Off-site Bedrock Groundwater Investigation

Site No. 932151
915 Cleveland Avenue Off-site Bedrock Groundwater Plume
Niagara Falls, Niagara County

September 12,2011

The 915 Cleveland Ave. Site is located in an urban area at the southeast intersection of Cleveland Ave. and Main St. in the City of Niagara Falls. The surrounding area is predominately commercial however there are residential properties to the east. The site had been home to auto repair and dry cleaning businesses. It was the original parcel of a BCP site (#C932133), which was expanded to include six additional parcels. The site was redeveloped and now forms a portion of the Niagara Falls Municipal Complex which houses a public safety building and court room facility. The building was opened in May 2009. A Certificate of Completion on the BCP site is expected in late 2011. The multiple parcels were combined and the current street address of the site is 1925 Main Street.

Prior to remediation significant concentrations of tetrachloroethene (PCE) up to 17 parts per million (ppm) and associated breakdown products were detected in the overburden groundwater immediately above the bedrock surface. PCE was detected in bedrock groundwater samples, both on-site and at adjacent off-site locations, detected PCE at concentrations from < 1 to 550 parts per billion (ppb). Only limited soils data was available at that time. No soils data was available from beneath the on-site buildings which occupied the majority of the site. Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were detected in the soil but were within Recommended Soil Cleanup Objectives (RSCOs) with the exception of 1,2,4-trimethylbenzene (9.5 ppm). Metals (arsenic, mercury and lead) were detected in the soil exceeding RSCOs.

Remediation at the site is complete. The buildings were removed and all on-site impacted soils were excavated to the top of the dolostone bedrock at approximately 15 feet below grade (bgs). Four underground storage tanks (USTs) were uncovered along the south side of Cleveland Ave. and were removed during the excavation work. Subsequent sampling confirmed significant concentrations of PCE, trichloroethene (TCE) and petroleum constituents in the excavated site soils. Post excavation confirmation soil sampling confirmed that remaining on-site soils meet Part 375 Unrestricted Use Soil Cleanup Objectives. One small area of off-site soils near the former UST field could not be excavated due to the proximity of the street. These off-site soils contained PCE up to 6ppm (below Part 375 Restricted Use- Restricted Residential SCOs). Groundwater monitoring wells BRMW-1 and BRMW-2, located off-site near the former UST field, detected residual PCE in the bedrock groundwater at 550 ppb and 360 ppb, respectively.

The BCP applicant is a volunteer and they were not obligated to undertake off-site characterizations of the bedrock groundwater. As such, the Department, in consultation with the Department of Health (DOH), has undertaken the appropriate off-site bedrock groundwater characterizations.

Prior investigation determined the bedrock groundwater flow direction was to the northwest. A standby contractor was called out and installed two additional off-site bedrock wells (BRMW-7 & BRMW-8) on the north side of Cleveland Ave., north and west of the former UST locations. The overburden materials, encountered during the well installations consisted of silty clay with gravelly silt and were consistent with those found on-site. Depth to bedrock ranged from 23.7 feet at BRMW-7 to 17.8 feet at BRMW-8. The wells were developed and latter sampled, along

with all available previously installed bedrock wells, on July 25, 2011. A report summarizing the well installation work and sampling is attached.

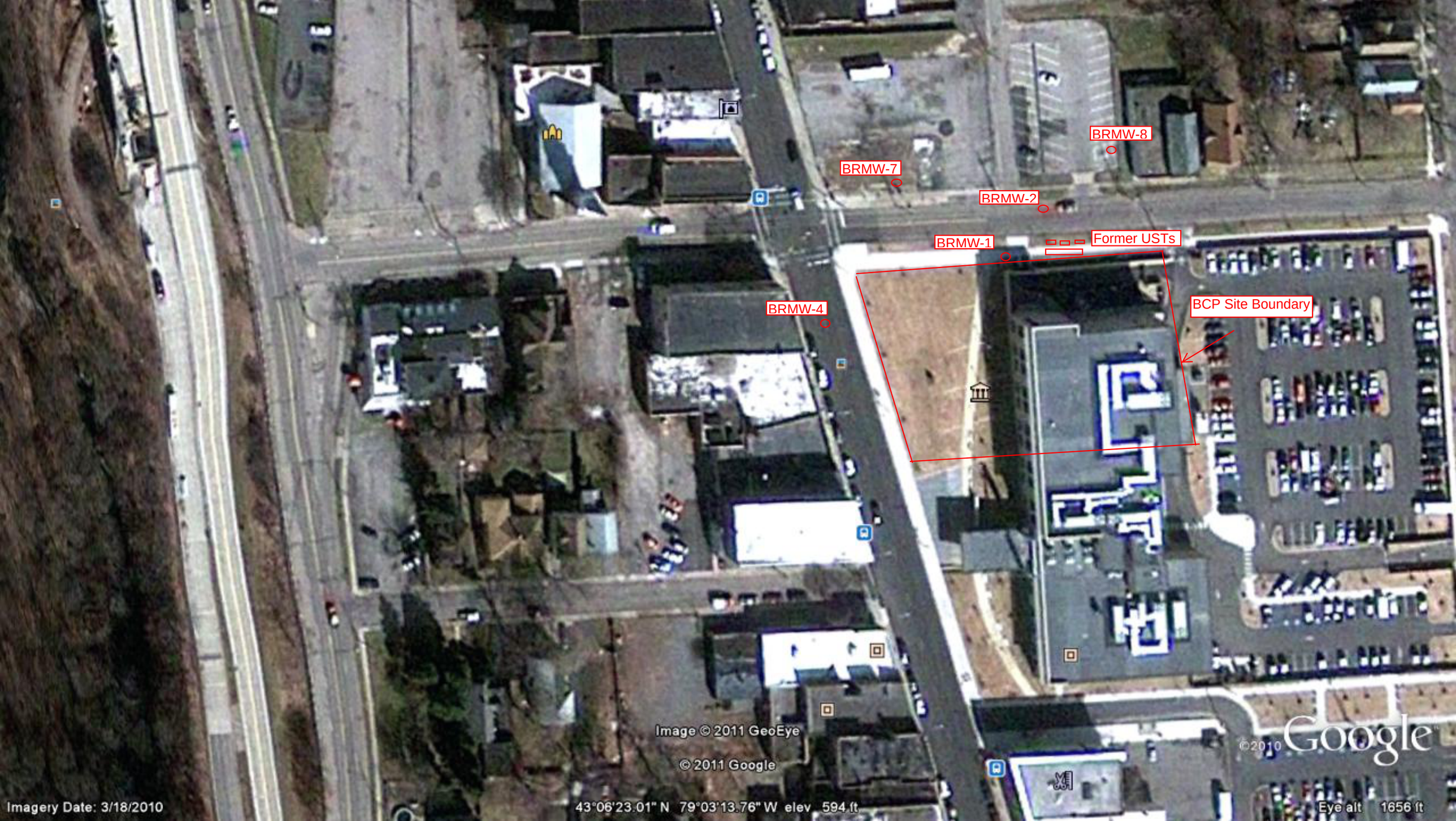
As listed in the attached table, PCE concentrations in the new off-site wells BRMW-7 & BRMW-8 ranged from 29 to <1 ppb, respectively. PCE concentrations in both on-site and off-site wells ranged from <1 to 250 ppb. Groundwater concentrations in the older wells have shown a significant decrease.

One to two additional sample rounds are planned with the next round occurring in late 2011. The results will be evaluated to determine the need for additional sampling.

Site # 932151 - 915 Cleveland Off-Site Bedrock Groundwater Plume

Bedrock Monitoring Well PCE Concentration (ug/l)

	BRMW-1	BRMW-2	BRMW-3	BRMW-4	BRMW-5	BRMW-6	BRMW-7	BRMW-8
10/31/2007	550	360	<10	45	<10	<10		
8/19/2010		250		7.3	<1			
7/25/2011	180	250		1.4			29	<1


BRMW-8
BRMW-7
BRMW-2
BRMW-1
Former USTs
BRMW-4
BCP Site Boundary
Image © 2011 GeoEye
© 2011 Google
©2010 Google
Imagery Date: 3/18/2010
43°06'23.01" N 79°03'13.76" W elev 594 ft
Eye alt 1656 ft

EMPIRE GEO SERVICES, INC.
A SUBSIDIARY OF SJB SERVICES, INC.

August 9, 2011
Empire GeoServices Project No. BEV-11-023

New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

Phone: (716) 851-7220
Fax: (716) 851-7252

Attention: Timothy E. Dieffenbach, Engineering Geologist 2

Reference: Groundwater Monitoring Well Installations and Groundwater Sampling
Off-Site Bedrock Groundwater Plume
915 Cleveland Avenue, Niagara Falls, New York
NYSDEC Site Number 932151

Dear Mr. Dieffenbach:

Empire GeoServices, Inc. (Empire) installed two groundwater monitoring wells and sampled groundwater from five wells at the above referenced site, as requested and authorized by the New York State Department of Environmental Conservation (NYSDEC). The purpose of this work was to assess bedrock groundwater quality downgradient of the 915 Cleveland Avenue site where previous remedial activities were previously completed by others.

DRILLING AND SAMPLING

Empire completed the drilling and well installation work during July 6 to July 8, 2011. These new wells were designated BRMW-7 and BRMW-8.

All drilling activities were completed by Empire's affiliate, SJB Services, Inc. under the direction of an Empire environmental geologist. The test borings were advanced using a Central Mine Equipment (CME) model 550-X wheel mounted drill rig. The test borings were advanced in the overburden using hollow stem augers and split spoon sampling techniques. Representative soil samples were continuously obtained from the ground surface until auger refusal. Once auger refusal was encountered, the borehole was advanced approximately 15 feet into bedrock using HQ-size coring equipment (borehole diameter of 3.8 inches).

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CORTLAND OFFICE
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Cortland, NY 13045
Phone: (607) 758-7182
Fax: (607) 758-7188

ROCHESTER OFFICE
535 Summit Point Drive
Henrietta, NY 14467
Phone: (585) 359-2730
Fax: (585) 359-9668

MEMBER
ACEC New York

In general, the overburden materials encountered at the boring locations consist of gravels and clayey silts overlying dolostone bedrock. Bedrock was encountered at approximately 23.7 feet and 17.8 feet below ground surface at BRMW-7 and BRMW-8, respectively. Subsurface logs are attached.

ENVIRONMENTAL SCREENING

The recovered soil samples were screened for volatile organic compound (VOC) vapors using an Ion Science PhoCheck 1000 Photoionization Detector (PID) equipped with a 10.6 eV lamp. The PID will detect, if present, the aggregate concentration of many VOCs at a practical threshold of approximately 1-2 parts per million (ppm). In addition, the soils were visually inspected for evidence of environmental degradation (i.e. discoloration, odors, etc.).

All PID measurements on the recovered soil samples were at background levels and no evidence of environmental degradation was observed.

MONITORING WELL INSTALLATIONS AND DEVELOPMENT

A bedrock monitoring well was installed in each test boring. The wells were constructed of two-inch diameter Schedule 40 PVC, with 10 foot long, 0.01-inch slotted screen flushed threaded to riser pipe. A filter pack consisting of Number 1 silica sand was placed around the well screen and extended approximately 1.5 feet above the top of the well screen. A minimum two feet bentonite clay seal was constructed above the sand pack. The remainder of the boring was backfilled with a cement/bentonite grout. A curb box was installed at each monitoring well location to protect and secure the well. Individual monitoring well diagrams are attached.

Well development occurred on July 11, 2011. The wells were developed by surging a disposable polyethylene bailer in the water column prior to purging the water with the same bailer. Twenty six gallons (approximately 12 times the standing well volume) of groundwater were purged from monitoring well BRMW-7. Eleven standing well volumes or 31 gallons of water were removed from monitoring well BRMW-8.

SAMPLE COLLECTION AND ENVIRONMENTAL LABORATORY ANALYSIS

Groundwater sampling was completed on July 25, 2011, including new monitoring wells BRMW-7 and BRMW-8 and existing wells BRMW-1, BRMW-2 and BRMW-4. Three well volumes were purged from each monitoring well using a dedicated disposable polyethylene bailer prior to sampling. The groundwater purging and sampling field forms are attached.

The samples were placed into pre-cleaned appropriate glass containers, labeled with the date, time, location of the project, and placed in an iced cooler at approximately 4-degrees Celsius for transport via courier to TestAmerica Laboratories, Inc. (TestAmerica) in Amherst, New York. TestAmerica is a New York State Department of Health (NYSDOH) certified analytical testing laboratory. Chain-of-custody documentation accompanied the samples. The groundwater samples were analyzed for volatile organic compounds (VOCs) utilizing EPA Method 8260 for the Target Compound List. Test America's analytical report is attached.

This report has been prepared for the exclusive use of the New York State Department of Environmental Conservation for specific application to this project site in accordance with generally accepted environmental practices. If you have any questions or require further assistance, please contact our office at 716-649-8110.

Respectfully submitted,
EMPIRE GEOSERVICES, INC.

Stephen J. Bochenek
Engineering Geologist

David R. Steiner
Environmental Services Manager

Attachments

Boring Logs and Well Installation Diagrams

Groundwater Purging and Sampling Field Forms

TestAmerica, Inc. Laboratory Report

DATE
START 7/6/2011
FINISH 7/7/2011
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. BRMW-7
SURF. ELEV
G.W. DEPTH See Notes

PROJECT: MONITORING WELL INSTALLATION
PROJ. NO.: BEV-11-023
LOCATION: 915 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1						BUILDING DEMOLITION FILL	PID = Photoionization Detector. Measurements in parts per million BG = Background REF = Sample Spoon Refusal
5	2	50/0.4			REF	BG	Brown f-c GRAVEL, little f-c Sand, tr.silt (moist, FILL)	
	3	6	3				Brown to Red-Brown Clayey SILT, tr.sand (moist-wet, medium, ML)	
		3	6		6	BG		
	4	6	5					
10		7	11		12	BG	Brown Silty CLAY, little f-c Gravel, little f-c Sand (moist, stiff, CL)	
	5	7	14				Red-Brown SILT, little f-c Sand, tr.gravel (moist, compact, ML)	
		28	36		42	BG		
	6	50/0.4			REF	BG	Grey f-c GRAVEL, little f-c Sand, tr.silt (moist, v.compact, GW, Possible Cobble)	
15	7	14	12				Brown f-c SAND, some Silt, little f-c Gravel, tr.clay (moist, compact, SM)	
		20	28		32	BG		
	8	31	40				Contains "and" f-c Gravel (v.compact)	
		48	50/0.4		88	BG		
	9	23	44				Brown f-c GRAVEL, some f-c Sand, little Silt, tr.clay (moist, v.compact, GW)	
20		40	38		84	BG		

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: B. DELUDE

DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 7/6/2011
FINISH 7/7/2011
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. BRMW-7
SURF. ELEV
G.W. DEPTH See Notes

PROJECT: MONITORING WELL INSTALLATION
PROJ. NO.: BEV-11-023
LOCATION: 915 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	10	28	29					No free standing water encountered at boring completion
		22	47		51	BG		
	11	50/0.4			REF			Auger Refusal at 23.7'
								HQ Coring
								RUN #1: 23.7' - 28.7'
								REC = 92%
25							Grey DOLOSTONE, hard, slightly weathered, thinly bedded to massive, occasional horizontal fractures, occasional vugs and fossils	RQD = 79%
							27.4' - 27.8' - frequent voids	
30								RUN #2: 28.7' - 32.7'
								Core Block at 32.7'
								REC = 91%
								RQD = 46%
							Contains occasional Calcite	
								RUN #3: 32.7' - 38.2'
								REC = 100%
35								RQD = 92%
							Boring Complete at 38.2'	2" PVC Monitoring Well Installed at boring completion.
40								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

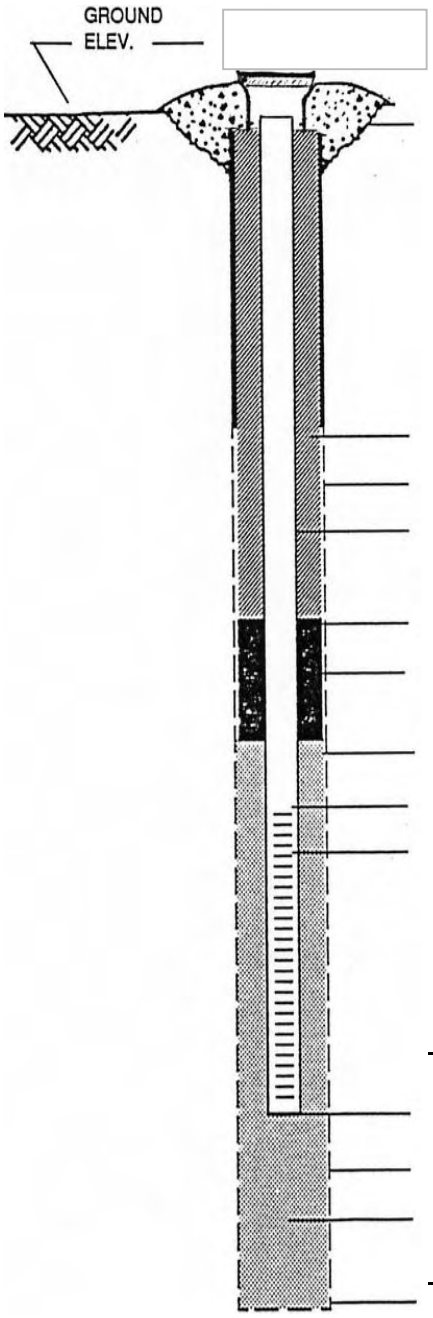
DRILLER: B. DELUDE

DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

MONITORING WELL COMPLETION RECORD

PROJECT: 915 CLEVELAND AVENUE	
PROJECT NUMBER: BEV-11-023	DRILLING METHOD: 4 1/4" HSA HQ CORE
WELL NUMBER: BRMW-7	GEOLOGIST: S. BOCHENEK
DRILLER: B. DELUDE	INSTALLATION DATE(S): 7/7/2011



FLUSH MOUNT CURB BOX AT GROUND SURFACE

TYPE OF SURFACE SEAL: CONCRETE

TYPE OF BACKFILL: BENTONITE GROUT

BOREHOLE DIAMETER: 9"OVERBURDEN; 3.8" BEDROCK

I.D. OF RISER PIPE: 2"

TYPE OF RISER PIPE: PVC

DEPTH OF SEAL: 22.8' BGS

TYPE OF SEAL: BENTONITE CHIPS

DEPTH OF SAND PACK: 24.8' BGS

DEPTH OF TOP OF SCREEN: 25.8' BGS

TYPE OF SCREEN: PVC

SLOT SIZE X LENGTH: 0.01" X 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: NO. 1 SILICA SAND

DEPTH BOTTOM OF SCREEN: 35.8' BGS

DEPTH BOTTOM OF SAND PACK: 35.8' BGS

TYPE OF BACKFILL BELOW OBSERVATION WELL: BEDROCK FRAGMENTS, GRAVEL

ELEVATION/ DEPTH OF HOLE: 38.2' BGS

DATE
START 7/7/2011
FINISH 7/8/2011
SHEET 1 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. BRMW-8
SURF. ELEV
G.W. DEPTH See Notes

PROJECT: MONITORING WELL INSTALLATION
PROJ. NO.: BEV-11-023
LOCATION: 915 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
	1						Auger through asphalt pavement and base to 2 feet	PID = Photoionization Detector. Measurements in parts per million
	2	3	3				Red-Brown Clayey SILT, tr.sand (moist, medium, ML/Possible Reworked)	BG = Background
		4	3		7	BG		Poor Recovery Sample
5	3	7	5				Red-Brown SILT, tr.clay (moist-wet, loose, ML)	
		4	6		9	BG		REF = Sample Spoon Refusal
	4	5	7					
		8	13		15	BG	(firm)	
	5	4	8				Red-Brown Clayey SILT, tr.gravel, frequent Silty San seams (moist, hard, ML)	
10		14	15		22	BG		
	6	9	18				Contains "and" f-c Sand	
		28	29		46	BG		Daily drilling activities
	7	47	50/0.4		REF	BG	Brown f-c GRAVEL, some f-c Sand, some Silt (moist, v.compact, GW)	stopped at 17.8' on
								Free standing water measured at 14.5' on 7/8/2011
15	8	19	17				Contains tr.clay (compact)	
		26	50/0.3		43	BG		Auger Refusal at 17.8'
								Driller removed casing installed 4" Casing prior HQ Coring.
							Grey DOLOSTONE, hard, slightly weathered, thinly bedded to massive, occasional horizontal fractures, occasional vugs	HQ Coring RUN #1: 17.8' - 22.8' REC = 100% RQD = 88%
20								

N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW

CLASSIFIED BY: Geologist

DRILLER: B. DELUDE

DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

DATE
START 7/7/2011
FINISH 7/8/2011
SHEET 2 OF 2

SJB SERVICES, INC.
SUBSURFACE LOG

HOLE NO. BRMW-8
SURF. ELEV
G.W. DEPTH See Notes

PROJECT: MONITORING WELL INSTALLATION
LOCATION: 915 CLEVELAND AVENUE
PROJ. NO.: BEV-11-023
NIAGARA FALLS, NEW YORK

DEPTH FT.	SMPL NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	PID	SOIL OR ROCK CLASSIFICATION	NOTES
							19.3' - 19.9' Nearly vertical fracture	
								RUN #2: 22.8' - 27.8' REC = 94% RQD = 78%
25							25.6' - 26.4' Zone of core disturbed by coring activitie	
							Becomes massive	
								RUN #3: 27.8' - 32.8' REC = 80% RQD = 78%
30								
							Boring Complete at 32.8'	2" PVC Monitoring Well Installed at boring completion.
35								
40								

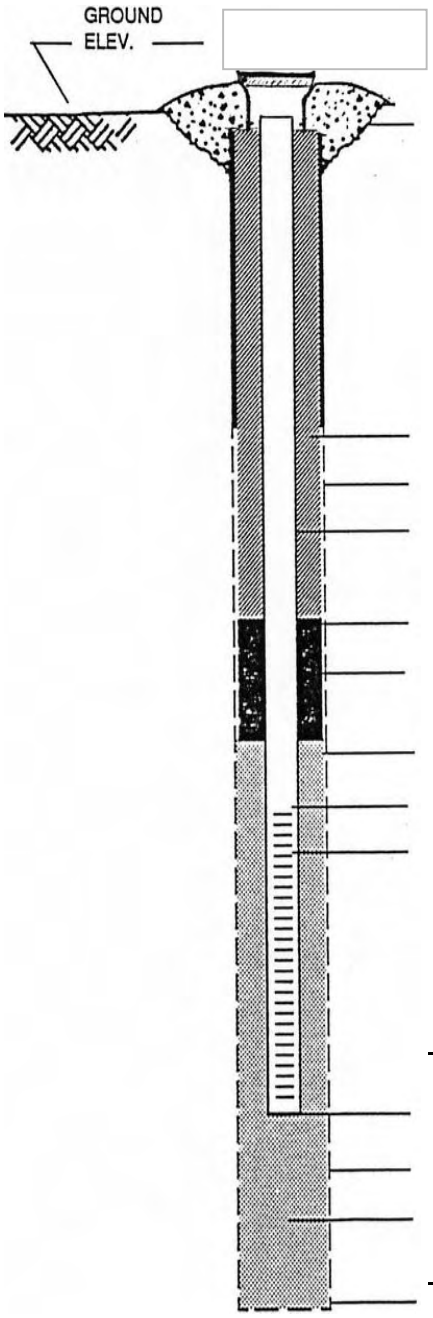
N = NO. BLOWS TO DRIVE 2-INCH SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
CLASSIFIED BY: Geologist

DRILLER: B. DELUDE
DRILL RIG TYPE : CME-550X

METHOD OF INVESTIGATION ASTM D-1586 USING HOLLOW STEM AUGERS

MONITORING WELL COMPLETION RECORD

PROJECT: 915 CLEVELAND AVENUE	
PROJECT NUMBER: BEV-11-023	DRILLING METHOD: 4 1/4" HSA HQ CORE
WELL NUMBER: BRMW-8	GEOLOGIST: S. BOCHENEK
DRILLER: B. DELUDE	INSTALLATION DATE(S): 7/8/2011



FLUSH MOUNT CURB BOX AT GROUND SURFACE

TYPE OF SURFACE SEAL: CONCRETE

TYPE OF BACKFILL: BENTONITE GROUT

BOREHOLE DIAMETER: 9"OVERBURDEN; 3.8" BEDROCK

I.D. OF RISER PIPE: 2"

TYPE OF RISER PIPE: PVC

DEPTH OF SEAL: 17.5' BGS

TYPE OF SEAL: BENTONITE CHIPS

DEPTH OF SAND PACK: 20.0' BGS

DEPTH OF TOP OF SCREEN: 21.5' BGS

TYPE OF SCREEN: PVC

SLOT SIZE X LENGTH: 0.01" X 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: NO. 1 SILICA SAND

DEPTH BOTTOM OF SCREEN: 31.5' BGS

DEPTH BOTTOM OF SAND PACK: 32.8' BGS

TYPE OF BACKFILL BELOW OBSERVATION WELL: NO. 1 SILICA SAND

ELEVATION/ DEPTH OF HOLE: 32.8' BGS

SB SERVICES, INC.

Well Purging and Sample Collection

JULY 25, 2011

915 CLEVELAND AVE, NIAGARA FALLS

Project No.: BEY-11-023 Well No. BRMW-8 Site: NYSDEC SITE NUMBER 932151

Purging Method: Pumped ☒ Bailed ☐ Other: _____

Pump Type: _____ Bailer Type: POLYETHYLENE

Weather Conditions: SUNNY, 80s

Volume Calculation: 15.97' x 0.17 gal/ft = 2.7 gal

(D.T.B. – D.T.W. x vol./ft. = Gals./well vol.)
(Gals./well vol. x 5 = Total Volume to be removed)

Gals./well vol.: 2.7 3 VOL = 8.1 gal

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond.	Temp.	Color	Odor Y/N	Turbidity
11:05	15.31	31.28							
11:30	15.50 AFTER PURGING 5 GAL.		5.0						
11:50			8.5						
12:05	COLLECTED SAMPLE								
		Sample Readings							

Comments: WATER TRANSLUCENT, TAN-BROWN DURING PURGING, NO SHEEN, NO ODOR

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
2"	0.16
4"	0.65

Field Blank Taken ☐ Time: _____

Well Duplicate ☐ No.: _____

Signature: David R. Stein

Date: 7/25/2011

HNu/PPM	LEL/%	O2/%	H2S/PPM	CO/PPM	

SJB SERVICES, INC.

Well Purging and Sample Collection

JULY 25, 2011

915 CLEVELAND AVE., NIAGARA FALLS

Project No.: BEY-11-023 Well No. BRMW-1 Site: NYSDEC SITE NUMBER 932151

Purging Method: Pumped ☒ Bailed ☐ Other: _____

Pump Type: _____ Bailer Type: POLYETHLYENE

Weather Conditions: SUNNY, 80s

Volume Calculation: 3.83' x 0.17 gal/ft = 0.65 gal

(D.T.B. – D.T.W. x vol./ft. = Gals./well vol.)
(Gals./well vol. x 5 = Total Volume to be removed)

Gals./well vol.: 0.65 3 VOL = 1.95 GAL

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond.	Temp.	Color	Odor Y/N	Turbidity
12:15	19.43	23.26							
12:30	21.80		1.5						
12:40			2.5						
12:55	COLLECTED SAMPLE								
		Sample Readings							

Comments: WATER OPAQUE-BROWN DURING PURGING, NO SHEEN, NO ODOR. LOG INDICATES DEPTH OF 36.5-FT., WELL APPEARS TO HAVE ≈ 13 FT. OF DEBRIS IN BOTTOM, CONSISTING OF ROAD SAND SEEN INSIDE CURB BOX. NO SHEEN, NO ODOR.

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
2"	0.16
4"	0.65

Field Blank Taken ☐ Time: _____

Well Duplicate ☐ No.: _____

Signature: David R. Stein

Date: 7, 25, 2011

HNu/PPM	LEL/%	O2/%	H2S/PPM	CO/PPM	

SJB SERVICES, INC.

July 25, 2011

Well Purging and Sample Collection

915 CLEVELAND AVE., NIAGARA FALLS

Project No.: BEY-11-023 Well No. BRMW-2 Site: NYSDEC SITE NUMBER 932151

Purging Method: Pumped ☒ Bailed ☐ Other: _____

Pump Type: _____ Bailer Type: POLYETHYLENE

Weather Conditions: SUNNY, 80s

Volume Calculation: 11.17' x 0.17 gal/ft = 1.9 gal

(D.T.B. – D.T.W. x vol./ft. = Gals./well vol.)
(Gals./well vol. x 5 = Total Volume to be removed)

Gals./well vol.: 1.9 gal 3 VOL = 5.7 gal

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond.	Temp.	Color	Odor Y/N	Turbidity
13:20	23.51	34.68							
13:35	23.90		5.0						
13:50			7.0						
13:55	COLLECTED SAMPLE								
		Sample Readings							

Comments: REMOVED POLY TUBING FROM WELL. WATER CLEAR DURING PURGING. WATER LEVEL STAYING NEAR STATIC DURING PURGING. NO SHEEN, NO ODOR

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
2"	0.16
4"	0.65

Field Blank Taken ☐ Time: _____

Well Duplicate ☐ No.: _____

Signature: David R. Stein

Date: 7/25/2011

HNu/PPM	LEL/%	O2/%	H2S/PPM	CO/PPM	

SJB SERVICES, INC.

July 25, 2011

Well Purging and Sample Collection

915 CLEVELAND AVE., NIAGARA FALLS

Project No.: BEV-11-023 Well No. BRMW-4 Site: NYSDEC SITE NUMBER 932151

Purging Method: Pumped ☒ Bailed ☐ Other: _____

Pump Type: _____ Bailer Type: POLYETHYLENE

Weather Conditions: SUNNY, 80s

Volume Calculation: 5.24' x 0.17 gal/ft = 0.9 gal

(D.T.B. – D.T.W. x vol./ft. = Gals./well vol.)
(Gals./well vol. x 5 = Total Volume to be removed)

Gals./well vol.: 0.9 gal 3 VOL = 2.7 GAL

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond.	Temp.	Color	Odor Y/N	Turbidity
14:20	43.28	48.52							
14:40	46.40		2.0						
14:50			3.0						
15:05	COLLECTED SAMPLE								
		Sample Readings							

Comments: REMOVED POLY TUBING FROM WELL. WATER ALMOST CLEAR DURING PURGING; WATER CONTAINS RUSTY-RED FLOATERS (IRON BACTERIA ?). NO SHEEN, NO ODOR.

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
2"	0.16
4"	0.65

Field Blank Taken ☐ Time: _____

Well Duplicate ☐ No.: _____

Signature: David R. Stein

Date: 7/25/2011

HNu/PPM	LEL/%	O2/%	H2S/PPM	CO/PPM	

SB SERVICES, INC.

July 25, 2011

Well Purging and Sample Collection

915 CLEVELAND AVE., NIAGARA FALLS

Project No.: BEV-11-023 Well No. Site: NYSDEC SITE NUMBER 932151

Purging Method: Pumped ☒ Bailed ☐ Other:

Pump Type: Bailer Type: POLYETHYLENE

Weather Conditions: SUNNY, 80s

Volume Calculation: 12.93' x 0.17 gal/ft = 2.2 gal

(D.T.B. – D.T.W. x vol./ft. = Gals./well vol.)
(Gals./well vol. x 5 = Total Volume to be removed)

Gals./well vol.: 2.2 3 VOL = 6.6 GAL

Time	Depth to Water (D.T.W.)	Depth to Bottom (D.T.B.)	Volume Removed (gal.)	pH	Cond.	Temp.	Color	Odor Y/N	Turbidity
15:45	22.46	35.39							
16:10	22.79		5.0						
16:20			7.0						
16:30	COLLECTED SAMPLE								
		Sample Readings							

Comments: WATER TRANSLUCENT BROWN DURING PURGING. WATER LEVEL MAINTAINING NEAR STATIC DURING PURGING. NO SHEEN, NO ODOR

Inside Diameter	vol./ft.
1"	0.04
1.25"	0.06
2"	0.16
4"	0.65

Field Blank Taken ☐ Time:

Well Duplicate ☐ No.:

Signature: David R. Stein

Date: 7/25/2011

HNu/PPM	LEL/%	O2/%	H2S/PPM	CO/PPM	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-7706-1
Client Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

For:
New York State D.E.C.
270 Michigan Avenue
Buffalo, New York 14203

Attn: Timothy Dieffenbach

Authorized for release by:
08/01/2011 03:46:12 PM

Brian Fischer
Project Manager II
brian.fischer@testamericainc.com

LINKS

Review your project results through TotalAccess

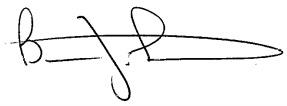
Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all 2003 NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Brian Fischer
Project Manager II
08/01/2011 03:46:12 PM

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Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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.

Job ID: 480-7706-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-7706-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 8260B: The following sample(s) was diluted due to the abundance of target analytes: BRMW-1 (480-7706-2), BRMW-2 (480-7706-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-8
Date Collected: 07/25/11 12:05
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/27/11 03:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/27/11 03:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/27/11 03:04	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/27/11 03:04	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/27/11 03:04	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/27/11 03:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/27/11 03:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/27/11 03:04	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/27/11 03:04	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/27/11 03:04	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/27/11 03:04	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/27/11 03:04	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/27/11 03:04	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/27/11 03:04	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/27/11 03:04	1
2-Hexanone	ND		5.0	1.2	ug/L			07/27/11 03:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/27/11 03:04	1
Acetone	ND		10	3.0	ug/L			07/27/11 03:04	1
Benzene	ND		1.0	0.41	ug/L			07/27/11 03:04	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/27/11 03:04	1
Bromoform	ND		1.0	0.26	ug/L			07/27/11 03:04	1
Bromomethane	ND		1.0	0.69	ug/L			07/27/11 03:04	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/27/11 03:04	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/27/11 03:04	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/27/11 03:04	1
Chloroethane	ND		1.0	0.32	ug/L			07/27/11 03:04	1
Chloroform	ND		1.0	0.34	ug/L			07/27/11 03:04	1
Chloromethane	ND		1.0	0.35	ug/L			07/27/11 03:04	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/27/11 03:04	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/27/11 03:04	1
Cyclohexane	ND		1.0	0.18	ug/L			07/27/11 03:04	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/27/11 03:04	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/27/11 03:04	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/27/11 03:04	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/27/11 03:04	1
Methyl acetate	ND		1.0	0.50	ug/L			07/27/11 03:04	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/27/11 03:04	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/27/11 03:04	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/27/11 03:04	1
Styrene	ND		1.0	0.73	ug/L			07/27/11 03:04	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/27/11 03:04	1
Toluene	ND		1.0	0.51	ug/L			07/27/11 03:04	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/27/11 03:04	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/27/11 03:04	1
Trichloroethene	ND		1.0	0.46	ug/L			07/27/11 03:04	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/27/11 03:04	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/27/11 03:04	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/27/11 03:04	1

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-8
Date Collected: 07/25/11 12:05
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-1
Matrix: Water

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*07/27/11 03:04*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/27/11 03:04*	*1*
Toluene-d8 (Surr)	*114*		*71 - 126*		*07/27/11 03:04*	*1*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-1
Date Collected: 07/25/11 12:55
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/27/11 03:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/27/11 03:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/27/11 03:26	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/27/11 03:26	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/27/11 03:26	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/27/11 03:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/27/11 03:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/27/11 03:26	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/27/11 03:26	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/27/11 03:26	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/27/11 03:26	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/27/11 03:26	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/27/11 03:26	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/27/11 03:26	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/27/11 03:26	1
2-Hexanone	ND		5.0	1.2	ug/L			07/27/11 03:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/27/11 03:26	1
Acetone	ND		10	3.0	ug/L			07/27/11 03:26	1
Benzene	ND		1.0	0.41	ug/L			07/27/11 03:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/27/11 03:26	1
Bromoform	ND		1.0	0.26	ug/L			07/27/11 03:26	1
Bromomethane	ND		1.0	0.69	ug/L			07/27/11 03:26	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/27/11 03:26	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/27/11 03:26	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/27/11 03:26	1
Chloroethane	ND		1.0	0.32	ug/L			07/27/11 03:26	1
Chloroform	ND		1.0	0.34	ug/L			07/27/11 03:26	1
Chloromethane	ND		1.0	0.35	ug/L			07/27/11 03:26	1
cis-1,2-Dichloroethene	**7.2**		1.0	0.81	ug/L			07/27/11 03:26	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/27/11 03:26	1
Cyclohexane	ND		1.0	0.18	ug/L			07/27/11 03:26	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/27/11 03:26	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/27/11 03:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/27/11 03:26	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/27/11 03:26	1
Methyl acetate	ND		1.0	0.50	ug/L			07/27/11 03:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/27/11 03:26	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/27/11 03:26	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/27/11 03:26	1
Styrene	ND		1.0	0.73	ug/L			07/27/11 03:26	1
Toluene	ND		1.0	0.51	ug/L			07/27/11 03:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/27/11 03:26	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/27/11 03:26	1
Trichloroethene	**8.4**		1.0	0.46	ug/L			07/27/11 03:26	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/27/11 03:26	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/27/11 03:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/27/11 03:26	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*07/27/11 03:26*	*1*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-1
Date Collected: 07/25/11 12:55
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/27/11 03:26*	*1*
Toluene-d8 (Surr)	*112*		*71 - 126*		*07/27/11 03:26*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**180**		2.0	0.72	ug/L			07/27/11 22:29	2

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*07/27/11 22:29*	*2*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*07/27/11 22:29*	*2*
Toluene-d8 (Surr)	*112*		*71 - 126*		*07/27/11 22:29*	*2*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-2
Date Collected: 07/25/11 13:55
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/27/11 03:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/27/11 03:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/27/11 03:49	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/27/11 03:49	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/27/11 03:49	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/27/11 03:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/27/11 03:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/27/11 03:49	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/27/11 03:49	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/27/11 03:49	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/27/11 03:49	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/27/11 03:49	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/27/11 03:49	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/27/11 03:49	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/27/11 03:49	1
2-Hexanone	ND		5.0	1.2	ug/L			07/27/11 03:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/27/11 03:49	1
Acetone	ND		10	3.0	ug/L			07/27/11 03:49	1
Benzene	ND		1.0	0.41	ug/L			07/27/11 03:49	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/27/11 03:49	1
Bromoform	ND		1.0	0.26	ug/L			07/27/11 03:49	1
Bromomethane	ND		1.0	0.69	ug/L			07/27/11 03:49	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/27/11 03:49	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/27/11 03:49	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/27/11 03:49	1
Chloroethane	ND		1.0	0.32	ug/L			07/27/11 03:49	1
Chloroform	ND		1.0	0.34	ug/L			07/27/11 03:49	1
Chloromethane	ND		1.0	0.35	ug/L			07/27/11 03:49	1
cis-1,2-Dichloroethene	**2.5**		1.0	0.81	ug/L			07/27/11 03:49	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/27/11 03:49	1
Cyclohexane	ND		1.0	0.18	ug/L			07/27/11 03:49	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/27/11 03:49	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/27/11 03:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/27/11 03:49	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/27/11 03:49	1
Methyl acetate	ND		1.0	0.50	ug/L			07/27/11 03:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/27/11 03:49	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/27/11 03:49	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/27/11 03:49	1
Styrene	ND		1.0	0.73	ug/L			07/27/11 03:49	1
Toluene	ND		1.0	0.51	ug/L			07/27/11 03:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/27/11 03:49	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/27/11 03:49	1
Trichloroethene	**3.8**		1.0	0.46	ug/L			07/27/11 03:49	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/27/11 03:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/27/11 03:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/27/11 03:49	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*07/27/11 03:49*	*1*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-2
Date Collected: 07/25/11 13:55
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*07/27/11 03:49*	*1*
Toluene-d8 (Surr)	*112*		*71 - 126*		*07/27/11 03:49*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**250**		5.0	1.8	ug/L			07/27/11 22:52	5

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*07/27/11 22:52*	*5*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*07/27/11 22:52*	*5*
Toluene-d8 (Surr)	*111*		*71 - 126*		*07/27/11 22:52*	*5*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-4
Date Collected: 07/25/11 15:05
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/27/11 04:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/27/11 04:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/27/11 04:12	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/27/11 04:12	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/27/11 04:12	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/27/11 04:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/27/11 04:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/27/11 04:12	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/27/11 04:12	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/27/11 04:12	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/27/11 04:12	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/27/11 04:12	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/27/11 04:12	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/27/11 04:12	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/27/11 04:12	1
2-Hexanone	ND		5.0	1.2	ug/L			07/27/11 04:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/27/11 04:12	1
Acetone	ND		10	3.0	ug/L			07/27/11 04:12	1
Benzene	ND		1.0	0.41	ug/L			07/27/11 04:12	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/27/11 04:12	1
Bromoform	ND		1.0	0.26	ug/L			07/27/11 04:12	1
Bromomethane	ND		1.0	0.69	ug/L			07/27/11 04:12	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/27/11 04:12	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/27/11 04:12	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/27/11 04:12	1
Chloroethane	ND		1.0	0.32	ug/L			07/27/11 04:12	1
Chloroform	ND		1.0	0.34	ug/L			07/27/11 04:12	1
Chloromethane	ND		1.0	0.35	ug/L			07/27/11 04:12	1
cis-1,2-Dichloroethene	**10**		1.0	0.81	ug/L			07/27/11 04:12	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/27/11 04:12	1
Cyclohexane	ND		1.0	0.18	ug/L			07/27/11 04:12	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/27/11 04:12	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/27/11 04:12	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/27/11 04:12	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/27/11 04:12	1
Methyl acetate	ND		1.0	0.50	ug/L			07/27/11 04:12	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/27/11 04:12	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/27/11 04:12	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/27/11 04:12	1
Styrene	ND		1.0	0.73	ug/L			07/27/11 04:12	1
Tetrachloroethene	**1.4**		1.0	0.36	ug/L			07/27/11 04:12	1
Toluene	ND		1.0	0.51	ug/L			07/27/11 04:12	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/27/11 04:12	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/27/11 04:12	1
Trichloroethene	**0.76**	**J**	1.0	0.46	ug/L			07/27/11 04:12	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/27/11 04:12	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/27/11 04:12	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/27/11 04:12	1

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-4
Date Collected: 07/25/11 15:05
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-4
Matrix: Water

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*07/27/11 04:12*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*07/27/11 04:12*	*1*
Toluene-d8 (Surr)	*113*		*71 - 126*		*07/27/11 04:12*	*1*

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-7
Date Collected: 07/25/11 16:30
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/27/11 04:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/27/11 04:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/27/11 04:35	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/27/11 04:35	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/27/11 04:35	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/27/11 04:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/27/11 04:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/27/11 04:35	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/27/11 04:35	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/27/11 04:35	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/27/11 04:35	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/27/11 04:35	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/27/11 04:35	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/27/11 04:35	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/27/11 04:35	1
2-Hexanone	ND		5.0	1.2	ug/L			07/27/11 04:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/27/11 04:35	1
Acetone	ND		10	3.0	ug/L			07/27/11 04:35	1
Benzene	ND		1.0	0.41	ug/L			07/27/11 04:35	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/27/11 04:35	1
Bromoform	ND		1.0	0.26	ug/L			07/27/11 04:35	1
Bromomethane	ND		1.0	0.69	ug/L			07/27/11 04:35	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/27/11 04:35	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/27/11 04:35	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/27/11 04:35	1
Chloroethane	ND		1.0	0.32	ug/L			07/27/11 04:35	1
Chloroform	**0.67**	**J**	1.0	0.34	ug/L			07/27/11 04:35	1
Chloromethane	ND		1.0	0.35	ug/L			07/27/11 04:35	1
cis-1,2-Dichloroethene	**2.2**		1.0	0.81	ug/L			07/27/11 04:35	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/27/11 04:35	1
Cyclohexane	ND		1.0	0.18	ug/L			07/27/11 04:35	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/27/11 04:35	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/27/11 04:35	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/27/11 04:35	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/27/11 04:35	1
Methyl acetate	ND		1.0	0.50	ug/L			07/27/11 04:35	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/27/11 04:35	1
Methylcyclohexane	**0.84**	**J**	1.0	0.16	ug/L			07/27/11 04:35	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/27/11 04:35	1
Styrene	ND		1.0	0.73	ug/L			07/27/11 04:35	1
Tetrachloroethene	**29**		1.0	0.36	ug/L			07/27/11 04:35	1
Toluene	ND		1.0	0.51	ug/L			07/27/11 04:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/27/11 04:35	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/27/11 04:35	1
Trichloroethene	**2.6**		1.0	0.46	ug/L			07/27/11 04:35	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/27/11 04:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/27/11 04:35	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/27/11 04:35	1

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-7
Date Collected: 07/25/11 16:30
Date Received: 07/26/11 12:40

Lab Sample ID: 480-7706-5
Matrix: Water

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*07/27/11 04:35*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*07/27/11 04:35*	*1*
Toluene-d8 (Surr)	*115*		*71 - 126*		*07/27/11 04:35*	*1*

Lab Chronicle

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Client Sample ID: BRMW-8
Lab Sample ID: 480-7706-1
Date Collected: 07/25/11 12:05
Matrix: Water
Date Received: 07/26/11 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	25098	07/27/11 03:04	ND	TAL BUF

Client Sample ID: BRMW-1
Lab Sample ID: 480-7706-2
Date Collected: 07/25/11 12:55
Matrix: Water
Date Received: 07/26/11 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	25098	07/27/11 03:26	ND	TAL BUF
Total/NA	Analysis	8260B	DL	2	25271	07/27/11 22:29	DC	TAL BUF

Client Sample ID: BRMW-2
Lab Sample ID: 480-7706-3
Date Collected: 07/25/11 13:55
Matrix: Water
Date Received: 07/26/11 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	25098	07/27/11 03:49	ND	TAL BUF
Total/NA	Analysis	8260B	DL	5	25271	07/27/11 22:52	DC	TAL BUF

Client Sample ID: BRMW-4
Lab Sample ID: 480-7706-4
Date Collected: 07/25/11 15:05
Matrix: Water
Date Received: 07/26/11 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	25098	07/27/11 04:12	ND	TAL BUF

Client Sample ID: BRMW-7
Lab Sample ID: 480-7706-5
Date Collected: 07/25/11 16:30
Matrix: Water
Date Received: 07/26/11 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	25098	07/27/11 04:35	ND	TAL BUF

Laboratory References:
TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	Georgia EPD	4	N/A
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Illinois	NELAC	5	100325 / 200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	Kentucky UST	4	30
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY0044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	68-00281
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-08-TX
TestAmerica Buffalo	USDA	USDA		P330-08-00242
TestAmerica Buffalo	Virginia	State Program	3	278
TestAmerica Buffalo	Washington	State Program	10	C1677
TestAmerica Buffalo	West Virginia	West Virginia DEP	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

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: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: New York State D.E.C.
Project/Site: NYSDEC - 915 Cleveland Ave:Site# 932151

TestAmerica Job ID: 480-7706-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-7706-1	BRMW-8	Water	07/25/11 12:05	07/26/11 12:40
480-7706-2	BRMW-1	Water	07/25/11 12:55	07/26/11 12:40
480-7706-3	BRMW-2	Water	07/25/11 13:55	07/26/11 12:40
480-7706-4	BRMW-4	Water	07/25/11 15:05	07/26/11 12:40
480-7706-5	BRMW-7	Water	07/25/11 16:30	07/26/11 12:40

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: NYSDEC - REGION 9
Project Manager: T. DIEFFENBACH (D. STEINER EMPIRE GEO)
Date: 7-25-11
Chain of Custody Number: 112197
Address: 270 MICHIGAN AVE, BUFFALO
Telephone Number (Area Code)/Fax Number: 716-851-7220 (716-649-8110)
Lab Number:
Page 1 of 1
City:
State: NY
Zip Code:
Site Contact:
Lab Contact:
Carrier/Waybill Number:
Project Name and Location (State): OFFSITE BEDROCK GW PLUME, NIAGARA FALLS, NY CLEVELAND AVE.
Contract/Purchase Order/Quote No.: NYSDEC SITE No. 932151

Analysis (Attach list if more space is needed): 8260 FULL TCL

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH
BRMW-8	7-25-11	12:05		X						X		
BRMW-1		12:55		X						X		
BRMW-2		13:55		X						X		
BRMW-4		15:05		X						X		
BRMW-7		16:30		X						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other PER NYSDEC AVTA.

QC Requirements (Specify)

	Date	Time
1. Relinquished By: David R. Steiner	7-26-11	10:50
2. Relinquished By:	07-26-11	12:40
3. Relinquished By:	Date	Time

	Date	Time
1. Received By:	07-26-11	10:50
2. Received By:	7/26/11	1240
3. Received By:	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

4.2

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-7706-1

Login Number: 7706
List Number: 1
Creator: Janish, Carl

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	SJB
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	