments at bottom of interval, saturated. (ML)
							0.0	
							0.0	
							0.0	

DEPTH HOLE	<u>28.0'</u>	JOB NO.	<u>083-89111</u>	PROJECT	<u>CWM/RMU-2 FOOTPRINT RELOCATION/NY</u>	BORING NO.	<u>RMU2-W22</u>
DEPTH SOIL DRILL	<u>28.0'</u>	GA INSP.	<u>RJM</u>	DRILLING METHOD	<u>DIRECT PUSH</u>	SHEET	<u>2 of 2</u>
DEPTH ROCK CORE	<u>N/A</u>	WEATHER	<u>OVERCAST</u>	DRILLING CO.	<u>ZEBRA ENVIRONMENTAL DRILLING</u>	SURFACE EL.	<u>320.37</u>
NO. DIST.	<u>N/A</u>	US.	<u>N/A</u>	TEMP.	<u>40°F-WINDY</u>	DRILL RIG	<u>BOBCAT MT52</u>
	<u>N/A</u>					DRILLER	<u>P. ORSI</u>
DEPTH WL.	<u>N/A</u>	HRS. PROD.	<u>N/A</u>	WT. SAMPLER HAMMER	<u>N/A</u>	DROP	<u>N/A</u>
		HRS. DELAYED	<u>N/A</u>	WT. CASING HAMMER	<u>N/A</u>	DROP	<u>N/A</u>
TIME WL.	<u>N/A</u>					STARTED	<u>0900/2-12-09</u>
						COMPLETED	<u>1020/2-12-09</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	*TRACE - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	CA	COARSE	MOT	MOTTLED	SD	SAND	SOME - 12-30%
D.S.	DENSED SAMPLE	CB	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORANGE	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	FIN	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.1.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GRAVEL	GRAVEL	R	REP	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LAYERED	LAYERED	RES	RESIDUAL	WOP	WEIGHT OF RODS	
		LITTLE	LITTLE	RX	ROCK	Y	YELLOW	
CONSISTENCY								
		LS	LOOSE	S	SOFT			
		CP	COMPACT	FM	FIRM			
		OV	OVERLY	ST	STIFF			
		VERY	VERY	SH	HARD			

[illegible]

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	16.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	RMU2-W23
DEPTH SOIL DRILL	16.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	OVERCAST	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.63
NO. DIST.	N/A US.	TEMP.	40F-WINDY	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	1036/2-12-09
						COMPLETED	1105/2-12-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%	
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%	
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%	
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%	
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY		
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME		
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE		
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL		
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER		
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS		
		LI	LITTLE	RX	ROCK	Y	YELLOW		
								CONSISTENCY	
								LS LOOSE	S SOFT
								CP COMPACT	FM FIRM
								DN DENSE	ST STIFF
								V VERY	H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
	FILL 0.0-0.5'							
2	UPPER CLAY TILL	NA	1	DO	4.0 4.0		0.0	SA-1 0.0-4.0 Ft. Loose, coarse GRAVEL and SILT fill to approx. 0.5 ft. (GM), then firm, brown CLAYEY SILT, little fine gravel, trace to little fine-sand, occasional rock fragments and coarse gravel, moist. (ML)
							0.0	
							0.0	
							3.2	
4	UPPER CLAY TILL	NA	2	DO	4.0 4.0		1.5	SA-2 4.0-8.0 Ft. Stiff, brown CLAYEY SILT to SILTY CLAY, trace to little fine gravel, occasional tan-brown silt pockets, with 0.5-ft. thick pocket of compact silt from approx. 5.5 to 6.0 ft. bgs., very moist, to approx. 6.0 ft. bgs. (ML-CL), then firm to soft, brown SILTY CLAY, trace fine gravel, very moist. (CL)
6							1.0	
							0.0	
							0.0	
8	GLACIOLACUSTRINE CLAY	NA	3	DO	3.9 4.0		0.0	SA-3 8.0-12.0 Ft. Firm, brown SILTY CLAY to CLAYEY SILT, very moist, to approx. 8.4 ft. bgs. (CL-ML), then compact, tan-brown to brown SILT, little to some fine sand, little fine gravel, becoming saturated around 11.3 ft. bgs., then soft, gray-brown SILTY CLAY to CLAY, trace fine gravel, trace fine sand, plastic, moist. (ML-CL)
10							0.0	
							0.0	
							0.0	Glaciolacustrine clay (GC) transition zone beginning at approx. 11.3 ft. bgs.
12	MIDDLE SILT TILL	NA	4	DO	4.0 4.0		0.0	
							0.0	SA-4 12.0-16.0 Ft. As above, becoming compact, tan-brown to brown SILT again from approx. 13.0 ft. bgs., very moist. (CL-ML)
14							0.0	
							0.0	
16	END OF BORING 16.0' bgs.							
								1100 - Collect soil sample 5.0-6.0 ft. bgs. for VOCs.
								1415 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

APPENDIX D
PHASE I WESTERN BOUNDARY INVESTIGATION RADIATION SCREENING
(PROVIDED BY OTHERS)



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: STUART PRYCE (ENSOL)

Date of Report: 2/9/09

Description of Excavation Location: FOOTPRINT OF RMU-2

GPS Northing: _____

GPS Eastern: _____

Elevation: _____ msl

Purpose of Excavation: INVESTIGATE SOIL FOR POSSIBLE CHEMICAL + RADIOLOGICAL CONTAMINATION
BY

1. Radiological Survey Scan

Rad Scan Performed By: STUART PRYCE

Date of Rad Survey: 2/9/09

Rad Instrument Used: LUDLUM MODEL-2221 WITH 44-10 PROBE
SN# SN#

Date of Calibration: 2/2/09

CAL DUE: 2/2/10

Documentation of QC checks performed before and after survey (describe):

PRE-SURVEY: 1 MIN. BKGD COUNT: 4,933 cpm 1 MIN. SOURCE CHECK: 74,592 cpm

POST-SURVEY: 1 MIN. BKGD COUNT: 5,211 cpm 1 MIN. SOURCE CHECK: 75,027 cpm

Description of Rad Survey performed: SCANNED SURFACE OF GEO-PROBE LOCATION, THEN EACH COLE 0-12' @ A RATE OF 1 INCH PER SECOND.

Rad Scan Survey Results:

Time	Scan Survey Data COUNT RANGE	Units	Scan Location (Layer, Lift, Bottom)
1030	4,820 - 6,650	cpm	RMU-2 W-1 SURFACE BKGD - 6,319 cpm
1115	5,500 - 7,400	}	RMU-2 W-2 SURFACE BKGD - 6,775 cpm
1200	5,200 - 7,785		RMU-2 W-3 SURFACE BKGD - 7,109 cpm
1345	5,980 - 7,750		RMU-2 W-4 SURFACE BKGD - 7,246 cpm
1430	5,845 - 7,500		RMU-2 W-5 SURFACE BKGD - 7,627 cpm

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities. (PID READINGS BY GOLDER)



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: STUART PRYCE (ENSOL)

Date of Report: 2/10/09

Description of Excavation Location: FOOTPRINT OF RMU-2

GPS Northing: _____

GPS Eastern: _____

Elevation: _____ msl

Purpose of Excavation: INVESTIGATE SOIL FOR
CHEMICAL + RADIOLOGICAL CONTAMINATION &
GEO-PROBE

1. Radiological Survey Scan

Rad Scan Performed By: STUART PRYCE

Date of Rad Survey: 2/10/09

Rad Instrument Used: LUDLUM MODEL-2221
WITH 4410 PROBE
SN# 211782 SN# 220133

Date of Calibration: 2/2/09
CALDUE - 2/2/10

Documentation of QC checks performed before and after survey (describe):

PRE-SURVEY: 1 MIN BKGD COUNT: 5879 cpm 1 MIN. SOURCE CHECK: 75004 cpm
POST-SURVEY: 1 MIN BKGD COUNT: 5426 cpm 1 MIN. SOURCE CHECK: 74817 cpm

Description of Rad Survey performed: SCANNED SURFACE OF GEO-PROBE
LOCATION THEN EACH CORE 0-12' @ A RATE OF 1 INCH PER
SECOND.

Rad Scan Survey Results:

Time	Scan Survey Data COUNT RANGE	Units	Scan Location (Layer, Lift, Bottom)
0830	6,000 - 7,250	cpm	RMU-2 W-6 SURFACE CT - 7,229 cpm
0915	3,300 - 5,500	}	RMU-2 W-7 SURFACE BKGD - *3,629 cpm
1000	3,250 - 5,440		RMU-2 W-8 SURFACE BKGD - *3,430 cpm
1115	3,750 - 5,025		RMU-2 W-9 SURFACE BKGD - *4,246 cpm
1150	3,800 - 5,225		RMU-2 W-10 SURFACE BKGD - *4,194 cpm
1230	4,820 - 7,200		RMU-2 W-11 SURFACE BKGD - 6,549 cpm
1415	5,800 - 7,600		RMU-2 W-12 SURFACE BKGD - 6,213 cpm
1500	3,400 - 5,600		RMU-2 W-13 SURFACE BKGD - 4,073 cpm

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities.

(PID READINGS PROVIDED BY GOLDER)

* BKGD COUNT
ON PAVEMENT



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: STUART PRYCE (ENSOL)

Date of Report: 2/11/09

Description of Excavation Location: FOOTPRINT OF RMU-2

GPS Northing: _____

GPS Eastern: _____

Elevation: _____ msl

Purpose of Excavation: INVESTIGATE SOIL FOR POSSIBLE
CHEMICAL + RADIOLOGICAL CONTAMINATION BY
GEOPROBE

1. Radiological Survey Scan

Rad Scan Performed By: STUART PRYCE

Date of Rad Survey: 2/11/09

Rad Instrument Used: LUDLUM MODEL-2221
WITH 44-10 PROBE
SN# 211782 SN# 220133

Date of Calibration: 2/2/09

CAL DUE: 2/2/10

Documentation of QC checks performed before and after survey (describe):

PRE-SURVEY: 1 MIN. BKGD COUNT: 5379 cpm 1 MIN. SOURCE CHECK: 78821 cpm

POST-SURVEY: 1 MIN. BKGD COUNT: 5615 cpm 1 MIN. SOURCE CHECK: 76469 cpm

Description of Rad Survey performed: SCANNED EACH GEO-PROBE LOCATION &
SURFACE. THEN SCANNED EACH CORE 0-12' @ A RATE OF 1 INCH
PER SECOND.

Rad Scan Survey Results:

Time	Scan Survey Data	Units	Scan Location (Layer, Lift, Bottom)
0810	COUNT RANGE 3,600 - 5,850	cpm	RMU-2 W-14 SURFACE BKGD - 4,459 cpm
0915	7,900 - 6,200		RMU-2 W-15 SURFACE BKGD - 4,279 cpm
1000	4,220 - 6,350		RMU-2 W-16 SURFACE BKGD - 4,751 cpm
1030	3,750 - 5,875		RMU-2 W-17 SURFACE BKGD - 4,294 cpm
1115	3,820 - 5,950		RMU-2 W-18 SURFACE BKGD - 4,523 cpm
1300	3,880 - 5,540		RMU-2 W-19 SURFACE BKGD - 4,222 cpm
1400	3,400 - 5,600		RMU-2 W-20 E-1 SURFACE BKGD 3,946 cpm

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities.

(PID READINGS PROVIDED BY GOLDER)



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: STUART PRYCE

Date of Report: 2/12/09

Description of Excavation Location: FOOTPRINT OF RMU-2 IN FRONT OF SHIPPING RECEIVING BUILDING GARAGE DOORS.

GPS Northing: _____

GPS Eastern: _____

Elevation: _____ msl

Purpose of Excavation: TO INVESTIGATE FOR POSSIBLE CHEMICAL + RADIOLOGICAL CONTAMINATION.

1. Radiological Survey Scan

Rad Scan Performed By: STUART PRYCE

Date of Rad Survey: 2/12/09

Rad Instrument Used: LUDLUM MODEL 2221 WITH 44-10 PROBE

Date of Calibration: 2/2/09

CAL DUE - 2/2/10

Documentation of QC checks performed before and after survey (describe):

PRE-SURVEY: 1 MIN. BKGD. COUNT 61672 cpm 1 MIN. SOURCE CHECK 76226 cpm

POST-SURVEY: 1 MIN. BKGD. COUNT 5994 cpm 1 MIN. SOURCE CHECK 791014 cpm

Description of Rad Survey performed: SCANNED SURFACE AREA OF GEOPROBE LOCATION, THEN EACH CORE 0-16' @ A RATE OF 1 INCH PER SECOND

Rad Scan Survey Results:

Time	Scan Survey Data	Units	Scan Location (Layer, Lift, Bottom)
1115	COUNT RANGE 31760 - 5255	cpm	63 - SOUTH - R-1
1300	3810 - 5,000	cpm	63 - SOUTH - R-2
1340	3600 - 5,150	cpm	63 - EAST - R-1
1430	3197 - 5,088	cpm	63 - EAST - R-2
1515	3,601 - 6,000	cpm	63 - NORTH - R-1
1600	3,800 - 5,500	cpm	63 - NORTH - R-2

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities.



If soil or other media samples are collected, complete the following:

Sample ID#	Sample Location			1 Minute Static Count within 1 inch of Sample Location		Estimated Sample Volume (Include Units)
	Northing	Easting	Elevation (msl)	Before	After	
63-S-R-1				3,244 cpm	3,479 cpm	600 g.
63-S-R-2				3,551 cpm	3,506 cpm	
63-E-R-1				3,794 cpm	3,891 cpm	
63-E-R-2				4,251 cpm	4,326 cpm	
63-N-R-1				3,601 cpm	3,857 cpm	
63-N-R-2				3,884 cpm	3,904 cpm	

Note: Attach analytical analysis of samples to this report when results are obtained.

2. Chemical Contamination Screening

(PID READINGS + RESULTS PROVIDED BY GOLDBER)

PID Scan Performed By: _____

Date of PID Survey: _____

PID Instrument Used: _____

Date of Calibration: _____

Level of PPE Required: _____

Visible Evidence of Chemical Contamination: _____

Yes No
(Circle One)

Description of PID Survey performed: _____

Time	VOA Screening Data	Units	Scan Location (Layer, Lift, Bottom)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Comments: _____

Attach chain of custody and any analytical results of soil samples collected.



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: STUART PRYCE

Date of Report: 2/16/09

Description of Excavation Location: FOOTPRINT OF RMU-2 IN FRONT OF SHIPPING + RECEIVING GARAGE DOORS

GPS Northing: _____

GPS Eastern: _____

Elevation: _____ msl

Purpose of Excavation: INVESTIGATION OF RMU-2 FOOTPRINT, LOOKING FOR POSSIBLE CHEMICAL AND OR RADIOLOGICAL CONTAMINATION

1. Radiological Survey Scan

Rad Scan Performed By: STUART PRYCE

Date of Rad Survey: 2/16/09

Rad Instrument Used: LUDLUM M-2221 WITH 44-10 PROBE
SN# 2110782 SN# 220138

Date of Calibration: 2/2/09
CALDUE - 2/10/09

Documentation of QC checks performed before and after survey (describe):

PRE-SURVEY: 1 MIN BKGD COUNT - 3604 cpm 1 MIN. SOURCE CHECK: 76,466 cpm

POST-SURVEY: 1 MIN BKGD COUNT - 3586 cpm 1 MIN. SOURCE CHECK: 75,520 cpm

Description of Rad Survey performed: SCANNED SURFACE AREA @ LOCATION OF EACH GEO PROBE. THEN SCANNED EACH CORE 0-16' @ A RATE OF 1 INCH PER SECOND.

Rad Scan Survey Results:

Time	Scan Survey Data COUNT RANGE	Units	Scan Location (Layer, Lift, Bottom)
0840	2900 - 3850	cpm	W-19 W-1 BKGD @ SURFACE - 2994 cpm
0915	3,100 - 3940		W-19 W-2 - 3348 cpm
1000	2800 - 4,400		W-19 W-3 - 3,105 cpm
1100	2,550 - 4,295		W-19 - W-4 - 2,681 cpm
1230	2,750 - 4,270		W-19 - N-1 W-4 - 3,079 cpm
1310	2,700 - 4,250		W-19 - S-1 W-4 - 3,004 cpm
1350	2,650 - 4,450		W-19 - E-1 - 2922 cpm
1430	3,150 - 4,450		W-19 - E-2 - 3,349 cpm

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities.

APPENDIX E
PHASE II WESTERN BOUNDARY INVESTIGATION BORING LOGS

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	24.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	W19-W4-N2
DEPTH SOIL DRILL	24.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	OVERCAST	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.05
NO. DIST.	N/A US.	TEMP.	36°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	0900/4-22-09
						COMPLETED	1000/4-22-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID* (ppm)		
2	FILL 0.0-2.4'	NA	1	DO	3.6 4.0		0.0	SA-1 0.0-4.0 Ft. Dense, coarse GRAVEL and SILT, some fine to coarse sand, very moist, to approx. 2.4 ft. bgs., (GM), then firm, dark gray-brown to blackish, CLAYEY SILT, little fine gravel, with blackish, organic-like liquid and odor present from approx. 3.1-4.0 ft. bgs. (ML)
4	UPPER CLAY TILL	NA	2	DO	4.0 4.0		0.0	SA-2 4.0-8.0 Ft. As above, with zone of black-stained, SILTY CLAY from approx. 4.4-4.7 ft. bgs., pockets of coarse sand and fine to coarse gravel, blackish staining, to approx. 5.2 ft. bgs., very moist, then stiff, brown SILTY CLAY, little to some fine gravel, slightly laminated, wet. (CL)
6							0.0	
8							0.0	
9							0.0	
10	UPPER SILT TILL	NA	3	DO	3.1 4.0		0.0	SA-3 8.0-12.0 Ft. As above to approx. 9.3 ft. bgs. (CL), then compact, brown-gray fine SAND, little silt content, trace fine gravel, saturated, with increasing gravel and sand coarseness towards bottom. (SM)
11							0.0	
12							0.0	
14							0.0	SA-4 12.0-16.0 Ft. Compact, gray brown to brown, gravelly, silty, fine to coarse SAND, little to some clay content, saturated. (SM)
16	GLACIOLACUSTRINE CLAY	NA	5	DO	3.4 4.0		0.0	SA-5 16.0-20.0 Ft. As above, with increasing clay content to approx. 18.9 ft. bgs., saturated (SM), then firm to soft, brown SILTY CLAY, trace fine gravel, trace to little fine sand, becoming slightly plastic from approx. 19.3 ft. bgs., very moist. (CL)
18							0.0	
20							0.0	SA-6 20.0-24.0 Ft. As above to approx. 20.4 ft. bgs., then very soft, brown-gray to brown SILTY CLAY to CLAY, trace fine gravel to approx. 21.2 ft. (CL), becoming firm to stiff, brown SILTY CLAY, little fine gravel, occasional coarse gravel, slightly laminated, turning back to compact SILT, little fine gravel, some clay content, wet to saturated. (CL-ML)
21.2							0.0	
22	END OF BORING 24.0' bgs.	NA	6	DO	3.5 4.0		0.0	1025 - Collect soil sample 4.0 to 5.0 ft. bgs. for VOCs.
22							0.0	1145 - Collect groundwater sample for VOCs.
22							0.0	NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.
24							0.0	Glaciolacustrine clay (GC) beginning at approx. 19.3 ft. bgs.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	16.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	W19-W4-N3
DEPTH SOIL DRILL	16.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	OVERCAST	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.07
NO. DIST.	N/A US.	TEMP.	36°F	DRILL RIG	BOBCAT MT52	DRILLER	P. ORSI
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						STARTED	1005/4-22-09
						COMPLETED	1030/4-22-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILT	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	
								CONSISTENCY
								LS LOOSE S SOFT
								CP COMPACT FM FIRM
								DN DENSE ST STIFF
								V VERY H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID* (ppm)		
2	FILL 0.0-1.9'	NA	1	DO	3.5 4.0		0.0	SA-1 0.0-4.0 Ft. Dense, coarse GRAVEL and SILT fill to approx. 1.9 ft. bgs., moist (GM), then loose, coarse GRAVEL and rock fragments, organic odor present, some slag-like material, with dark grayish-green organic-like liquid and odor present to 4.0 ft. bgs. (GM)
4	UPPER CLAY TILL						0.0	
6		NA	2	DO	3.6 4.0		0.0	SA-2 4.0-8.0 Ft. As above, becoming loose, fine to coarse SAND and GRAVEL and SILT, with multicolored SILTY CLAY, wet, to approx. 5.2 ft. bgs. (GW-CL), then stiff, brown SILTY CLAY, little to some fine gravel, occasional coarse gravel, moderately laminated, very moist. (CL)
8							0.0	
9							0.0	SA-3 8.0-12.0 Ft. As above, occasional coarse gravel, occasional silt pockets, very moist, to approx. 9.6 ft. bgs. (CL), then soft to very soft, brown-gray SILTY CLAY to CLAY, trace fine gravel, plastic, with zone of compact, tan-brown, fine sand at approx. 11.9-12.0 ft. bgs., very moist. (CL)
9.6	GLACIOLACUSTRINE CLAY	NA	3	DO	4.0 4.0		0.0	Glaciolacustrine clay (GC) beginning at approx. 9.6 ft. bgs.
11							0.0	
11.9							0.0	
12		NA	4	DO	3.8 4.0		0.0	SA-4 12.0-16.0 Ft. Compact to loose, brown to tan-brown fine to medium SAND, trace to little silt content, saturated. (SM)
14							0.0	
16	END OF BORING 16.0' bgs.						0.0	1025 - Collect soil sample 4.0 to 5.0 ft. bgs. for VOCs. 1145 - Collect groundwater sample for VOCs. NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

FIELD BORING LOG

NYSDEC OHMS Document No. 201469232-00007

DEPTH HOLE	12.0'	JOB NO.	083-89111	PROJECT	CWM/RMU-2 FOOTPRINT RELOCATION/NY	BORING NO.	W19-W4-N4
DEPTH SOIL DRILL	12.0'	GA INSP.	RJM	DRILLING METHOD	DIRECT PUSH	SHEET	1 of 1
DEPTH ROCK CORE	N/A	WEATHER	LT.RAIN	DRILLING CO.	ZEBRA ENVIRONMENTAL DRILLING	SURFACE EL.	320.04
NO. DIST.	N/A	US.	N/A	TEMP.	35°F	DRILL RIG	BOBCAT MT52
				DRILLER	P. ORSI	DATUM	SITE
DEPTH WL.	N/A	HRS. PROD.	N/A	WT. SAMPLER HAMMER	N/A	DROP	N/A
						STARTED	1055/4-22-09
TIME WL.	N/A	HRS. DELAYED	N/A	WT. CASING HAMMER	N/A	DROP	N/A
						COMPLETED	1115/4-22-09

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
C.S.	CHUNK SAMPLE	BR	BROWN	MIC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME" - 12-30%
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORGANIC	SIY	SILTY	
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	WR	WEIGHT OF RODS	
		LI	LITTLE	RX	ROCK	Y	YELLOW	

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	REC/ATTEMPT	PID (ppm)		
2	FILL 0.0-7.6'	NA	1	DO	3.8 4.0		0.0	SA-1 0.0-4.0 Ft. Dense, coarse GRAVEL and SILT fill, to approx. 1.6 ft. bgs., very moist, (GM), then firm, brown
							0.0	CLAYEY SILT, with zone of compact, tan-brown fine sand from approx. 2.5-3.1 ft. bgs., over soft, dark
							0.0	grayish-black SILTY CLAY, little fine gravel, to approx. 3.8 ft. bgs. (CL), then compact SILT and fine to coarse
							0.0	SAND, some coarse gravel, little fine gravel, very moist. (ML-SM)
4	FILL 0.0-7.6'	NA	2	DO	4.0 4.0		0.0	SA-2 4.0-8.0 Ft. As above to approx. 4.5 ft. bgs., then compact, GRAVELLY coarse SAND, little silt content, wet, to approx. 7.0 ft. bgs. (GM), slight chemical odor present, then firm, brown CLAYEY SILT, trace fine gravel, to approx. 7.6 ft. bgs. (ML), then firm,
6							0.0	gray-brown, CLAYEY SILT to SILTY CLAY, trace to little fine gravel, slightly laminated, very slight chemical odor, very moist. (ML-CL)
7							1.7	
							6.1	
8	UPPER CLAY TILL	NA	3	DO	4.0 4.0		0.0	SA-3 8.0-12.0 Ft. As above to approx. 8.5 ft. bgs., then compact to loose, coarse SAND and fine GRAVEL, trace clay content, slightly wet, to approx. 9.0 ft. bgs. (GW), then stiff to firm, gray-brown SILTY CLAY, little fine gravel, occasional silt pockets, slightly plastic, to approx. 10.5 ft. bgs. (CL), then soft, gray SILTY CLAY to CLAY, little fine gravel, occasional thin silt lenses, plastic, slightly wet. (CL)
9							0.0	
10							0.0	
10.5							0.0	
	GLACIOLACUSTRINE CLAY	NA	3	DO	4.0 4.0		0.0	Glaciolacustrine clay (GC) transition zone beginning at approx. 10.5 ft. bgs.
12								
	END OF BORING 12.0' bgs.	NA	3	DO	4.0 4.0			1120/1125 - Collect soil sample 6.0-8.0 ft. bgs. for VOCs/TPH.
14								1155 - Collect groundwater sample for VOCs.
								NOTE: Since the Direct Push drilling method does not provide blow counts, soil consistency was determined in the field by physical (hand) observation.

