

April 6, 2009

Mr. William P. Murray, P.E.
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

**Re: Ameron Colgate Avenue, Buffalo, Site #915133
Supplemental Investigation**

Dear Mr. Murray:

In accordance with our October 28, 2008 correspondence and subsequent Work Plan dated January 8, 2008, Benchmark Environmental Engineering & Science, PLLC (Benchmark) has completed a supplemental boring and groundwater investigation in the northwestern portion of the above-referenced Site (see Figure 1). A description of our approach to the work, investigation findings, analytical results, and recommendations are presented below. Borehole logs are provided in Attachment 1. Project photographs depicting major aspects of field activities as well as sample locations are presented in Attachment 2. Laboratory analytical results are contained in Attachment 3.

TEMPORARY BORINGS B-1/TMW-1 & B-2/TMW-2

Per our letter of October 28, 2008, two temporary monitoring wells (i.e., TMW-1 and TMW-2) were installed and sampled to address the Department's request for deeper groundwater data (i.e., at target depths of 15-20 feet below grade) in the area downgradient of the former underground storage tank field. Field work was performed on October 31, 2008. A Geoprobe® direct-push drill rig was employed to advance soil borings and facilitate installation of temporary 1-inch PVC wells at the designated sampling locations. Recovered soil cores were described in the field using the Unified Soil Classification System (USCS), scanned for total volatile organic vapors with a calibrated MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp, and characterized for impacts via visual and/or olfactory observations.

Boring location SB-1/TMW-1 was completed to a depth of 20 feet below grade. As documented on the boring log (see Attachment 1), no field indications of impact (i.e., elevated PID readings, staining or odors) were encountered at this location. At boring location SB-2/TMW-2, elevated PID readings and slight organic odor were noted beginning at depths of approximately 6-8 feet below grade and terminating in a silty-clay confining layer encountered at approximately 14 feet below grade. Accordingly, TMW-2 was installed

to a depth of approximately 16 feet below grade to avoid potentially penetrating the bottom of the confining layer.

Groundwater samples were collected from both temporary wells via mini-bailer, transferred to laboratory-supplied, precleaned sample vials and submitted to TestAmerica Labs in Amherst, NY for analysis of Target Compound List (TCL) Volatile Organic Compounds (VOCs). Analytical results are presented on Table 1, attached. As indicated, the sample from TMW-1 generally yielded non-detectable or low concentrations of VOCs below NY State Class GA groundwater quality standards and guidance values (GWQS/GV), with only benzene present at a trace (estimated) concentration slightly above the GWQS/GV. At TMW-2 the data indicated the presence of several compounds, including chlorinated organics, at concentrations exceeding their respective Class GA GWQS/GV.

TEMPORARY BORINGS B-3 THROUGH B-9

Based on the above-described investigation data, Benchmark and the Department met on December 30, 2008 and agreed that a supplemental soil boring/temporary well investigation would be performed to delineate the extent of apparent chlorinated organic impact observed at TMW-2, followed by installation of a permanent well pair near the downgradient property line. A Work Plan describing the supplemental investigation approach was prepared by Benchmark on January 8, 2009 and subsequently approved by the Department. The supplemental boring/temporary well investigation was completed on January 30, 2009 and involved a one-day investigation program using a Geoprobe® direct-push drill rig to advance seven additional borings and facilitate installation of two temporary monitoring wells. Recovered soil cores were described in the field using the Unified Soil Classification System (USCS), scanned for total volatile organic vapors with a calibrated MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp, and characterized for impacts via visual and/or olfactory observations

Field observations/readings are recorded on the borehole logs in Attachment 1. As indicated, the borings generally exhibited 2-4 feet of fill material overlying native soils with a stiff to very stiff high plasticity clay confining layer encountered at depths of 5 to 12 feet below grade. None of the borings exhibited visual, olfactory or PID evidence of impact with the exception of boring location TWM-3 (see Attachment 1). PVC monitoring wells TMW-3 and TMW-4 were constructed at borehole locations B-3 and B-4 respectively. The wells were set at depths of 12 fbgs (TMW-3) and 16 fbgs (TMW-4), approximately 5-feet below the top of the shallow water table.

Groundwater samples were collected from both temporary wells via mini-bailer, transferred to laboratory-supplied, precleaned sample vials and submitted to TestAmerica Labs in Amherst, NY for analysis of TCL VOCs. Analytical results are presented on Table 1, attached. As indicated, sample results for downgradient well TMW-4 indicated a significant drop in VOC concentrations from TMW-2, with most parameters reported as non-detect or at trace levels below GWQS/GV and the detected constituents reported at concentrations

an order of magnitude below the levels present in TMW-2. Sample TMW-3 exhibited no detectable chlorinated organics; compounds reported above GWQS/GV were limited to petroleum aromatics likely representing residual halo from the UST removal.

PERMANENT WELL PAIR

In accordance with Benchmark's January 8, 2009 Work Plan, a permanent well pair (shallow and deep overburden wells) were planned for the downgradient side of the property near TMW-4. Permanent well installation work was initiated on March 4, 2009. Shallow overburden well 7A was screened at 7-12 feet below grade, approximately 4 feet into the clay confining layer (see Attachment 1). On March 5, 2009, Benchmark attempted to install the deep overburden well MW-7B. Temporary casing was initially set into the top of the confining layer, encountered at 7 feet below grade, to prevent potential downhole contaminant migration. The boring was then advanced through the casing. The clay confining layer continued to a depth of approximately 23 feet below grade and exhibited no desiccation, fracturing or lenses to suggest a potential pathway for vertical contaminant migration. The MW-7B borehole was completed to a depth of approximately 24.5 feet below grade, at which point bedrock was encountered. A till lens was encountered between the bottom of the confining layer and the top of rock. The augers were retracted to the top of this lens, however after several hours no groundwater was encountered. Mr. Martin Doster of the NYSDEC was subsequently contacted and it was agreed that based on the thickness and competency of the confining layer and absence of overburden groundwater within or beneath the confining layer, well MW-7B would be abandoned. The borehole was filled with bentonite to within a foot of grade and completed with soil cover.

Well MW-7A was developed and sampled via low flow sampling procedures on March 9 2009 in accordance with the Work Plan. Groundwater samples were analyzed for TCL VOCs by TestAmerica Labs in Amherst, NY. Analytical results are presented on Table 1. As anticipated, sample results were comparable to those encountered at well TMW-4, with concentrations of chlorinated VOCs dropping by approximately an order of magnitude from those detected at TMW-2.

CONCLUSIONS AND RECOMMENDATIONS

The findings of the investigation indicate that chlorinated organic detections at TMW-2 are isolated and attenuate rapidly in the downgradient overburden groundwater. This is evidenced by the absence of nearby field indications of impact, the significantly lower VOC concentrations observed at MW-7a, and the lack of chlorinated VOC detection during the Remedial Investigation in downgradient wells MW-3R and MW-4. In addition, no receptors are present along the adjacent western (downgradient) site boundary. As the environmental easement to be developed as part of the final remedial measures for the site will provide for a restriction on use of site groundwater and a requirement for subsurface vapor mitigation in any new structures erected on the property, it is recommended that remedial measures to address this isolated area of the site involve the addition of MW-7a to the post-remedial monitoring program to verify continued attenuation of the impacts.

The petroleum VOCs encountered at TMW-3 are indicative of residual impact from the former UST area. Again, these compounds attenuate rapidly downgradient as evidenced by the absence of petroleum VOCs above groundwater quality standards in MW-7a. Continued monitoring of MW-7a and other monitoring wells to be sampled as part of the post-remedial groundwater monitoring program described in the draft RI/FS report will serve to verify downgradient groundwater quality.

Per our letter of October 28, 2008 the draft RI/FS report will be updated to incorporate the above-described investigation results and requirements for post-remedial vapor intrusion mitigation and handling of investigation-derived waste (IDW) materials currently staged onsite. MW-7a will be added to the proposed post-remedial monitoring program as well.

Please contact us if you have any questions or concerns.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Thomas H. Forbes, P.E.
Project Manager

C: Paul Pavlis, Esq. – Ameron International Corporation
Craig Slater, Esq. – Harter, Secrest & Emery, LLP
Cameron O'Connor – NYSDOH

file: 0100-001-200

Attachments

TABLES

TABLE 1

GROUNDWATER ANALYTICAL DATA SUMMARY

Supplemental Investigation
Colgate Avenue Site
Ameron International Corporation

Parameter ¹	Sample Location					GWQS/GV ²
	TMW-1	TMW-2	TMW-3	TMW-4	MW-7a	
TCL VOCs (ug/L)						
Acetone	4 J	9 J	140 DJ	2 J	1 J	50
Benzene	6 J	11	1.6 J	ND	0.69 J	1
2-Butanone (MEK)	ND	8 J	4.9 J	ND	ND	50
Carbon disulfide	0.6 J	ND	ND	ND	ND	60
1,1-Dichloroethane	ND	0.3 J	ND	ND	ND	5
1,1-Dichloroethene	ND	6 J	ND	ND	1.5 J	5
cis-1,2-Dichloroethene	ND	1600 D	ND	120	240	5
trans-1,2-Dichloroethene	ND	300 D	ND	1.4 J	3.7 J	5
Ethylbenzene	ND	440 D	670 DJ	1.9 J	ND	5
2-Hexanone	ND	0.9 J	ND	ND	ND	50
Isopropylbenzene (Cumene)	ND	10	160 DJ	ND	ND	5
Methylcyclohexane	1 J	ND	21 DJ	ND	ND	--
Methylene chloride	ND	ND	ND	ND	0.87	5
4-methyl-2-pentanone (MIBK)	0.6 J	850 D	31 DJ	ND	ND	--
Tetrachloroethene	ND	42	ND	ND	0.25 J	5
Toluene	0.8 J	38	3 J	ND	ND	5
Trichloroethene	ND	870 D	ND	46	130	5
Vinyl chloride	ND	510 D	ND	14	20	2
Total Xylene	ND	180	3300 DJ	9.6 J	ND	5

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. NYSDEC Division of Water Ambient Water Quality Standards & Guidance Values and Effluent Limitations (TOGS1.1.1).

Definitions:

- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- D = Dilution required due to high concentration of analyte.
- ND = parameter not detected above laboratory detection limit.
- " -- " = not analyzed for this parameter

BOLD

= Analytical result exceeds individual GWQS/GV.

FIGURES

DATE: FEBRUARY 2009
DRAFTED BY: THF/JCT/NTM

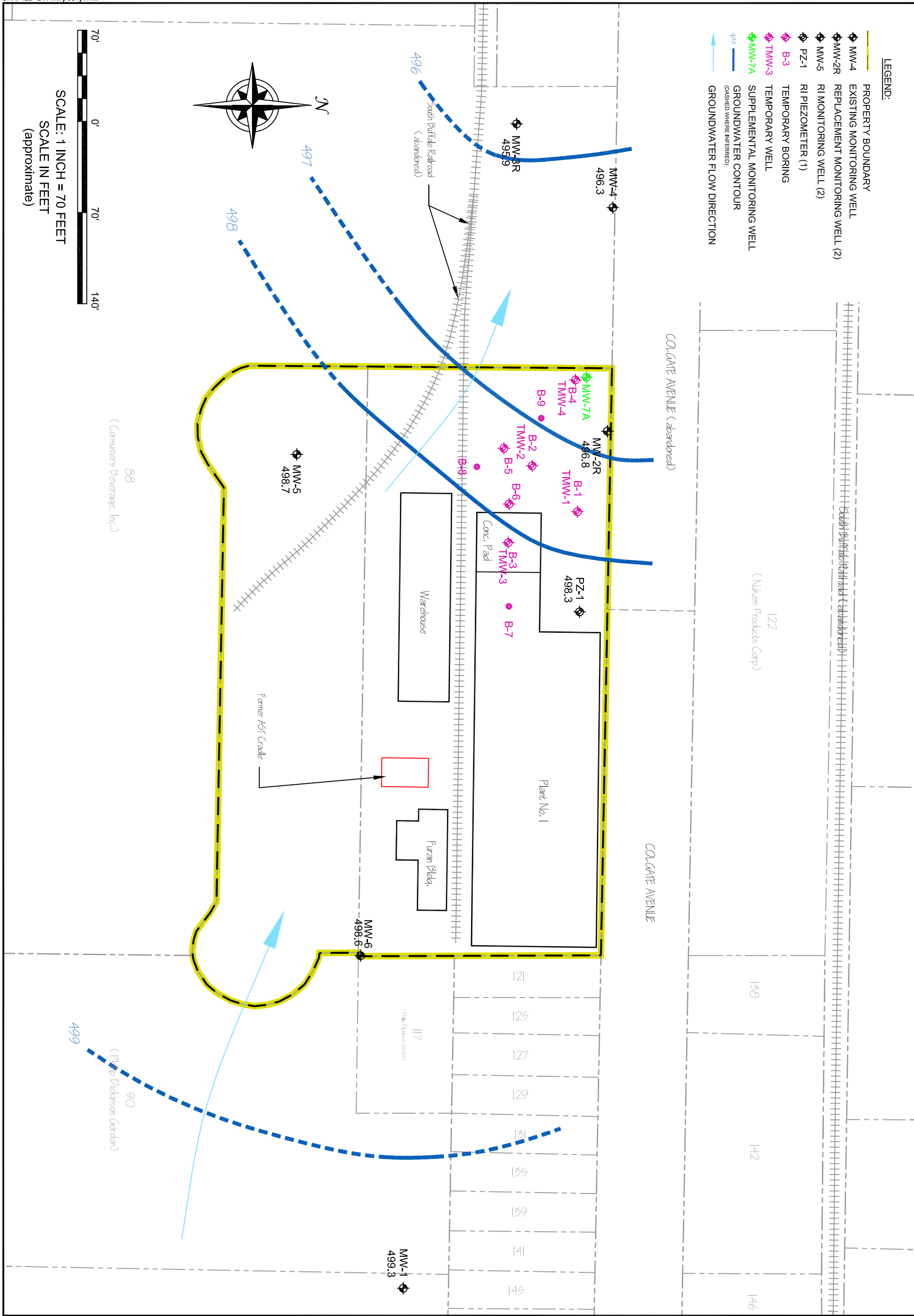



FIGURE 1	<p>SUPPLEMENTAL SOIL BORING LOCATIONS SUPPLEMENTAL REMEDIAL INVESTIGATION</p> <p>COLGATE AVENUE SITE</p> <p>BUFFALO, NEW YORK</p> <p>PREPARED FOR AMERON INTERNATIONAL</p>	 <p>726 EXCHANGE STREET SUITE 624 BUFFALO, NEW YORK 14210 (716) 856-0599</p>
	<p>JOB NO.: 0100-001-200</p>	

ATTACHMENT 1

BOREHOLE LOGS

Project No: 0100 - 001 - 200

Borehole Number: B-1/TMW-1

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

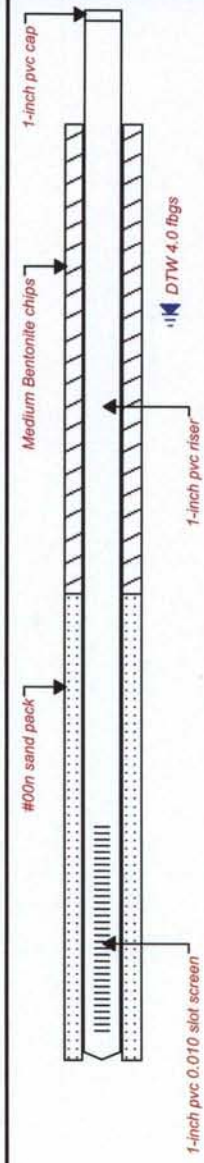
Site Location: 111 Colgate Ave.

Checked By:



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 12.5 25	Lab Sample	Well Completion Details or Remarks
Depth (ftgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0									
	0.0	Ground Surface							
	0.0	Limestone Grey/ brown, moist, broken limestone fragments with brown silt fine.	1	NA	0.6	▲	0.0		
3.0									
	-4.0	Coarse sand Brown and grey, wet, coarse sand, with some fine gravel with few silt and fine sand, medium dense loose when disturbed, non-plastic.	2	NA	0.7	▲	0.0		
8.0		As above.							
	-8.0								
	8.0		3	NA	1.1	▲	0.0		
13.0		As above.							
	-12.0								
	12.0		4	NA	0.7	▲	0.0		
18.0		Silty Clay Brown, wet, silty clay with trace fine sand, soft, high plasticity, slightly laminated.	5	NA	4.0	▲	0.0		
	-16.0								
	16.0								
	-20.0	End of Borehole							
	20.0								



Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: 1.90 feet
Datum: NA

Drill Date(s): 10/31/08

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B-2/TMW-2

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

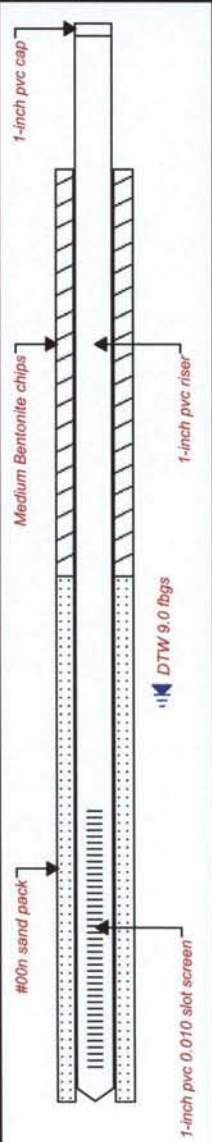
Site Location: 111 Colgate Ave.

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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-2.0	0.0	Ground Surface							
	0.0	Fill Brown, moist, silt with fine sand and some coarse sand and little fine gravel, non-plastic, dense, loose when disturbed.	1	NA	2.4	0.0			
3.0	-4.0	As above with orange brick							
	4.0		2	NA	4.0	0.0			
8.0	-8.0	Silty clay Dark grey to black, with few fine sand, medium soft, low plasticity with orange brick, slight organic odor.							
	10.0	Fine sand Medium grey, wet, fine sand, medium dense, loose when disturbed, rapid dilatancy, slight organic odor.	3	NA	2.8	37.4			
	11.0	Concrete Grey to white, moist, broken up concrete with concrete fines.							
	11.5	Fine Sand As 10.0 to 11.0 fbgs with some silt and few coarse sand, rapid dilatancy, organic odor.							
13.0	-14.0	Silty clay Brown, wet, silty clay with trace fine sand, medium soft, high - plasticity, slight laminations, no odor.	4	NA	3.7	44.7			
	16.0	End of Borehole				0.3			



Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Drill Date(s): 10/31/08

Hole Size: 2 - inch
Stick-up: 1.0 feet
Datum: NA

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B-3/TMW - 3



Project: Supplemental groundwater investigation

Client: Ameron International

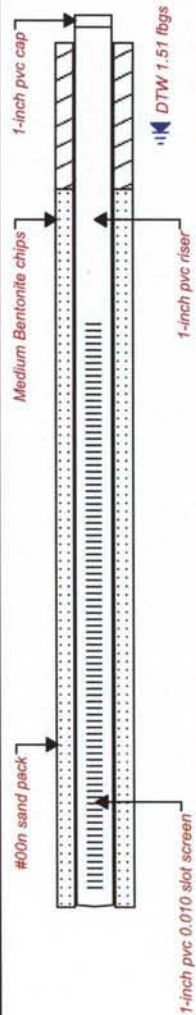
Logged By: TAB

Site Location: 111 Colgate Ave.

Checked By: BCH

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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-1.0	0.0	Ground Surface							
	0.0	Concrete Floor							
		Floor Subbase Brown, moist, fine sand with non-plastic fines, some coarse sand and fine gravel, orange brick, medium dense, loose when disturbed.							
		Clayey Silt Black brown, moist, clayey silt with some fine sand, medium plasticity, firm, paint-like odor.	1	NA	2.4		92.9		
							25.0		
4.0	4.0	Silty Clay Medium grey, moist, silty clay, with some fine sand, medium soft, high plasticity, slight paint-like odor.					1.5		
	6.0	Clayey Silt Black brown, wet, clayey silt with some fine sand, medium plasticity, firm, paint like odor.	2	NA	2.4		23.4		
	8.0	Silty Clay Medium grey, wet to moist, silty clay, with few fine sand, medium soft to stiff, high plasticity, laminated, slight paint-like odor.	3	NA	2.2		4.0		
							4.0		
	12.0	NO RECOVERY.							
14.0	14.0		4	NA	0.0				
	16.0	End of Borehole							
19.0									



Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: 0.5 - feet
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B-4/TMW - 4

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

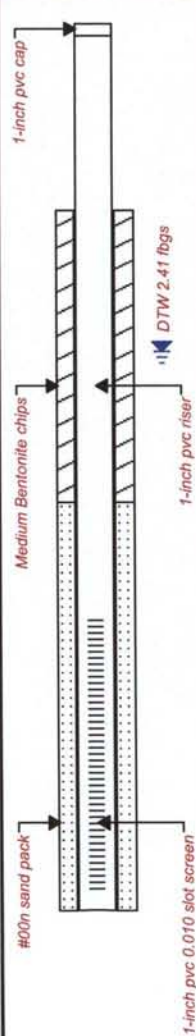
Site Location: 111 Colgate Ave.

Checked By: BCH



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SUBSURFACE PROFILE			SAMPLE				PID VOCs	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-3.0									
	0.0	Ground Surface							
	0.0	Sand and Gravel Brown grey, moist, fine sand with some coarse sand and fine gravel, medium dense, loose when disturbed no odors.							
	-0.8								
	0.8	Fill Black, moist, fill, non-plastic fines with fine sand, with little coarse sand and trace fine gravel, orange brick fragments, medium dense, loose when disturbed.	1	NA	3.0	0.0			
2.0									
	-3.0								
	3.0	Silty Clay Brown, moist, silty clay, with few fine sand, stiff, high plasticity, iron orange staining and rootlets.							
	-4.0								
	4.0	Clayey Silt Brown, moist, clayey silt, with some fine sand, stiff, laminated, low plasticity, with grey fine sand filled fractures, no odors.	2	NA	3.3	0.0			
7.0									
	-7.0								
	7.0	Fine sand Brown, moist, fine sand with non-plastic fines, dense, breaks with hand pressure, no odors.							
	-8.0								
	8.0	Clayey Silt As above, wet							
	-10.0								
	10.0	Silty Clay Grey, wet to moist, silty clay with trace fine sand, stiff, high plasticity, laminated, no odors.	3	NA	2.6	0.0			
12.0									
	-12.0	End of Borehole							
	12.0								



Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: 3.2 - feet
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B - 5

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave.

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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
		Sand and Gravel Brown grey, moist, fine sand with some coarse sand and fine gravel, orange brick peices, medium dense, loose when disturbed, no odors.							
-2.0	2.0	Fill Black, moist, fill, non-plastic fines with fine sand, with little coarse sand and trace fine gravel, orange brick fragments, medium dense, loose when disturbed.	1	NA	1.7		0.0		
-4.0	4.0	Silty Clay Brown, moist, silty clay, with few fine sand, stiff, high plasticity, iron orange staining and rootlets with grey fine sand partings, no odors.							
-5.0	5.0	Fine Sand Brown, wet, fine sand with some non-plastic fines, dense, breaks with hand pressure, no odors.	2	NA	3.3		0.0		
-6.0	6.0	Silty Clay As above, wet to moist.							
-8.0	8.0	Silty Clay As abov. grey, moist, with trace fine sand.							
10.0			3	NA	0.9		0.0		
			4	NA	2.7		0.0		
-16.0	16.0	End of Borehole							
20.0									

DTW 6.0 fbgs

Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: NA
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B - 6

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave.

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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Silt/sand Dark Brown/black, moist, non-plastic fines with fine sand, some coarse sand and fine gravel, loose, no odors.							
	-2.0	Fill Black, moist, fill, silt with fine sand, with little coarse sand and trace fine gravel, medium dense, loose when disturbed, no odors.	1	NA	1.9		0.0		
	2.0								
	-5.0	Silty Clay Brown, wet, silty clay, with few fine sand, stiff, high plasticity, iron orange staining, no odors.	2	NA	3.3		0.0		
	5.0								
	-8.0	Silty Clay As above. Grey, wet to moist, with trace fine sand, no odors	3	NA	2.7		0.0		
	8.0								
	-16.0	Silty Clay As above. Grey, wet to moist, with trace fine sand, no odors	4	NA	3.3		0.0		
	16.0								
	-16.0	End of Borehole							
	16.0								
20.0									

DTW 5.0 fbgs

Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: NA
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B - 7

Project: Supplemental groundwater investigation

Client: Ameron International

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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
		Concrete Floor							
		Floor subbase							
		Brown, moist, fine sand with coarse sand and fine gravel, no odors.							
		Fine sand							
		Brown, wet, fine sand with some silt, medium dense, no odors.	1	NA	1.9		0.0		
		Silty Clay							
		Brown, moist, silty clay with some fine sand, medium plasticity, stiff, laminated, with orange staining, no odors.	2	NA	3.3		0.0		
		Fine Sand							
		Brown, wet, fine sand with some non-plastic fines, loose, rapid dilatancy, no odors.	3	NA	3.0		0.0		
		Silty Clay							
		Grey, wet, silty clay with trace fine sand, stiff, high plasticity, laminated, no odors.	4	NA	1.1		0.0		
		End of Borehole							

DTW 5.0 fbgs

Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: NA
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B - 8

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave.

Checked By: BCH



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Fill Brown/black, moist, fill, non-plastic fines with fine sand, some coarse sand, and few fine gravel, with cinders and yellow brick peices, medium dense, loose when disturbed, no odors.	1	NA	1.7		0.0	DTW 4.0 fbgs	
	-4.0	Silty Clay Brown, wet, silty clay with some sand, medium soft, high plasticity, no odors.							
	-5.5	Fine Sand Brown, wet, fine sand with some medium plastic fines, soft, medium plasticity, no odors.	2	NA	3.3		0.0		
	-6.0	Silty Clay Brown, wet, silty clay with some sand, medium soft, high plasticity, no odors.							
	-9.0	Silty Clay As above but grey, wet to moist, with little to trace fine sand, stiff, laminated.	3	NA	0.9		0.0		
	-16.0	Silty Clay As above but grey, wet to moist, with little to trace fine sand, stiff, laminated.	4	NA	2.7		0.0		
	-16.0	End of Borehole							
20.0	16.0								

Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: NA
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: B - 9

Project: Supplemental groundwater investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave.

Checked By: BCH



Benchmark Environmental Engineering & Science, PLLC
726 Exchange Street, Suite 624
Buffalo, NY
(716) 856-0599

SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0	Ground Surface							
	0.0	Fill Brown/black, moist, fill, non-plastic fines with fine sand, some coarse sand and few fine gravel, with slag and orange brick peices, medium dense, loose when disturbed, no odors.	1	NA	1.8		0.0	DTW 4.0 fbgs	
	4.0	Silty Clay Brown, wet, silty clay with little sand, stiff, high plasticity, iron staining, no odors.	2	NA	2.4		0.0		
	8.0	Fine Sand Brown, wet, fine sand with some silt, loose, rapid dilatancy, no odors.							
10.0	10.0	Silty Clay Grey, wet, silty clay with trace fine sand, stiff, high plasticity, laminated, no odors.	3	NA	3.3		0.0		
	12.0	NO RECOVERY							
	12.0		4	NA	0.0				
	16.0	End of Borehole							
20.0									

Drilled By: Trec Environmental
Drill Rig Type: DT6620
Drill Method: Directpush

Hole Size: 2 - inch
Stick-up: NA
Datum: NA

Drill Date(s): 1/30/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: MW-7A

Project: Supplemental Groundwater Investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave.

Checked By: BCH



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
-3.0								<p>Medium Bentonite chips 1-inch pvc riser DTW 3.0 fbs #00s sand pack 1-inch pvc 0.010 slot screen</p>	
0.0	0.0	Ground Surface							
-0.8	0.8	Sand and Gravel Brown grey, moist, fine sand with some coarse sand and fine gravel, medium dense, loose when disturbed no odors.	1	15	1.5	▲	0.0		
-2.0	2.0	Fill Black, moist, fill, non-plastic fines with fine sand, little coarse sand and trace fine gravel, orange brick fragments, medium dense, loose when disturbed.				■			
-2.0	2.0	Silt with Fine Sand Brown, moist to wet, silt with fine sand, medium dense, low plasticity, iron-stained.	2	10	1.8	▲	0.0		
-4.5	4.5	Clayey Silt Brown, wet, clayey silt, with little fine sand, stiff, low plasticity, with grey fine sand filled fractures.	3	12	1.8	▲	0.0		
-6.0	6.0	As above, wet with few to some fine sand with iron staining.				■			
-7.0	7.0		4	16	1.3	▲	0.0		
-8.0	8.0	Silty clay Dark Grey, moist, silty clay, with trace fine sand, varved silt 1-2mm thick, very stiff, High plasticity.	5	17	1.7	▲	0.0		
-10.0	10.0	As above trace coarse sand with rootlets.				■			
-12.0	12.0	As above no coarse sand.	6	17	1.9	▲	0.0		
-14.0	14.0		7	16	1.8	▲	0.0		
-14.0	14.0	End of Borehole							
17.0									

Drilled By: Earth Dimensions
Drill Rig Type: Dietrich D120
Drill Method: 4 1/4 - inch HSA Augers

Hole Size: 6 5/8 - inch
Stick-up: 2.5 - feet
Datum: NA

Drill Date(s): 3/5/09

Sheet: 1 of 1

Project No: 0100 - 001 - 200

Borehole Number: MW-7B

Project: Supplemental Groundwater Investigation

Client: Ameron International

Logged By: TAB

Site Location: 111 Colgate Ave., Buffalo NY

Checked By: BCH



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SUBSURFACE PROFILE			SAMPLE				PID VOCs ppm 0 25 50	Lab Sample	Well Completion Details or Remarks
Depth (fbs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol			
0.0	0.0 0.0	Ground Surface Augered with 81/4-inch augers See boring log MW-7A for soil description, secured temporary overburden casing from 2.0 to 14.0 fbs; grouted in place, continued drilling through casing using 2.25-inch HSA + continuous sampling.							
15.0	-14.0 14.0	Silty Clay Dark grey, moist, silty clay, with trace fine sand, varved with silt 1-2 mm thick, stiff, high plasticity.	1	8	1.7	▲	0.0		
	-16.0 16.0	As above with trace fine gravel.	2	8	1.5	▲	0.0		
	-18.0 18.0	As above no trace gravel.	3	11	1.7	▲	0.0		
			4	13	1.4	▲	0.0		
	-23.0 23.0	Till Grey, moist, Till, silt with little fine sand, trace coarse rounded to sub-rounded gravel, medium to high plasticity, stiff, soft at bottom of spoon.	5	15	2.0	▲	0.0		
	-24.3 24.3	Shale Black Shale, Dry.	6	100 3	0.0	▲			
		End of Borehole							
30.0									

Drilled By: Earth Dimensions
Drill Rig Type: Dietrich D120
Drill Method: 8 1/4 to 2 1/4 - inch HSA Augers

Hole Size:
Stick-up: NA
Datum: NA

Drill Date(s): 3/5/09

Sheet: 1 of 1

ATTACHMENT 2

REPRESENTATIVE PROJECT PHOTOGRAPHS



Client Name: Ameron International		Site Location: 111 Colgate Avenue, Buffalo NY	Project No.: 0100-001-200
Photo No. 1	Date 01/30/09		
Direction Photo Taken: East			
Description: Advancing boring b-7.			

Photo No. 2	Date 01/30/09	
Direction Photo Taken: West		
Description: Soil boring advancement of B-4/TMW-4.		



Client Name: Ameron International		Site Location: 111 Colgate Avenue, Buffalo NY	Project No.: 0100-001-200
Photo No. 3	Date 03/05/09		
Direction Photo Taken: North			
Description: Installing overburden casing at MW-7b.			

Photo No. 4	Date 01/30/09	
Direction Photo Taken: North		
Description: Soil boring advancement B-6		


Client Name: Ameron International		Site Location: 111 Colgate Avenue, Buffalo NY	Project No.: 0100-001-200
Photo No. 5	Date 03/05/09		
Direction Photo Taken: North			
Description: Continous split spoon sampling through 6-inch steel casing at MW-7b			

Photo No. 6	Date 03/05/09	
Direction Photo Taken:		
Description: Moist glacial till at top of Top of Rock 22.0 - 24.0 feet below ground surface, MW-7b		

ATTACHMENT 3

TEST AMERICA LABORATORIES, INC. ANALYTICAL DATA PACKAGE