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April 9, 2013

Mr. Greg Doel
Crazy Jakes
26 Webster Street
North Tonawanda, NY 14120

RE: Subsurface Investigation Results
Vacant Office Space
31 Webster Street
North Tonawanda, NY
NYSDEC Spill #1005734
METI Project #12-031

Dear Mr. Doel:

Matrix Environmental Technologies Inc., (METI) completed a Subsurface Investigation at the referenced property which included the completion of eight (8) soil borings, collection of five (5) soil samples and three (3) groundwater samples from temporary micro-wells for laboratory analysis. Attached is a copy of the report that describes the methods used in performing the subsurface investigation and a summary of the soil and groundwater analytical results.

Please contact METI if you have any questions.

Sincerely,
Matrix Environmental Technologies Inc.

D. Robert Gill, C.P.G.
Sr. Geologist

Michele M. Wittman, P.G.
Sr. Project Manager

Enclosure

20 years dedicated to a CLEANER ENVIRONMENT 1991-2011

SUBSURFACE INVESTIGATION RESULTS REPORT

Vacant Office Space
31 Webster Street
North Tonawanda, NY
NYSDEC Spill #1005734
METI Project #12-031

April 9, 2013

Prepared For:

Mr. Greg Doel
Crazy Jakes
26 Webster Street
North Tonawanda, NY 14120

Prepared By:

MATRIX
Environmental Technologies Inc.
3730 California Road
PO Box 427
Orchard Park, NY 14127
716-662-0745

D. Robert Gill, C.P.G.
Senior Geologist

Michele M. Wittman, P.G.
Senior Project Manager

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Authorization

Matrix Environmental Technologies Inc. (METI) was authorized by Mr. Greg Doel to complete a Subsurface Investigation at the property located at 31 Webster Street, North Tonawanda, New York (Site). A Site Map is included as **Figure 1**.

1.2 Site History

A Phase I Environmental Site Assessment[1] (ESA) completed at the Site by GZA GeoEnvironmental (GZA) and identified former use of the property as a filling station and Bob and Don's Texaco from 1949 to 1968. Although a 1973 letter indicated the tanks were removed, no analytical testing data was available to assure the historic tanks did not leak. Additionally, one 500-gallon "sludge tank" was present in 1973 and no records of removal were identified.

A Phase II ESA[2] was completed by GZA and included a geophysical survey to assess for buried metal objects that may provide further information on the possible presence of USTs. Several anomalies were identified and a subsurface investigation was completed in these areas. A total of 11 soil borings were completed. Soil conditions were identified as brown sand with lesser amounts of gravel, silt, and clay, overlying sand and silt soils. Groundwater was encountered at most locations at a depth of approximately 9 feet below ground surface.

The investigation did not identify volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) at concentrations above regulatory limits in the soil samples collected for analysis. However, several VOCs were detected in one groundwater sample collected on the western portion of the Site. An odor was detected in soil samples from four borings at depths greater than 6 feet bgs. It was concluded that impacts were limited to the northern and western portions of the Site, and likely attributed to the historic gasoline station usage.

New York State Department of Environmental Conservation (NYSDEC) assigned spill #1005734 for the Site and is requiring remedial measures be taken to address the contamination on-site.

[1] "Phase I Environmental Site Assessment, 31 Webster Street, North Tonawanda, New York," GZA GeoEnvironmental of New York, April 2010.
[2] "Phase II Environmental Site Assessment, 31 Webster Street, North Tonawanda, New York," GZA GeoEnvironmental, June 2010.

1.3 Objectives and Scope of Work

The objective of the subsurface investigation was to further assess the petroleum impacts in the soil and groundwater at the Site. The scope of work included the following tasks:

- Prepared a site specific health and safety plan.
- Identified the location of buried utilities through the Underground Facilities Protection Organization (UFPO).
- Completed eight (8) soil borings to a maximum depth of 16 feet below ground surface (bgs) using direct-push technology. Continuous soil sampling methodology was utilized for each boring.
- Inspected the soil samples for physical indications of impact, documented the soil type, screened for volatile organic compounds (VOCs) using an organic vapor meter (OVM), and containerized for potential laboratory analysis. Five (5) biased soil samples were selected for volatile organic compounds (VOCs) via EPA Method 8260 (STARS list).
- Collected a groundwater sample from temporary micro-wells at three (3) locations for laboratory analysis for VOCs via EPA Method 8260 (STARS list).
- Prepared this report that summarizes the methods and results of the assessment.

1.4 Site Description

The subject Site is located at 31 Webster Street, North Tonawanda, New York, as shown on **Figure 1**. The vacant office building is currently located on the Site. The Site is bordered by Webster Street to the west, Tremont Street to the north, and commercial properties to the south and east. A Phase I ESA contained documentation suggesting that the Site was former used as a gasoline filling station.

2.0 METHODS OF INVESTIGATION

2.1 Site Preparation

Prior to commencing site work, METI contacted the Underground Facilities Protection Organization (UFPO) for the location of underground utilities. Additionally, METI completed a site-specific health and safety plan for protection of its workers prior to the commencement of field activities.

2.2 Soil Boring Completion and Soil Sampling

Soil samples were obtained by driving a 2.125-inch OD, 48-inch long stainless-steel MacroCore sampler with an internal acetate sleeve into the ground using a Geoprobe®. Once the sampler was driven to the desired depth, the sampler was removed, opened, and the acetate sleeve was cut open to expose the soil sample. The soil borings are designated SB1 to SB8, as shown on **Figure 1**.

The soil samples were inspected for petroleum impact (sheen, discoloration, odor, etc.) and characterized lithologically. The samples were placed in airtight containers to allow vapors to accumulate in the headspace. The headspace was then screened for VOCs, expressed in parts per million (ppm), using a Thermo Environmental 580B Organic Vapor Meter (OVM).

2.3 Groundwater Sampling

Groundwater was encountered at each location, generally 4 to 11 feet below ground surface (bgs). Temporary groundwater micro-wells were installed at borings B2, B4, and B8. The temporary micro-wells were constructed of 1-inch diameter SCH40 PVC and were installed to depths of 14-feet bgs. Micro-wells were generally constructed of 10 foot lengths of 0.01-inch slotted well screen and connected to solid riser. Grab groundwater samples were collected from each temporary well with disposable bailers. The wells were caped below grade and covered for possible future sampling. Refer to **Figure 2** for a site map indicating the groundwater sampling locations.

2.4 Laboratory Analysis

The soil and groundwater samples were collected, as listed on **Table 1**, and submitted under chain-of-custody protocol to Accutest Laboratories (NELAC #11791), Marlborough, Massachusetts, and analyzed for VOCs using EPA Method 8260 (STARS list).

3.0 RESULTS

3.1 Subsurface Conditions

On January 16, 2013, METI collected soil samples from eight (8) borings that generally extended to 12 to 16 feet bgs. Subsurface conditions generally consisted of mostly silt with varying amounts of fine-grained sand and clay. Soil exhibiting impacts from hydrocarbons such as hydrocarbon odors, and elevated OVM response were identified in 6 of 8 borings. Impacts were identified as shallow as 4 feet to as deep as 14 feet bgs.

Wet or saturated soils were encountered at 10 to 11 feet bgs with the exception of boring B2 at 4 feet bgs. Sufficient water was available in each of the soil borings, in which water samples were

obtained. Olfactory evidence of petroleum impacts, including an odor and sheen, were observed in the water collected from B4 only. Refer to Appendix A for soil boring logs.

3.2 Soil

Five (5) biased soil samples were submitted for laboratory analysis, as shown on **Table 1**. Soil sample analytical results were compared to NYSDEC CP-51 Soil Cleanup Objective (SCO) values as shown in **Table 2**. Although individual VOCs were detected in the samples submitted from borings B2, B4, and B8, only ethylbenzene in sample B4 was detected at a concentration above its SCO. Soil boring B4 was located just north of the concrete pad located along Webster Street and exhibited the greatest impacts during field screening using the OVM. No VOCs were detected above method detection limits in the samples submitted from borings B3 and B5. Refer to Figure 1 for a site map indicating soil boring locations. Analytical testing results are included in Appendix B.

3.3 Groundwater

Grab groundwater samples were collected from micro-wells at locations B2, B4, and B8. Groundwater sample analytical results were compared to:

- NYSDEC Class GA criteria presented in the Division of Water Technical and Operational Guidance Series (TOGS 1.1.), dated October 1993, revised June 1998, errata January 1999 and amended April 2000 (NYSDEC Groundwater Standards).

Multiple VOCs were detected above NYSDEC standards from samples B2 and B4 the highest total VOC concentration was detected in sample B4 at 1,060.6 µg/L. No VOCs were detected above method detection limits in the sample from boring B8. Refer to Figure 2 for a site map indicating groundwater sampling locations.

4.0 DISCUSSION and CONCLUSIONS

METI was retained to further assess soil and groundwater petroleum impacts previously discovered by GZA in May 2012. Our work included the completion of eight (8) soil borings, and collection and analysis of select soil and groundwater samples. For purposes of discussion, the locations of the sample points from the GZA investigation were approximated and included in Figure 1 and Figure 2. Also included in the figures is the approximated location of a "pump island." The pump island was identified on a site survey figure included in the GZA Phase I ESA.

Surficial soils consist of mostly silt with lesser amounts of fine-grained sand and/or clay. An evaluation of the METI and GZA data sets indicates that hydrocarbon impacts in soil appear to be limited to the areas beneath the concrete pad directly west of the vacant building and north of the concrete pad. Although concentrations in soil did not exceed NYSDEC soil cleanup

objective values for VOCs in 8 of 9 samples (the exception being ethylbenzene in sample B4), nuisance odors were detected at depths ranging from 4 to 14 feet bgs. Impacts were not encountered below 14 feet bgs.

In contrast, 3 of the 5 water samples contained multiple individual VOCs in exceedence of their respective NYSDEC Groundwater Standard value. Impacts were in the vicinity of the concrete pad and were greatest in sample B4 at 1,060.6 µg/L. The water table was generally encountered at 10 to 11 feet bgs.

The existence of hydrocarbon impacts in soil and groundwater support the evidence of a release associated with the historic petroleum filling station use. Impacts are limited, located directly west of the vacant building, near a former dispenser island, beneath a concrete pad and are more significant in groundwater than soil. Lesser impacts were identified north of the concrete pad and vacant building. Given the age of the release, that the tanks have been removed over 30 years ago, depth of impacts and low concentrations in the soil and groundwater, no further remediation is recommended at this time.

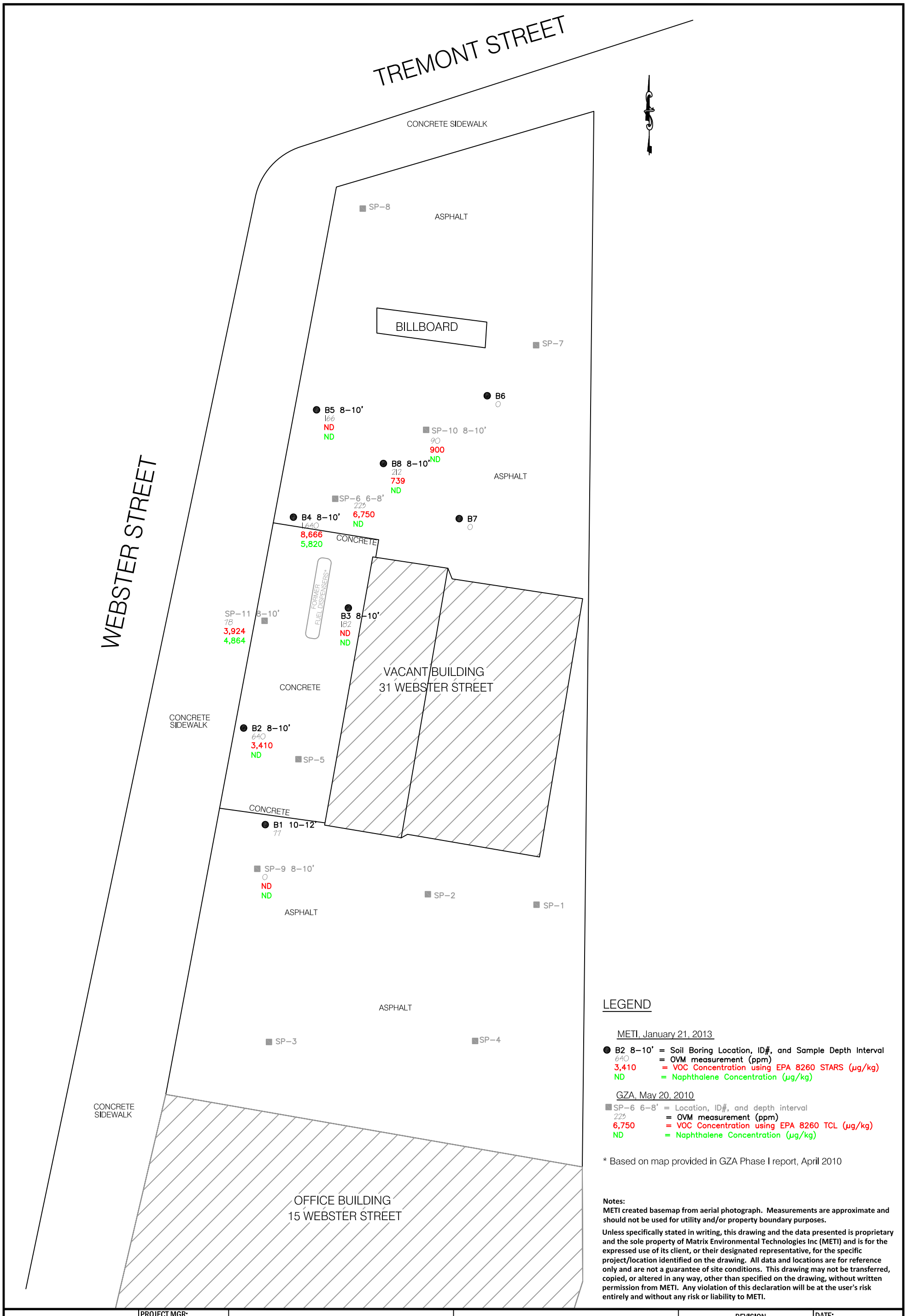
5.0 LIMITATIONS

This report is based on a limited number of soil samples and chemical analyses. The conclusions presented in this report are based only on the observations made during this investigation and data provided by others. The report presents a description of the subsurface conditions observed at each sample location during this investigation. Subsurface conditions may vary significantly with time, particularly with respect to groundwater elevations and groundwater quality. Conclusions and recommendations set forth are applicable only to the facts and conditions at the time of this investigation.

In performing professional services, METI uses the degree of care and skill exercised under similar circumstances by members of the environmental profession practicing in the same or similar locality under similar conditions.

The standard of care shall be judged exclusively as of the time these services are rendered and not according to later standards. METI makes no express or implied warranty beyond its conformance to this standard. METI shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed for this report. METI believes that all information contained in this report is factual; however, no guarantee is made or implied.

FIGURES



LEGEND

METI, January 21, 2013

- B2 8–10' = Soil Boring Location, ID#, and Sample Depth Interval
- 640 = OVM measurement (ppm)
- 3,410 = VOC Concentration using EPA 8260 STARS (µg/kg)
- ND = Naphthalene Concentration (µg/kg)

GZA, May 20, 2010

- SP–6 6–8' = Location, ID#, and depth interval
- 223 = OVM measurement (ppm)
- 6,750 = VOC Concentration using EPA 8260 TCL (µg/kg)
- ND = Naphthalene Concentration (µg/kg)

* Based on map provided in GZA Phase I report, April 2010

Notes:
METI created basemap from aerial photograph. Measurements are approximate and should not be used for utility and/or property boundary purposes.

PREPARED BY:
MATRIX ENVIRONMENTAL TECHNOLOGIES INC.

PREPARED FOR:
MR. GREG DOEL
26 WEBSTER STREET
NORTH TONAWANDA, NY

PROJECT MGR: DRG
DESIGNED BY: DRG
REVIEWED BY: CZ
DRAWN BY: DRG

PROJECT NAME / LOCATION:
VACANT OFFICE BUILDING
31 WEBSTER STREET
NORTH TONAWANDA, NEW YORK

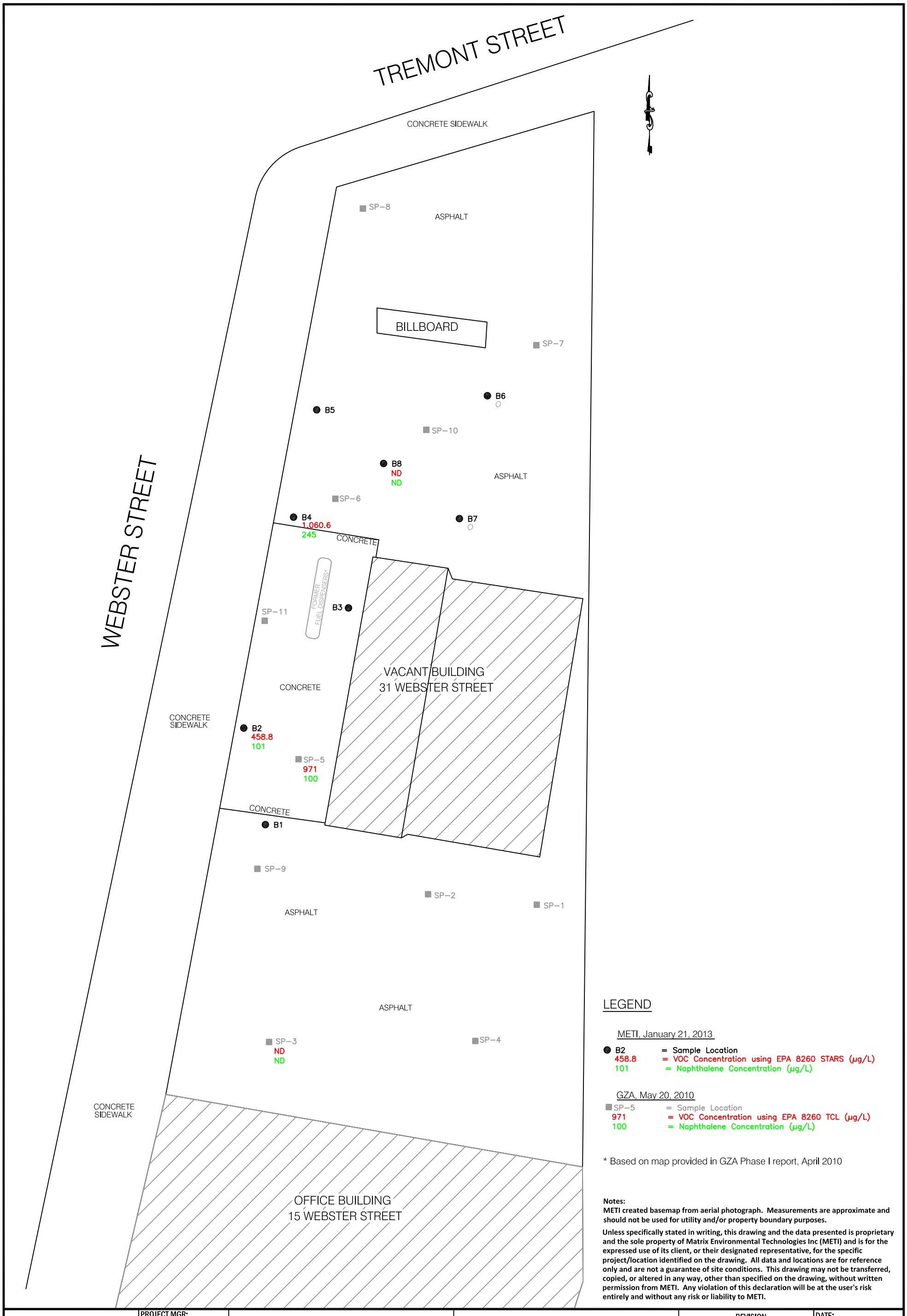
TITLE:
SITE MAP WITH SOIL BORING LOCATIONS AND CONTAMINANT CONCENTRATIONS

REVISION	
BY	DATE
DRG	2/18/13

SCALE IN FEET: 1" = 20
0 20

DATE: JANUARY 21, 2013
PROJECT NO.: 12-031
FIGURE: 1

20 years dedicated to a CLEANER ENVIRONMENT 1991-2011



LEGEND

METI, January 21, 2013

- B2 = Sample Location
- 458.8 = VOC Concentration using EPA 8260 STARS (µg/L)
- 101 = Naphthalene Concentration (µg/L)

GZA, May 20, 2010

- SP–5 = Sample Location
- 971 = VOC Concentration using EPA 8260 TCL (µg/L)
- 100 = Naphthalene Concentration (µg/L)

* Based on map provided in GZA Phase I report, April 2010

Notes:
METI created basemap from aerial photograph. Measurements are approximate and should not be used for utility and/or property boundary purposes.

PREPARED BY:
MATRIX ENVIRONMENTAL TECHNOLOGIES INC.

PREPARED FOR:
MR. GREG DOEL
26 WEBSTER STREET
NORTH TONAWANDA, NY

PROJECT MGR: DRG
DESIGNED BY: DRG
REVIEWED BY: CZ
DRAWN BY: DRG

PROJECT NAME / LOCATION:
VACANT OFFICE BUILDING
31 WEBSTER STREET
NORTH TONAWANDA, NEW YORK

TITLE:
SITE MAP WITH GROUNDWATER SAMPLING LOCATIONS AND CONTAMINANT CONCENTRATIONS

REVISION	
BY	DATE
DRG	2/18/13

SCALE IN FEET: 1" = 20
0 20

DATE: JANUARY 21, 2013
PROJECT NO.: 12-031
FIGURE: 2

20 years dedicated to a CLEANER ENVIRONMENT 1991-2011

TABLES

Table 1
Sample Matrix Summary

Vacant Office
31 Webster Road
North Tonawanda, NY

Soil Samples			
Location	**Date Sampled**	**Sample Depth Interval (ft bgs[1])**	**VOCs[2] using EPA Method 8260**
B2	1/21/2013	8-10	X
B3	1/21/2013	8-10	X
B4	1/21/2013	8-10	X
B5	1/21/2013	8-10	X
B8	1/21/2013	8-10	X
Groundwater Samples			
B2	1/21/2013	na	X
B4	1/21/2013	na	X
B8	1/21/2013	na	X

Notes:

1. ft bgs = feet below ground surface
2. VOCs = Volatile Organic Compounds

Table 2

Soil Analytical Summary

VOCs Using EPA MEthod 8260 STARS (µg/kg)

Vacant Office

31 Webster Road

North Tonawanda, NY

January 21, 2013

Compound	CP-51*	B2 8-10'	B3 8-10'	B4 8-10'	B5 8-10'	B8 8-10'
	OVM (ppm)	*640*	*182*	*1,640*	*166*	*212*
Benzene	60	ND	ND	ND	ND	ND
n-Butylbenzene	12,000	**2,030**	ND	**2,290**	ND	ND
sec-Butylbenzene	11,000	ND	ND	**429**	ND	**739**
tert-Butylbenzene	5,900	ND	ND	ND	ND	ND
Ethylbenzene	1,000	ND	ND	**1,540**	ND	ND
Isopropylbenzene	2,300	ND	ND	**587**	ND	ND
p-Isopropyltoluene	10,000	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	**1,380**	ND	**3,820**	ND	ND
Toluene	700	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	ND	ND	ND	ND	ND
Xylene (total)	260	ND	ND	ND	ND	ND
Total STARS VOCs	NA	**3,410**	ND	**8,666**	ND	**739**
MTBE	930	ND	ND	ND	ND	ND
Naphthalene	12,000	ND	ND	**5,820**	ND	ND

* NYSDEC Soil Cleanup Objective (SCO) values.

1. Concentrations in bold font were detected above detection limits

2. ND indicates compound not detected

3. Shading indicates compound detection exceeds NYSDEC CP51 Soil Cleanup Objective (SCO) values.

Table 3

Groundwater Analytical Summary

VOCs using EPA MEthod 8260 STARS (µg/L)

Vacant Office

31 Webster Road

North Tonawanda, NY

January 21, 2013

Compound	NSDEC Standard*	B2	B4	B8
Benzene	1	**2.6**	**5.8**	ND
n-Butylbenzene	5	ND	ND	ND
sec-Butylbenzene	5	ND	**12.5**	ND
tert-Butylbenzene	5	ND	ND	ND
Ethylbenzene	5	**136**	**355**	ND
Isopropylbenzene	5	**62.9**	**107**	ND
p-Isopropyltoluene	5	ND	ND	ND
n-Propylbenzene	5	**153**	**349**	ND
Toluene	5	**2.3**	**5**	ND
1,2,4-Trimethylbenzene	5	ND	**78.3**	ND
1,3,5-Trimethylbenzene	5	**14.5**	**69.4**	ND
Xylene (total)	5	**87.5**	**78.6**	ND
Total STARS VOCs	NA	**458.8**	**1,060.6**	ND
MTBE	10	ND	ND	ND
Naphthalene	10	**101**	**245**	ND

* NYSDEC Groundwater Standard.

1. Concentrations in bold font were detected above detection limits
2. ND indicates compound not detected
3. Shading indicates compound detection exceeds NYSDEC Groundwater Standard.

APPENDIX A

Soil Boring Logs

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B1**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~11'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	7	33	Asphalt and c GRAVEL.
1					Tan SILT trace CLAY
2					
3					Black SILT and f SAND little f GRAVEL. Dry. Impacts.
4	2	4-8	4	36	Gray SILT little CLAY. Moist. No impacts.
5					
6					
7					
8	3	8-10	4	17	SIMILAR MATERIAL.
9					
10	4	10-12	77	17	Black f SAND and SILT. Hydrocarbon odor detected.
11					Wet.
12	5	12-14	62	22	Gray/black f SAND and SILT trace CLAY. Wet. Hydrocarbon odor detected.
13					
14	6	14-16	0	22	SIMILAR MATERIAL. Wet. No impacts.
15					
16					**Boring completed at 16.0 feet.**

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B2**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~4'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	30	Cored through concrete. Gray SILT. Dry. No impacts.
1					
2					Tan SILT and f SAND trace f GRAVEL. Dry. No impacts.
3					
4	2	4-8	54	24	Olive SILT some f SAND trace CLAY with black staining. Wet. Hydrocarbon odor detected.
5					
6					
7					
8	3	8-10*	640	16	Gray SILT little f SAND trace CLAY. Wet. Hydrocarbon sheen and odor.
9					
10	4	10-12	293	16	SIMILAR MATERIAL. Wet. Hydrocarbon odor.
11					
12	5	12-14	8	15	Gray f SAND and SILT. Wet. No impacts.
13					
14	6	14-16	24	15	SIMILAR MATERIALS. Wet. No impacts.
15					
16					**Boring completed at 16.0 feet.**

A sample from the 8-10 foot interval was submitted for laboratory analysis for VOCs using EPA Method 8260 STARS. 1-inch ID PVC well installed in completed borehole. Water sampled collected and submitted for laboratory analysis for VOCs using EPA Method 8260 STARS.

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B3**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~11'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	20	Cored through concrete.
1					c GRAVEL. Dry.
					Tan SILT and CLAY. Dry. No impacts.
2					
3					
4	2	4-8	4	22	Brown f SAND trace SILT. Dry. No impacts.
5					
6					
7					
8	3	8-10*	225	15	Tan SILT and f SAND
9					Gray SILT trace SAND trace CLAY with black staining. Moist. Hydrocarbon odor detected.
10	4	10-12	182	15	Black SILT little f SAND trace CLAY. Hydrocarbon odor.
11					Wet.
12	5	12-14	40	20	Black SILT trace CLAY. Saturated. Hydrocarbon odor.
13					
14	6	14-16	7	20	Gray SILT some CLAY. Wet. No impacts.
15					
16					**Boring completed at 16.0 feet.**

A sample from the 8-10 foot interval was submitted for laboratory analysis for VOCs using EPA Method 8260 STARS.

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B4**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~10'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	15	Asphalt and c GRAVEL.
1					SLAG and SILT
					Tan SILT. Dry. No impacts.
2					
3					
4					
	2	4-8	770	27	Gray SILT little f SAND little CLAY with black staining. Moist. Hydrocarbon odor.
5					
6					
7					
8					
	3	8-10*	1,640	12	SIMILAR MATERIAL. No staining. Wet. Hydrocarbon odor.
9					
10					
	4	10-12	278	12	Olive SILT little f SAND little CLAY. Wet. Hydrocarbon odor.
11					
12					
	5	12-14	20	17	Gray SILT and f SAND trace CLAY. Saturated. No impacts.
13					
14					
	6	14-16	36	17	Gray f SAND and SILT. Wet. No impacts.
15					
16					**Boring completed at 16.0 feet.**

A sample from the 8-10 foot interval was submitted for laboratory analysis for VOCs using EPA Method 8260 STARS. 1-inch ID PVC well installed in completed borehole. Water sampled collected and submitted for laboratory analysis for VOCs using EPA Method 8260 STARS.

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B5**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~10'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	20	Asphalt and c GRAVEL.
1					SLAG and SILT
2					Tan SILT. Dry. No impacts.
3					
4	2	4-8	13	20	Gray SILT trace CLAY with black staining. Moist. Hydrocarbon odor.
5					
6					
7					
8	3	8-10*	166	18	Gray SILT little f SAND trace CLAY. Hydrocarbon odor.
9					
10					Wet.
	4	10-12	4	18	Olive SILT little f SAND trace CLAY. Wet. No impacts.
11					
12					**Boring completed at 12.0 feet.**
13					
14					
15					
16					

A sample from the 8-10 foot interval was submitted for laboratory analysis for VOCs using EPA Method 8260 STARS.

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B6**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~10'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	14	Asphalt and c GRAVEL.
1					SLAG and SILT
2					Brown SILT. Dry. No impacts.
3					
4	2	4-6	0	20	Tan SILT little f SAND little CLAY. Moist. No impacts.
5					
6	3	6-8	0	20	SAME MATERIAL. Moist. No impacts.
7					
8	4	8-12	0	33	Olive/gray SILT little CLAY trace f SAND. No impacts
9					
10					Wet. No impacts.
11					
12					**Boring completed at 12.0 feet.**
13					
14					
15					
16					

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B7**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~10'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	24	Asphalt and c GRAVEL.
1					
2					Brown SILT. Dry. No impacts.
3					
4	2	4-8	0	26	Brown/gray SILT some CLAY. Moist. No impacts.
5					
6					
7					
8					
	3	8-10	0	20	Gray SILT little CLAY trace f SAND.
9					
10					Wet. No impacts.
	4	10-12	0	20	SIMILAR MATERIALS. No impacts.
11					
12					
					Boring completed at 12.0 feet.
13					
14					
15					
16					

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

Matrix Environmental Technologies Inc. **SUBSURFACE LOG**

PROJECT & LOCATION:	31 WEBSTER STREET, NORTH TONANWANDA, NEW YORK	PROJECT No.	12-031
CLIENT:	GREG DOEL	WELL/BORING ID:	**B8**
START DATE:	1/21/2013 COMPLETION DATE: 1/21/2013	RECORDED BY:	D. R. GILL
GROUNDWATER DEPTH WHILE DRILLING:	~10'	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	MC 20° F DRILLING CONTRACTOR/DRILLERS: MATRIX ENVIRONNMENTAL TECHNOLOGIES INC		
DRILL RIG:	GEOPROBE DRILL SIZE & TYPE: 5410 DIRECT PUSH	HAMMER Type:	HYDRAULIC
		Sampler Type:	MACROCORE (MC)

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	Material Classification trace – 1-10% little – 11-20% some – 21-35% and – 36-50% f-fine m-medium c-coarse
	1	0-4	0	30	Asphalt and c GRAVEL.
1					
2					Brown SILT. Dry. No impacts.
3					
4	2	4-8	0	15	Brown SILT little CLAY. Moist. No impacts.
5					
6					
7					
8					
	3	8-10*	212	18	Tan/gray SILT little CLAY. Moist. Hydrocarbon odor.
9					
10					
	4	10-12	98	18	Gray SILT little f SAND little CLAY. Wet. Hydrocarbon odor detected.
11					
12					
	5	12-16	0	30	Gray SILT and f SAND trace CLAY. Wet. No impacts.
13					
14					
15					
16					**Boring completed at 16.0 feet.**

A sample from the 8-10 foot interval was submitted for laboratory analysis for VOCs using EPA Method 8260 STARS. 1-inch ID PVC well installed in completed borehole. Water sampled collected and submitted for laboratory analysis for VOCs using EPA Method 8260 STARS.

MC - Geoprobe Macrocore SS - Split Spoon SH - Shelby Tube C - Bedrock Core ND - Non-detect

APPENDIX B

Laboratory Analytical Reports

New England ACCUTEST LABORATORIES

02/06/13

Technical Report for

Matrix Environmetal Tech.

DOEL, 31 Webster, North Tonawanda, NY

12-031 PO#16

Accutest Job Number: MC17739

Sampling Date: 01/21/13

Report to:

Matrix
3730 California Road
Orchard Park, NY 14127
rgill@matrixbiotech.com

ATTN: Rob Gill

Total number of pages in report: **32**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) ISO 17025:2005 (L2235)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5

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Sample Summary

Matrix Environmetal Tech.

Job No: MC17739

DOEL, 31 Webster, North Tonawanda, NY
Project No: 12-031 PO#16

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC17739-1	01/21/13	00:00	DRG	01/24/13	SO	Soil	B2 8-10
MC17739-2	01/21/13	00:00	DRG	01/24/13	SO	Soil	B3 8-10
MC17739-3	01/21/13	00:00	DRG	01/24/13	SO	Soil	B4 8-10
MC17739-4	01/21/13	00:00	DRG	01/24/13	SO	Soil	B5 8-10
MC17739-5	01/21/13	00:00	DRG	01/24/13	SO	Soil	B8 8-10
MC17739-6	01/21/13	00:00	DRG	01/24/13	AQ	Ground Water	B2
MC17739-7	01/21/13	00:00	DRG	01/24/13	AQ	Ground Water	B4
MC17739-8	01/21/13	00:00	DRG	01/24/13	AQ	Ground Water	B8

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: MC17739
Account: Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY
Collected: 01/21/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC17739-1	**B2 8-10**					
n-Butylbenzene		2030	390		ug/kg	SW846 8260B
n-Propylbenzene		1380	390		ug/kg	SW846 8260B
MC17739-2	**B3 8-10**					
No hits reported in this sample.						
MC17739-3	**B4 8-10**					
n-Butylbenzene		2290	390		ug/kg	SW846 8260B
sec-Butylbenzene		429	390		ug/kg	SW846 8260B
Ethylbenzene		1540	160		ug/kg	SW846 8260B
Isopropylbenzene		587	390		ug/kg	SW846 8260B
Naphthalene		5820	390		ug/kg	SW846 8260B
n-Propylbenzene		3820	390		ug/kg	SW846 8260B
MC17739-4	**B5 8-10**					
No hits reported in this sample.						
MC17739-5	**B8 8-10**					
sec-Butylbenzene		739	340		ug/kg	SW846 8260B
MC17739-6	**B2**					
Benzene [a]		2.6	0.50		ug/l	SW846 8260B
Ethylbenzene [a]		136	1.0		ug/l	SW846 8260B
Isopropylbenzene [a]		62.9	5.0		ug/l	SW846 8260B
Naphthalene [a]		101	5.0		ug/l	SW846 8260B
n-Propylbenzene [a]		153	5.0		ug/l	SW846 8260B
Toluene [a]		2.3	1.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene [a]		14.5	5.0		ug/l	SW846 8260B
m,p-Xylene [a]		86.3	1.0		ug/l	SW846 8260B
o-Xylene [a]		1.2	1.0		ug/l	SW846 8260B
Xylene (total) [a]		87.5	1.0		ug/l	SW846 8260B
MC17739-7	**B4**					
Benzene		5.8	0.50		ug/l	SW846 8260B
sec-Butylbenzene		12.5	5.0		ug/l	SW846 8260B
Ethylbenzene		355	10		ug/l	SW846 8260B
Isopropylbenzene		107	5.0		ug/l	SW846 8260B

Summary of Hits

Job Number: MC17739
Account: Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY
Collected: 01/21/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Naphthalene		245	5.0		ug/l	SW846 8260B
n-Propylbenzene		349	5.0		ug/l	SW846 8260B
Toluene		5.0	1.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		78.3	5.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		69.4	5.0		ug/l	SW846 8260B
m,p-Xylene		66.7	1.0		ug/l	SW846 8260B
o-Xylene		11.9	1.0		ug/l	SW846 8260B
Xylene (total)		78.6	1.0		ug/l	SW846 8260B

MC17739-8 **B8**

No hits reported in this sample.

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	B2 8-10		
Lab Sample ID:	MC17739-1	**Date Sampled:**	01/21/13
Matrix:	SO - Soil	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	80.1
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G123955.D	1	01/25/13	JM	n/a	n/a	MSG4919
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.61 g	10.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	39	ug/kg	
104-51-8	n-Butylbenzene	2030	390	ug/kg	
135-98-8	sec-Butylbenzene	ND	390	ug/kg	
98-06-6	tert-Butylbenzene	ND	390	ug/kg	
100-41-4	Ethylbenzene	ND	150	ug/kg	
98-82-8	Isopropylbenzene	ND	390	ug/kg	
99-87-6	p-Isopropyltoluene	ND	390	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	150	ug/kg	
91-20-3	Naphthalene	ND	390	ug/kg	
103-65-1	n-Propylbenzene	1380	390	ug/kg	
108-88-3	Toluene	ND	390	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	390	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	390	ug/kg	
	m,p-Xylene	ND	150	ug/kg	
95-47-6	o-Xylene	ND	150	ug/kg	
1330-20-7	Xylene (total)	ND	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B3 8-10		
Lab Sample ID:	MC17739-2	**Date Sampled:**	01/21/13
Matrix:	SO - Soil	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	82.0
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G123956.D	1	01/25/13	JM	n/a	n/a	MSG4919
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.4 g	10.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	35	ug/kg	
104-51-8	n-Butylbenzene	ND	350	ug/kg	
135-98-8	sec-Butylbenzene	ND	350	ug/kg	
98-06-6	tert-Butylbenzene	ND	350	ug/kg	
100-41-4	Ethylbenzene	ND	140	ug/kg	
98-82-8	Isopropylbenzene	ND	350	ug/kg	
99-87-6	p-Isopropyltoluene	ND	350	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	140	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
103-65-1	n-Propylbenzene	ND	350	ug/kg	
108-88-3	Toluene	ND	350	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	350	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	350	ug/kg	
	m,p-Xylene	ND	140	ug/kg	
95-47-6	o-Xylene	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B4 8-10		
Lab Sample ID:	MC17739-3	**Date Sampled:**	01/21/13
Matrix:	SO - Soil	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	82.7
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G123957.D	1	01/25/13	JM	n/a	n/a	MSG4919
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.01 g	10.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	39	ug/kg	
104-51-8	n-Butylbenzene	2290	390	ug/kg	
135-98-8	sec-Butylbenzene	429	390	ug/kg	
98-06-6	tert-Butylbenzene	ND	390	ug/kg	
100-41-4	Ethylbenzene	1540	160	ug/kg	
98-82-8	Isopropylbenzene	587	390	ug/kg	
99-87-6	p-Isopropyltoluene	ND	390	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	160	ug/kg	
91-20-3	Naphthalene	5820	390	ug/kg	
103-65-1	n-Propylbenzene	3820	390	ug/kg	
108-88-3	Toluene	ND	390	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	390	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	390	ug/kg	
	m,p-Xylene	ND	160	ug/kg	
95-47-6	o-Xylene	ND	160	ug/kg	
1330-20-7	Xylene (total)	ND	160	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5 8-10		
Lab Sample ID:	MC17739-4	**Date Sampled:**	01/21/13
Matrix:	SO - Soil	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	80.7
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G123958.D	1	01/25/13	JM	n/a	n/a	MSG4919
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.7 g	10.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	35	ug/kg	
104-51-8	n-Butylbenzene	ND	350	ug/kg	
135-98-8	sec-Butylbenzene	ND	350	ug/kg	
98-06-6	tert-Butylbenzene	ND	350	ug/kg	
100-41-4	Ethylbenzene	ND	140	ug/kg	
98-82-8	Isopropylbenzene	ND	350	ug/kg	
99-87-6	p-Isopropyltoluene	ND	350	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	140	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
103-65-1	n-Propylbenzene	ND	350	ug/kg	
108-88-3	Toluene	ND	350	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	350	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	350	ug/kg	
	m,p-Xylene	ND	140	ug/kg	
95-47-6	o-Xylene	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B8 8-10		
Lab Sample ID:	MC17739-5	**Date Sampled:**	01/21/13
Matrix:	SO - Soil	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	80.2
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G123959.D	1	01/25/13	JM	n/a	n/a	MSG4919
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	11.1 g	10.0 ml	100 ul
Run #2			

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	34	ug/kg	
104-51-8	n-Butylbenzene	ND	340	ug/kg	
135-98-8	sec-Butylbenzene	739	340	ug/kg	
98-06-6	tert-Butylbenzene	ND	340	ug/kg	
100-41-4	Ethylbenzene	ND	140	ug/kg	
98-82-8	Isopropylbenzene	ND	340	ug/kg	
99-87-6	p-Isopropyltoluene	ND	340	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	140	ug/kg	
91-20-3	Naphthalene	ND	340	ug/kg	
103-65-1	n-Propylbenzene	ND	340	ug/kg	
108-88-3	Toluene	ND	340	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	340	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	340	ug/kg	
	m,p-Xylene	ND	140	ug/kg	
95-47-6	o-Xylene	ND	140	ug/kg	
1330-20-7	Xylene (total)	ND	140	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B2		
Lab Sample ID:	MC17739-6	**Date Sampled:**	01/21/13
Matrix:	AQ - Ground Water	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N72405.D	1	01/28/13	KD	n/a	n/a	MSN2720
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	2.6	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	136	1.0	ug/l	
98-82-8	Isopropylbenzene	62.9	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	101	5.0	ug/l	
103-65-1	n-Propylbenzene	153	5.0	ug/l	
108-88-3	Toluene	2.3	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	14.5	5.0	ug/l	
	m,p-Xylene	86.3	1.0	ug/l	
95-47-6	o-Xylene	1.2	1.0	ug/l	
1330-20-7	Xylene (total)	87.5	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	108%		70-130%
460-00-4	4-Bromofluorobenzene	113%		70-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B4		
Lab Sample ID:	MC17739-7	**Date Sampled:**	01/21/13
Matrix:	AQ - Ground Water	**Date Received:**	01/24/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	DOEL, 31 Webster, North Tonawanda, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L70539.D	1	01/26/13	TT	n/a	n/a	MSL3327
Run #2	N72402.D	10	01/28/13	KD	n/a	n/a	MSN2720

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	5.8	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	12.5	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	355 [a]	10	ug/l	
98-82-8	Isopropylbenzene	107	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	245	5.0	ug/l	
103-65-1	n-Propylbenzene	349	5.0	ug/l	
108-88-3	Toluene	5.0	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	78.3	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	69.4	5.0	ug/l	
	m,p-Xylene	66.7	1.0	ug/l	
95-47-6	o-Xylene	11.9	1.0	ug/l	
1330-20-7	Xylene (total)	78.6	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	130%	104%	70-130%
2037-26-5	Toluene-D8	126%	111%	70-130%
460-00-4	4-Bromofluorobenzene	126%	112%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B8
Lab Sample ID: MC17739-8
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: DOEL, 31 Webster, North Tonawanda, NY

Date Sampled: 01/21/13
Date Received: 01/24/13
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N72444.D	1	01/29/13	KD	n/a	n/a	MSN2722
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	111%		70-130%
460-00-4	4-Bromofluorobenzene	114%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

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FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # MC17739

Client / Reporting Information

Company Name: MARLEX
Street Address: 3730 CALEDONIA RD
City: CALEDONIA State: NY Zip: 14423
Project Contact: ROB GILL E-mail:
Phone #: Fax #:
Sampler(s) Name(s): ROB GILL Phone #:

Project Information

Project Name: DOEL 31 WEBSTER
Street: 31 WEBSTER
City: N. TONAWANDA
Project#: 12-031
Client PO#: 163
Project Manager: ROB GILL

Billing Information (If different from Report to)

Company Name: NEW SUNCO
Street Address:
City: State: Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	EPA 8260C STARS	CVOA MTBE (ppb)	LAB USE ONLY
-1	B2 E-10		1/21/13		DRG	SOIL	1					X					X	640	
-2	B3 E-10						1					X					X	225	
-3	B4 E-10						1					X					X	1,641	
-4	B5 E-10						1					X					X	166	
-5	B6 E-10		*		*	*	1					X					X	212	
-6	B2					GW	2	X									X		
-7	B4						2	X									X		
-8	B6		*		*	*	2	X									X		
																			2A, 354

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	DRG	1/22/13 12p				
2					1/23/13 700	2 FedEx
3	FedEx	1-24-13 900	3			
4						4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not Intact	Preserved where applicable [ ]

On Ice [X] Cooler Temp. 2.4

MC17739: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC17739 **Client:** MATRIX **Immediate Client Services Action Required:** No

Date / Time Received: 1/24/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: DOEL 31 WEBSTER **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC17739: Chain of Custody
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New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4919-MB	G123945.D	1	01/25/13	JM	n/a	n/a	MSG4919

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-1, MC17739-2, MC17739-3, MC17739-4, MC17739-5

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	25	ug/kg	
104-51-8	n-Butylbenzene	ND	250	ug/kg	
135-98-8	sec-Butylbenzene	ND	250	ug/kg	
98-06-6	tert-Butylbenzene	ND	250	ug/kg	
100-41-4	Ethylbenzene	ND	100	ug/kg	
98-82-8	Isopropylbenzene	ND	250	ug/kg	
99-87-6	p-Isopropyltoluene	ND	250	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	100	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
103-65-1	n-Propylbenzene	ND	250	ug/kg	
108-88-3	Toluene	ND	250	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	ug/kg	
	m,p-Xylene	ND	100	ug/kg	
95-47-6	o-Xylene	ND	100	ug/kg	
1330-20-7	Xylene (total)	ND	100	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	86%	70-130%

Method Blank Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3327-MB	L70530.D	1	01/26/13	TT	n/a	n/a	MSL3327

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	127%	70-130%
2037-26-5	Toluene-D8	120%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

Method Blank Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2720-MB	N72389.D	1	01/28/13	KD	n/a	n/a	MSN2720

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-6, MC17739-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	109%	70-130%
460-00-4	4-Bromofluorobenzene	114%	70-130%

Method Blank Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2722-MB	N72440.D	1	01/29/13	KD	n/a	n/a	MSN2722

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	109%	70-130%
460-00-4	4-Bromofluorobenzene	113%	70-130%

Blank Spike Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3327-BS	L70528.D	1	01/26/13	TT	n/a	n/a	MSL3327

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	52.5	105	70-130
104-51-8	n-Butylbenzene	50	50.4	101	70-130
135-98-8	sec-Butylbenzene	50	50.3	101	70-130
98-06-6	tert-Butylbenzene	50	48.5	97	70-130
98-82-8	Isopropylbenzene	50	51.0	102	70-130
99-87-6	p-Isopropyltoluene	50	53.7	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	57.8	116	70-130
91-20-3	Naphthalene	50	55.0	110	70-130
103-65-1	n-Propylbenzene	50	51.2	102	70-130
108-88-3	Toluene	50	51.4	103	70-130
95-63-6	1,2,4-Trimethylbenzene	50	47.6	95	70-130
108-67-8	1,3,5-Trimethylbenzene	50	47.7	95	70-130
	m,p-Xylene	100	101	101	70-130
95-47-6	o-Xylene	50	52.0	104	70-130
1330-20-7	Xylene (total)	150	153	102	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	121%	70-130%
2037-26-5	Toluene-D8	114%	70-130%
460-00-4	4-Bromofluorobenzene	112%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4919-BS	G123942.D	1	01/25/13	JM	n/a	n/a	MSG4919
MSG4919-BSD	G123943.D	1	01/25/13	JM	n/a	n/a	MSG4919

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-1, MC17739-2, MC17739-3, MC17739-4, MC17739-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2440	98	2420	97	1	70-130/25
104-51-8	n-Butylbenzene	2500	2390	96	2380	95	0	70-130/25
135-98-8	sec-Butylbenzene	2500	2280	91	2300	92	1	70-130/25
98-06-6	tert-Butylbenzene	2500	2190	88	2210	88	1	70-130/25
100-41-4	Ethylbenzene	2500	2450	98	2480	99	1	70-130/25
98-82-8	Isopropylbenzene	2500	2310	92	2320	93	0	70-130/25
99-87-6	p-Isopropyltoluene	2500	2530	101	2510	100	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	2500	2710	108	2690	108	1	70-130/25
91-20-3	Naphthalene	2500	2670	107	2540	102	5	70-130/25
103-65-1	n-Propylbenzene	2500	2290	92	2300	92	0	70-130/25
108-88-3	Toluene	2500	2480	99	2450	98	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	2500	2340	94	2360	94	1	70-130/25
108-67-8	1,3,5-Trimethylbenzene	2500	2350	94	2370	95	1	70-130/25
	m,p-Xylene	5000	4870	97	4950	99	2	70-130/25
95-47-6	o-Xylene	2500	2390	96	2430	97	2	70-130/25
1330-20-7	Xylene (total)	7500	7260	97	7370	98	2	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	93%	92%	70-130%
2037-26-5	Toluene-D8	91%	91%	70-130%
460-00-4	4-Bromofluorobenzene	86%	85%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2720-BS	N72386.D	1	01/28/13	KD	n/a	n/a	MSN2720
MSN2720-BSD	N72387.D	1	01/28/13	KD	n/a	n/a	MSN2720

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-6, MC17739-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	46.5	93	47.1	94	1	70-130/25
104-51-8	n-Butylbenzene	50	50.2	100	50.4	101	0	70-130/25
135-98-8	sec-Butylbenzene	50	48.0	96	48.5	97	1	70-130/25
98-06-6	tert-Butylbenzene	50	46.5	93	46.8	94	1	70-130/25
100-41-4	Ethylbenzene	50	47.1	94	47.4	95	1	70-130/25
98-82-8	Isopropylbenzene	50	46.9	94	47.7	95	2	70-130/25
99-87-6	p-Isopropyltoluene	50	52.3	105	52.4	105	0	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	39.6	79	37.3	75	6	70-130/25
91-20-3	Naphthalene	50	49.2	98	49.0	98	0	70-130/25
103-65-1	n-Propylbenzene	50	46.8	94	47.7	95	2	70-130/25
108-88-3	Toluene	50	47.5	95	47.9	96	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	47.9	96	48.0	96	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	48.2	96	48.7	97	1	70-130/25
	m,p-Xylene	100	89.1	89	88.9	89	0	70-130/25
95-47-6	o-Xylene	50	43.8	88	43.9	88	0	70-130/25
1330-20-7	Xylene (total)	150	133	89	133	89	0	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	111%	112%	70-130%
2037-26-5	Toluene-D8	112%	111%	70-130%
460-00-4	4-Bromofluorobenzene	105%	105%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2722-BS	N72437.D	1	01/29/13	KD	n/a	n/a	MSN2722
MSN2722-BSD	N72438.D	1	01/29/13	KD	n/a	n/a	MSN2722

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	48.5	97	47.3	95	3	70-130/25
104-51-8	n-Butylbenzene	50	51.6	103	50.5	101	2	70-130/25
135-98-8	sec-Butylbenzene	50	49.7	99	48.6	97	2	70-130/25
98-06-6	tert-Butylbenzene	50	47.6	95	46.9	94	1	70-130/25
100-41-4	Ethylbenzene	50	49.7	99	48.7	97	2	70-130/25
98-82-8	Isopropylbenzene	50	49.4	99	47.7	95	4	70-130/25
99-87-6	p-Isopropyltoluene	50	53.8	108	52.8	106	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	38.5	77	37.3	75	3	70-130/25
91-20-3	Naphthalene	50	49.5	99	48.3	97	2	70-130/25
103-65-1	n-Propylbenzene	50	48.9	98	47.5	95	3	70-130/25
108-88-3	Toluene	50	49.1	98	48.8	98	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	49.6	99	48.4	97	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	49.6	99	48.7	97	2	70-130/25
	m,p-Xylene	100	92.7	93	91.0	91	2	70-130/25
95-47-6	o-Xylene	50	46.2	92	44.4	89	4	70-130/25
1330-20-7	Xylene (total)	150	139	93	135	90	3	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	111%	109%	70-130%
2037-26-5	Toluene-D8	111%	110%	70-130%
460-00-4	4-Bromofluorobenzene	106%	105%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC17731-1MS	G123953.D	1	01/25/13	JM	n/a	n/a	MSG4919
MC17731-1MSD	G123954.D	1	01/25/13	JM	n/a	n/a	MSG4919
MC17731-1	G123946.D	1	01/25/13	JM	n/a	n/a	MSG4919

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-1, MC17739-2, MC17739-3, MC17739-4, MC17739-5

CAS No.	Compound	MC17731-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		2210	2130	96	2130	96	0	70-130/30
104-51-8	n-Butylbenzene	ND		2210	2120	96	2170	98	2	70-130/30
135-98-8	sec-Butylbenzene	ND		2210	2010	91	2060	93	2	70-130/30
98-06-6	tert-Butylbenzene	ND		2210	1930	87	1960	89	2	70-130/30
100-41-4	Ethylbenzene	ND		2210	2160	98	2200	99	2	70-130/30
98-82-8	Isopropylbenzene	ND		2210	2000	90	2040	92	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		2210	2220	100	2250	102	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		2210	2380	108	2360	107	1	70-130/30
91-20-3	Naphthalene	ND		2210	2500	113	2520	114	1	70-130/30
103-65-1	n-Propylbenzene	ND		2210	2020	91	2060	93	2	70-130/30
108-88-3	Toluene	ND		2210	2190	99	2170	98	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	85.2		2210	2140	93	2190	95	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		2210	2070	94	2100	95	1	70-130/30
	m,p-Xylene	ND		4420	4280	97	4360	99	2	70-130/30
95-47-6	o-Xylene	ND		2210	2110	95	2170	98	3	70-130/30
1330-20-7	Xylene (total)	ND		6640	6390	96	6520	98	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC17731-1	Limits
1868-53-7	Dibromofluoromethane	83%	81%	81%	70-130%
2037-26-5	Toluene-D8	86%	85%	83%	70-130%
460-00-4	4-Bromofluorobenzene	78%	80%	76%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC17737-1MS	L70548.D	5	01/26/13	TT	n/a	n/a	MSL3327
MC17737-1MSD	L70549.D	5	01/26/13	TT	n/a	n/a	MSL3327
MC17737-1	L70531.D	1	01/26/13	TT	n/a	n/a	MSL3327

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-7

CAS No.	Compound	MC17737-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.1		250	296	118	313	125	6	70-130/30
104-51-8	n-Butylbenzene	ND		250	271	108	297	119	9	70-130/30
135-98-8	sec-Butylbenzene	ND		250	275	110	296	118	7	70-130/30
98-06-6	tert-Butylbenzene	ND		250	267	107	287	115	7	70-130/30
98-82-8	Isopropylbenzene	ND		250	279	112	296	118	6	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	290	116	316	126	9	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	328	131* [a]	346	138* [a]	5	70-130/30
91-20-3	Naphthalene	ND		250	318	127	351	140* [a]	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	278	111	301	120	8	70-130/30
108-88-3	Toluene	ND		250	285	114	307	123	7	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	268	107	283	113	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	265	106	285	114	7	70-130/30
	m,p-Xylene	1.6		500	573	114	615	123	7	70-130/30
95-47-6	o-Xylene	ND		250	286	114	306	122	7	70-130/30
1330-20-7	Xylene (total)	1.6		750	859	114	920	122	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC17737-1	Limits
1868-53-7	Dibromofluoromethane	130%	136%* [b]	129%	70-130%
2037-26-5	Toluene-D8	125%	130%	122%	70-130%
460-00-4	4-Bromofluorobenzene	122%	126%	122%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC17745-4MS	N72395.D	100	01/28/13	KD	n/a	n/a	MSN2720
MC17745-4MSD	N72396.D	100	01/28/13	KD	n/a	n/a	MSN2720
MC17745-4	N72400.D	100	01/28/13	KD	n/a	n/a	MSN2720

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-6, MC17739-7

CAS No.	Compound	MC17745-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	17500		5000	21100	72	21100	72	0	70-130/30
104-51-8	n-Butylbenzene	ND		5000	4800	96	4840	97	1	70-130/30
135-98-8	sec-Butylbenzene	ND		5000	4550	91	4630	93	2	70-130/30
98-06-6	tert-Butylbenzene	ND		5000	4390	88	4470	89	2	70-130/30
100-41-4	Ethylbenzene	ND		5000	4600	92	4630	93	1	70-130/30
98-82-8	Isopropylbenzene	ND		5000	4500	90	4590	92	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		5000	4960	99	5040	101	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		5000	3980	80	3830	77	4	70-130/30
91-20-3	Naphthalene	ND		5000	4590	92	4940	99	7	70-130/30
103-65-1	n-Propylbenzene	ND		5000	4420	88	4520	90	2	70-130/30
108-88-3	Toluene	ND		5000	4540	91	4600	92	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		5000	4570	91	4650	93	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		5000	4550	91	4650	93	2	70-130/30
	m,p-Xylene	ND		10000	8700	87	8680	87	0	70-130/30
95-47-6	o-Xylene	ND		5000	4300	86	4340	87	1	70-130/30
1330-20-7	Xylene (total)	ND		15000	13000	87	13000	87	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC17745-4	Limits
1868-53-7	Dibromofluoromethane	111%	111%	105%	70-130%
2037-26-5	Toluene-D8	110%	111%	109%	70-130%
460-00-4	4-Bromofluorobenzene	105%	106%	114%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC17824-1MS	N72460.D	5	01/29/13	KD	n/a	n/a	MSN2722
MC17824-1MSD	N72461.D	5	01/29/13	KD	n/a	n/a	MSN2722
MC17824-1	N72446.D	1	01/29/13	KD	n/a	n/a	MSN2722

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC17739-8

CAS No.	Compound	MC17824-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	227	91	222	89	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	220	88	227	91	3	70-130/30
135-98-8	sec-Butylbenzene	ND		250	221	88	223	89	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	219	88	218	87	0	70-130/30
100-41-4	Ethylbenzene	ND		250	229	92	224	90	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	223	89	221	88	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	240	96	243	97	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	182	73	180	72	1	70-130/30
91-20-3	Naphthalene	ND		250	207	83	227	91	9	70-130/30
103-65-1	n-Propylbenzene	ND		250	218	87	218	87	0	70-130/30
108-88-3	Toluene	ND		250	231	92	225	90	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	224	90	225	90	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	223	89	227	91	2	70-130/30
	m,p-Xylene	ND		500	428	86	424	85	1	70-130/30
95-47-6	o-Xylene	ND		250	215	86	211	84	2	70-130/30
1330-20-7	Xylene (total)	ND		750	643	86	635	85	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC17824-1	Limits
1868-53-7	Dibromofluoromethane	113%	111%	107%	70-130%
2037-26-5	Toluene-D8	111%	111%	110%	70-130%
460-00-4	4-Bromofluorobenzene	105%	106%	115%	70-130%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC17739-6	N72405.D	105.0	108.0	113.0
MC17739-7	N72402.D	104.0	111.0	112.0
MC17739-7	L70539.D	130.0	126.0	126.0
MC17739-8	N72444.D	105.0	111.0	114.0
MC17737-1MS	L70548.D	130.0	125.0	122.0
MC17737-1MSD	L70549.D	136.0* [a]	130.0	126.0
MC17745-4MS	N72395.D	111.0	110.0	105.0
MC17745-4MSD	N72396.D	111.0	111.0	106.0
MC17824-1MS	N72460.D	113.0	111.0	105.0
MC17824-1MSD	N72461.D	111.0	111.0	106.0
MSL3327-BS	L70528.D	121.0	114.0	112.0
MSL3327-MB	L70530.D	127.0	120.0	122.0
MSN2720-BS	N72386.D	111.0	112.0	105.0
MSN2720-BSD	N72387.D	112.0	111.0	105.0
MSN2720-MB	N72389.D	106.0	109.0	114.0
MSN2722-BS	N72437.D	111.0	111.0	106.0
MSN2722-BSD	N72438.D	109.0	110.0	105.0
MSN2722-MB	N72440.D	103.0	109.0	113.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

(a) Outside control limits due to possible matrix interference.

Volatile Surrogate Recovery Summary

Job Number: MC17739
Account: MATNYOP Matrix Environmetal Tech.
Project: DOEL, 31 Webster, North Tonawanda, NY

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC17739-1	G123955.D	85.0	84.0	81.0
MC17739-2	G123956.D	84.0	83.0	79.0
MC17739-3	G123957.D	84.0	84.0	89.0
MC17739-4	G123958.D	84.0	83.0	79.0
MC17739-5	G123959.D	84.0	85.0	91.0
MC17731-1MS	G123953.D	83.0	86.0	78.0
MC17731-1MSD	G123954.D	81.0	85.0	80.0
MSG4919-BS	G123942.D	93.0	91.0	86.0
MSG4919-BSD	G123943.D	92.0	91.0	85.0
MSG4919-MB	G123945.D	95.0	93.0	86.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%