



December 12, 2016

Mr. Raphael Ketani
New York State Department of Environmental Conservation
Division of Environmental Remediation – Region 2
Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101-5407

**Re: NYSDEC Spill #95-00846
Speedway #7830
3904 Northern Boulevard
Long Island City, NY**

Dear Mr. Ketani:

Please find enclosed a Remedial Action Plan (RAP) for the above referenced location.

If you have any questions regarding this RAP, please do not hesitate to contact Matt Butler of Speedway at (732) 738-2924 or myself or Ed Russo at (631) 924-3001.

Sincerely,

A handwritten signature in blue ink that reads "Joseph Rennie".

Joseph Rennie
Project Manager

cc: Matt Butler (Speedway)

REMEDIAL ACTION PLAN

**Speedway # 7830
39-04 Northern Boulevard
Long Island City, New York**

NYSDEC Spill # 95-00846

December 2016

Prepared For:

Speedway LLC
500 Speedway Drive
Enon, OH 45323

Prepared By:

EnviroTrac Ltd.
5 Old Dock Road
Yaphank, New York 11980

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1. INTRODUCTION

Speedway LLC (Speedway) has retained EnviroTrac Ltd. (EnviroTrac) to prepare this Remedial Action Plan (RAP) for Speedway Station # 7830 located at 3904 Northern Boulevard, Long Island City, New York (the Site). This RAP is being prepared to address New York State Department of Environmental Conservation (NYSDEC) Spill # 95-00846.

2. SITE DESCRIPTION

2.1 Site Location

The Site is located on the southeastern corner of the intersection of Northern Blvd and 39th Street in Long Island City, New York. An Aerial Photograph of the site is included as **Figure 1**.

2.2 Hydrogeology and Site Geology

Groundwater at the site and surrounding area ranges from approximately 16 to 20 feet below grade surface with regional groundwater flow direction towards the west. A data table summarizing the historical groundwater elevation measurements is included in **Appendix A**. Based on observations made during earlier underground storage tank (UST) closure activities and subsurface investigations, the soil in the vicinity of the site consists of brown, fine to medium-grained sand with trace gravels. Based on historic subsurface investigations and well logs, a layer of cobbles and boulders exists between 10 and 40 feet below grade. A detailed description of geology encountered during soil boring and well installation activities is presented in the geologic logs provided as **Appendix B**.

2.3 Background

The Site is an active retail gasoline station selling regular, plus, and premium grades of unleaded gasoline only. Site structures include a convenience store, canopy, car wash and dispenser islands. A summary of historical site activities is provided below:

- **April 1995** – Impacted soils were encountered during a UST upgrade project. Four (4) 4,000-gallon, two (2) 2,000-gallon, and thirty-eight (38) 550-gallon steel gasoline and one (1) 1,000-gallon steel fuel-oil underground storage tanks (USTs) were removed. During this project, 846 tons of impacted soils were removed off site for disposal. NYSDEC Spill #95-00846 was assigned to the site. The closed UST system was replaced by a new UST system consisting of five (5) 4,000-gallon double-walled fiberglass gasoline USTs and one 600-gallon double-walled fiberglass waste water UST.
- **1996** – A subsurface investigation was conducted that included installation of monitoring wells (MW-1, MW-2, MW-3, and MW-4).
- **June 21, 2000** – Soil vapor extraction (SVE) and air sparge (AS) feasibility testing was performed.
- **August 15, 2000** – Two (2) monitoring wells (MW-5 and MW-6) were installed.
- **October 17, 18 and 19, 2001** – Five (5) sparge point wells (SP-1, SP-2, SP-3 and SP-4) and two (2) vapor point wells (VP-2 and VP-3).
- **October 31, 2001** – Geological Services Corporation (GSC) Submitted Remedial Action Plan and Specifications for Environmental Installation to the NYSDEC for operation of an AS/SVE Remediation System.
- **February 28, 2002** – A Stipulation Agreement was executed and during a 2002 station upgrade, 955 tons of soils were excavated. The station upgrade was witnessed by another consultant and the details of the upgrade are not available to EnviroTrac.
- **September 26, 2002** – An onsite AS/SVE system was installed and commenced operation.
- **February 10, 2006** – The AS/SVE system was shutdown with permission from the NYSDEC. The system had recovered an estimated 7,489 lbs. of cumulative petroleum hydrocarbons during operation.
- **August 4, 2006** – The Supplemental Remedial Action Plan (SRAP) to address residual dissolved liquid phase hydrocarbon impacts in the vicinity of MW-3 was approved by the NYSDEC.
- **November 2009 through March 2010** – Short Term Remediation Events (STREs) were conducted on selected monitoring wells.
- **April 5 through April 7, 2010** – Three (3) monitoring wells (MW-7, MW-8 and MW-9) and one (1) air sparge well (AS-1) were installed.

- **August 2 through August 20, 2013** – A subsurface investigation, which included the installation of two (2) AS wells (AS-2 and AS-3) and one (1) cluster well (CW-3) was completed.

2.4 Potential Sensitive Receptors

The Site is surrounded by commercial and retail properties. A subway line runs to the north of the property. The closest surface water body is the East River, which is approximately 1.5 miles northwest (down-gradient) of the site.

3. AREAS OF ADSORBED AND DISSOLVED HYDROCARBON IMPACT

3.1 Adsorbed Hydrocarbon Impact

In order to determine hydrocarbon impact to subsurface soil at the Site, geologic logs and soil sampling data from the installation of wells MW-7, MW-8, MW-9, and AS-1 were reviewed. Photo-ionization detector (PID) readings of soil samples collected during well installation activities ranged from 0.0 parts per million (ppm) in several wells, to 921 ppm (MW-9). Soil sampling data indicated volatile organic compounds (VOCs) above their respective NYSDEC soil cleanup objectives in samples collected from wells MW-7, MW-8, MW-9, and CW-3. Summaries of Soil Sampling Data are included in **Appendix A** and Geologic Logs and Well Construction Details are included in **Appendix B**.

3.2 Dissolved Hydrocarbon Impact

As illustrated in the Groundwater Gauging and Analytical Data table (**Appendix A**), dissolved hydrocarbon impact is present at the Site with significant concentrations only remaining in one on-site well (MW-9). Data from the most recent groundwater sampling event conducted on September 19, 2016 revealed benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations ranging from non-detect (ND) in wells MW-1, MW-3, MW-4, and MW-6 to 6,501.6 micrograms per liter ($\mu\text{g/L}$) in well MW-9. Methyl tertiary-butyl ether (MTBE) concentrations were found to be ND in all wells. Liquid-phase hydrocarbons (LPH) have never

been detected in any on-site monitoring wells. **Figure 2** includes groundwater sampling data from the last four (4) sampling events, including the September 19, 2016 event.

4. ENVIRONMENTAL DATABASE REPORT, DATED SEPTEMBER 4, 2015

An Environmental Database Report (ER) was ordered from Toxics Targeting on September 3, 2015 to address surrounding properties of the Speedway Station. According to the ER, there are five (5) Brownfields Sites within ½ mile from the Site, seven (7) Active Hazardous Spills within ½ mile of the Site. The ER is included in **Appendix C**. A list of sites within the ER that pose a threat to subsurface soil and groundwater quality in the vicinity of the Speedway Station includes:

- Standard Motor Products Building at 37-18 Northern Boulevard in Long Island City, located 408 feet to the South West of the Site is identified on several environmental databases (Air Discharge Site, Toxic Release Inventory Site, Hazardous Waste Generator/Transporter, Petroleum Bulk Storage Site, Chemical Bulk Storage Facility, Brownfields Site, and others). Spill # 9006846 was opened with the NYSDEC on September 21, 1990 as a result of an unknown amount of waste oil/used oil spilled. The spill was closed on October 15, 1990. Spill # 9509528 was opened with the NYSDEC on November 1, 1995 due to an unknown amount of #4 fuel oil was released. The spill was closed on March 23, 2004. Spill # 9900754 was opened with the NYSDEC on April 20, 1999, the material and quantity spilled was unknown and the spill was closed on June 11, 2002.
- Silver Star Motors Site at 37-14 36th Street in Long Island City, located 1,131 feet to the West of the Site is identified as a Brownfield's Site. Soil and groundwater have been impacted by VOCs and SVOCs as a result of former site usage. The site has had several owners and has historically operated as a gasoline service station, an automotive repair shop, a carwash and an automobile dealership. Spill # 0000726 was opened with the NYSDEC on April 18, 2000 and groundwater impacts at the site are currently being addressed.
- Levco Metals at 34-11 36th Street in Long Island City, located 1,830 feet to the North of the Speedway Station is identified as a Brownfield's Site. The site historically operated as a metal finishing facility for 30 years, with industrial operations ceasing in November 1990. Soils had been impacted by VOCs. On-site groundwater was impacted by VOCs

and an AS/SVE system operated from 2005-2007. Groundwater quality is currently underway on a semi-annual basis.

- Subway Station S/B Platform at 34-17 Northern Boulevard in Long Island City, located 1,566 feet to the West of the Site is identified on the Active Hazardous Spills database. A Shell Station located at 34-17 Northern Boulevard was identified as a possible source of petroleum impacts at the Subway Station and remediation is currently being addressed between the owner of the Shell Station (Bill Wolf Petroleum) and the NYC MTA.
- Kaufman-Astoria Film Studio Buildings at 34-41 36th Street and 34-44 36th Street in Long Island City, located 1,884 feet to the North of the Site is identified as a Brownfield's Site. The property was used for film/movie related activities including film storage, chemical mixing and lab production. There are three (3) Historic Closed Spills identified with this site. Spill # 0708563 was opened with the NYSDEC on November 6, 2007 as a result of eight (8) gallons of #6 fuel oil spilled, and the cause is listed as equipment failure. On December 31, 2010 five (5) gallons of #6 fuel oil were spilled for the same reason and on January 14, 2012 twenty (20) gallons of #6 fuel oil were spilled due to overfilling. The three (3) spills are listed as closed.
- Plaza 48 Shopping Center at 48th Street and Northern Boulevard in Long Island City, located 2,629 feet to the East of the Site is identified on the Hazardous Material Spills Database. On May 31, 1995 spill # 9502582 was opened with the NYSDEC as a result of twenty (20) gallons of diesel spilled. The spill was contained by the spiller and thus was closed on May 31, 1995.
- The Amtrak Sunnyside Yard at Northern Boulevard and Skillman Avenue in Long Island City, located 2,594 feet to the South West of the Speedway Station is listed in the Hazardous Material Spills Database. There are forty-eight (48) Hazardous Material Spills associated with this address. Several of the spills identified are open, and remediation is ongoing.

5. REMEDIAL PILOT TESTING

5.1 AS/SVE Pilot Test

To determine the feasibility of continuing to use SVE and in-situ AS technologies to remediate remaining soil and groundwater impacts at the Site, EnviroTrac conducted an AS/SVE pilot test on wells MW-9, CW-3, and AS-3 on September 20, 2016. SVE step tests were performed on wells MW-9 and CW-3. The step test procedures consisted of extracting soil vapors at different vacuums and flow rates utilizing a 3-horsepower (hp) vacuum blower. During testing, vacuum conditions were monitored at the test extraction well and vacuum responses were measured at the wellheads of nearby wells. These measurements were used to estimate the radius of influence (ROI) for the extraction well. ROI is the estimated distance in which soil vapor is captured by the extraction well. During each step, soil vapor discharge samples were collected in Tedlar sample bags and field-screened for VOCs using a PID. Due to the high vacuum and water being extracted from the well only a single step was performed on CW-3.

Following the SVE tests, AS field test procedures were conducted using a 2-hp air compressor connected to the air sparge well (AS-3 and CW-3AS). During testing, pressure and flow rates were measured at the test AS well while positive pressure and headspace PID readings in nearby wells were monitored. SVE effluent air samples were collected for laboratory analysis from wells MW-9 and CW-3 with and without the nearby air sparge well operating.

5.2 SVE Test Results

SVE field test data is provided in **Appendix D**. Maximum PID concentrations during SVE only testing ranged from 0.0 ppm (CW-3) to 8.3 ppm (MW-9). The ROI for the extraction test well MW-9 was estimated using the graphical approach. Pressure influence readings collected from the surrounding monitoring wells during testing were plotted as functions of distance from the extraction well on a semi-logarithmic scale. As shown in the graph found in **Appendix D**, a logarithmic trendline is drawn on the graph for each set of plotted points. Using the formula for the trendline, the radial distance where the vacuum response equals 0.10" H₂O is calculated and taken to be the ROI of the well at the corresponding extraction flow rate/wellhead vacuum. SVE ROI's for well MW-9 ranged from 15 feet to 37 feet at wellhead vacuums of 13" H₂O to 32" H₂O and flow rates of 31 to 88 standard cubic feet per minute (scfm). Based on the test results, the SVE ROI is estimated to be 30 ft. The proposed SVE remedial coverage is depicted in **Figure 4**.

5.3 AS Test Results

A summary of AS test results is provided in **Appendix D**. During each test pressure and flow readings were measured from the air sparge test well and pressure response and PID head space readings were measured from the surrounding observation wells. At AS-3, a breaking pressure of 11 pounds per square inch (psi), running pressure of 6 psi and flow rate of 12 cfm were observed. Head space PID concentrations increased in the wells surrounding AS-3 from 0.0 ppm before sparging to 1,330 ppm while sparging. BTEX and PID concentrations increased in the air extracted from MW-9 from 0.0 ppm and 1.9 ppm respectively without sparging to 386.7 ppm and 1,400 ppm respectively when sparging AS-3. At CW-3AS, a breaking pressure of 15 psi, running pressure of 8 psi and flow rate of 10 cfm were observed. Head space PID concentrations increased in the well CW-3 from 0.0 ppm before sparging to 90 ppm while sparging CW-3AS. BTEX and PID concentrations increased in the air extracted from CW-3 from 0.0 ppm and 0.0 ppm respectively without sparging to 105.1 ppm and 330 ppm respectively when sparging CW-3AS. Based upon this data and experience with similar sites, an estimated AS ROI of 15 feet was selected for remedial design purposes. The proposed AS remedial coverage is depicted in **Figure 4**.

6. REMEDIAL ACTION PLAN

Based on the results of site characterization activities, groundwater sampling, AS/SVE pilot testing, and historical data, it has been determined that adsorbed and dissolved hydrocarbon impacts are still present at the Site in the area of MW-9. A review of the ER and Sensitive Receptors in the area has indicated the presence of several Brownfields Sites and Active Hazardous Spills within ½ mile of the Site. The Site is surrounded by commercial and retail properties and drinking water is provided by municipal water services, thus there is no threat to drinking water.

Pilot test results indicate that AS/SVE would be an effective remedial technology to remove hydrocarbon mass from the subsurface from both the saturated and unsaturated zones. Positive results of the AS/SVE pilot testing and experience with similar projects for which AS/SVE

technology has been effective in the remediation of hydrocarbons under similar conditions confirm this approach as an effective remedial technology for the Site. EnviroTrac proposes to conduct short term remediation events (STREs) using AS/SVE technology. The STREs will be conducted once a month for a period of six (6) months. During each event air sparge will be operated on air sparge well AS-3 and soil vapor extraction will be performed on well MW-9 for a duration of 8-hrs.

6.1 Soil Vapor Extraction

Based on the results of SVE pilot testing, one (1) SVE well (MW-9) will be utilized during each remedial event. Based on the applied vacuum and air flow rates observed during SVE pilot testing, it is expected that an average SVE radius of influence of 30 feet can be achieved. The proposed ROI for the SVE remedial events is included in **Figure 3**. The average extraction flow rate from each well will be 80 cfm with an average wellhead vacuum of 30 in. w.c. The discharge stack will extend to 15-ft above grade.

6.2 Air Sparge

Based on the results of AS pilot testing, one (1) AS wells (AS-3) will be utilized during each remedial event. Air will be injected into the subsurface at a flow rate of 15-20 cfm at depths ranging from 10 to 12 feet below the water table. The AS component of the mobile remedial system will be operated to maintain a 15-foot radius of influence surrounding the sparge well. The AS/SVE layout allows for adequate overlapping of injection and vacuum extraction points, minimizing the possibility of fugitive vapor migration. The proposed ROI for the AS system is depicted in **Figure 3**. To ensure adequate coverage, the air sparge well will only be operated when the nearby SVE well is operating.

6.3 Proposed Remedial Equipment

A proposed process and instrumentation diagram of the mobile remediation trailer is provided as **Figure 4**. The remedial equipment necessary to conduct the STREs will likely include, but not be limited to:

- A regenerative blower for SVE (80 cfm @ 30”H20 vac);
- A moisture separator and particulate air filter;
- A rotary vane oil-less air compressor for AS (15 cfm @ 12 psi);
- Portable generator;
- Instrumentation; and
- Associated piping and fittings.

During every remediation event, the remedial wells will be surrounded by barricades to protect vehicular and pedestrian traffic. Ramps will be utilized to allow pedestrians to safely cross over AS and SVE hoses. A PID will be used before, during, and after testing to confirm 0.0 ppm PID readings inside the station's convenience store. If PID readings > 0.0 ppm are detected at any point, the STRE event will be shutdown.

7. OPERATION, MAINTENANCE AND MONITORING PLAN (OMMP)

During each STRE gauge readings (vacuum, flow, pressure) will be recorded and the SVE effluent air will be analyzed for volatile organic compounds (VOCs) using a photoionization detector (PID). Pressure/vacuum influence measurements will be collected from the surrounding observation wells.

Near the conclusion of the 1st event a sample will be collected for laboratory analysis of the air extracted from MW-9 and analyzed for BTEX and MTBE via EPA method TO-3. Laboratory results of the discharge sampling will be forwarded to the NYSDEC along with recommendations for future sampling and/or vapor treatment prior to the 2nd STRE.

8. SCHEDULE

Following approval of this RAP by the NYSDEC, Speedway will execute the following implementation schedule:

Action Item	Duration (Days)
NYSDEC approval of RAP	-

Begin Monthly STREs.	30 days from date of RAP approval
Evaluate need for additional remediation.	180 days from above

9. REPORTING

Quarterly update reports, which will summarize remedial event performance, work performed during the monitoring period, air effluent data, groundwater analytical data from the quarterly groundwater sampling events, and proposed action items, if any, will be submitted to the NYSDEC. The NYSDEC will be notified if any significant Site changes occur between reporting periods. After conducting the monthly events for six months an evaluation of groundwater and remedial event data will be conducted in order to determine the need for future events or other remedial activities to address any remaining impact.

AERIAL PHOTOGRAPH

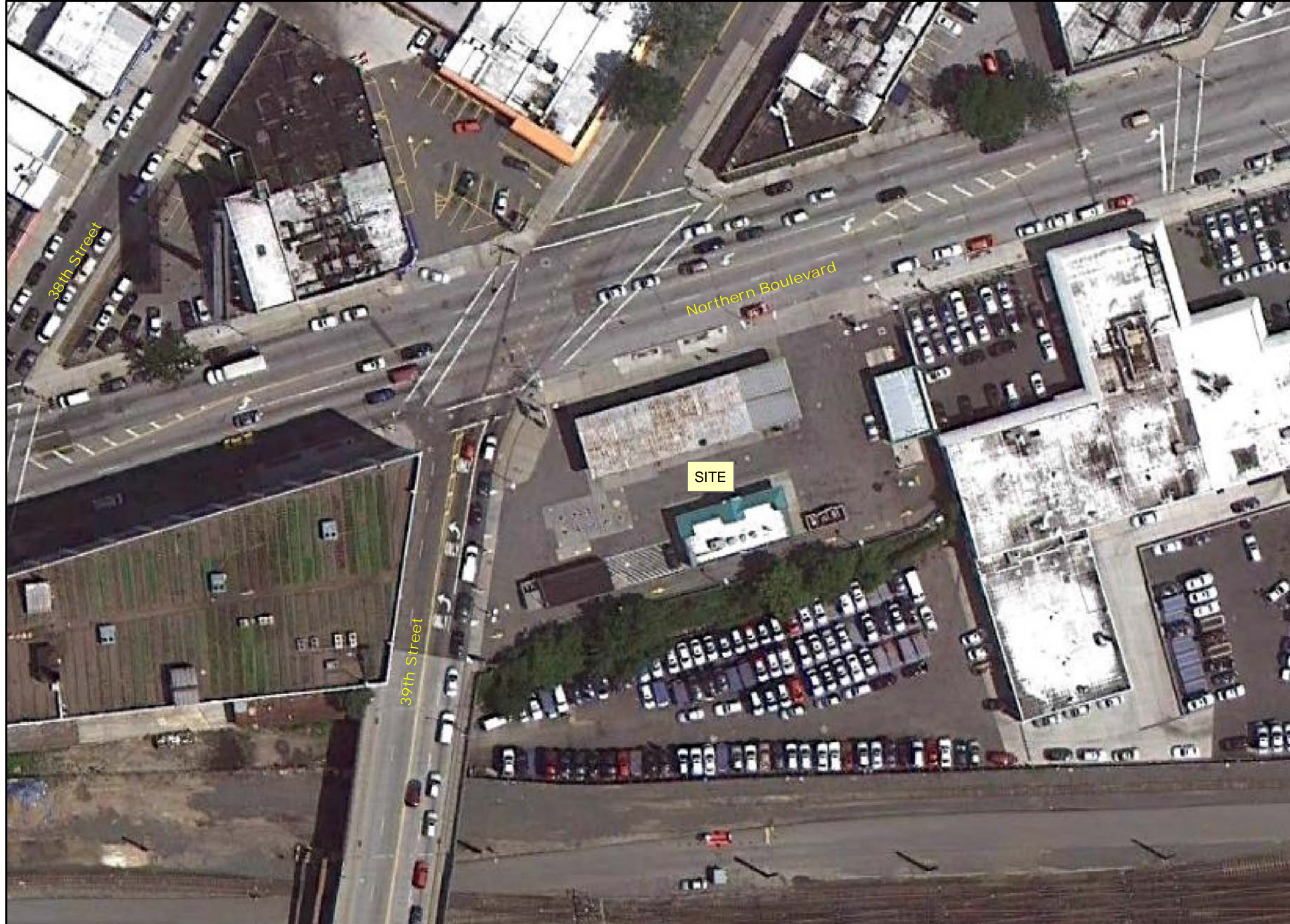
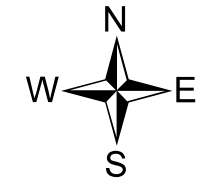


Figure 1
Aerial Photograph

39-04 Northern Boulevard
Long Island City, NY

Digital Imagery taken in 2010



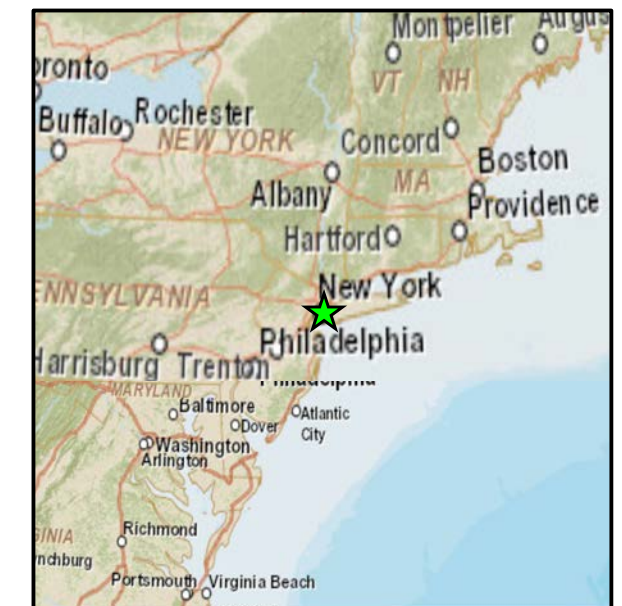
EnviroTrac

Environmental Services

5 Old Dock Road

Yaphank, NY 11980

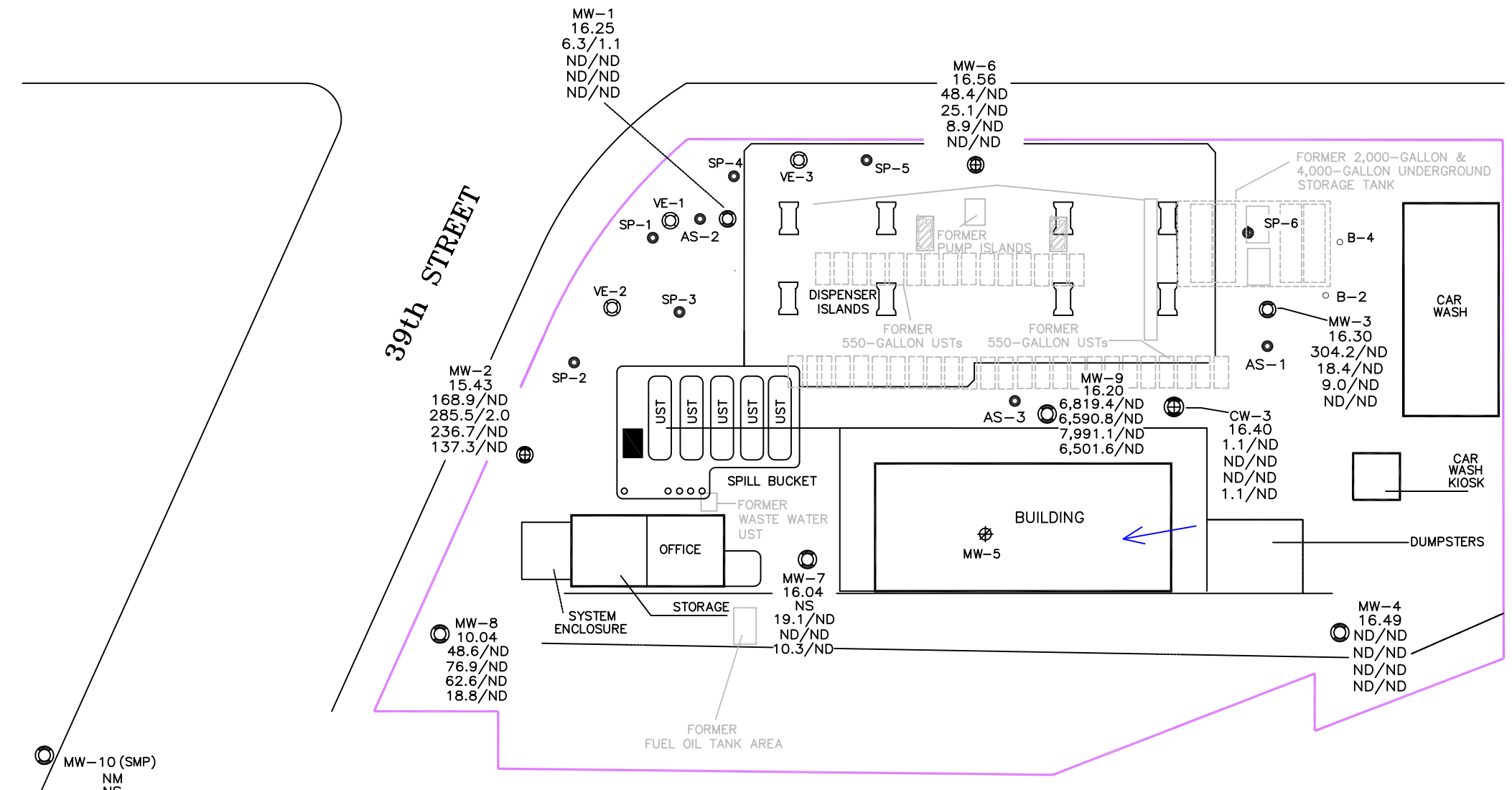
P: 631-924-3001 F: 631-924-5001





NORTHERN BOULEVARD

39th STREET



LEGEND:

- PROPERTY LINE
- MONITORING WELL
- AIR SPARGE WELL
- ⊙ SOIL VAPOR EXTRACTION WELL
- ⊕ MONITORING WELL AND VAPOR EXTRACTION WELL
- ⊗ DESTROYED WELL
- GREY FORMER SITE FEATURE
- SMP = STANDARD MOTOR PRODUCTS
- NM = NOT MEASURED
- NI = NOT INSTALLED
- ND = NOT DETECTED
- <MDL = LESS THAN METHOD OF DETECTION LIMIT
- J = ESTIMATED VALUE
- NSD = NO SURVEY DATA
- NS = NOT SAMPLED
- ← = HISTORIC GROUNDWATER FLOW DIRECTION

SAMPLE WELL:

○ MW-2 = MONITORING WELL ID
 15.43 = WATER-TABLE ELEVATION
 168.9/ND = DECEMBER 16, 2015
 285.5/2.0 = MARCH 1, 2016
 236.7/ND = JUNE 10, 2016
 137.3/ND = SEPTEMBER 19, 2016

TOTAL BTEX/MTBE CONCENTRATIONS IN ug/L

- FORMER 550-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 4,000-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 2,000-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 1,000-GALLON STEEL UNDERGROUND STORAGE TANK
- ▨ 550-GALLON TANK ABANDONED IN PLACE WITH CONCRETE
- 600-GALLON WASTE WATER DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
- 4,000-GALLON WASTE WATER DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK

Base map taken from DELTA map dated 1/24/08



REVISION DATE: NOVEMBER 14, 2016	SCALE: 1" = 30 FEET	REVISED BY: TB
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SPEEDWAY #7830
 39-04 NORTHERN BOULEVARD
 LONG ISLAND CITY, NEW YORK

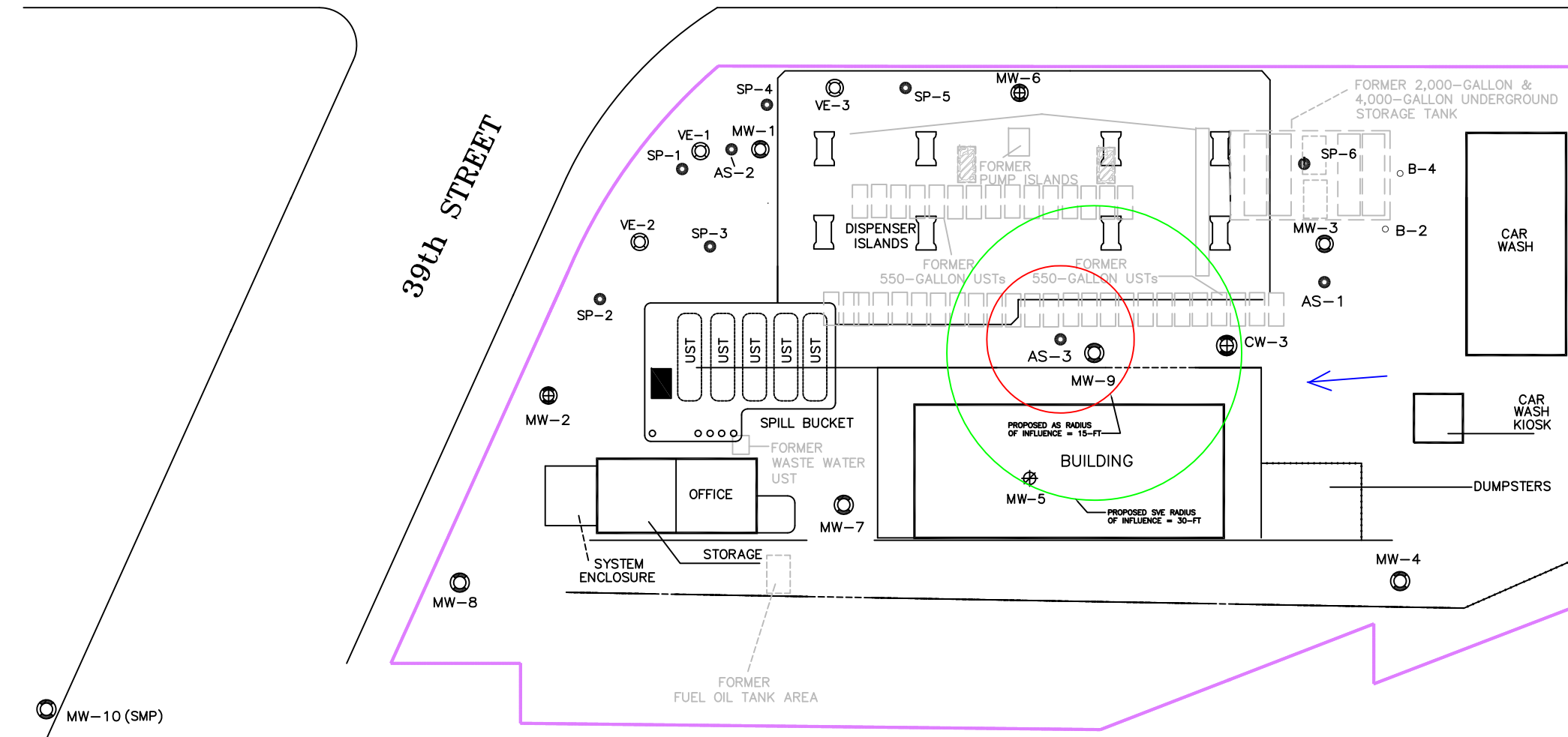
WATER TABLE ELEVATION ON SEPTEMBER 19, 2016
 AND TOTAL BTEX/MTBE CONCENTRATIONS MAP

FIGURE #
 2



NORTHERN BOULEVARD

39th STREET



- LEGEND:**
- PROPERTY LINE
 - MONITORING WELL
 - AIR SPARGE WELL
 - ⊙ SOIL VAPOR EXTRACTION WELL
 - ⊕ MONITORING WELL AND VAPOR EXTRACTION WELL
 - ⊗ DESTROYED WELL
 - GREY FORMER SITE FEATURE
 - SMP = STANDARD MOTOR PRODUCTS
 - ← = HISTORIC GROUNDWATER FLOW DIRECTION
- SAMPLE WELL:**
- MW-2 = MONITORING WELL ID

Base map taken from DELTA map dated 1/24/08

- FORMER 550-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 4,000-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 2,000-GALLON STEEL UNDERGROUND STORAGE TANK
- FORMER 1,000-GALLON STEEL UNDERGROUND STORAGE TANK
- ▨ 550-GALLON TANK ABANDONED IN PLACE WITH CONCRETE
- 600-GALLON WASTE WATER DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
- 4,000-GALLON WASTE WATER DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK



0 15 FT 30

REVISION DATE: DECEMBER 6, 2016

SCALE: 1" = 30 FEET

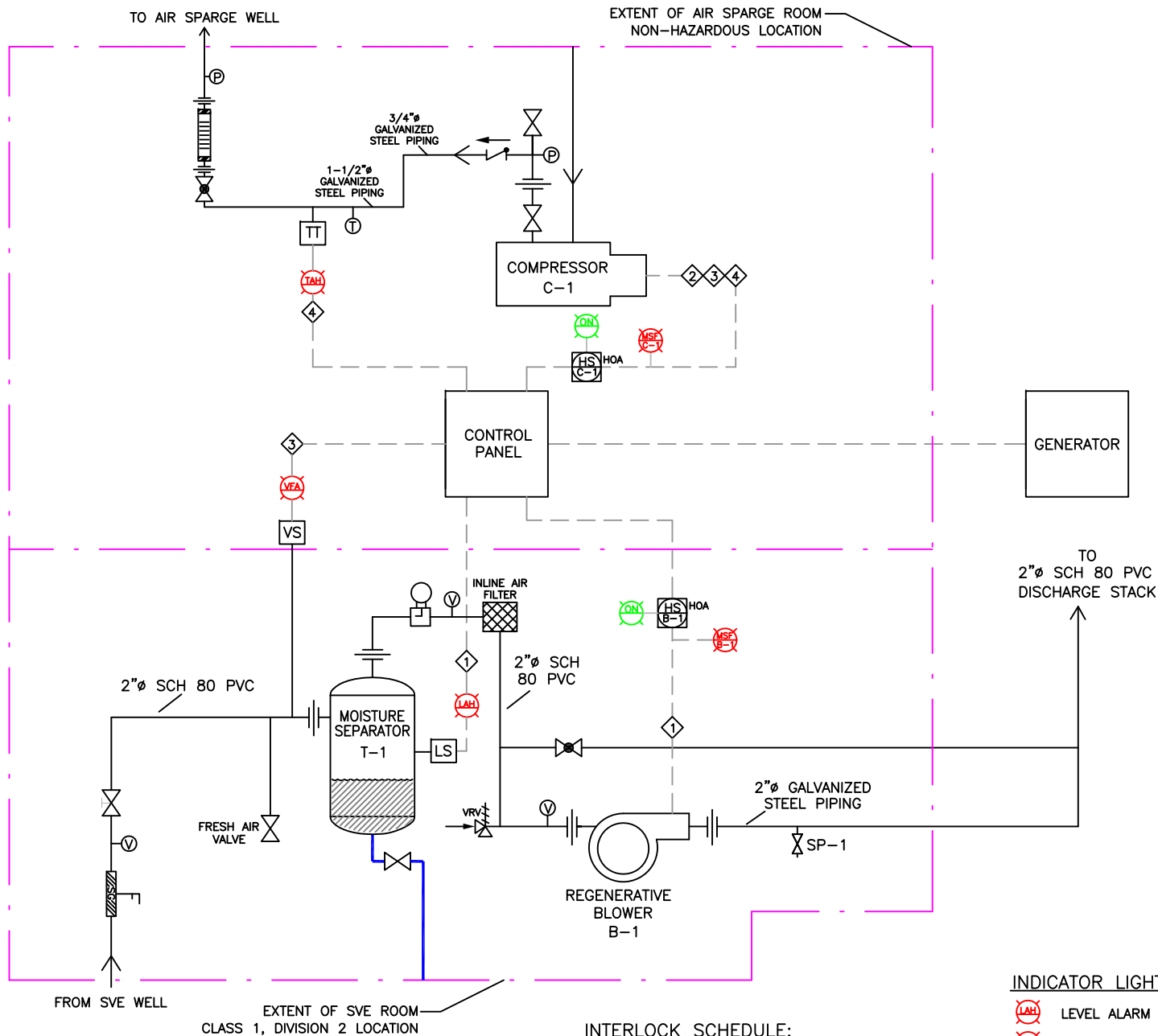
REVISED BY: JW



SPEEDWAY #7830
39-04 NORTHERN BOULEVARD
LONG ISLAND CITY, NEW YORK

SITE PLAN WITH PROPOSED
REMEDIAL COVERAGE

FIGURE #
3



SYSTEM LEGEND:

- VACUUM GAUGE
- TEMPERATURE GAUGE
- PRESSURE GAUGE
- VENTURI FLOW METER
- ROTAMETER FLOW METER
- LEVEL SWITCH
- TEMPERATURE SWITCH
- VACUUM SWITCH
- BALL VALVE
- GLOBE VALVE
- GATE VALVE
- SAMPLE PORT
- VACUUM RELIEF VALVE
- CHECK VALVE
- FLOW/ANEMOMETER PORT
- SIGHT GLASS
- UNION
- HAND SWITCH PANEL MOUNTED
- CONTROL PANEL INDICATOR LIGHT
- CONTROL PANEL INTERLOCK
- ELECTRIC LINE
- AIR FLOW DIRECTION
- CONDENSATE WATER FLOW DIRECTION
- ENCLOSURE LIMITS

DRAWN/REVISED BY: JW
 REVISION DATE: DEC. 5, 2016
 FIGURE: 4

DRAWING TITLE
 AIR SPARGE/SOIL VAPOR EXTRACTION
 STRE SYSTEM PROCESS AND
 INSTRUMENTATION DIAGRAM

PREPARED FOR

 SPEEDWAY STATION #7830
 39-04 NORTHERN BOULEVARD
 LONG ISLAND CITY, NEW YORK

INDICATOR LIGHT INDEX:

- LEVEL ALARM HIGH
- TEMPERATURE ALARM HIGH
- VACUUM ALARM
- MOTOR STARTER FAILURE
- MOTOR RUN INDICATOR

INTERLOCK SCHEDULE:

- HIGH LEVEL IN T-1 - SHUT DOWN B-1.
- INTERLOCK C-1 TO RUN ONLY WHEN B-1 IS OPERATING.
- LOW VACUUM ON SVE MANIFOLD - SHUT DOWN C-1.
- HIGH TEMPERATURE - SHUT DOWN C-1.

NOTES:
 BLOWER: ROTRON MODEL NO: EN505AX58ML (2 HP, 1 PH, XP)
 COMPRESSOR: ORION MODEL NO: KRX6-SS-1501-G3 (2 HP, 1 PH, TEFC)

Appendix A – Data Tables

TABLE 1
Well Gauging and Groundwater Analytical Data
3904 Northern Boulevard
Long Island City, NY

Well ID (Screen Zone)	Date	Gauge Point Elevation (feet)	Depth to Water (fbg)	Depth to Product (fbg)	Product Thickness (feet)	Relative GW Elevation (feet)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)
MW-1 (13-28')	10/11/96 a	100.27	13.94			86.33	63.7	276	83.7	594	1,017.4	288
	1/14/1997	100.27	13.76			86.51	10.9	16	13.1	86.5	127	160
	4/1/1997	100.27	14.17			86.10	19.9	40.3	21.6	118	200	179
	7/9/1997	100.27	13.84			86.43	106	162	68.9	759	1,096	810
	10/14/1997	100.27	13.70			86.57	195	341	87.8	1,880	2,504	1,220
	1/6/1998	100.27	13.87			86.40	41.5	120	111	611	884	140
	4/8/1998	100.27	13.99			86.28	27.5	18.4	29.1	124	199	541
	7/22/1998	100.27	13.77			86.50	44.7	41.3	63.8	499	649	272
	10/16/1998	100.27	13.39			86.88	222	267	317	1,570	2,376	782
	2/1/1999	100.27	13.43			86.84	52.9	92	160	1,120	1,425	117
	6/7/1999	100.27	13.19			87.08	480	860	140	5,000	6,480	1,500
	10/18/1999	100.27	13.19			87.08	3,400	11,000	570	4,500	19,470	200,000
	2/2/2000	100.27	13.04			87.23	1,000	6,300	1,200	5,000	13,500	31,000
	06/20/00 c	100.27	13.44			86.83	5,200	17,000	640	7,400	30,240	270,000
	9/8/2000	100.27	18.33			81.94	2,100	6,700	530	3,600	12,930	130,000
	10/12/2000	100.27	18.43			81.84	4,900	17,000	1,300	10,000	33,200	230,000
	2/13/2001	100.27	18.35			81.92	2,600	4,900	<1000	4,400	11,900	75,000
	6/13/2001	100.27	18.11			82.16	5,100	17,000	1,200	10,000	33,300	150,000
	10/17/01 b	100.27	18.10			82.17	5,800	21,000	1,100	9,400	37,300	170,000
	2/5/2002	100.27	18.46			81.81	39	120	6.50	140	306	900
	6/4/2002	100.27	18.46			81.81	170	160	22.00	330	682	17,000
	10/17/2002	100.27	17.62			82.65	8.6	5.7	10.00	22.80	47	260
	2/14/2003	100.27	18.15			82.12	340	600	500	1,800	3,240	1,200
	6/30/2003	100.27	17.45			82.82	13.0	<10	<10	<20	13.0	500
	10/17/2003	100.27	17.80			82.47	<1	<1	1.4	2.2	4.0	3.3
	2/12/2004	100.27	23.03			77.24	1.9	<1	<1	<2	2.0	12
	6/16/2004	100.27	17.98			82.29	3.1	<1	1.1	<2	4.0	23
	10/7/2004	100.27	17.54			82.73	<1	<1	<1	<2	ND	<1
	2/28/2005	100.27	17.89			82.38	1.9	<1	<1	<2	1.9	1.5
	6/17/2005	100.27	17.38			82.89	<1	<1	<1	<2	ND	3.24
	10/10/2005	100.27	17.74			82.53	<1	<1	<1	<2	ND	<1
	2/20/2006	100.27	17.64			82.63	4.3	<1	<1	<1	4.3	2.6
	5/8/2006	100.27	17.81			82.46	18.1	<1	0.47 J	<1	19	6.1
	8/30/2006	100.27	17.22			83.05	<1	<1	<1	<1	ND	1.0
	12/29/2006	100.27	17.61			82.66	<1	<1	<1	<3	ND	<1
	2/22/2007	100.27	18.02			82.25	16	<1	<1	<3	16	53
	5/12/2007	100.27	17.36			82.91	55	<1	<1	<3	55	<1
	9/10/2007	100.27	NM			NM	NS	NS	NS	NS	NS	NS
	12/21/2007	100.27	17.70			82.57	<1	<1	<1	<3	ND	1.3
	3/24/2008	100.27	NM			NM	NS	NS	NS	NS	NS	NS
	06/30/08	100.27	17.23			83.04	479	89.1	1,050	3,680	5,298.1	77.5
	09/10/08	100.27	17.40			82.87	NS	NS	NS	NS	NS	NS
	12/17/08	100.27	17.50			82.77	108	1.2	ND	1.1	110	3.0
	03/23/09	100.27	18.10			82.17	ND	ND	ND	ND	ND	1.7
	06/04/09	100.27	17.79			82.48	5.8	ND	ND	ND	5.8	4.2
	09/22/09	100.27	17.63			82.64	33.6	0.32 J	0.91 J	ND	34.83 J	10.3
	12/29/09	100.27	17.49			82.78	0.52 J	ND	ND	ND	0.52 J	2.9
	03/31/10	100.27	16.70			83.57	ND	ND	ND	ND	ND	5.9
	06/22/10	100.27	17.59			82.68	ND	ND	ND	ND	ND	1.3
	09/23/10	100.27	17.97			82.30	4.2	ND	ND	ND	4.2	2.8
	12/16/10	100.27	18.05			82.22	4.6	ND	2.6	2.9	10.1	1.5
	03/22/11	100.27	17.51			82.76	15.8	ND	ND	ND	15.8	2.9
	06/27/11	100.27	17.68			82.59	ND	ND	ND	ND	ND	1.2
	09/27/11	100.27	16.95			83.32	ND	ND	ND	ND	ND	0.71 J
	12/20/11	100.27	17.26			83.01	ND	ND	ND	ND	ND	ND
	03/27/12	100.27	17.92			82.35	ND	ND	ND	ND	ND	0.72 J
	06/27/12	100.27	17.61			82.66	ND	ND	ND	ND	ND	0.48 J
	09/27/12	100.27	17.72			82.55	ND	ND	ND	ND	ND	ND
	12/20/12	100.27	17.86			82.41	ND	ND	ND	ND	ND	0.38 J
	03/25/13	100.27	17.69			82.58	13.9	0.31 J	0.84 J	1.8	16.85 J	0.95 J
	06/24/13	100.27	17.38			82.89	0.77 J	ND	ND	ND	0.77 J	1.4
	09/24/13	100.27	17.73			82.54	0.75 J	ND	0.53 J	0.33 J	1.61 J	0.64 J
	12/18/13	100.27	17.82			82.45	ND	ND	ND	ND	ND	0.65 J
	03/27/14	100.27	17.71			82.56	ND	ND	ND	ND	ND	0.84 J
	06/17/14	100.27	17.07			83.20	3.5	ND	ND	ND	3.5	1.3
	09/30/14	100.27	17.76			82.51	ND	ND	ND	ND	ND	0.30 J
	12/18/14	100.27	17.31			82.96	302	49.0	28.6	49.0	428.6	ND
	03/18/15	34.69	17.33			17.36	ND	ND	ND	ND	ND	ND
	06/18/15	34.69	17.40			17.29	ND	ND	ND	ND	ND	ND
	09/24/15	34.69	18.96			15.73	246	6.9	38.0	24.5	315.4	19.6
	12/16/15	34.69	18.56			16.13	3.0	ND	3.3	ND	6.3	1.1
	03/01/16	34.69	17.74			16.95	ND	ND	ND	ND	ND	ND
	06/10/16	34.69	18.02			16.67	ND	ND	ND	ND	ND	ND
	09/19/16	34.69	18.44			16.25	ND	ND	ND	ND	ND	ND

TABLE 1
Well Gauging and Groundwater Analytical Data
3904 Northern Boulevard
Long Island City, NY

Well ID (Screen Zone)	Date	Gauge Point Elevation (feet)	Depth to Water (fbg)	Depth to Product (fbg)	Product Thickness (feet)	Relative GW Elevation (feet)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)
MW-3 (9-24')	10/11/96 ac	100.02	14.36			85.66	491	9,490	3,770	17,100	30,851	2,870
	1/14/1997	100.02	14.20			85.82	99.9	6,780	3,650	16,500	27,030	965
	4/1/1997	100.02	14.38			85.64	87	5,390	4,060	15,500	25,037	1,370
	7/9/1997	100.02	14.19			85.83	94.3	5,180	4,860	17,500	27,634	295
	10/14/1997	100.02	14.10			85.92	<50	6,850	5,640	22,600	35,090	83
	01/6/98 b	100.02	14.33			85.69	89.8	4,970	5,570	24,000	34,629.8	<50
	4/8/1998	100.02	14.49			85.53	26.1	2,940	6,180	20,240	29,386	402
	7/22/1998	100.02	14.26			85.76	19.9	2,330	5,130	19,910	27,390	<100
	10/16/1998	100.02	13.81			86.21	<25	1,600	4,200	16,120	21,920	1,190
	2/1/1999	100.02	13.86			86.16	<25	996	4,730	20,960	26,686	<25
	6/7/1999	100.02	13.61			86.41	<50	550	5,200	21,000	26,750	<100
	10/18/1999	100.02	13.61			86.41	7.3	970	6,100	25,000	32,077	21
	2/2/2000	100.02	13.46			86.56	6	930	6,400	24,000	31,336	14
	6/20/2000	100.02	13.91			86.11	<5	350	4,700	18,000	23,050	13
	9/8/2000	100.02	17.74			82.28	<5	110	3,800	12,000	15,910	<10
	10/12/2000	100.02	17.81			82.21	3.9	280	4,900	16,000	21,184	12
	2/13/2001	100.02	17.75			82.27	10	180	5,100	16,000	21,290	23
	6/13/2001	100.02	17.46			82.56	3	100	4,500	13,000	17,603	6
	10/17/2001	100.02	17.49			82.53	<50	<50	2,100	3,050	5,150	130
	2/5/2002	100.02	17.87			82.15	1.3	8.5	2,400	3,430	5,840	<1.0
	6/4/2002	100.02	17.80			82.22	<50	<50	2,700	9,550	12,250	510
	10/17/2002	100.02	16.94			83.08	<50	<50	1,700	6,030	7,730	<50
	2/14/2003	100.02	17.55			82.47	<20	<20	2,700	8,990	11,690	31
	6/30/2003	100.02	16.75			83.27	<5	<5	250	420	670	<5
	10/17/2003	100.02	17.10			82.92	<1	<1	3.20	53.7	57	1.10
	2/12/2004	100.02	17.02			83.00	<2	3.2	1,600	5,290	6,893	7.8
	6/16/2004	100.02	17.35			82.67	<10	<10	960	1,066	2,026	<10
	10/7/2004	100.02	16.83			83.19	<1	<1	56	132	188	<1
	2/28/2005	100.02	17.25			82.77	<1	<1	270	119	389	3.2
	6/17/2005	100.02	16.84			83.18	<5	<5	357	694	1,051	<5
	10/10/2005	100.02	17.20			82.82	<5	<5	406	176	582	<5
	2/20/2006	100.02	17.09			82.93	<5	2.20 J	1,290	2,450	3,742	<5
	5/8/2006	100.02	17.12			82.90	<5	<5	1,490	2,560	4,050	<5
	8/30/2006	100.02	16.62			83.40	<1	0.47 J	124	35	159	<1
	12/29/2006	100.02	16.94			83.08	<1	<1	130	31	161	<1
	2/22/2007	100.02	17.34			82.68	<1	<1	91	85	176	<1
	5/12/2007	100.02	16.64			83.38	<1	<1	1.2	<3	1.2	<1
	9/10/2007	100.02	18.10			81.92	<1	<1	1.5	<3	1.5	<1
	12/21/2007	100.02	16.93			83.09	<2.5	<2.5	110	31	141	<2.5
	3/24/2008	100.02	16.83			83.19	<1	<1	5.9	5.7	11.5	<1.0
	06/30/08	100.02	16.91			83.11	829	534	182	1,060	2,605	105
	09/10/08	100.02	16.71			83.31	ND	0.64 J	107	88.0	195.64 J	ND
	12/17/08	100.02	16.86			83.16	0.26 J	0.88 J	130	137	268 J	ND
	03/23/09	100.02	17.46			82.56	ND	ND	229	25	253.7	ND
	06/04/09	100.02	17.18			82.84	ND	ND	36	2.9	39.1	ND
	09/22/09	100.02	17.16			82.86	ND	ND	4.8	5.0	9.8	ND
	12/29/09	100.02	16.77			83.25	ND	1.2	120	280	401.2	ND
	03/31/10	100.02	16.23			83.79	11.2	40.8	231	338	621.0	0.89 J
	06/22/10	100.02	16.95			83.07	ND	ND	22.7	54.4	77.1	ND
	09/23/10	100.02	17.83			82.19	ND	ND	ND	ND	ND	ND
	12/16/10	100.02	17.28			82.74	ND	7.1	442	848	1,297.1	ND
	03/22/11	100.02	16.85			83.17	ND	ND	1.3	0.86 J	2.16 J	ND
06/27/11	100.02	17.12			82.90	ND	0.48 J	32.4	13.9	46.78 J	ND	
09/27/11	100.02	16.39			83.63	ND	ND	ND	ND	ND	ND	
12/20/11	100.02	16.87			83.15	ND	ND	ND	ND	ND	ND	
03/27/12	100.02	17.36			82.66	ND	0.28 J	19.1	1.3	20.68 J	ND	
06/27/12	100.02	17.11			82.91	ND	0.65 J	16.3	6.4	23.35 J	ND	
09/27/12	100.02	17.17			82.85	0.45 J	2.6	35.3	22.2	60.55 J	ND	
12/20/12	100.02	17.26			82.76	ND	1.1	28.4	28.0	57.5	ND	
03/25/13	100.02	17.09			82.93	ND	ND	ND	ND	ND	0.21 J	
06/24/13	100.02	16.72			83.30	ND	ND	ND	ND	ND	ND	
09/24/13	100.02	17.20			82.82	ND	1.0	22.1	14.8	37.9	ND	
12/18/13	100.02	17.24			82.78	ND	2.9	42.3	49.2	94.4	ND	
03/27/14	100.02	17.20			82.82	ND	ND	2.9	1.7	4.6	ND	
06/17/14	100.02	16.51			83.51	ND	ND	ND	ND	ND	ND	
09/30/14	100.02	17.34			82.68	ND	ND	0.31 J	ND	0.31 J	ND	
12/18/14	100.02	16.72			83.30	ND	ND	ND	ND	ND	ND	
03/18/15	34.84	17.16			17.68	ND	ND	ND	ND	ND	ND	
06/18/15	34.84	16.48			18.36	ND	ND	2.4	ND	2.4	ND	
09/24/15	34.84	18.18			16.66	ND	2.4	48.7	32.9	84.0	ND	
12/16/15	34.84	17.98			16.86	ND	4.2	164	136	304.2	ND	
03/01/16	34.84	17.12			17.72	ND	1.7	8.4	8.3	18.4	ND	
06/10/16	34.84	17.42			17.42	ND	ND	9.0	ND	9.0	ND	
09/19/16	34.84	18.54			16.30	ND	ND	ND	ND	ND	ND	

TABLE 1
Well Gauging and Groundwater Analytical Data
3904 Northern Boulevard
Long Island City, NY

Well ID (Screen Zone)	Date	Gauge Point Elevation (feet)	Depth to Water (fbg)	Depth to Product (fbg)	Product Thickness (feet)	Relative GW Elevation (feet)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)
MW-4 (9-25')	10/11/96 a	100.62	14.38			86.24	<0.5	<0.5	<0.5	0.54	0.54	1.59
	1/14/1997	100.62	14.19			86.43	<0.5	10.3	8.02	37	55	0.52
	4/1/1997	100.62	14.53			86.09	<0.5	4.04	3.92	15.4	23.36	14.3
	7/9/1997	100.62	14.18			86.44	<0.5	<0.5	<0.5	<0.5	ND	<0.5
	10/14/1997	100.62	14.05			86.57	<0.5	<0.5	<0.5	<0.5	ND	<0.5
	1/6/1998	100.62	14.31			86.31	<0.5	1.89	2.61	14.2	19	0.75
	4/8/1998	100.62	14.51			86.11	1.94	0.75	1.71	6.0	10	0.97
	7/22/1998	100.62	14.27			86.35	ND	ND	ND	ND	ND	ND
	10/16/1998	100.62	13.82			86.80	ND	ND	ND	ND	ND	7.8
	2/1/1999	100.62	13.87			86.75	ND	ND	ND	ND	ND	1.04
	6/7/1999	100.62	13.57			87.05	ND	ND	ND	ND	ND	ND
	10/18/1999	100.62	13.62			87.00	ND	ND	4.8	19	24	ND
	2/2/2000	100.62	13.44			87.18	ND	ND	ND	ND	ND	ND
	6/20/2000	100.62	13.92			86.70	ND	ND	1.1	4.3	5	ND
	9/8/2000	100.62	18.25			82.37	<0.5	<1	<1	<1	ND	<1
	10/12/2000	100.62	18.31			82.31	ND	2.8	3.8	11	18.0	4.7
	2/13/2001	100.62	18.20			82.42	<0.5	<1	<1	<1	ND	<1
	6/13/2001	100.62	17.92			82.70	<0.5	<1	<1	<1	ND	<1
	10/17/2001	100.62	17.99			82.63	<1	<1	<1	<1	ND	<1
	2/5/2002	100.62	18.41			82.21	<1	<1	<1	<2	ND	1.4
	6/4/2002	100.62	18.35			82.27	<1	<1	<1	<2	ND	7.2
	10/17/2002	100.62	17.43			83.19	<1	<1	<1	<2	ND	2.2
	2/14/2003	100.62	18.10			82.52	<1	<1	<1	<2	ND	1.6
	6/30/2003	100.62	17.27			83.35	<1	<1	<1	<2	ND	<1
	10/17/2003	100.62	17.70			82.92	<1	<1	<1	<2	ND	<1
	2/12/2004	100.62	17.56			83.06	<1	<1	<1	<2	ND	3.3
	06/16/04 c	100.62	17.86			82.76	4.4	1.6	<1	<2	6.0	62
	10/7/2004	100.62	17.37			83.25	<1	<1	<1	<2	ND	6.4
	2/28/2005	100.62	17.82			82.80	<1	<1	<1	<2	ND	7.8
	6/17/2005	100.62	17.30			83.32	<1	<1	<1	<2	ND	1.59
	10/10/2005	100.62	17.73			82.89	<1	<1	<1	<2	ND	<1
	2/20/2006	100.62	17.59			83.03	<1	<1	<1	<1	ND	0.77 J
	5/8/2006	100.62	17.66			82.96	<1	<1	<1	<1	ND	0.67
	8/30/2006	100.62	17.11			83.51	<1	<1	<1	<1	ND	<1
	12/29/2006	100.62	17.48			83.14	<1	<1	<1	<3	ND	<1
	2/22/2007	100.62	17.89			82.73	<1	<1	<1	<3	ND	<1
	5/12/2007	100.62	17.19			83.43	<1	<1	<1	<3	ND	<1
	9/10/2007	100.62	NM			NM	NS	NS	NS	NS	NS	NS
	12/21/2007	100.62	17.51			83.11	<1	<1	<1	<3	ND	<1
	03/24/08	100.62	NM			NM	NS	NS	NS	NS	NS	NS
	06/30/08 b	100.62	16.90			83.72	<1.0	0.52 J	47.9	24.8	73.22 J	ND
	09/10/08	100.62	NM			NM	NS	NS	NS	NS	NS	NS
	12/17/08	100.62	17.36			83.26	ND	0.22 J	ND	ND	0.22 J	ND
	03/23/09	100.62	18.03			82.59	ND	ND	ND	ND	ND	ND
	06/04/09	100.62	17.70			82.92	ND	ND	ND	ND	ND	ND
	09/22/09	100.62	17.73			82.89	ND	ND	ND	ND	ND	ND
	12/29/09	100.62	17.26			83.36	ND	ND	ND	ND	ND	ND
03/31/10	100.62	16.36			84.26	ND	ND	ND	ND	ND	ND	
06/22/10	100.62	17.52			83.10	ND	ND	ND	ND	ND	ND	
09/23/10	100.62	17.87			82.75	ND	ND	ND	ND	ND	ND	
12/16/10	100.62	17.95			82.67	ND	ND	ND	ND	ND	ND	
03/22/11	100.62	17.38			83.24	ND	ND	ND	ND	ND	ND	
06/27/11	100.62	17.64			82.98	ND	ND	ND	ND	ND	ND	
09/27/11	100.62	16.92			83.70	ND	ND	ND	ND	ND	ND	
12/20/11	100.62	17.17			83.45	ND	ND	ND	ND	ND	ND	
03/27/12	100.62	17.96			82.66	ND	ND	ND	ND	ND	ND	
06/27/12	100.62	17.61			83.01	ND	ND	ND	ND	ND	ND	
09/27/12	100.62	17.74			82.88	ND	ND	ND	ND	ND	ND	
12/20/12	100.62	17.82			82.80	ND	ND	ND	ND	ND	ND	
03/25/13	100.62	18.62			82.00	ND	ND	ND	ND	ND	ND	
06/24/13	100.62	17.27			83.35	ND	ND	ND	ND	ND	ND	
09/24/13	100.62	17.78			82.84	ND	ND	ND	ND	ND	ND	
12/18/13	100.62	17.91			82.71	ND	ND	ND	ND	ND	ND	
03/27/14	100.62	17.89			82.73	ND	ND	ND	ND	ND	ND	
06/17/14	100.62	17.04			83.58	ND	ND	ND	ND	ND	ND	
09/30/14	100.62	17.85			82.77	ND	ND	ND	ND	ND	ND	
12/18/14	100.62	17.30			83.32	ND	ND	ND	ND	ND	ND	
03/18/15	35.06	17.28			17.78	ND	ND	ND	ND	ND	ND	
06/18/15	35.06	17.40			17.66	ND	ND	ND	ND	ND	ND	
09/24/15	35.06	18.70			16.36	ND	ND	ND	ND	ND	ND	
12/16/15	35.06	18.60			16.46	ND	ND	ND	ND	ND	ND	
03/01/16	35.06	17.70			17.36	ND	ND	ND	ND	ND	ND	
06/10/16	35.06	17.99			17.07	ND	ND	ND	ND	ND	ND	
09/19/16	35.06	18.57			16.49	ND	ND	ND	ND	ND	ND	

TABLE 1
Well Gauging and Groundwater Analytical Data
3904 Northern Boulevard
Long Island City, NY

Well ID (Screen Zone)	Date	Gauge Point Elevation (feet)	Depth to Water (fbg)	Depth to Product (fbg)	Product Thickness (feet)	Relative GW Elevation (feet)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	
MW-10 (SMP)	12/16/10	NSD	4.52			NSD	4.8	52.2	382	365	804.0	ND	
	03/22/11	NSD	4.56			NSD	5.9	63.5	464	941	1,474.4	ND	
	06/27/11	NSD	4.73			NSD	7.6	46.8	370	782	1,206.4	ND	
	09/27/11	NSD	4.07			NSD	6.8	53.8	390	602	1,052.6	ND	
	12/20/11	NSD	4.37			NSD	1.4	13.0	159	192	365.4	ND	
	03/27/12	NSD	4.98			NSD	1.5	12.5	120	120	254.0	0.22 J	
	06/27/12	NSD	4.60			NSD	2.6	20.2	103	101	226.8	ND	
	09/27/12	NSD	4.82			NSD	0.85 J	6.8	19.6	22.3	49.55 J	ND	
	12/20/12	NSD	4.91			NSD	4.4	29.7	230	243	507.1	ND	
	03/25/13	NSD	4.17			NSD	ND	1.6	5.4	5.4	12.4	ND	
	06/24/13	NSD	4.54			NSD	2.0	12.9	111	86.1	212.0	ND	
	09/24/13	NSD	4.92			NSD	0.93 J	14.1	164	98.2	277.23 J	ND	
	12/18/13	NSD	4.97			NSD	0.84 J	10	94.4	65.6	170.84 J	ND	
	03/27/14	NSD	4.99			NSD	0.39 J	4.6	34.4	18.9	58.29 J	ND	
	06/17/14	NSD	4.29			NSD	1.5	12.4	130	101	244.9	ND	
	09/30/14	NSD	5.15			NSD	0.20 J	0.28 J	0.37 J	0.75 J	1.60 J	ND	
	12/18/14	NSD	4.54			NSD	ND	3.1	18.1	10.8	32.0	ND	
	03/18/15	NSD	4.55			NSD	1.4	8.7	66.0	41.3	117.4	ND	
	CW-3	9/24/2013 abc	NSD	18.07			NSD	9.0	5.8	762	2,290	3,066.8	0.64 J
		12/18/13	NSD	18.06			NSD	4.3	0.86 J	481	22.1	508.26 J	ND
03/27/14		NSD	18.04			NSD	2.5	0.99 J	128	2.6	134.09 J	ND	
06/17/14		NSD	17.36			NSD	ND	ND	1.7	0.36 J	2.06 J	ND	
09/30/14		NSD	18.14			NSD	1.3	0.31 J	191	1.2	193.81 J	ND	
12/18/14		NSD	17.56			NSD	ND	ND	15.1	ND	15.1	ND	
03/18/15		35.23	17.54			17.69	ND	ND	1.8	ND	1.8	ND	
06/18/15		35.23	17.68			17.55	ND	ND	2.1	ND	2.1	ND	
09/24/15		35.23	19.07			16.16	1.2	ND	17.7	ND	18.9	ND	
12/16/15		35.23	18.86			16.37	1.1	ND	ND	ND	1.1	ND	
03/01/16		35.23	17.99			17.24	ND	ND	ND	ND	ND	ND	
06/10/16		35.23	18.37			16.86	ND	ND	ND	ND	ND	ND	
09/19/16		35.23	18.83			16.40	1.1	ND	ND	ND	1.1	ND	

Notes

a - Initial Sampling Event
b - Highest BTEX Concentration Sampling Event
c - Highest MTBE Concentration Sampling Event
NM - Not Measured

ND - Not Detected
D - Dry
WD - Well Destroyed
J - Estimated Value

NS - Not Sampled
NSP - Not Sampled due to Product
NSD - No Survey Data
Site re-surveyed on December 16, 2010

Table 2
Summary of Soil Sample Results for Monitoring Wells (MW-7, 8, and 9)
Speedway Station #7830
39-04 Northern Boulevard
Long Island City, NY

Compound	MW-7 (15-20')	MW-7 (20-25')	MW-8 (20-25')	MW-8 (25-30')	MW-9 (15-19')	MW-9 (19-21')	NYSDEC TAGM #4046 Soil Cleanup Objective
Benzene	ND	ND	ND	<230	ND	<220	60
n-Butylbenzene	ND	2,010	ND	18,200	ND	11,800	10,000
sec-Butylbenzene	ND	877	ND	6,400	ND	4,660	10,000
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	10,000
Ethylbenzene	ND	446	ND	83,500	ND	82,300	5,500
Isopropylbenzene	ND	400	ND	15,100	ND	14,500	2300
p-Isopropyltoluene	ND	280 J	ND	3,670	ND	2640 J	10,000
Methyl Tertiary-Butyl Ether	ND	ND	ND	ND	ND	ND	120
Naphthalene	ND	2,290	ND	36,200	ND	30,300	13,000
n-Propylbenzene	ND	2,590	ND	64,200	ND	53,100	3,700
Toluene	ND	ND	ND	ND	0.92 J	667	1,500
1,2,4-Trimethylbenzene	ND	11,300	ND	152,000	1.8 J	308,000	10,000
1,3,5-Trimethylbenzene	ND	2,170	ND	5,240	3.0 J	16,600	3,300
m,p-Xylene	ND	1,690	ND	55,700	1.7 J	195,000	1,200
o-Xylene	ND	538	ND	903	0.84 J	35,700	1,200
Xylene (total)	ND	2,230	ND	56,600	2.5 J	231,000	1,200
Acenaphthene	ND	26.8 J	ND	48.4	ND	ND	50,000
Anthracene	ND	ND	ND	24.4 J	15.8 J	ND	50,000
Benzo(a)anthracene	ND	ND	ND	24.3 J	52.7	17.2 J	224
Benzo(a)pyrene	ND	ND	ND	ND	70.5	ND	61
Benzo(b)flouranthene	ND	ND	16.1 J	ND	96.7	ND	1,100
Benzo(g,h,i)perylene	ND	ND	ND	ND	83.5	ND	50,000
Benzo(k)flouranthene	ND	ND	12.8 J	ND	58.4	ND	1,100
Chrysene	ND	ND	ND	35.9	72.0	27.5 J	400
Dibenzo(a,h)anthracene	ND	ND	ND	ND	36.0	ND	14
Fluoranthene	ND	28.7 J	23.4 J	62.3	99.8	37.3	50,000
Fluorene	ND	54.5	ND	102	ND	61.1	50,000
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	73.6	ND	3,200
Naphthalene	ND	169	ND	15,000	80.9	8,050	13,000
Phenanthrene	ND	48.2	ND	129	42.9	70.4	50,000
Pyrene	ND	26.3 J	21.3 J	53.9	63.1	41.1	50,000

Notes:

Samples collected on April 6-7, 2010.

EPA Analytical Method 8260 plus MTBE, and 8270 (STARS Compounds Only)

Concentration units - ug/Kg (micrograms per kilogram)

ND - Compound not detected above the method detection limit

J - Estimated Value

NM- Not Measured

Table 3
Summary of Soil Sample Results for Soil Borings (B-4 and B-5)
Speedway Station #7830
39-04 Northern Boulevard
Long Island City, NY

Compound	B-4 (11-13')	B-5 (AS-1) (15-17')	B-5 (AS-1) (19-21')	NYSDEC TAGM #4046 Soil Cleanup Objective
Benzene	ND	ND	ND	60
n-Butylbenzene	ND	ND	222 J	10,000
sec-Butylbenzene	ND	ND	186 J	10,000
tert-Butylbenzene	ND	ND	ND	10,000
Ethylbenzene	ND	ND	ND	5,500
Isopropylbenzene	ND	ND	51.7 J	2300
p-Isopropyltoluene	ND	ND	99.6 J	10,000
Methyl Tertiary-Butyl Ether	ND	ND	ND	120
Naphthalene	ND	ND	ND	13,000
n-Propylbenzene	ND	ND	449	3,700
Toluene	ND	ND	ND	1,500
1,2,4-Trimethylbenzene	ND	ND	523	10,000
1,3,5-Trimethylbenzene	ND	ND	ND	3,300
m,p-Xylene	ND	ND	ND	1,200
o-Xylene	ND	ND	ND	1,200
Xylene (total)	ND	ND	ND	1,200
Acenaphthene	32.9	ND	ND	50,000
Anthracene	82.6	ND	51.2	50,000
Benzo(a)anthracene	228	25.8 J	33.1	224
Benzo(a)pyrene	251	ND	15.8 J	61
Benzo(b)flouranthene	263	24.7 J	14.7 J	1,100
Benzo(g,h,i)perylene	156	ND	ND	50,000
Benzo(k)flouranthene	142	ND	12.3 J	1,100
Chrysene	225	33.5	38.1	400
Dibenzo(a,h)anthracene	60.5	ND	ND	14
Fluoranthene	495	88.0	305	50,000
Fluorene	29.2	ND	19.5 J	50,000
Indeno(1,2,3-cd)pyrene	145	ND	ND	3,200
Naphthalene	67.6	ND	ND	13,000
Phenanthrene	211	37.7	112	50,000
Pyrene	307	54.9	223	50,000

Notes:

Samples collected on April 5, 2010.

EPA Analytical Method 8260 plus MTBE, and 8270 (STARS Compounds Only)

Concentration units - ug/Kg (micrograms per kilogram)

ND - Compound not detected above the method detection limit

J - Estimated Value

Table 4
Summary of VOCs and SVOCs for Soil Analytical Data of CW-3
Speedway Station #7830
39-04 Northern Boulevard
Long Island City, New York

Compound	CW-3 (20-22')	CW-3 (30-32')	CW-3 (35-37')	NYSDEC Soil Cleanup Objective (CP-51)
Benzene	0.73 J	0.57 J	0.49 J	60
n-Butylbenzene	43.3	8.1	7.1	12,000
sec-Butylbenzene	32.3	13.3	3.9 J	11,000
tert-Butylbenzene	ND	ND	ND	5,900
Ethylbenzene	4.9	8.3	1.4	1,000
Isopropylbenzene	93.3	13.0	2.2 J	2,300
p-Isopropyltoluene	15.5	7.8	2.4 J	10,000
MTBE	ND	ND	ND	930
Naphthalene	2.8 J	ND	ND	12,000
n-Propylbenzene	2,910	13.0	7.3	3,900
Toluene	1.9	0.75 J	0.96 J	700
1,2,4-Trimethylbenzene	6,450	8.5	6.5	3,600
1,3,5-Trimethylbenzene	41.2 J	53.5	9.5	8,400
m,p-Xylene	5.8	16.7	1.7	*
o-Xylene	1.5	22.8	1.3	*
Total Xylenes	7.4	39.5	3.0	260
Acenaphthene	71.1	ND	ND	20,000
Anthracene	206	ND	ND	100,000
Benzo(a)anthracene	617	ND	ND	1,000
Benzo(a)pyrene	626	ND	ND	1,000
Benzo(b)fluoranthene	710	ND	ND	1,000
Benzo(g,h,i)perylene	388	ND	ND	100,000
Benzo(k)fluoranthene	300	ND	ND	800
Chrysene	653	ND	ND	1000
Dibenzo(a,h)anthracene	97.4	ND	ND	330
Fluoranthene	1,560	ND	ND	100,000
Fluorene	65.9	ND	ND	30,000
Indeno(1,2,3-cd)pyrene	419	ND	ND	500
Naphthalene	28.4 J	ND	ND	12,000
Phenanthrene	822	ND	ND	100,000
Pyrene	1,100	ND	ND	100,000

Notes:

1. Samples collected on August 13, 2013
2. Concentration units = ug/kg (micrograms per kilogram)
3. * = No Cleanup Objective exists
4. Laboratory analysis via EPA Method 8260 & 8270 (STARS Lists)
5. J = Estimated Value
6. ND = Not Detected

Appendix B – Geologic Logs & Well Construction Details

Geologic Log & Well Construction Details

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, NY, 11980

Air-Sparge Well AS-2

Client: Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Hess # 32525	Address: 39-04 Northern Boulevard, Long Island City, NY	Date NM	DTW NM	NM
Drilling Company: AARCO Environmental	Method: Hollow Stem Auger			
Date Started: 8/6/2013	Date Completed: 8/13/2013			Measuring Point Elevation
Completion Depth: 62'	ENVIROTRAC Oversight: Victor Cardoza			NM

BORING CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION	
		Recovery (ft.)	Blow per 6 in.	OVM (ppm)		
B-1/ AS	0	6	NA	NM	0-6' Hand cleared through asphalt and concrete.	
	5				6-10' Brown fine grained SAND , with cobbles, with fill material; no odor	
	10	1	NA	0	10-12' Dark brown silty to fine grained SAND , with small gravel and cobbles, dry, no odor	
	15	0.5	NA	0	15-17' Brown medium to fine grained SAND , with cobbles dry, no odor	
	20	2	NA	2,000	20-22' Dark brown to gray medium to fine grained SAND , with small gravel and cobbles, wet, petroleum-like odor	
	25					
	30	0.5	NA	1,416	30-32' Dark brown to gray medium to coarse grained SAND , with small gravel and cobbles, wet, petroleum-like odor	
	35	0.5	NA	1,481	35-37' Same as above wet, petroleum-like odor	
	40	3	NA	543	40-42' Dark brown to gray medium to fine grained SAND , with cobbles wet, petroleum-like odor	
	45	3	NA	363	45-47' Dark brown to gray fine to silty SAND , trace medium grained sand, trace small gravel, wet, petroleum-like odor	
	50	6	NA	1,484	50-52' Dark brown to gray, fine to silty SAND , wet, petroleum-like odor	
	55	2	NA	28.9	55-57' Dark brown to gray, coarse grained SAND , with medium and small gravel, wet, petroleum-like odor	
	60	1.5	NA	0	60-62' Gray CLAY , no odor	
	65				End of soil boring at 62' below grade	
LEGEND: Concrete Bentonite Seal Gravel Pack (Morie #2) Screen Zone End/Top Cap					Well Construction Details: Bottom of Well: 50' Screen Zone: 50-48' Morie Sand: 50 to 45' Grout: 6-1' Screen material: 2" Sch 40 PVC 20 Slot Casing material: 2" Sch 40 PVC Bentonite Seals: 45-14" Sand Pack: Morie #2 Concrete: Flush Mount	
NTS - Not to Scale		ND - Not Detected	NM - Not Monitored		DTW - Depth to Water	NA - Not Applicable

Geologic Log & Well Construction Details

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, NY, 11980

Log of Air Sparge Well AS-3

Client: Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Hess # 32525	Address: 39-04 Northern Boulevard, Long Island City, NY	Date NM	DTW NM	NM
Drilling Company: AARCO Environmental	Method: Hollow Stem Auger/ Air Rotary			
Date Started: 8/6/2013	Date Completed: 8/20/2013			Measuring Point Elevation
Completion Depth: 62'	ENVIROTRAC Oversight: Victor Cardoza			NM

BORING CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (ft.)	Blow per 6 in.	OVM (ppm)	
AS-3	0	6	NA	NM	0-6' Hand cleared through asphalt and concrete. Brown fine grained silty SAND , with medium grained sand and gravel, with cobbles, with fill material consisting of brick, concrete and asphalt, dry, no odor
	5				6-10' Brown fine grained silty SAND , with medium grained sand and gravel, with cobbles, with fill material; no odor
	10	0.5	NA	0	10-12' Dark brown medium to fine grained SAND , with medium and small gravel, dry, no odor
	15	0.5	NA	0	15-17' Dark brown medium to fine grained SAND , with silt, with mixed sized gravel and cobble, dry, no odor
	20	1.5	NA	2,000	20-22' Dark brown to green medium to fine grained SAND , trace small gravel and cobbles, wet, petroleum-like odor
	25	1.5	NA	1,873	25-27' Gray medium to fine grained SAND , with coarse grains, wet, petroleum-like odor
	30	1.5	NA	2,000	30-32' Dark brown medium to fine grained SAND , with small gravel and cobbles, wet, petroleum-like odor
	35	NA	NA	NA	35' Encountered boulders at ~35' below grade, switched to Air Rotary drilling
	40	0.5	NA	1,819	40-42' Dark brown to gray medium to fine grained SAND , wet, petroleum-like odor
	45	1.5	NA	1,038	45-47' Dark brown to gray to green fine to medium grained SAND , wet, petroleum-like odor
	50	1	NA	2,000	50-52' Dark brown to gray to green fine to medium grained SAND , wet, petroleum-like odor
	55	2	NA	137.1	55-57' Brown to gray medium to coarse grained SAND , with small gravel, wet, petroleum-like odor
	60	2.0	NA	29.8	58-62' Gray CLAY , wet, petroleum-like odor
	65				End of soil boring at 62' below grade

LEGEND: Concrete Bentonite Seal Gravel Pack (Morie #2) Screen Zone End/Top Cap	Well Construction Details: Bottom of Well: 35' Screen Zone: 33-35' Morie Sand: 0-23' and 31-60' Screen material: 2" Sch 40 PVC 20 Slot Casing material: 2" Sch 40 PVC Bentonite Seals: 23-31' Sand Pack: Morie #2 Concrete: Flush Mount
--	--

NTS - Not to Scale ND - Not Detected NM - Not Monitored DTW - Depth to Water NA - Not Applicable

Geologic Log & Well Construction Details

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, NY, 11980

Log of Cluster Well CW-3

Client: Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Hess # 32525	Address: 39-04 Northern Boulevard, Long Island City, NY	Date NM	DTW NM	NM
Drilling Company: AARCO Environmental	Method: Hollow Stem Auger			
Date Started: 8/2/2013	Date Completed: 8/16/2013			Measuring Point Elevation
Completion Depth: 38'	ENVIROTRAC Oversight: Victor Cardoza			NM

CLUSTER WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (ft.)	Blow per 6 in.	OVM (ppm)	
CW-3	0	6	NA	NM	<u>0-6'</u> Hand cleared through asphalt and concrete. Brown fine to medium grained SAND , trace gravel, with medium sized cobbles, with fill material consisting of asphalt and brick, dry, no odor
	5				<u>6-10'</u> Brown fine to medium grained SAND , trace gravel, with medium sized cobbles, with fill material; no odor
	10	1	NA	0	<u>10-12'</u> Brown to dark brown medium to fine grained SAND , with cobble, dry, no odor
	15	1	NA	0	<u>15-17'</u> Brown to dark brown, medium to fine grained SAND , brick with small and medium gravel, dry, no odor
	20	0.5	NA	461	<u>20-22'</u> Dark brown medium to fine grained SAND , with coarse grains, with small gravel, wet, petroleum-like odor
	25	0.5	NA	888	<u>25-27'</u> Dark brown medium to fine grained SAND , trace small gravel, wet, petroleum-like odor
	30	0.5	NA	549	<u>30-32'</u> Dark brown medium to coarse grained SAND , with fine grains, with small gravel, wet, petroleum-like odor
	35	0.5	NA	1,280	<u>35-37'</u> Dark brown medium to fine grained SAND , with coarse grains, wet, no odor
	40				Obstruction at 38' below grade

LEGEND:

- Concrete
- Bentonite Seal
- Gravel Pack (Morie #2)
- Screen Zone
- End/Top Cap

Well Construction Details MW: AS:
 Bottom of Well: 26'; 36'
 Screen Zone: 11-26'; 34-36'
 Morie Sand: 0-5', 9-28' and 32-37'
 Screen material: 2" Sch 40 PVC 20 Slot
 Casing material: 2" Sch 40 PVC
 Bentonite Seals: 5-9' and 28-32'
 Sand Pack: Morie #2
 Concrete: Flush Mount






NTS - Not to Scale ND - Not Detected NM - Not Monitored DTW - Depth to Water NA - Not Applicable

Geologic Log & Well Construction Detail
Log of Monitoring Well (MW-7)
ENVIROTRAC LTD.
5 Old Dock Road, Yaphank, NY 11980

Client: Hess Corporation	NYSDEC #'s: 95-00846
Site Name: Hess Station # 32525- Long Island City	Address: 39-04 Northern Blvd., Long Island City, NY
Drilling Company: Summit Drilling	Method: Hollow Stem Auger/ Air Rotary
Date Started: 4/5/2010	Date Completed: 4/7/2010
Completion Depth: 25'	ENVIROTRAC Geologist: Donna Eschrich

WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (ft.)	Blow per 6 in.	PID (ppm)	
MW-7	0	NM	NM	NM	
	5	NM	NM	ND	<u>0-5'</u> Hand Cleared, asphalt and brown medium grained SAND ; dry, no odor
	10	NM	NM	ND	<u>5-10'</u> Brown medium grained SAND with some cobbles; dry, no odor
	15	NM	NM	ND	<u>10-15'</u> No recovery- Switched to Air Rotary due to obstruction at 10 ft.
	20	NM	NM	ND	<u>15-20'</u> Dark Brown medium grained SAND ; moist, slight petroleum-like odor
	25	NM	NM	188.0	<u>20-25'</u> Dark Grey to Black medium grained SAND ; moist to wet, petroleum-like odor

NTS- Not to Scale ND- Not Detected NM- Not Measured NA- Not Applicable

LEGEND:	
	Concrete
	Bentonite Seal
	Gravel Pack (Morie #2)
	Screen Zone
	End/Top Cap

Well Construction Details:
Bottom of Well: 25'
Screen Zone: 10-25'
Morie Sand: 10-25'
Screen material: 4" Sch 40 PVC 20 Slot
Casing material: 4" Sch 40 PVC
Sand Pack: Morie #2
Cement Seal: 1.0-Grade (Flush Mount)

Geologic Log & Well Construction Detail Log of Monitoring Well (MW-8)






ENVIROTRAC LTD.

5 Old Dock Road, Yaphank, NY 11980

Client: Hess Corporation	NYSDEC #'s: 95-00846
Site Name: Hess Station #32525- Long Island City	Address: 39-04 Northern Blvd., Long Island City, NY
Drilling Company: Summit Drilling	Method: Hollow Stem Auger/ Air Rotary
Date Started: 4/5/2010	Date Completed: 4/7/2010
Completion Depth: 30'	ENVIROTRAC Geologist: Donna Eschrich

WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (ft.)	Blow per 6 in.	PID (ppm)	
MW 8					
0	0	NM	NM	NM	<u>0-5'</u> Hand cleared asphalt and medium brown SAND , dry, no odor
5	5	NM	NM	ND	<u>5-10'</u> Light Brown to Medium Brown SAND , trace gravel, dry, no odor
10	10	NM	NM	ND	<u>10-15'</u> Medium Brown to Dark Brown SAND , dry to moist, no odor
15	15	NM	NM	ND	<u>15-20'</u> Reddish Brown fine to medium grained SAND , dry, no odor
20	20	NM	NM	ND	<u>20-25'</u> Reddish Brown fine to medium grained SAND , dry, no odor
25	25	NM	NM	741.0	<u>25-30'</u> Dark Grey fine to medium grained SAND , wet, petroleum-like odor
30	30				

NTS- Not to Scale ND- Not Detected NM- Not Measured NA- Not Applicable

LEGEND:	
	Concrete
	Bentonite Seal
	Gravel Pack (Morie #2)
	Screen Zone
	End/Top Cap

Well Construction Details:

Bottom of Well: 30'
 Screen Zone: 13-28'
 Morie Sand: 13-28'
 Screen material: 4" Sch 40 PVC 20 Slot
 Casing material: 4" Sch 40 PVC
 Bentonite Seals: 9-11'
 Sand Pack: Morie #2 Morie #2
 Cement Seal: 1.0-Grade (Flush Mount)

Geologic Log & Well Construction Detail
Log of Monitoring Well (MW-9)
ENVIROTRAC LTD.
5 Old Dock Road, Yaphank, NY 11980

Client: Hess Corporation	NYSDEC #'s: 95-00846
Site Name: Hess Station #32525- Long Island City	Address: 39-04 Northern Blvd., Long Island City, NY
Drilling Company: Summit Drilling	Method: Hollow Stem Auger/Air Rotary
Date Started: 4/5/2010	Date Completed: 4/7/2010
Completion Depth: 26'	ENVIROTRAC Geologist: Donna Eschrich

WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (ft.)	Blow per 6 in.	PID (ppm)	
	0	NM	NA	ND	<u>0-5'</u> Hand cleared, asphalt with Brown SAND , some gravel; dry, no odor
	5	0.50	6/9/7/5	ND	<u>5-7'</u> Brown medium to coarse SAND , some gravel; dry no odor
	10	1.0	5/9/7/6	ND	<u>7-9'</u> Dark brown to medium brown, medium to coarse grained SAND ; slightly moist, no odor
	11	0.50	2/1/NM/NM	ND	<u>9-11'</u> Medium to coarse grained SAND , with fill material; moist, no odor Obstruction at 10 ft.
	15	NA	NA	NA	<u>11-15'</u> No Recovery
	17	0.50	17/8/9/11	ND	<u>15-17'</u> Dark brown to light brown, medium grained SAND ; moist, no odor
	20	0.75	7/9/7/7	ND	<u>17-19'</u> Dark brown to light brown, medium grained SAND ; moist, no odor
	21	1.25	3/5/8/10	382.0	<u>19-21'</u> Dark grey, medium grained SAND ; wet, petroleum-like odor
	26	NA	NA	921.0	<u>21-26'</u> Dark grey, medium grained SAND ; wet, petroleum-like odor
	30				

NTS- Not to Scale ND- Not Detected NM- Not Measured NA- Not Applicable

LEGEND:	
	Concrete
	Bentonite Seal
	Gravel Pack (Morie #2)
	Screen Zone
	End/Top Cap

Well Construction Details:
Bottom of Well: 26'
Screen Zone: 11-26'
Morie Sand: 11-26'
Screen material: 4" Sch 40 PVC 20 Slot
Casing material: 4" Sch 40 PVC
Bentonite Seals: 7-9'
Sand Pack: Morie #2
Cement Seal: Grade-1.0' (Flush Mount)

Geologic Log & Well Construction Detail
Log of Air Sparge Well (AS-1)
ENVIROTRAC LTD.
5 Old Dock Road, Yaphank, NY 11980

Client: Hess Corporation	NYSDEC #'s: 95-00846
Site Name: Hess Station #32525- Long Island City	Address: 39-04 Northern Blvd., Long Island City, NY
Drilling Company: Summit Drilling	Method: Hollow Stem Auger/Air Rotary
Date Started: 4/7/2010	Date Completed: 4/7/2010
Completion Depth: 21'	ENVIROTRAC Geologist: Donna Eschrich

WELL CONSTRUCTION (NTS)	DEPTH (ft below grade)	SAMPLES			SOIL DESCRIPTION	
		Recovery (ft.)	Blow per 6 in.	PID (ppm)		
<p style="text-align: center;">B-5 (AS-1)</p>	0	NM	NA	ND	<u>0-5'</u> Hand cleared, asphalt surface, Brown SAND , some gravel; dry, no odor	
	5	0.75	6/7/3/4	ND	<u>5-7'</u> Medium brown, medium to coarse grained SAND , some gravel; dry no odor	
		0.25	5/3/2/4	ND	<u>7-9'</u> Dark brown to medium brown, medium to coarse grained SAND ; dry, no odor	
		0.50	5/6/6/8	ND	<u>9-11'</u> Medium to coarse grained SAND , with fill material; dry, no odor	
	10					
		0.50	12/12/5/5	ND	<u>11-13'</u> Reddish brown, medium grained SAND , with fill material, dry, no odor	
	15	1.0	3/9/13/9	ND	<u>15-17'</u> Dark brown to light brown, medium grained SAND ; dry, no odor	
		1.0	6/6/6/6	ND	<u>17-19'</u> Dark brown to light brown, medium grained SAND ; moist, no odor	
	20	1.75	1/5/8/12	765.0	<u>19-21'</u> Dark grey, medium grained SAND ; wet, petroleum like odor	
	25					
30						

NTS- Not to Scale ND- Not Detected NM- Not Measured NA- Not Applicable

LEGEND:	
	Concrete
	Bentonite Seal
	Gravel Pack (Morie #2)
	Screen Zone
	End/Top Cap

Well Construction Details:	
Bottom of Well:	21'
Screen Zone:	18'-20'
Morie Sand:	17'-21'
Screen material:	2" Sch 40 PVC 20 Slot
Casing material:	2" Sch 40 PVC
Bentonite Seals:	15'-17'
Sand Pack:	Morie #2
Cement Seal:	Grade-1' (Flush Mount)

Groundwater & Environmental Services, Inc.

Well Log

Project: Merit-Northern
 Location: 3904 Northern Boulevard
 Long Island City, NY

Owner: Merit Oil
 Screen Length: 15' Type: .020
 Casing Length: 13' Type: PVC
 Casing Diam.: 4"
 Screen Diam.: 4"
 Static Water: 19.50'
 Log By: Wayne Kempinski
 Casing Elevation: NA

Total Depth: 28'

Drilling Method: Air Rotary

Driller: Summit Drilling

Sample Method: Split Spoon

Date: 01/31/96

Completion Details: MW on the Northwest side of station.

MW1

Depth (feet)	Sample No.	Construction	OVM (ppm)	Recovery	Blow Counts	Lithology
0-5'						Asphalt, Pavement and Blend
5-7'			5.0			Light brown fine to medium SAND, no Silt or Gravel; no odor
7-9.5'						(Boulder drilled through)
9.5-12'			2.2			Light brown coarse GRAVEL and fine SAND; no odor
12-17'						Brown fine to medium SAND and SILT, little Gravel; no odor
17-21'			1.8			Brown fine SAND and SILT; odor
21-22'			100			Dark gray-brown coarse GRAVEL and SILT, some fine Sand; strong odor, (shean on water in spoon), wet
22-24'			185			Dark gray-brown coarse SAND, little Silt and Gravel; wet
24'	*MW1		200			
28'						Well completed at 28'

* Note: Soil sample analyzed for VOC's and Gasoline Range/Organics via EPA method 8020 and API Method Rev. 5.

Groundwater & Environmental Services, Inc.

Well Log

Project: Merit-Northern
 Location: 3904 Northern Boulevard
 Long Island City, NY

Owner: Merit Oil
 Screen Length: 15' Type: .020
 Casing Length: 11' Type: PVC
 Casing Diam.: 4"
 Screen Diam.: 4"
 Static Water: 19.21'
 Log By: Wayne Kempski
 Casing Elevation: NA

Total Depth: 26'

Drilling Method: Air Rotary

Driller: Summit Drilling

Sample Method: Split Spoon

Date: 02/23/96

Completion Details: MW on the Northwest side of site.

MW2

Depth (feet)	Sample No.	Con-struction	OVM (ppm)	Recovery	Blow Counts	Lithology
0-2'						Asphalt, Pavement and Blend
2-8'						Fill material, Brick, Wood, etc.
8-17'			1.5			Light brown Silty-SAND, little Gravel, trace Cobbles
17-19'						(Boulder drilled through)
19-20'			2.8			Light brown Silty-SAND, little Gravel, trace Cobbles and Boulders
20-28'						Gray-brown medium to coarse SAND, little Gravel, trace Cobbles; strong odor
22	* MW2		188			
26			156			
						Well completed at 26'
27						
28						
29						
30						
31						
32						
33						
34						

* Note: Soil sample analyzed for VOC's and Gasoline Range/Organics via EPA method 8020 and API Method Rev. 5.

Groundwater & Environmental Services, Inc.

Well Log

Project: Merit-Northern
 Location: 3904 Northern Boulevard
 Long Island City, NY

Owner: Merit Oil
 Screen Length: 15' Type: .020
 Casing Length: 9' Type: PVC
 Casing Diam.: 4"
 Screen Diam.: 4"
 Static Water: 18.17'
 Log By: Wayne Kempski
 Casing Elevation: NA

Total Depth: 24'

Drilling Method: Air Rotary

Driller: Summit Drilling

Sample Method: Split Spoon

Date: 02/22/96

Completion Details: MW on the West side of site.

MW3

Depth (feet)	Sample No.	Construction	OVM (ppm)	Recovery	Blow Counts	Lithology
1						0-5' Asphalt, Pavement and Gravel
2						
3						
4						
5						5-16' Dark brown Silty-SAND, little Gravel, trace Boulders; no odor
6			4.2			
7						
8						
9						
10						
11			4.5			
12						
13						
14						
15						
16						16-18' Tan fine SAND, no Silt or Gravel; faint odor
17			11.8			
18						
19	* MW3		280			18-20' Dark gray-brown fine Silty-SAND, no Gravel; odor
20						
21						20-24' Gray-brown Silty-SAND, no Gravel; strong odor
22						
23			65			
24						
25						Well completed at 24'
26						
27						
28						
29						
30						
31						
32						
33						
34						

* Note: Soil sample analyzed for VOC's and Gasoline Range/Organics via EPA method 8020 and API Method Rev. 5.

Groundwater & Environmental Services, Inc.

Well Log

Project: Merit-Northern
 Location: 3904 Northern Boulevard
 Long Island City, NY

Owner: Merit Oil
 Screen Length: 16' Type: .020
 Casing Length: 9' Type: PVC

Total Depth: 25'

Casing Diam.: 4"

Drilling Method: Air Rotary

Screen Diam.: 4"

Driller: Summit Drilling

Static Water: 18.02'

Sample Method: Split Spoon

Log By: Wayne Kempski

Date: 02/23/96

Casing Elevation: NA

Completion Details: MW on the Southeast side of station.

MW4

Depth (feet)	Sample No.	Construction	OVM (ppm)	Recovery	Blow Counts	Lithology
0-2'		Asphalt, Pavement and Blend				
2-12'		Fill material including Sand, Bricks and Building Debris				
12-18'		Dark brown medium to coarse SAND with little Silt, no Gravel; no odor	0.8			
18-25'		Dark brown medium to coarse SAND, little Silt, no Gravel; no odor, wet	1.0 1.2			
25'	* MW4					Well completed at 25'
26'						
27'						
28'						
29'						
30'						
31'						
32'						
33'						
34'						

* Note: Soil sample analyzed for VOC's and Gasoline Range/Organics via EPA method 8020 and API Method Rev. 5.

GEOLOGIC SERVICES CORPORATION

1401 Church Street, Suite 8, Bohemia, NY 11716
 Phone: (631) 218-8958 Fax: (631) 218-8942

Monitoring Well - 5 Construction Log

Site Name: Merit Northern
 Address: 3904 Northern Boulevard
 City/State: Queens, New York
 GSC Project #: 0006404
 Install Date: 8/15/2000
 Boring Driller: BL Myers
 Drilling Method: Hollow Stem Auger
 Geologist: Jeremy Travis
 Project Manager: Brian Kelly

Use: Groundwater Monitoring
 Type of Well: Monitoring well
 Well Depth (ft bgs): 30'
 Casing: 15 feet; schedule 40, 0.010" slot 2" PVC
 Screen Length and Type: 15 feet; Schedule 40, 0.010" slot 2" PVC
 Screened Interval (ft bgs): 15' - 30'

Depth (ft.)	Munsell Color Chart Code	Soil/Geologic Description (modified Burmeister)	Depth (ft.)	Well Diagram
1		Asphalt	1	
2			2	
3	10yr 3/4	(Hand Clear to 5') Medium sand, w/ 15% coarse gravel, trace of cobbles, fine-medium gravel, dry, no odor	3	
4			4	
5			5	
6			6	
7	10yr 3/4	Medium sand, dry, no odor	7	
8			8	
9			9	
10			10	
11			11	
12	10yr 3/4	Loosely packed Coarse to medium gravel	12	
13			13	
14			14	
15			15	
16			16	
17	10yr 3/4	Loosely packed Coarse to medium gravel	17	
18			18	
19		▼ Water @ 19'	19	
20			20	
21			21	
22	2.5y 2.5/1	Fine sand and clay, black, damp, no odor	22	
23			23	
24			24	
25			25	
26			26	
27	2.5y 2.5/1	Fine sand and clay, dark black, wet, petroleum odor, has a film on it	27	
28			28	
29			29	
30			30	
31			31	

*Drawing vertically to scale

GEOLOGIC SERVICES CORPORATION

1401 Church Street, Suite 6, Bohemia, NY 11716
 Phone: (631) 218-6956 Fax: (631) 218-6942

Site Name: Merit Northern
 Address: 3904 Northern Boulevard
 City/State: Queens, New York
 GSC Project #: 0006404
 Install Date: 8/15/2000
 Boring Driller: BL Myers
 Drilling Method: Hollow Stem Auger
 Geologist: Jeremy Travis
 Project Manager: Brian Kelly

Monitoring Well - 6 Construction Log

Use: Groundwater Monitoring
 Type of Well: Monitoring well
 Well Depth (ft bgs): 26'
 Casing: 15 feet; schedule 40, 0.010" slot 2" PVC
 Screen Length and Type: 15 feet; Schedule 40, 0.010" slot 2" PVC
 Screened Interval (ft bgs): 11' - 26'

Depth (ft.)	Munsell Color Chart Code	Soil/Geologic Description (modified Burmister)	Depth (ft.)	Well Diagram
1		Concrete (5" reinforced)	1	
2			2	
3	10yr 4/6	(Hand Clear to 5') Medium sand, trace of fine sand Dry, no odor	3	
4			4	
5			5	
6			6	
7	10yr 4/6	Fine sand, w/25% medium sand Dry, no odor	7	
8			8	
9			9	
10			10	
11			11	
12	10yr 3/4	Fine sand, w/15% medium to coarse gravel Trace of clay and silt Dry, no odor	12	
13			13	
14			14	
15			15	
16			16	
17	10yr 4/3	Medium to fine sand, w/10% medium to fine gravel Moist, no odor	17	
18			18	
19		▼ Water @ 19'	19	
20			20	
21			21	
22	10yr 3/3	Medium to coarse sand, w/5% fine to medium gravel, 10% clay, wet, some odor	22	
23			23	
24			24	
25			25	
26	2.5y 3/1	Fine sand and clay, wet, some odor	26	
27			27	

*Drawing vertically to scale

**Appendix C – Environmental Database
Report, dated September 4, 2015**

Toxics Targeting Environmental Report

**Sensitive Receptor Report
1/2 Mile Search Radius
39-04 Northern Blvd
Long Island City, NY 11101**

September 04, 2015

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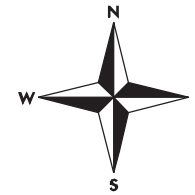
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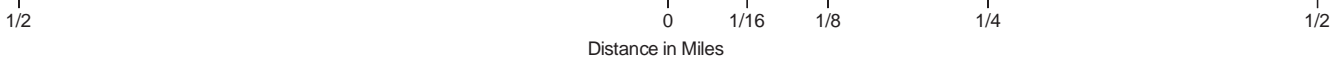
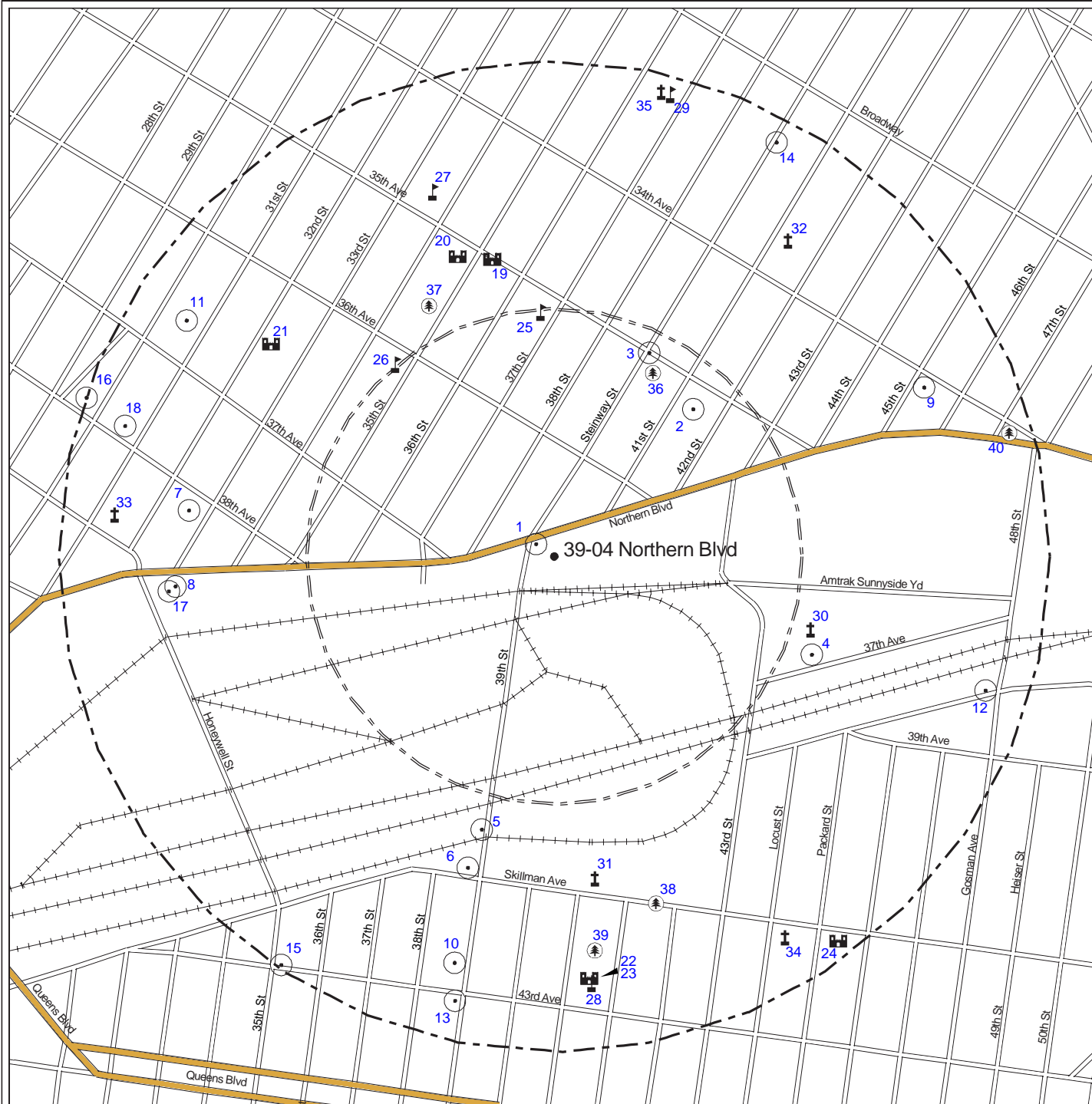
Toxics Targeting
1/2 Mile Well & Sensitive Receptor Map
39-04 Northern Blvd
Long Island City, NY 11101



Queens County



- | | | | |
|--|------------|--|------------|
| | Wells | | Park |
| | School | | Beach |
| | Hospital | | Day Care |
| | Church | | Adult Home |
| | Adult Home | | |
-
- | | | | |
|--|-----------------|--|-----------------|
| | Site Location | | Waterbody |
| | Minor Roads | | NYSDEC Wetland |
| | Major Roads | | County Border |
| | Expressways | | Railroad Tracks |
| | 1/2 Mile Radius | | |
| | 1/4 Mile Radius | | |



USGS GROUNDWATER SITE INVENTORY (GWSI) WELLS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 1

USGS Site-id: 404508073552901

Local Well Number: Q 389. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
 Approximate distance from property: 117 feet to the NW*

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
 Revised zip code: NO CHANGE

Owner:	No Information provided	
Station Type:	GROUND WATER OTHER THAN SPRING	
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE	
Hole Depth:	84 ft	Well Depth:
	Site Use	Water Use
Primary:	TEST	

Map Identification Number 2

USGS Site-id: 404515073551801

Local Well Number: Q 1813. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
 Approximate distance from property: 1079 feet to the NE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
 Revised zip code: NO CHANGE

Owner:	No Information provided	
Station Type:	GROUND WATER OTHER THAN SPRING	
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE	
Hole Depth:		Well Depth: 58' ft
	Site Use	Water Use
Primary:	TEST	

Map Identification Number 3 **USGS Site-id: 404518073552101**

Local Well Number: Q 376. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 1197 feet to the NNE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	122 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 4 **USGS Site-id: 404502073551001**

Local Well Number: Q 62. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 1469 feet to the ESE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	129 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 5 **USGS Site-id: 404453073553301**

Local Well Number: Q 602. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 1506 feet to the SSW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	159 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 6 **USGS Site-id: 404451073553401**

Local Well Number: Q 386. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 1721 feet to the SSW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	222 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 7 **USGS Site-id: 404510073555301**

Local Well Number: Q 1635. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 1961 feet to the W

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	40 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 8 **USGS Site-id: 404506073555401**

Local Well Number: Q 13. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2024 feet to the W

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	89 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 9

USGS Site-id: 404516073550201

Local Well Number: Q 3122. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2166 feet to the ENE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner: U.S. GEOLOGICAL SURVEY
Station Type: GROUND WATER OTHER THAN SPRING
Ground-water Site Type: WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth: Well Depth: 47' ft

Primary: Site Use: OBSERVATION Water Use: UNUSED

Map Identification Number 10

USGS Site-id: 404446073553501

Local Well Number: Q 453. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2230 feet to the SSW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner: No Information provided
Station Type: GROUND WATER OTHER THAN SPRING
Ground-water Site Type: WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth: 147 ft Well Depth:

Primary: Site Use: TEST Water Use:

Map Identification Number 11 **USGS Site-id: 404520073555301**

Local Well Number: Q 1246. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2327 feet to the WNW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	220 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 12 **USGS Site-id: 404500073545801**

Local Well Number: Q 263. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2407 feet to the ESE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	125 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 13 **USGS Site-id: 404444073553501**

Local Well Number: Q 425. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2426 feet to the SSW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	159 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 14 **USGS Site-id: 404529073551201**

Local Well Number: Q 379. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2504 feet to the NNE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	147 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 15 **USGS Site-id: 404446073554701**

Local Well Number: Q 1258. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2618 feet to the SW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	63 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

Map Identification Number 16 **USGS Site-id: 404516073560001**

Local Well Number: Q 1912. 1

MAP LOCATION INFORMATION

Site location mapped by: MAP COORDINATE (?)
Approximate distance from property: 2631 feet to the WNW

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Owner:	No Information provided
Station Type:	GROUND WATER OTHER THAN SPRING
Ground-water Site Type:	WELL, FOR SINGLE WELLS OTHER THAN WELLS OF THE COLLECTOR OR RANNEY TYPE
Hole Depth:	400 ft
	Well Depth:
Primary:	Site Use TEST
	Water Use

NO NYSDEC WATER WELLS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

NO NYSDEC LONG ISLAND WELLS OVER 45 GAL/MIN IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

NO NYSDEC PUBLIC SUPPLY WELLS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

NYSDEC WELL REGISTRATION SITES IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 17
39-29 HONEYWELL STREET, LONG ISLAND CITY

Well Number: Q003586

MAP LOCATION INFORMATION
Site location mapped by: ADDRESS MAPPING
Approximate distance from property: 2062 feet to the W

ADDRESS CHANGE INFORMATION
Revised street: NO CHANGE
Revised zip code: 11101

Owner: AMTRAK
Permit Number:
Depth: 60 ft

Mail Address: 39-29 HONEYWELL STREET, LONG ISLAND CITY
Driller Registration Number: 1667
Purpose: BATHROOM

Approval Date for Drilling: 09/28/1994
Remarks: CANCELLED

These wells are unmapped and may be located in the search area:

Well Number: Q003581T Well Location: SUNNYSIDE YARD, LONG ISLAND CITY, QUEENS
Well Number: Q003590 Well Location: 3200 RAILROAD AVENUE, LONG ISLAND CITY

NEW YORK CITY HEALTH DEPARTMENT WELLS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 18 ASTORIA 38TH AVENUE, INC. QUEENS, NY 11101 Camis-id: 40423103
37-40 31 STREET

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 2389 feet to the WNW

ADDRESS CHANGE INFORMATION

Revised street: 3740 31ST ST
Revised zip code: 11101

Doc Number:	199977	License Number:	0006487	License Code:	H33
Status:	002	Class:	ND	Sub-Class:	R
Expiration Date:	12/31/1996				

DAY CARE FACILITIES IDENTIFIED WITHIN THE 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 19 **NYC PARKS & RECREATION ARROW COMMUNITY CENTER** **Facility Id: 234297**
35-30 35TH AVE. ASTORIA, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: ADDRESS MATCHING
Approximate distance from property: 1594 feet to the NNW

Facility Type: School Age Child Care
Contact: Ms. Mackenzie Steinkamp, Director
Capacity: 30

ADDRESS CHANGE INFORMATION

Revised street: 3530 35TH AVE.
Revised zip code: NO CHANGE

Status: Open
Contact Phone: (718) 349-3408

Map Identification Number 20 **CONDE- BARBECKO, JUDITH** **Facility Id: 169744**
35-10 35TH STREET, APT. A1 LONG ISLAND CITY, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 1659 feet to the NNW

Facility Type: Group Family Day Care
Contact: Mrs. JUDITH CONDE- BARBECKO, On-Site Provider
Capacity: 10 Children, Ages 6 weeks to 12 years or
12 Children Ages 2 to 12 years and
2 Additional School Age

ADDRESS CHANGE INFORMATION

Revised street: 3510 35TH ST
Revised zip code: NO CHANGE

Status: Open
Contact Phone: (718) 784-5259

Map Identification Number 21 **TABARES, MARIA** **Facility Id: 67304**
36-33 32ND. STREET, 1ST FLOOR LONG ISLAND CITY, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 1883 feet to the NW

Facility Type: Family Day Care
Contact: MARIA TABARES, On-Site Provider
Capacity: 5 Children, Ages 6 weeks to 12 years or
6 Children Ages 2 to 12 years

ADDRESS CHANGE INFORMATION

Revised street: 3633 32ND ST
Revised zip code: NO CHANGE

Status: Open
Contact Phone: (718) 729-8321

Map Identification Number 22 **YMCA LONG ISLAND CITY VIRTUAL Y @ PS 150**
40-01 43RD AVE

Facility Id: 73817

LONG ISLAND CITY, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2282 feet to the S

ADDRESS CHANGE INFORMATION

Revised street: 4001 43RD AVE
Revised zip code: NO CHANGE

Facility Type: School Age Child Care
Contact: Ms. Gerarda Sacino, Director
Capacity: 63

Status: Open
Contact Phone: (718) 392-7932

Map Identification Number 23 **SUNNYSIDE COMM. SERVICES @ PS 150**
40-01 43RD AVE

Facility Id: 74139

SUNNYSIDE, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2282 feet to the S

ADDRESS CHANGE INFORMATION

Revised street: 4001 43RD AVE
Revised zip code: NO CHANGE

Facility Type: School Age Child Care
Contact: Ms. Laura E. Forster, Director
Capacity: 169

Status: Open
Contact Phone: (718) 784-6173

Map Identification Number 24 **HOLY MOUNTAIN PRE-SCHOOL**
45-08 SKILLMAN AVE

Facility Id: 274353

SUNNYSIDE, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2559 feet to the SE

ADDRESS CHANGE INFORMATION

Revised street: 4508 SKILLMAN AVE
Revised zip code: NO CHANGE

Facility Type: School Age Child Care
Contact: Ms. Theresa Alagna, Director
Capacity: 25

Status: Open
Contact Phone: (718) 361-0080

SCHOOLS IDENTIFIED WITHIN THE 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 25 **OUR WORLD NEIGHBORHOOD CHARTER SCHOO** **Facility Id: 343000860836**
36-12 35TH AVE ASTORIA, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 1303 feet to the N

ADDRESS CHANGE INFORMATION

Revised street: 3612 35TH AVE
Revised zip code: 11106

Map Identification Number 26 **BACCALAUREATE SCHOOL-GLOBAL ED** **Facility Id: 343000011580**
34-12 36TH AVE LONG ISLAND CITY, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 1324 feet to the NW

ADDRESS CHANGE INFORMATION

Revised street: 3412 36TH AVE
Revised zip code: 11106

Map Identification Number 27 **PS 166 HENRY GRADSTEIN SCHOOL** **Facility Id: 343000010166**
33-09 35TH AVE LONG ISLAND CITY, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2047 feet to the NNW

ADDRESS CHANGE INFORMATION

Revised street: 3309 35TH AVE
Revised zip code: 11106

Map Identification Number 28 **PS 150** **Facility Id: 343000010150**
40-01 43D AVE LONG ISLAND CITY, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2284 feet to the S

ADDRESS CHANGE INFORMATION

Revised street: 4001 43RD AVE
Revised zip code: 11104

Map Identification Number 29 **MOST PRECIOUS BLOOD SCHOOL** **Facility Id: 343000125958**
32-52 37TH ST LONG ISLAND CITY, NY 111034004

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (3)
Approximate distance from property: 2543 feet to the NNE

ADDRESS CHANGE INFORMATION

Revised street: 3252 37TH ST
Revised zip code: 111034004

NO HOSPITALS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

NO ADULT NURSING HOMES IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

CHURCHES IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 30 **NY Presbyterian Church** **Facility Id:**
4323 37TH AVE Long Island City, NY 11101

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 1419 feet to the ESE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Map Identification Number 31 **Moak Yang Presbyterian Church** **Facility Id:**
4005 SKILLMAN AVE Long Island City, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 1731 feet to the S

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Map Identification Number 32 **Korean Central Church of NY** **Facility Id:**
3271 41ST ST Queens, NY 11103

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 2092 feet to the NE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Map Identification Number 33 **St. George Coptic Orthodox Church** **Facility Id:**
3825 31ST ST Long Island City, NY 11101

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 2353 feet to the W

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Map Identification Number 34 **Queen of Angels RC Church** **Facility Id:**
4404 SKILLMAN AVE Sunnyside, NY 11104

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (2)
Approximate distance from property: 2375 feet to the SSE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

Map Identification Number 35 **Most Precious Blood RC**
3223 36TH ST

Facility Id:
Queens, NY 11106

MAP LOCATION INFORMATION

Site location mapped by: PARCEL MAPPING (1)
Approximate distance from property: 2538 feet to the NNE

ADDRESS CHANGE INFORMATION

Revised street: NO CHANGE
Revised zip code: NO CHANGE

PARKS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

PLEASE NOTE: * Compass directions can vary substantially for sites located very close to the subject property address.

Map Identification Number 36	Playground Thirty Five STEINWAT ST / 35TH AVE	Long Island City, NY 11101	Facility Id:
MAP LOCATION INFORMATION		ADDRESS CHANGE INFORMATION	
Site location mapped by: PARCEL MAPPING (1)		Revised street: NO CHANGE	
Approximate distance from property: 1110 feet to the NNE		Revised zip code: NO CHANGE	
Map Identification Number 37	A.R.R.O.W. Field House 3538 35TH ST	Queens, NY 11106	Facility Id:
MAP LOCATION INFORMATION		ADDRESS CHANGE INFORMATION	
Site location mapped by: PARCEL MAPPING (1)		Revised street: NO CHANGE	
Approximate distance from property: 1493 feet to the NNW		Revised zip code: NO CHANGE	
Map Identification Number 38	Torsney Playground	Queens, NY	Facility Id: NY43184
MAP LOCATION INFORMATION		ADDRESS CHANGE INFORMATION	
Site location mapped by: MAP COORDINATE (2)		Revised street: NO CHANGE	
Approximate distance from property: 1927 feet to the SSE		Revised zip code: NO CHANGE	
Map Identification Number 39	P.S. 150 Playground 4122 42ND ST	Long Island City, NY 11104	Facility Id:
MAP LOCATION INFORMATION		ADDRESS CHANGE INFORMATION	
Site location mapped by: PARCEL MAPPING (1)		Revised street: NO CHANGE	
Approximate distance from property: 2111 feet to the S		Revised zip code: NO CHANGE	
Map Identification Number 40	Dwyer Square 34TH AVE / NORTHERN BLVD	Long Island City, NY 11101	Facility Id:
MAP LOCATION INFORMATION		ADDRESS CHANGE INFORMATION	
Site location mapped by: PARCEL MAPPING (1)		Revised street: NO CHANGE	
Approximate distance from property: 2512 feet to the ENE		Revised zip code: NO CHANGE	

NO BEACHES IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

NO WETLANDS IDENTIFIED WITHIN 1/2 MILE SEARCH RADIUS

Appendix D – SVE/AS Pilot Test Data

Soil Vapor Extraction (SVE) Pilot Test Data

Site Name: Speedway #7830
39-04 Northern Boulevard, Long Island City, NY

Test Date: 9/20/2016

Personnel: JW, DW

Weather: Cloudy/75 DEG F

MW-9

Extraction Well

Observation Well	Observation Well	Observation Well	Observation Well
CW-3	MW-3		
Distance (ft)	Distance (ft)	Distance (ft)	Distance (ft)
19.4	52.4		

Time	Well Head Vac	System Vac	Flow (acfm)	Flow (scfm)	Extraction PID (ppm)	Vacuum"H ₂ O	Vacuum"H ₂ O	Vacuum"H ₂ O	Vacuum"H ₂ O
9:20	-	-	-	-	-	0.00	0.00		
10:00	13	14	30	31.1	0.0	0.08	0.02		
10:10	13	14	30	31.1	0.0	0.08	0.01		
10:15	13	14	30	31.1	0.0	0.08	0.01		
10:16	21	25	50	53.3	1.4	0.15	0.02		
10:21	21	25	50	53.3	1.9	0.15	0.02		
10:26	21	25	50	53.3	3.3	0.15	0.02		
10:27	32	35	80	87.5	5.9	0.22	0.02		
10:32	32	35	80	87.5	2.4	0.22	0.03		
10:37	32	35	80	87.5	8.3	0.22	0.03		

Comment / Notes: Collected air bag during 10:21 stage.

Soil Vapor Extraction (SVE) Pilot Test Data

Site Name: Speedway #7830
39-04 Northern Boulevard, Long Island City, NY

Test Date: 9/20/2016

Personnel: JW, DW

Weather: Cloudy/75 DEG F

Extraction Well			
CW-3			
Observation Well	Observation Well	Observation Well	Observation Well
MW-9	MW-3		
Distance (ft)	Distance (ft)	Distance (ft)	Distance (ft)
19.4	40		

Time	Well Head Vac	System Vac	Flow (acfm)	Flow (scfm)	Extraction PID (ppm)	Vacuum"H ₂ O	Vacuum"H ₂ O	Vacuum"H ₂ O	Vacuum"H ₂ O
10:40	-	-	-	-	-	0.00	0.00		
10:45	64	70	30	36.2	0.0	0.06	0.07		
10:50	64	70	30	36.2	0.0	0.07	0.07		
10:55	64	70	30	36.2	0.0	0.07	0.07		

Comment / Notes:
Blower maxed out on initial stage.
Collected air bag @ 10:50.

				Air Sparge Pilot Test Data							
Site Name: Speedway #7830 39-04 Northern Boulevard, Long Island City, N				AS Test Well							
				AS-3				Observation Well		Observation Well	
Test Date: 9/20/2016								MW-9		CW-3	
Personnel: JW, DW				Distance (ft)		Distance (ft)		Distance (ft)		Distance (ft)	
Weather: Cloudy/75 DEG F				5.60		23.92					
Time	Max Pres. (psi)	Run Pres. (psi)	Flow (cfm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)
10:57	-	-	-	0.00	0.0	0.00	0.0				
11:00	11	8	10	0.06	6	0.01	0				
11:15	-	6	12	0.30	6.6	0.05	0				
11:30	-	6	12	0.25	6.3	0.05	0				
11:45	-	6	12	0.31	615	0.05	0				
12:00	-	6	12	0.32	757	0.05	42				
12:15	-	6	12	0.32	1330	0.05	38				
Comment / Notes: Well breaking pressure - 11 psi.											

				Air Sparge Pilot Test Data									
Site Name: Speedway #7830 39-04 Northern Boulevard, Long Island City, N				AS Test Well									
				Test Date: 9/20/2016				CW-3AS					
Personnel: JW, DW												A	Observation Well
Weather: Cloudy/80 DEG F				CW-2		MW-9		MW-3					
				Distance (ft)		Distance (ft)		Distance (ft)		Distance (ft)			
				0.33		19.40		40.00					
Time	Max Pres. (psi)	Run Pres. (psi)	Flow (cfm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)	Pressure (in. w.c.)	PID (ppm)		
12:30	15	14	6	0.70	40	0.02	1000	0.02	0.0				
1:00	-	8	10	1.00	90	0.07	750	0.00	0.0				
1:15	-	8	10	0.95	82	0.07	755	0.00	0.0				
1:30	-	8	10	0.97	85	0.07	750	0.00	0.0				
Comment / Notes: Well breaking pressure - 15 psi.													

Site Name: Speedway #7830 39-04 Northern Boulevard, Long Island City, NY	AS Test Well
Test Date: 9/20/2016	AS-3
Personnel: JW, DW	
Weather: Cloudy, 75 DEG	Breakthrough pressure = 11 psi. Running pressure = 6 psi. Running flow rate = 12 cfm.

Air Sparge Pilot Test Data

Well ID	Distance (ft)	Baseline PID Head Space Reading (ppm)	Maximum PID Head Space Reading During Sparging (ppm)	Maximum Pressure Influence During Sparging (in. w.c.)
MW-9	5.6	0.0	1330	0.32
CW-3	23.9	0.0	42	0.05

Site Name: Speedway #7830 39-04 Northern Boulevard, Long Island City, NY	AS Test Well
Test Date: 9/20/2016	CW-3AS
Personnel: JW, DW	
Weather: Cloudy, 80 DEG	Breakthrough pressure = 15 psi. Running pressure = 8 psi. Running flow rate = 10 cfm.

Air Sparge Pilot Test Data

Well ID	Distance (ft)	Baseline PID Head Space Reading (ppm)	Maximum PID Head Space Reading During Sparging (ppm)	Maximum Pressure Influence During Sparging (in. w.c.)
CW-3	0.3	0.0	90	1.00
MW-9	19.4	0.0	1,000	0.07
MW-3	40.0	0.0	0.0	0.02

Site Name: Speedway #7830
39-04 Northern Boulevard, Long Island City, NY

Test Date: 9/20/2016

Personnel: JW, DW

MW-9 SVE Effluent Air Sampling Results With & Without AS

Contaminant	Concentration w/o AS (ppmV)	Concentration w/ AS-3 (ppmV)
MTBE	ND	95.7
Benzene	ND	124
Toluene	ND	47
Ethylbenzene	ND	45.3
Xylenes	ND	74.7
PID	1.9	1,400

CW-3 SVE Effluent Air Sampling Results With & Without AS

Contaminant	Concentration w/o AS (ppmV)	Concentration w/ CW-3AS (ppmV)
MTBE	ND	ND
Benzene	ND	ND
Toluene	ND	48.2
Ethylbenzene	ND	14.1
Xylenes	ND	42.8
PID	0.0	330

Summary of Soil Vapor Extraction Pilot Test Data
Speedway Station # 7830
39-04 Northern Boulevard
Long Island City, NY

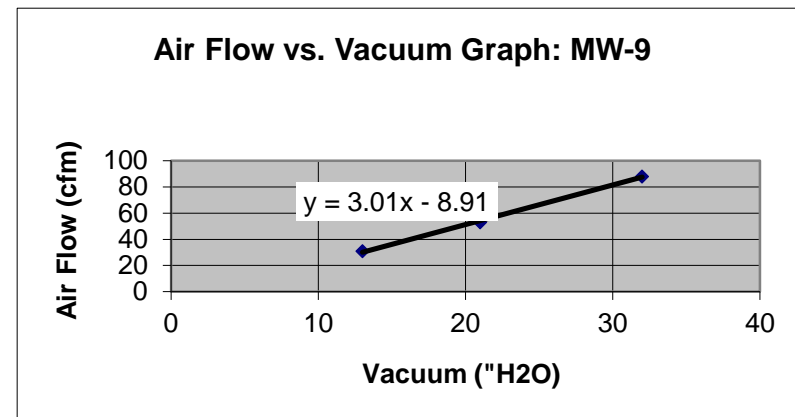
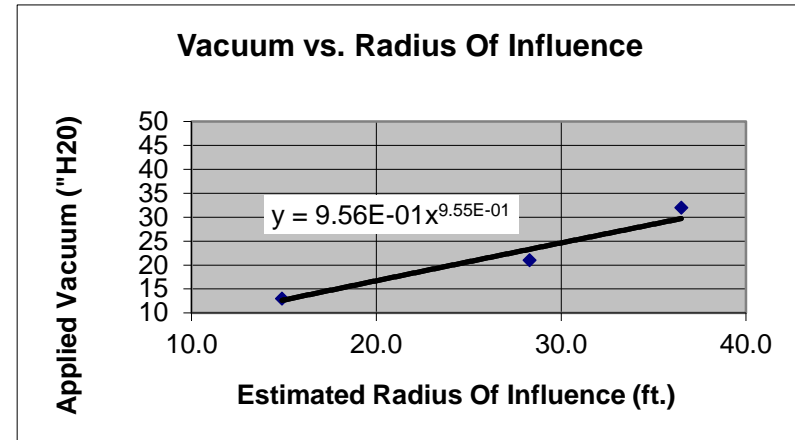
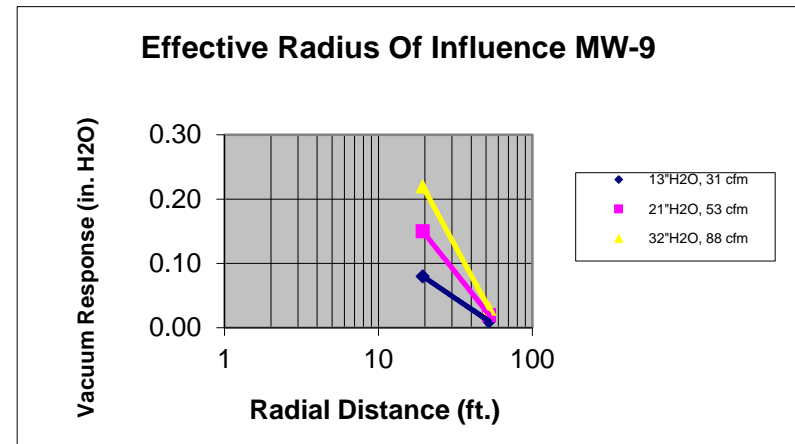
Test Date: 9/20/2016
Performed By: EnviroTrac
Extraction Well: MW-9
Test Duration (min.): 55
Wellhead Vacuum ("H2O): 10 to 30
Vapor Discharge Flow (scfm): 25 to 100

SVE Design Data

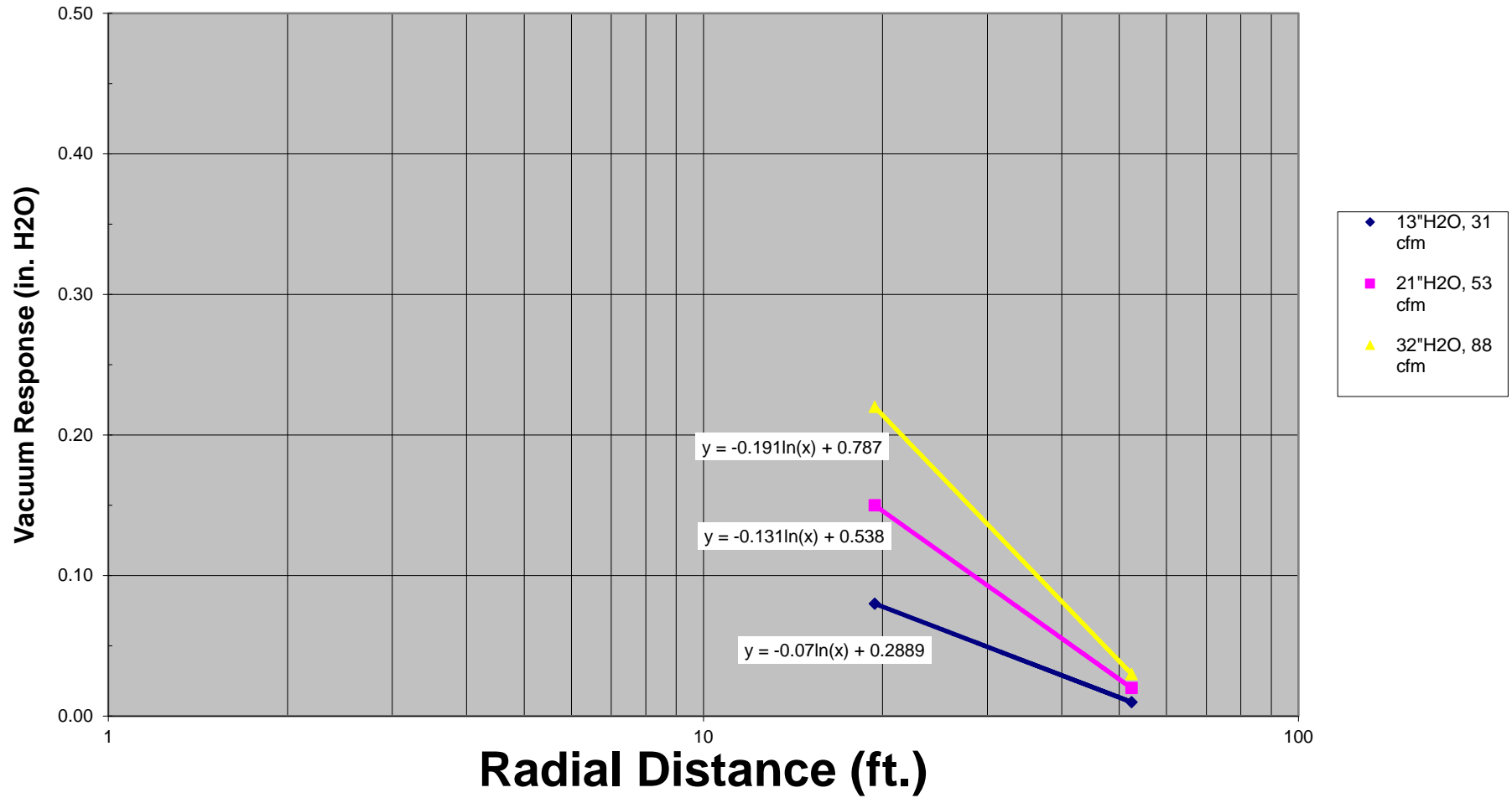
Radial Distance (ft.)	Vacuum Response 1 13" H2O Applied Vacuum, 31 scfm ("H2O)	Vacuum Response 2 21" H2O Applied Vacuum, 53 scfm ("H2O)	Vacuum Response 3 32" H2O Applied Vacuum, 88 scfm ("H2O)
19.4	0.08	0.15	0.22
52.4	0.01	0.02	0.03

Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
14.9	13	31
28.3	21	53
36.5	32	88

Desired ROI = 30 feet
 @ 30 ft ROI, Vacuum = 17 inches w.c.
 @ 17 inches w.c. Vacuum, Flow = 53 cfm



Effective Radius Of Influence MW-9



Appendix E – Pilot Test Laboratory Data

October 03, 2016

Ed Russo
Enviro Trac Ltd.
5 Old Dock Road
Yaphank, NY 11980

RE: Project: C210007830 COC ID # 00044223
Pace Project No.: 10363118

Dear Ed Russo:

Enclosed are the analytical results for sample(s) received by the laboratory on September 21, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joanne M Richardson
joanne.richardson@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

Alaska Certification UST-107

525 N 8th Street, Salina, KS 67401

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Alabama Certification #40770

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L

Florida/NELAP Certification #: E87605

Guam Certification #:14-008r

Georgia Certification #: 959

Georgia EPD #: Pace

Idaho Certification #: MN00064

Hawaii Certification #MN00064

Illinois Certification #: 200011

Indiana Certification#C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky Dept of Envi. Protection - DW #90062

Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086

Louisiana DHH #: LA140001

Maine Certification #: 2013011

Maryland Certification #: 322

Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Saipan (CNMI) #:MP0003

South Carolina #:74003001

Texas Certification #: T104704192

Tennessee Certification #: 02818

Utah Certification #: MN000642013-4

Virginia DGS Certification #: 251

Virginia/VELAP Certification #: Pace

Washington Certification #: C486

West Virginia Certification #: 382

West Virginia DHHR #:9952C

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10363118001	MW-9 SVE ONLY	Air	09/20/16 10:21	09/21/16 07:55
10363118002	CW-3 SVE ONLY	Air	09/20/16 10:50	09/21/16 07:55
10363118003	MW-9 SVE W/ AS	Air	09/20/16 12:15	09/21/16 07:55
10363118004	CW-3 SVE W/AS	Air	09/20/16 13:30	09/21/16 07:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10363118001	MW-9 SVE ONLY	TO-3 Air	RTP	6
10363118002	CW-3 SVE ONLY	TO-3 Air	RTP	6
10363118003	MW-9 SVE W/ AS	TO-3 Air	RTP	6
10363118004	CW-3 SVE W/AS	TO-3 Air	RTP	6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Sample: MW-9 SVE ONLY		Lab ID: 10363118001	Collected: 09/20/16 10:21	Received: 09/21/16 07:55	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG		Analytical Method: TO-3 Air						
Benzene	ND	ppmv	0.67	6.7		09/28/16 10:02	71-43-2	1M
Ethylbenzene	ND	ppmv	0.67	6.7		09/28/16 10:02	100-41-4	
Methyl-tert-butyl ether	ND	ppmv	0.67	6.7		09/28/16 10:02	1634-04-4	
Toluene	ND	ppmv	0.67	6.7		09/28/16 10:02	108-88-3	
m&p-Xylene	ND	ppmv	1.3	6.7		09/28/16 10:02	179601-23-1	
o-Xylene	ND	ppmv	0.67	6.7		09/28/16 10:02	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Sample: CW-3 SVE ONLY		Lab ID: 10363118002	Collected: 09/20/16 10:50	Received: 09/21/16 07:55	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG		Analytical Method: TO-3 Air						
Benzene	ND	ppmv	0.58	5.79		09/28/16 10:23	71-43-2	1M
Ethylbenzene	ND	ppmv	0.58	5.79		09/28/16 10:23	100-41-4	
Methyl-tert-butyl ether	ND	ppmv	0.58	5.79		09/28/16 10:23	1634-04-4	
Toluene	ND	ppmv	0.58	5.79		09/28/16 10:23	108-88-3	
m&p-Xylene	ND	ppmv	1.2	5.79		09/28/16 10:23	179601-23-1	
o-Xylene	ND	ppmv	0.58	5.79		09/28/16 10:23	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Sample: MW-9 SVE W/ AS		Lab ID: 10363118003	Collected: 09/20/16 12:15	Received: 09/21/16 07:55	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG		Analytical Method: TO-3 Air						
Benzene	124	ppmv	8.1	81.4		09/28/16 13:13	71-43-2	1M
Ethylbenzene	45.3	ppmv	8.1	81.4		09/28/16 13:13	100-41-4	
Methyl-tert-butyl ether	95.7	ppmv	8.1	81.4		09/28/16 13:13	1634-04-4	
Toluene	47.0	ppmv	8.1	81.4		09/28/16 13:13	108-88-3	
m&p-Xylene	59.5	ppmv	16.3	81.4		09/28/16 13:13	179601-23-1	
o-Xylene	15.2	ppmv	8.1	81.4		09/28/16 13:13	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Sample: CW-3 SVE W/AS		Lab ID: 10363118004	Collected: 09/20/16 13:30	Received: 09/21/16 07:55	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG		Analytical Method: TO-3 Air						
Benzene	13.4	ppmv	0.68	6.76		09/28/16 10:53	71-43-2	1M
Ethylbenzene	6.6	ppmv	0.68	6.76		09/28/16 10:53	100-41-4	
Methyl-tert-butyl ether	13.3	ppmv	0.68	6.76		09/28/16 10:53	1634-04-4	
Toluene	3.4	ppmv	0.68	6.76		09/28/16 10:53	108-88-3	
m&p-Xylene	9.3	ppmv	1.4	6.76		09/28/16 10:53	179601-23-1	
o-Xylene	2.3	ppmv	0.68	6.76		09/28/16 10:53	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

QC Batch: 437900 Analysis Method: TO-3 Air
 QC Batch Method: TO-3 Air Analysis Description: TO3 GCV AIR BTEX BAG
 Associated Lab Samples: 10363118001, 10363118002, 10363118003, 10363118004

METHOD BLANK: 2378778 Matrix: Air
 Associated Lab Samples: 10363118001, 10363118002, 10363118003, 10363118004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.10	09/28/16 08:29	
Ethylbenzene	ppmv	ND	0.10	09/28/16 08:29	
m&p-Xylene	ppmv	ND	0.20	09/28/16 08:29	
Methyl-tert-butyl ether	ppmv	ND	0.10	09/28/16 08:29	
o-Xylene	ppmv	ND	0.10	09/28/16 08:29	
Toluene	ppmv	ND	0.10	09/28/16 08:29	
a,a,a-Trifluorotoluene (S)	%	113	30-150	09/28/16 08:29	

LABORATORY CONTROL SAMPLE & LCSD: 2378779

2378780

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ppmv	1	1.1	1.0	109	105	70-130	4	30	
Ethylbenzene	ppmv	1	1.1	1.0	111	103	70-130	7	30	
m&p-Xylene	ppmv	2	2.2	2.0	111	102	70-130	8	30	
Methyl-tert-butyl ether	ppmv	1	1.0	1.0	102	100	70-130	3	30	
o-Xylene	ppmv	1	1.1	1.0	113	102	70-130	10	30	
Toluene	ppmv	1	1.1	1.0	109	105	70-130	4	30	
a,a,a-Trifluorotoluene (S)	%				110	108	30-150			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1M Sample was transferred from a sampling bag into a Summa Canister within 72 hours of collection.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: C210007830 COC ID # 00044223

Pace Project No.: 10363118

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10363118001	MW-9 SVE ONLY	TO-3 Air	437900		
10363118002	CW-3 SVE ONLY	TO-3 Air	437900		
10363118003	MW-9 SVE W/ AS	TO-3 Air	437900		
10363118004	CW-3 SVE W/AS	TO-3 Air	437900		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10363118

Page: 1 of 1

Section A
 Required Client Information:
 Company: EnviroTrac Ltd.
 Address: 5 Old Dock Road
 Yaphank, NY 11980
 Email To: ed@envirotrac.com
 Phone: 631-924-3001 Fax: Standard
 Requested Due Date/TAT:

Section B
 Required Project Information:
 Report To: ed@envirotrac.com
 Copy To:
 Purchase Order No.:
 Project Name: LIC (Northern)
 Project Number: Speedway #7830

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 Pace Quote Reference:
 Pace Project Manager:
 Pace Profile #:

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: STATE:

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WT PRODUCTS SL OIL CL WPE WP AIR AR OTHER OT TISSUE TS	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Correct (Y/N)	Samples Intact (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB									
1	MW-9 SVE only	MG	9/10	10:20		1							
2	CW-3 SVE only	↓	9/10	10:30		1							
3	MW-9 SVE w/AS	↓	12/15			1							
4	CW-3 SVE w/AS	↓	1/30			1							
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: *FastFlow a.e.* DATE: 9/21/07 TIME: 07:55 AM

ACCEPTED BY / AFFILIATION: *FastFlow a.e.* DATE: 9/21/07 TIME: 07:55 AM

SAMPLE CONDITIONS: N

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: *Jim Wilkinson*
 SIGNATURE of SAMPLER: *[Signature]*
 DATE SIGNED (MM/DD/YY): 9/20/06

Chain-of-Custody-Record

Speedway Project Information
Speedway Store #: C210007830 **Facility ID** 2-297313
Address: 3904 Northern Blvd
City: Long Island City **State:** NY
Phone #: **Fax #:**
Speedway Proj. Mgr: Matthew Butler ****INVOICE TO SPEEDWAY****
A/E #: 150266 **Work Order #:** 1100686625



TURN AROUND TIME
STANDARD

COC ID # 00044223

Lab Information
Lab: Pace Analytical Services (MN)
Consultant: EnviroTrac Ltd - Yaphank, NY
Project Mgr: Joe Rennie
Address:
Phone #: **Fax #:**
Sampler: Jim Wilkinson
Shipped: FedEx
Tracking #: 809251694900

Sample ID	Date/Time Sampled	Matrix	Count	Container Type	Preservative	Analysis to be Performed	Method	Remarks
CW-3 SVE ONLY	09/20/2016 10:50am	A	1	TEDLAR	NONE	TO-3	TO-3	BTEX/MTBE
CW-3 SVE W/AS	09/20/2016 01:30pm	A	1	TEDLAR	NONE	TO-3	TO-3	(1:30) BTEX/MTBE
MW-9 SVE ONLY	09/20/2016 10:21am	A	1	TEDLAR	NONE	TO-3	TO-3	BTEX/MTBE
MW-9 SVE W/ AS	09/20/2016 12:15pm	A	1	TEDLAR	NONE	TO-3	TO-3	BTEX/MTBE
Relinquished by:	Date						Date	Time
Relinquished by:	Date						Date	Time
Special Reporting Requirements:								
Lab Notes:								



Analysis Name: TO-3 (Air)

Analysis Description / Method: TO-3 Air / Air Analysis

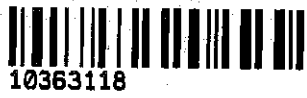
Container Type / Preservative: TEDLAR / NONE

Analytes: Benzene ppmv, Ethylbenzene ppmv, Methyl tert butyl ether ppmv, Toluene ppmv, m,p-Xylene ppmv, o-Xylene ppmv

Air Sample Condition Upon Receipt

Client Name: Euro-trac - NY

Project #: **WO#: 10363118**



Courier: Fed Ex UPS Speedee Client
 Commercial Pace Other: _____

Tracking Number: 8092 5169 4903

Optional: Proj. Due Date: _____ Proj. Name: _____

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Tin Can Other: _____ Temp Blank rec: Yes No

Temp. (TO17 and TO13 samples only) (°C): 0 Corrected Temp (°C): 0 Thermom. Used: B88A912167504 151401163
 B88A0143310098 151401164

Temp should be above freezing to 6°C Correction Factor: 0 Date & Initials of Person Examining Contents: 292116

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>T-BAG</u>
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: Air Can <u>Airbag</u> Filter TDT Passive		11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received:					
Canisters			Canisters		
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID

CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: Speedway chain of custody provided via e-mail by Crystal Bakewicz on 9-21.

Project Manager Review: Joanne Richardson Date: 9-21-16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118001
 Client Sample ID: MW-9 SVE ONLY

ProjSampleNum: 10363118001
 Matrix: Air

Date Collected: 09/20/16 10:21
 Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	ND	mg/m3	2.2	6.7	09/28/16 10:02 RTP	71-43-2	1M
Ethylbenzene	ND	mg/m3	3	6.7	09/28/16 10:02 RTP	100-41-4	
m&p-Xylene	ND	mg/m3	5.7	6.7	09/28/16 10:02 RTP	179601-23-1	
Methyl-tert-butyl ether	ND	mg/m3	2.5	6.7	09/28/16 10:02 RTP	1634-04-4	
o-Xylene	ND	mg/m3	3	6.7	09/28/16 10:02 RTP	95-47-6	
Toluene	ND	mg/m3	2.6	6.7	09/28/16 10:02 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118003
 Client Sample ID: MW-9 SVE W/ AS

ProjSampleNum: 10363118003
 Matrix: Air

Date Collected: 09/20/16 12:15
 Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	403	mg/m3	26.3	81.4	09/28/16 13:13 RTP	71-43-2	1M
Ethylbenzene	200	mg/m3	35.8	81.4	09/28/16 13:13 RTP	100-41-4	
m&p-Xylene	263	mg/m3	71.9	81.4	09/28/16 13:13 RTP	179601-23-1	
Methyl-tert-butyl ether	351	mg/m3	29.7	81.4	09/28/16 13:13 RTP	1634-04-4	
o-Xylene	67.1	mg/m3	35.8	81.4	09/28/16 13:13 RTP	95-47-6	
Toluene	180	mg/m3	31	81.4	09/28/16 13:13 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118004

ProjSampleNum: 10363118004

Date Collected: 09/20/16 13:30

Client Sample ID: CW-3 SVE W/AS

Matrix: Air

Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	43.5	mg/m3	2.2	6.76	09/28/16 10:53 RTP	71-43-2	1M
Ethylbenzene	29.1	mg/m3	3	6.76	09/28/16 10:53 RTP	100-41-4	
m&p-Xylene	41.1	mg/m3	6.2	6.76	09/28/16 10:53 RTP	179601-23-1	
Methyl-tert-butyl ether	48.7	mg/m3	2.5	6.76	09/28/16 10:53 RTP	1634-04-4	
o-Xylene	10.2	mg/m3	3	6.76	09/28/16 10:53 RTP	95-47-6	
Toluene	13	mg/m3	2.6	6.76	09/28/16 10:53 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc.
1700 Elm Street – Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
Phone: 631-924-3001

Lab Project Number: 10363118
Project Name: C210007830 COC ID # 00044223

PARAMETER FOOTNOTES

ND Not detected at or above adjusted reporting limit

NC Not Calculable

J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

[1M] Sample was transferred from a sampling bag into a Summa Canister within 72 hours of collection.

SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118001
 Client Sample ID: MW-9 SVE ONLY

ProjSampleNum: 10363118001
 Matrix: Air

Date Collected: 09/20/16 10:21
 Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	ND	ppbv	670	6.7	09/28/16 10:02 RTP	71-43-2	1M
Ethylbenzene	ND	ppbv	670	6.7	09/28/16 10:02 RTP	100-41-4	
m&p-Xylene	ND	ppbv	1300	6.7	09/28/16 10:02 RTP	179601-23-1	
Methyl-tert-butyl ether	ND	ppbv	670	6.7	09/28/16 10:02 RTP	1634-04-4	
o-Xylene	ND	ppbv	670	6.7	09/28/16 10:02 RTP	95-47-6	
Toluene	ND	ppbv	670	6.7	09/28/16 10:02 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118002
 Client Sample ID: CW-3 SVE ONLY

ProjSampleNum: 10363118002
 Matrix: Air

Date Collected: 09/20/16 10:50
 Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	ND	ppbv	580	5.79	09/28/16 10:23 RTP	71-43-2	1M
Ethylbenzene	ND	ppbv	580	5.79	09/28/16 10:23 RTP	100-41-4	
m&p-Xylene	ND	ppbv	1200	5.79	09/28/16 10:23 RTP	179601-23-1	
Methyl-tert-butyl ether	ND	ppbv	580	5.79	09/28/16 10:23 RTP	1634-04-4	
o-Xylene	ND	ppbv	580	5.79	09/28/16 10:23 RTP	95-47-6	
Toluene	ND	ppbv	580	5.79	09/28/16 10:23 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118003
 Client Sample ID: MW-9 SVE W/ AS

ProjSampleNum: 10363118003
 Matrix: Air

Date Collected: 09/20/16 12:15
 Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	124000	ppbv	8100	81.4	09/28/16 13:13 RTP	71-43-2	1M
Ethylbenzene	45300	ppbv	8100	81.4	09/28/16 13:13 RTP	100-41-4	
m&p-Xylene	59500	ppbv	16300	81.4	09/28/16 13:13 RTP	179601-23-1	
Methyl-tert-butyl ether	95700	ppbv	8100	81.4	09/28/16 13:13 RTP	1634-04-4	
o-Xylene	15200	ppbv	8100	81.4	09/28/16 13:13 RTP	95-47-6	
Toluene	47000	ppbv	8100	81.4	09/28/16 13:13 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, Inc.
 1700 Elm Street – Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: Speedway Project
 Phone: 631-924-3001

Lab Project Number: 10363118
 Project Name: C210007830 COC ID # 00044223

Lab Sample No: 10363118004

ProjSampleNum: 10363118004

Date Collected: 09/20/16 13:30

Client Sample ID: CW-3 SVE W/AS

Matrix: Air

Date Received: 09/21/16 7:55

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-3 Air							
Benzene	13400	ppbv	680	6.76	09/28/16 10:53 RTP	71-43-2	1M
Ethylbenzene	6600	ppbv	680	6.76	09/28/16 10:53 RTP	100-41-4	
m&p-Xylene	9300	ppbv	1400	6.76	09/28/16 10:53 RTP	179601-23-1	
Methyl-tert-butyl ether	13300	ppbv	680	6.76	09/28/16 10:53 RTP	1634-04-4	
o-Xylene	2300	ppbv	680	6.76	09/28/16 10:53 RTP	95-47-6	
Toluene	3400	ppbv	680	6.76	09/28/16 10:53 RTP	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT

Units Conversion Request



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1700 Elm Street – Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
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ANALYTICAL RESULTS

Client: Speedway Project
Phone: 631-924-3001

Lab Project Number: 10363118
Project Name: C210007830 COC ID # 00044223

PARAMETER FOOTNOTES

ND Not detected at or above adjusted reporting limit

NC Not Calculable

J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

[1M] Sample was transferred from a sampling bag into a Summa Canister within 72 hours of collection.

SUPPLEMENTAL REPORT

Units Conversion Request