Limited Phase II Site Investigation Report

348 Langner Road
West Seneca, New York

January 2010 0123-005-100

Prepared For:

Delta Sonic Car Wash Systems, Inc.

Prepared By:

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LIMITED PHASE II ENVIRONMENTAL INVESTIGATION REPORT

January 2010 0123-005-100

Prepared for:

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348 Langner Road Site

West Seneca, New York

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348 Langner Road Site
West Seneca, New York

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1.0 BACKGROUND AND SITE DESCRIPTION

Benchmark Environmental Engineering and Science, PLLC (Benchmark) performed a Limited Phase II Environmental Site Investigation at 348 Langner Road, West Seneca, New York (Site; see Figure 1) on behalf of Delta Sonic.

The Site is an approximate 1.87-acre property owned and operated by Delta Sonic, which is currently utilized as a gasoline station, convenience store and car wash. The Site is improved with one convenience store building, one car wash building, four product dispenser islands and two underground storage tank (UST) areas containing a total of eight petroleum USTs (see Figure 2). Based on our review of historical site information and maps, the Site has been a gas station since the 1950s. Prior to the current location of the product dispensers and buildings, the gas station and fuel assets were located in the northeastern portion of the property where the current carwash building sits.

This investigation included: soil borings, installation of four temporary monitoring wells; subsurface soil sampling; and, groundwater sampling.

2.0 METHODS OF INVESTIGATION

2.1 Soil Investigation

On December 9, 2009, Benchmark personnel conducted a subsurface soil investigation at the Site. The subsurface investigation included advancing 9 soil borings and 4 temporary wells in the locations shown on Figure 2.

2.1.1 Soil Borings

Nine soil borings (SB-1 through SB-9) were advanced using a track-mounted direct-push drill rig equipped with an approximate 1.5-inch diameter, 48-inch long macro-core sampler. Soil samples were generally collected within each borehole continuously from the ground surface until approximately 8 to 16 feet below the ground surface (fbgs) (i.e., the target depth), or until equipment refusal was encountered. Any down-hole equipment was decontaminated between boreholes.

The physical characteristics of all soil boring samples were classified using the Unified Soil Classification System (USCS). Benchmark personnel noted any visual and/or olfactory observations, and scanned soils for total volatile organic vapors with a Mini Rae 2000 Photoionization Detector (PID) equipped with a 10.6 eV lamp. Boring logs are presented in Attachment 1.

2.1.2 Soil Sampling

Eight (8) soil samples were collected from the boring macro-cores using dedicated stainless steel sampling tools. Representative soil samples were placed in pre-cleaned sample bottles and submitted under chain-of-custody to Test America Laboratories Inc., for analysis for NYSDEC STARS List Volatile Organic Compounds (VOCs) and STARS List Semi-Volatile Organic Compounds (SVOCs) by Methods 8260B and 8270C, respectively. Analytical soil data is summarized on Table 1.

2.1.3 Temporary Monitoring Wells

Following borehole advancement as described above, one-inch diameter temporary monitoring wells were installed within soil borings SB-1/TMW-1, SB-4/TMW-2, SB-

5/TMW-3 and SB-9/TMW-4. TMW-1 and TWM-2 were installed to an approximate depth of 16 fbgs. TMW-3 was installed to a depth 12 fbgs and TMW-4 was installed to a depth of approximately 8 fbgs.

Groundwater samples were collected using dedicated disposable polyethylene bailers. The samples were transferred into laboratory-provided pre-preserved sample vials for analysis of Target Compound List (TCL) plus NYSDEC STARS List volatile organic compounds (VOCs) via USEPA Method 8260. The samples were cooled to 4 °C in the field, and transported under chain-of-custody to Test America Laboratories, Inc. Analytical groundwater data is summarized on Table 2.

3.0 INVESTIGATION FINDINGS

A summary of the soil sample results from the soil boring are presented in Table 1. For comparison purposes, Table 1 soil analytical results are compared against NYSDEC TAGM #4046 recommended soil cleanup objectives (RSCOs). Table 2 groundwater analytical results are compared to NYSDEC groundwater quality standard (GWQS) per Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. A copy of the laboratory analytical data package is included in Appendix A.

3.1 Field Observations

General

The portion of the property where the car wash building is located is historically where the previous gas station was located on the property. There are two separate tank fields, designated Tank Field 1 and Tank Field 2, which service four pump islands. Tank Field 1 is located in-between the car wash and the pump islands and Tank Field 2 is located on the western side of the pump island underneath the canopy. A storm water drain located south of the pump islands runs the length of the property in an east-west direction.

The Site itself is generally flat; however, a steep embankment is located on the north property boundary to accommodate an elevated portion of Ridge Road that crosses nearby railroad tracks and Interstate Route 90. A utility corridor for power lines and rail road tracks borders the western portion of the Site; this area is flat and low lying with high grassy areas.

Qualitative Soil Screening

Visual and olfactory evidence of impacts as well as elevated PID readings were noted during the investigation. At sample location SB-1/TMW-1, sheening was noted on perched groundwater encountered at the fill/clayey silt interface. At borings SB-4, SB-5 and SB-9, elevated PID readings were noted.

In TurnKey's experience, the visual/olfactory observations and PID measurements are indicative of petroleum impacts in the Tank Field 1 area on the eastern portion of the property, west of the Tank Field 2 area, and on the western portion of the property. Refer to the attached soil boring/monitoring well logs for soil classification for each sample interval, field observations, and PID measurements.

3.2 Geology

The geology encountered at the Site includes four general units, noted in order from the ground surface with increasing depth: asphalt and sub-base (~0 to 0.5 fbgs); non-native fill materials, including fine to coarse sands and fine to coarse gravels with pieces of slag, cinders and brick (~0.5 to 4 fbgs); native soil consisting of grey to brown, moist to wet, silty clay (~4-11 fbgs); and, grey, wet till (~11-16 fbgs). Groundwater was encountered at approximately 8.5 fbgs. Perched groundwater was also noted at sample locations SB-1 and SB-2 at the fill/silty clay interface.

3.3 Soil Analytical Results

Soil analytical results show elevated concentrations of VOCs, and slightly elevated SVOC in subsurface soils on-Site (see Table 1). VOCs were detected above TAGM #4046 RSCOs in SB-4 (2-4) and SB-5 (2-4), and SVOC were detected above TAGM #4046 RSCOs in SB-7 (2-4).

3.4 Groundwater Analytical Results

Elevated concentrations of petroleum-related VOCs above NYSDEC GWQS were detected in temporary monitoring wells TMW-2, TMW-3 and TMW-4. Total VOCs were detected in TMW-2 at a concentration of approximately 13,825 ug/L, in TMW-3 at concentration of approximately 42,879 ug/L and in TMW-4 at a concentration of approximately 50 ug/L.

4.0 CONCLUSIONS

Based on the results of this soil and groundwater investigation, Benchmark offers the following conclusions and recommendations:

- The Site is currently utilized as a gasoline station and carwash. The Site has historically been a gasoline station since the 1950's.

- During the completion of soil borings, stained soils, petroleum-like odors and/or elevated PID readings were noted at sample locations SB-1, SB-4, SB-5 and SB-9. SB-1 and SB-9 are located on the western portion of the Site west of Tank Field 1 and the product dispensers and SB-4 and SB-5 are located on the eastern portion of the Site in the area of the former gasoline station.

- Based on the soil analytical results, petroleum-related compounds were detected above TAGM #4046 RSCOs at concentrations that typically require remediation. The former gasoline station area appears to the most impacted area. Additional investigation is required to delineate the extent of soil impacts.

- Based on the groundwater analytical results, elevated concentrations of petroleum VOCs were detected above NYSDEC GWQS (i.e., up to 42,879 ug/L total VOCs) in the groundwater samples collected from the area of the former gasoline station and west of Tank Field 2. Additional investigation is required to delineate the extent of groundwater impacts.

- Based on the results of this investigation, the NYSDEC was notified and NY Spill No. 09-10758 was assigned to the Site. This report should be forwarded to the NYSDEC for review.

- Benchmark understands that the Site may be redeveloped with a new commercial facility. Consideration should be given to applying for the New York Brownfield Cleanup Program (BCP) prior to Site redevelopment.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of Delta Sonic. The contents of this report are limited to information available at the time of the site investigation activities and to data referenced herein, and assume all referenced information sources to be true and accurate. The findings herein may be relied upon only at the discretion of Delta Sonic. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering & Science, PLLC.

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

SUMMARY OF SOIL ANALYTICAL DATA
348 Langner Road, West Seneca, NY
Delta Sonic

PARAMETER	Sample Location								TAGM RSCOs[2]
	SB-01 (2-4)	SB-02 (2-4)	SB-03 (2-4)	SB-04 (2-4)	SB-05 (2-4)	SB-06 (4-6)	SB-07 (2-4)	SB-09 (2-4)	
NYSDEC STARS List VOCs (mg/kg)									
Benzene	ND	ND	ND	0.11	0.078 W1,J	ND	ND	ND	0.06
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	0.0027 J	10
sec-Butylbenzene	ND	ND	ND	0.034	0.65 W1	ND	ND	ND	10
Ethylbenzene	ND	ND	ND	21 D08, W1	25 W1,D08	ND	ND	ND	5.5
Isopropylbenzene	ND	ND	ND	0.19	1.6 W1	ND	ND	0.0014 J	2.3
p-Cymene	ND	ND	ND	0.016	0.45 W1	ND	ND	0.0021 J	"--"
n-Propylbenzene	ND	ND	ND	12 D08, W1	7.8 W1	ND	ND	0.0024 J	3.7
Toluene	0.0023 J	0.0033 J	ND	0.24	21 W1,D08	0.0014 J	ND	0.0012 J	1.5
o-Xylene	0.0011 J	ND	ND	43 D08, W1	42 W1,D08	ND	ND	ND	1.2
m-Xylene & p-Xylene	0.0033 J,B	0.0036 J,B	ND	120 D08, W1	110 W1,D08	0.0019 J,B	0.0017 J,B	0.002 J,B	2.4
Methyl tert butyl ether (MTBE)	ND	0.0038 J	ND	ND	ND	ND	ND	ND	0.12
1,2,4-Trimethylbenzene	0.0014 J	ND	ND	35 D08, W1	92 W1,D08	ND	0.0019 J	0.016	10
1,3,5-Trimethylbenzene	ND	ND	ND	120 D08, W1	31 W1,D08	ND	ND	ND	3.3
NYSDEC STARS LIST SVOCs (mg/kg)									
Acenaphthene	ND	ND	ND	ND	ND	ND	0.49 D12,J	ND	50
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	0.25 D12,J	ND	0.224
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	0.34 D12,J	ND	0.22
Chrysene	ND	ND	ND	ND	ND	ND	0.45 D12,J	ND	0.4
Fluoranthene	ND	ND	ND	ND	0.031 J	ND	ND	ND	50
Fluorene	ND	ND	ND	0.25 D10,J	ND	ND	0.98 D12,J	ND	50
Naphthalene	ND	ND	ND	11 D10	0.33	ND	ND	ND	13
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	50
Phenanthrene	ND	ND	ND	0.63 D10,J	0.039 J	ND	2.9 D12,J	0.58 D12,J	50
Pyrene	ND	ND	ND	0.35 D10,J	0.029 J	ND	ND	ND	50

Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per TAGM 4046 RSCOs.
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparison to RSCOs.

Definitions:
ND = Parameter not detected above laboratory detection limit.
"--" = No RSCO available.
J = Estimated value; result is less than the sample quantization limit but greater than zero.
B = Analyte was detected in the associated method blank.
D08 = Dillution required due to high concentration of target analyte(s).
D10 = Dilution Due to sample color.
D12 = Dilution required due to sample viscosity.
W1 = Sample was prepared and analyzed utilizing the medium level extraction.

Exceeds RSCO

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TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL DATA

348 Langner Road, West Seneca, NY
Delta Sonic

PARAMETER	Sample Location				Class GA Groundwater Quality Standards
	TMW-1	TMW-2	TMW-3	TMW-4	
TCL plus STARS LIST VOCs (ug/L)					
1,2,4-Trimethylbenzene	ND	2200 D08	3600 D08,P11	8.3	5
1,3,5-Trimethylbenzene	ND	690 D08	1100 D08,P11	2.8	5
1,2-Dichloroethane	ND	1.8 P11	ND	ND	5
2-Butanone	ND	12 P11	100	ND	50
Acetone	4.9 J	43 P11	200	6.7	50
Benzene	ND	150 D08	1000 D08,P11	0.52 J	1
Cyclohexane	ND	ND	1500 D08,P11	6.2	--
Ethylbenzene	ND	1300 D08	3200 D08,P11	3	5
Isopropylbenzene	ND	56 P11	76	ND	5
Methylcyclohexane	ND	33 P11	470 D08,P11	2.7	--
n-Propylbenzene	ND	210 D08	420 D08,P11	1.2	5
o-Xylene	ND	2800 D08	5200 D08,P11	4	5
p-Cymene	ND	3.3 P11	5.4	ND	5
m-Xylene & p-Xylene	ND	6100 D08	13000 D08,P11	11	10
sec-Butylbenzene	ND	6.3 P11	8	ND	5
Toluene	ND	220 D08	13000 D08,P11	3.5	5
Total VOCs (mg/L)	4.9	13825.4	42879.4	49.92	

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Class GA groundwater Quality Standards (GWQS).

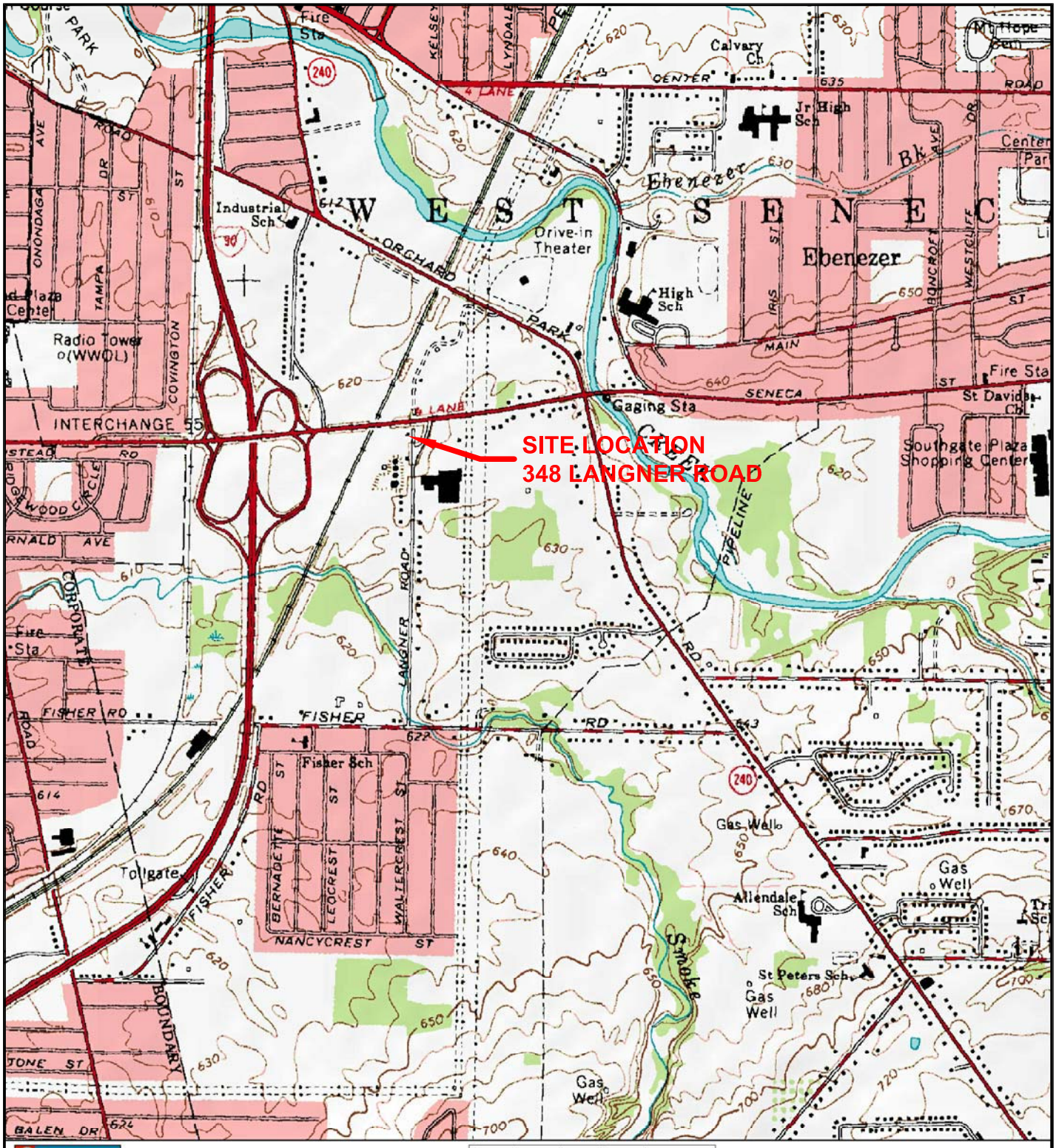
Definitions:

ND = Parameter not detected above laboratory detection limit.
"--" = No GWQS available.
J = Estimated value; result is less than the sample quantization limit but greater than zero.
P11= Sample was not sufficiently preserved at time of collection.
D08 = Dillution required due to high concentration of target analyte(s).

Exceeds RSCO

FIGURES

FIGURE 1



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PROJECT NO.: 0123-005-100

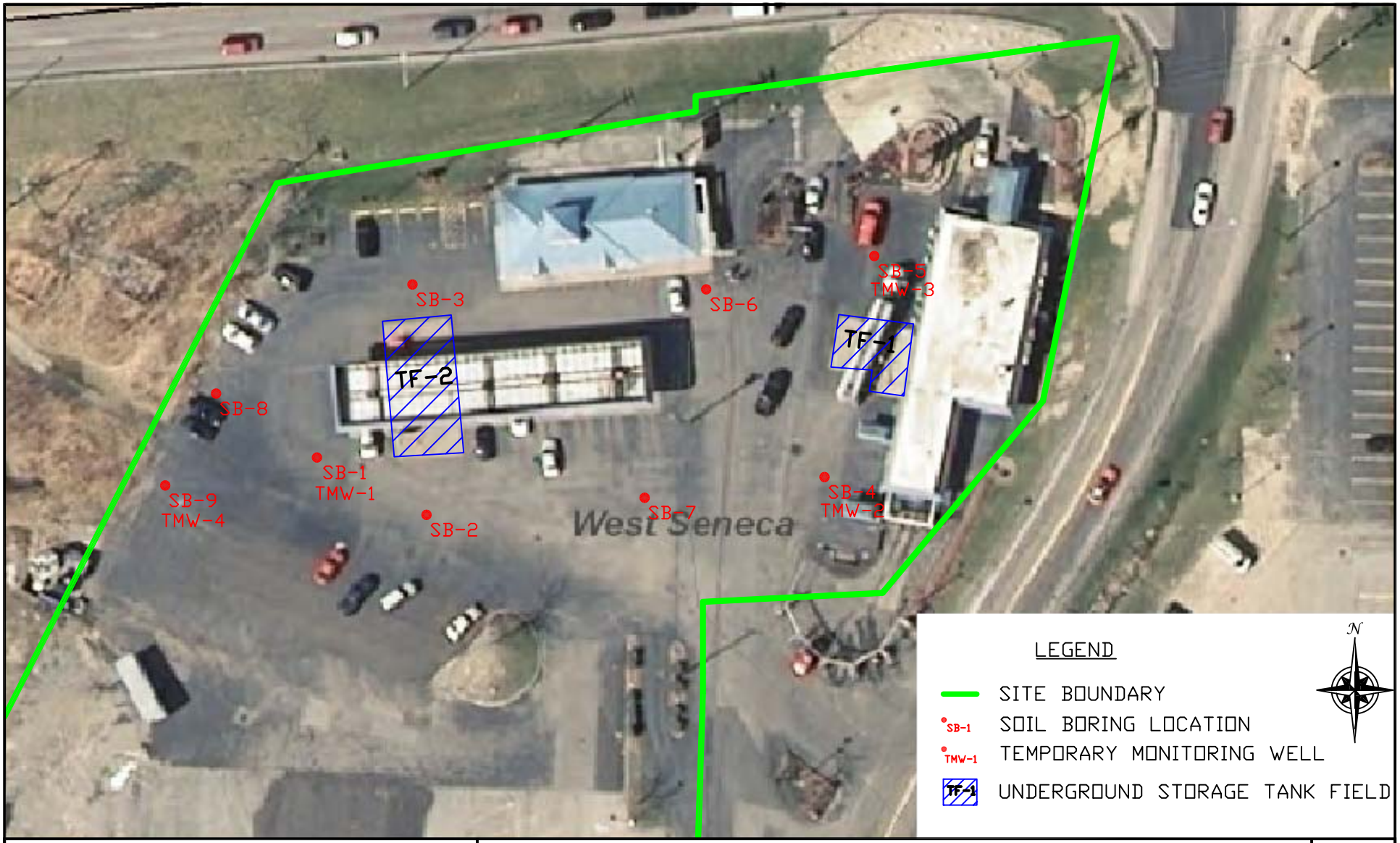
DATE: DECEMBER 2009

DRAFTED BY: JCT

SITE LOCATION AND VICINITY MAP

348 LANGNER ROAD

348 LANGNER ROAD
WEST SENECA, NEW YORK
PREPARED FOR
DELTA SONIC



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SITE PLAN

348 LANGNER ROAD

348 LANGNER ROAD
WEST SENECA, NEW YORK
PREPARED FOR
DELTA SONIC

FIGURE 2

ATTACHMENT 1

BORING LOGS AND WELL COMPLETION DETAILS

Project No: 0123-005-100

Borehole Number: SB - 1

Project: Delta Sonic Phase II

Client: Delta Sonic

Logged By: TAB

Site Location: 348 Langner Rd, West Seneca

Checked By: BCH

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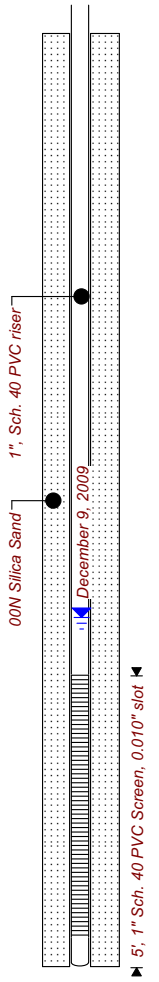
SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt and Subbase*** Black/grey non plastic fines, with fine to coarse sand and some coarse and fine gravel, dense, loose when disturbed.							
	-1.0 / 1.0	***Fill*** Black, moist to wet (3.0 fbgs) non plastic fines, some coarse sands, dense, with orange brick, slight sheen.	1		3.2		0.0		
	-3.0 / 3.0	***Silty Clay*** Brown, moist, medium to high plasticity fines, little sand , few coarse sand. very stiff, high plasticity.					0.0	STARS VOC & STARS SVOC	
	-4.0 / 4.0						0.0		
5.0		***Silty Clay*** As above, very stiff.	2		2.8		0.0		
	-8.0 / 8.0						0.0		
		Silty Clay As above, wet, few fine gravel, some fine sand, very stiff to soft,							
10.0			3		3.0		0.0		
	-11.0 / 11.0	***Till*** Grey, wet, masssive, fines with some fine sand, with few sub-rounded fine gravel's, soft, high plasticity,							
	-12.0 / 12.0						0.0		
		Till As above, brown.	4		1.0		0.0		
15.0									
	-16.0 / 16.0	End of Borehole							



Drilled By: Russo Development
Drill Rig Type: Geo-probe
Drill Method: Direct Push

Drill Date(s): 12/9/09

Hole Size: 2-inch
Stick-up: na
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0123-005-100

Borehole Number: SB -2

Project: Delta Sonic Phase II

Client: Delta Sonic

Logged By: TAB

Site Location: 348 Langner Rd, West Seneca

Checked By: BCH

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SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt and subbase*** Black/grey non plastic fines, with fine to coarse sand and some coarse and fine gravel, dense, loose when disturbed.							
	-1.0 1.0	***Fill*** Black moist to wet (3.0 fbgs) non-plastic fines, w/ some coarse sands, w/ orange brick, dense.	1		2.8				
	-3.0 3.0	***Silty Clay*** Brown, moist, silty clay, little sand , few coarse sand and fine gravel.							
	-4.0 4.0								
5.0		***Silty Clay*** As above very dense, high plasticity.	2		3.3				
	-8.0 8.0								
		Silty Clay As above few fine gravel, wet some fine sand.	3		3.1				
10.0	-11.0 11.0	***Till*** Grey, wet, high plasticity fines w/ some fine sand, few sub rounded fine gravel, soft.							
	-12.0 12.0								
		Till As above.	4		1.2				
15.0	-16.0 16.0	End of Borehole							
20.0									

December 9, 2009

Drilled By: Russo Development
Drill Rig Type: Geo-probe
Drill Method: Direct Push

Drill Date(s): 12/9/09

Hole Size: 2-inch
Stick-up: na
Datum: Mean Sea Level

Sheet: 1 of 1

Project No: 0123-005-100

Borehole Number: SB-3

Project: Delta Sonic Phase II

Client: Delta Sonic

Logged By: TAB

Site Location: 348 Langner Rd, West Seneca, NY

Checked By: BCH

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SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt and Subbase*** Black/grey non plastic fines, with fine to coarse sand and some coarse and fine gravel, dense, loose when disturbed.					0.0		
	-1.0 1.0	***Fill (reworked)*** Brown, moist, dense, non-plastic fines, some fine to coarse sands and fine to coarse gravels.	1		3.3		0.0	STARS VOC & STARS SVOC	
	-4.0 4.0	***Silty Clay*** Brown, moist, high plasticity fines, stiff.	2		.8		0.0		
5.0							0.0		
	-8.0 8.0	***Silty Clay*** As above, moist to wet w/ trace fine sand, very stiff.	3		3.5		0.0		▼ December 9, 2009
10.0							0.0		
	-11.0 11.0	***Till*** Grey, wet, high plasticity fines w/ some fine sand, with few sub rounded fine gravels, soft, high plasticity.					0.0		
	-12.0 12.0	***Till*** As above.	4		2.4		0.0		
15.0							0.0		
	-16.0 16.0	End of Borehole							
20.0									

Drilled By: Russo Development
Drill Rig Type: Geo-probe
Drill Method: Direct Push

Drill Date(s): 12/9/09

Hole Size: 2-inch
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 1