SUFFOLK COUNTY FORMER BELLPORT GAS STATION
1401 MONTAUK HIGHWAY, EAST PATCHOGUE, NY
SITE: #E-1-52-194

PWGC Project No. SHD0902

REMEDIAL INVESTIGATION REPORT
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New York State Department of Environmental Conservation

Prepared for:
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1.0 INTRODUCTION

1.1 Purpose and Scope

P.W. Grosser Consulting, Inc. (PWGC) has prepared the following Remedial Investigation Report (RI) on behalf of the Suffolk County Department of Health Services (SCDHS) to document the investigation activities performed at the former Bellport Gas Station site located at 1401 Montauk Highway in East Patchogue, New York (Suffolk County Tax Map Number 200-975.8-4-20) (**Figure 1**). The property is owned by Suffolk County.

The scope of the investigation is detailed in the approved Remedial Investigation Work Plan (RIWP) prepared by PWGC in December 2008. PWGC performed the remedial investigation in accordance with the RIWP beginning in May 2009, and the results are summarized in this RI.

1.2 Site Location and Description

The area of concern is an abandoned gas station, approximately 0.3 acres in size (**Figure 2**). The site is located at 1401 Montauk Highway in East Patchogue, New York. The property is located on the north side of Montauk Highway and is bounded on the east by Lenox Avenue, on the north by residential properties, and on the west and south by commercial properties.

1.3 Site History

This property has been occupied by many different independent retail gasoline service stations, such as Eastern Petroleum (1983), Major Fuel (1986), National (1987), Independent (1991), and Ocean/Coastal (1991-1998).

Suffolk County acquired the property in 1999 for failure to pay property taxes.

On February 16, 1984, the SCDHS completed an inspection of this site when Gary's Auto and Truck Repair occupied the facility. This inspection revealed that there was an indoor floor drain which discharged waste liquid to a storm water drywell.

NYSDEC opened a spill number (8703461) in 1987 after an underground storage tank (UST) failed a tank test. Three (3) gasoline/diesel USTs and one (1) waste oil UST were removed from the site in 1988. The spill number was closed in 1988.

In 1994 the NYSDEC opened spill number 94-04094 after MTBE was detected in an offsite well, hydraulically down gradient of the subject property. The NYSDEC performed an in-depth off-site groundwater investigation, which delineated the extent of the offsite MTBE and BTEX impacts. The investigation concluded that impacts to private wells were eliminated through connections to public water, MTBE exposure at Dunton Lake and tidal creeks were not expected to cause adverse impacts to aquatic or terrestrial organism populations, and impacts to Bellport Bay were expected to be minimal. As a result, the off-site spill file was closed in 2008.

In May 1998, the Suffolk County Department of Health Services (SCDHS) received laboratory results from an environmental audit report completed by Tyree Bros. Environmental Services. This report documented contamination in the floor drain and two outdoor storm water drywells. The floor drain contained elevated levels of volatile organic compounds (VOCs) and metals.

Past sampling and remediation activities at the site have determined that elevated concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals are present in the soil and groundwater at the site. The extent of the contamination has not been thoroughly delineated. An application for inclusion into the New York State Environmental Restoration Program (ERP) was submitted on February 5, 2007. The site was approved for the ERP program on June 26, 2007 (Site ID#1-52-194). A State Assistance Contract (SAC) #T303811 was finalized on May 8, 2008.

1.4 Previous Investigations

In 2006, O'Brien and Gere prepared a Site Characterization Report which detailed the following:

- The groundwater at the site was found to contain elevated concentrations of metals, VOCs, and semi-volatile organic compounds (SVOCs). Contamination was detected in sampling locations located down-gradient of the former UST excavation.
- Surface and subsurface soils were found to have elevated concentrations of VOCs. Areas of contamination were located along the western property boundary, approximately 30 feet south of the building and in the southwest corner of the property, and within the former UST excavation collected 20-24 feet below ground surface (bgs).
- Aqueous and sludge samples collected from the floor drain at the site exhibited elevated concentrations of VOCs, SVOCs, PCBs, and metals. The sample collected from storm water drywell DW-1 contained elevated concentrations of metals.
- Exterior soil gas samples and interior sub-slab soil gas samples were found to contain elevated concentrations of VOCs.

O'Brien and Gere submitted a Remedial Alternatives Report in September 2006 which proposed the following potential remedial actions for the subject site:

- Removal of subsurface soil
- Implementation of a dual phase extraction system
- Removal of the floor drain
- Removal of surface soil
- Asbestos and lead based paint (LBP) abatement.

In September 2008, the SCDHS sampled storm water drywell DW-2 at the site as part of an Emergency Action Interim Remedial Measure (IRM). Analytical results from the sediment sample indicated concentrations of

chrysene and lead above SCDHS Action Levels. Based on the results, the SCDHS proposed remediation of DW-2 as per their NYSDEC-approved IRM Work Plan. The dry well was remediated and closed on October 7, 2008. Results of the IRM is discussed in Section 2.0.

2.0 SCDHS EMERGENCY IRM – DW-2 SOIL REMEDIATION

On October 7, 2008 the SCDHS performed remediation of storm water drywell DW-2. The objective of the IRM was to remove elevated concentrations of SVOCs and lead from the structure. Remediation activities were performed using Department of Public Works (SCDPW) equipment. Liquids contained in the structure were transferred to a nearby storm water drywell (DW-1). A vacuum powered truck was then used to remove approximately five feet of sediment from the base of the structure. Remedial activities were overseen by a SCDHS representative. Following cleanout activities, an endpoint sample was collected from the base of the structure. Endpoint sample analytical results indicated that remedial activities were successful, as no VOCs, SVOCs, or metals were detected in the endpoint sample at concentrations exceeding the SCDHS Cleanup Objectives.

Following collection of endpoint samples, the structure was permanently abandoned and backfilled with clean sand provided by Roanoke Sand and Gravel. Sediments which were removed from DW-2 were placed on poly sheeting inside the building and will be disposed of in the future. Approximately five cubic yards of sediments are staged inside the building, awaiting disposal. Information regarding the IRM performed by the SCDHS, including a description of activities performed, photos, endpoint sample results, and clean fill receipts, is contained in **Appendix A**.

3.0 FIELD INVESTIGATION

PWGC began the implementation of the RIWP in May 2009. As required, ten-day notification was provided to the NYSDEC before investigation activities began. Soil, soil-vapor, and groundwater sampling activities were performed between May 15 and June 4, 2009.

3.1 Field Investigation and Technical Approach

The Scope of Work, as identified in the approved RIWP, included the following tasks:

1. Underground Injection Control (UIC) Investigation
2. Surface and Subsurface Soil Sampling
3. Monitoring Well Installation
4. Groundwater Sampling
5. Soil Vapor Sampling

These tasks are discussed in detail in the following sections.

3.1.1 UIC Investigation

On May 15, 2009, PWGC and their subcontractor American Environmental Assessment Corporation (AEAC) of Wyandanch, New York mobilized to the site to locate and sample existing UIC structures at the site. Previous investigations have identified the presence of an on-site sanitary system, an existing storm-water drywell, and a floor drain. The purpose of the UIC investigation was to characterize soil/sludge within the existing UIC structures.

AEAC utilized a Case 590 Super L Backhoe to locate and expose the site's sanitary system and the storm-water drywell associated with floor drain (FD-1) located within the abandoned building. A single four inch diameter Orangeburg pipe (bituminized pipe used from the 1860's to 1970's) was traced from the bathroom located at the northeast corner of the building to a leaching cesspool (CP-1) consisting of six foot diameter block pool approximately six feet deep with a brick chimney and solid concrete cover. An inspection of FD-1 identified the structure to have a solid concrete bottom with a single four inch diameter Orangeburg pipe exiting to the northeast. The pipe was traced from the northwest corner of the building to a leaching drywell (DW-3) consisting of a six foot diameter block pool approximately six feet deep with a solid concrete cover. No overflow pipes were identified in CP-1 and DW-3. Stormwater drywell DW-1 was inspected and was found to be constructed of an eight-foot diameter precast concrete ring and had a depth of approximately four feet. The location of UIC structures are identified on **Figure 2**.

Soil/sludge samples were retrieved from the base of CP-1, DW-1, and DW-3 utilizing a stainless steel hand auger. Prior to sampling, equipment was decontaminated using a laboratory-grade glassware detergent and tap water scrub to remove visual contamination; generous tap water rinse; followed by a distilled water rinse. At each UIC structure three grab samples were retrieved from the base. Grab samples were screened with a photoionization detector (PID) to detect the presence of volatile organic vapors. A volatile organic compound (VOC) sample was collected from the grab sample which had the highest PID response from each structure. The remaining samples were transferred to a stainless steel bowl and homogenized. Once the soil/sludge was homogenized, a

sample was transferred into glassware provided by Chemtech of Mountainside, New Jersey. Samples were packed in coolers with ice and shipped to Chemtech under chain-of-custody seal.

The three (3) soil/sludge samples were analyzed for the presence of:

- Volatile organic compounds by EPA Method 8260 (SCDHS List)
- Semi-volatile organic compounds by EPA Method 8270 (SCDHS List)
- Total Metals by EPA Method 6010 (SCDHS List)

3.1.2 Surface and Subsurface Soil Sampling

Surface and subsurface soil sampling was conducted to delineate the extent of two separate impacted areas identified during the O'Brien & Gere Investigation.

Surface Sampling:

Surface soil samples were collected to delineate the areal extent of VOC and metal impacted soils around two locations sampled during the O'Brien & Gere Investigation (SS-9 and SS-10). Two new samples from the original locations and four (4) from around each of the two former sampling locations were collected. Surface soil locations are identified on **Figure 3**.

Surface soils were collected from 0 to 2 inches below ground surface (bgs) or below the vegetative layer. Samples were also collected from 1.0 to 1.5 feet bgs.

Soil samples were collected from each location using stainless steel sampling equipment. Prior to sampling, equipment was decontaminated using a laboratory-grade glassware detergent and tap water scrub to remove visual contamination; generous tap water rinse; followed by a distilled water rinse. Sampling equipment was decontaminated between each interval. Soil samples were classified using the Unified Soil Classification System (USCS) and screened in the field for the presence of VOCs using a PID. Samples were then placed in pre-cleaned, laboratory-supplied glassware provided by Chemtech. Samples were packed in coolers with ice and shipped to Chemtech under chain-of-custody seal.

Initially, the shallow surface soil samples (0-2") were analyzed, while the deeper samples (1'-1.5') samples were held pending analytical results. These samples were analyzed for VOCs according to USEPA Method 8260 and TAL metals according to USEPA Method 6010. If a soil sample showed concentrations of VOCs or metals above NYSDEC Recommended Cleanup Objectives (RSCOs), the deeper sample collected from that location (1'-1.5') was analyzed.

Subsurface Sampling:

On May 19, 2009, PWGC and their subcontractor, Land Air Water Environmental Services (LAWES), of Center Moriches, New York mobilized to the site to collect subsurface soil samples. Subsurface soil samples were collected to determine the areal extent of impact in the vicinity of the former UST area (O'Brien & Gere sampling

location GP-2). One soil boring was performed through the center of the former UST excavation and four soil borings were performed along the perimeter of the UST excavation. Soil boring locations are identified on **Figure 4**.

LAWES utilized a track mounted Geoprobe™ to perform the five soil borings. At each boring location, soils were collected continuously from ground surface to 25 feet bgs in SB-4, SB-5, SB-6, & SB-7 and to 30 feet bgs in SB-8. Groundwater was encountered at approximately 19 feet bgs. Soil samples were classified using the Unified Soil Classification System (USCS) and screened in the field for the presence of VOCs using a PID. PID responses above background levels were not observed above the water table in the five borings. PID responses above background were observed in each of the five borings at a depth of 22 feet to 24 feet bgs. PID readings ranged from 78 parts per million (ppm) in SB-6 to 1,294 ppm in SB-8. PID readings above and below this interval were below background readings or near non-detect. Soil boring logs are included in **Appendix B**.

Soil samples were collected from the interval directly above the water table, 16 feet to 18 feet bgs, and from the interval exhibiting the highest PID response, 22 feet to 24 feet bgs, in each boring. Samples were placed in pre-cleaned, laboratory-supplied glassware provided by Chemtech. Samples were packed in coolers with ice and shipped to Chemtech under chain-of-custody seal. These samples were analyzed for VOCs according to USEPA Method 8260.

3.1.3 Monitoring Well Installation

During a site inspection by PWGC on September 24, 2008, the existing monitoring wells were found not to be viable for sample collection. As a result, three monitoring wells were installed to obtain groundwater quality data for the RI and for future groundwater monitoring, as necessary. The location of MW-11 was relocated to the southwest corner of the property due to underground utilities identified in the sidewalk area. Monitoring well locations are identified on **Figure 5**.

On May 18, 2009, PWGC and their subcontractor, LAWES, mobilized to the site to install three monitoring wells (MW-9, MW-10, & MW-11). LAWES utilized a track mounted Geoprobe™ to advance 4 ¼ inch diameter hollow stem augers to the appropriate depths. The boreholes were over drilled to a depth of 26 ½ feet bgs. At this depth, a 2 inch diameter, schedule 40 PVC monitoring well was installed through the augers. The monitoring well consisted of 10 feet of screen with 0.010 inch slot and 16 feet of solid riser. This allowed for the well screen to be set with 7 feet into and 3 feet above the water table. The well annulus was filled with #2 morie sand to two feet above the well screen. A two-foot fine sand layer, #00, was installed above the screen followed by a bentonite seal to grade. A concrete surface pad (2 feet by 2 feet by 6-inch) was installed. The wells were finished with locking j-plugs and flush mount curb boxes. Monitoring well construction logs are included in **Appendix C**.

3.1.3.1 Monitoring Well Development

On May 20, 2009 PWGC mobilized to the site to develop the newly installed monitoring wells. Monitoring wells were developed by over-pumping to restore the hydraulic properties of the aquifer. Well development continued until the turbidity of the groundwater was less than or equal to 50 Nephelometric Turbidity Units (NTUs),

or when pH, temperature, and conductivity measurements stabilized. Stabilization was considered achieved when three consecutive readings of these field parameters were within five percent of each other. Monitoring well development information is provided on the well development logs in **Appendix D**.

3.1.3.2 Monitoring Well Survey

On May 20, 2009, PWGC mobilized to the site to survey the newly installed monitoring wells. PWGC utilized a TOPCON Green Label auto level (AT-G6) to measure the elevations of the new wells. The AT-G6 is accurate to 0.01 feet. The new monitoring wells were surveyed relative to an arbitrary on-site datum. The measuring points on each well casing were marked for future measurements.

3.1.4 Groundwater Investigation

A groundwater investigation was conducted to determine the extent of groundwater impact, both on-site and off-site. Groundwater samples were collected from on-site locations and at an off-site down-gradient location. This was completed by collecting samples from on-site monitoring wells and Geoprobe™ groundwater sampling locations (**Figure 5**).

3.1.4.1 Geoprobe™ Groundwater Sampling

On May 19, 2009, PWGC and their subcontractor LAWES mobilized to the site to collect three groundwater samples. One location, GW-1, was located northwest of the former UST excavation. GW-2, which was relocated to the north side of the sidewalk due to underground utilities encountered during hand clearing, was located southwest of the former UST excavation. GW-3, which was relocated to a parcel owned by Suffolk County on the south side of Montauk Highway, was located southwest of the subject site. GW-2 and GW-3 are down-gradient with respect to the local groundwater flow direction.

LAWES utilized a track mounted Geoprobe™ unit to advance a four-foot long screen point sampler to three feet below the water table. This allowed the sampler screen to intersect the water table. Disposable polyethylene tubing was inserted through the probe rods into the water bearing zone. The end of the tubing was connected to a peristaltic pump with disposable silicone tubing. Four casing volumes of water were purged from the screen point sampler. After each well casing volume of water was removed from the well a sample was monitored for turbidity, pH, temperature, and conductivity. A sample was collected after conductivity, pH, and temperature readings adequately stabilized during the pumping. Copies of the groundwater sampling data sheets containing the field parameters recorded and purge volumes for each sampling point are attached in **Appendix E**.

Samples were poured into pre-cleaned, laboratory-supplied glassware provided by Chemtech. Samples were packed in coolers with ice and shipped to Chemtech under chain-of-custody seal. These samples were analyzed for VOCs according to USEPA Method 8260 (including trimethylbenzenes), SVOCs by EPA Method 8270 and TAL metals by EPA Method 6010 (both filtered and unfiltered).

3.1.4.2 Monitoring Well Sampling

On June 4, 2009, PWGC mobilized to the site to perform groundwater sampling of the monitoring wells. Samples were collected from the three monitoring well locations (MW-9 through MW-11) shown in **Figure 5.** MW-10 is located up-gradient, MW-9 is located side-gradient and MW-11 is located down-gradient of the site.

Groundwater monitoring of the wells consisted of collecting and recording depth to water, depth to light non-aqueous phase liquid (LNAPL), LNAPL thickness, and total well depth measurements for the three on-site groundwater monitoring wells. Water levels and LNAPL measurements were collected using a Solinist Interface Probe. LNAPL was not detected in the three monitoring wells. Water level measurements were converted into groundwater elevation data to construct a groundwater contour map and determine flow direction (**Figure 6**). Water Elevation Measurements are included in **Table 1**. Based on the calculations performed, groundwater flow is in a southwest direction.

Prior to sampling, each well was purged using a peristaltic pump. Three casing volumes of water were purged from each monitoring well. After each well casing volume of water was removed from the well a sample was monitored for turbidity, pH, temperature, and conductivity. A sample was collected following the removal of three casing volumes and after conductivity, pH, and temperature readings adequately stabilized during the pumping. Copies of the groundwater sampling data sheets containing the field parameters recorded and purge volumes for each sampling point are attached in **Appendix E**.

Samples were poured into pre-cleaned, laboratory-supplied glassware provided by Chemtech. Samples were packed in coolers with ice and shipped to Chemtech under chain-of-custody seal. These samples were analyzed for VOCs according to USEPA Method 8260 (including trimethylbenzenes), SVOCs by EPA Method 8270 and TAL metals by EPA Method 6010. Since turbidity readings were low prior to sample collection, metals analysis was performed only on unfiltered samples collected from the monitoring wells.

3.1.5 Soil-Vapor Investigation

Soil vapor samples were collected to evaluate the presence of VOC vapors identified during the O'Brien & Gere Investigation. During the O'Brien & Gere Investigation, elevated concentrations above USEPA target concentrations were identified in two sample locations on the sidewalk south of the subject property.

Based on this evaluation, PWGC installed four (4) temporary soil vapor points at the subject site with a Geoprobe®. The location of the soil vapor points are shown on **Figure 7**. One point was located in the vicinity of former soil vapor point SG-3 to confirm the elevated concentration of 1,3 butadiene and 1,1,1-TCA. One point was located under the site's building slab to provide vapor results indicative of what would be expected under a future site structure. A third sampling location was along the property line with the adjacent residential property to determine if impacts to adjacent residential properties are likely. The last sampling location was located across Montauk Highway, south of the site, adjacent to GW-3. An indoor air sample was also collected inside the building and an outdoor ambient air sample was collected from an upwind location at the time of sampling.

PWGC followed the procedures for these samples outlined in the New York State Department of Health (NYSDOH) guidelines found in the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*.

On May 20, 2009, PWGC and their subcontractor LAWES mobilized to the site to install the soil gas probes. The soil gas probes were installed using a track mounted Geoprobe®. At each location, a shallow soil vapor sampling point was installed five feet beneath the surface, except at SV-1 which was installed directly beneath the building slab (no greater than 2-inches beneath the slab).

SV-2 through SV-4 were installed as follows:

- Soil gas probe with dedicated polyethylene tubing was installed at a depth of 5 feet bgs.
- #1 crushed stone was poured around the probe to create a 2 foot sampling zone.
- Soil gas probes were sealed above the sampling zone with a bentonite slurry to grade.

SV-1 was installed as follows:

- Soil gas probe with dedicated polyethylene tubing was installed to a depth so that the tubing did not extend further than 2 inches into the sub-slab material.
- #1 crushed stone was added to cover 1 inch of the probe tip.
- The soil gas probe was sealed with modeling clay.

Prior to sampling, the integrity of the seal was tested using tracer gas analysis. The environment surrounding the seal was enriched with the tracer gas, helium, as readings were collected through the sampling probe with a portable *Ion Gas Check G3 Helium Detector*. Tracer gas readings were acceptable for the sample. After the initial tracer gas test was performed, one to three volumes of the implant (i.e., the volume of the tube) was purged prior to collecting the sample. In order to minimize potential outdoor air infiltration during sampling, flow rates for both purging and sample collection did not exceed 0.2 liters per minute.

In order to obtain a representative sample, the sample tubing was connected to a 6.0 L Summa™ canister fitted with a one hour regulator. The indoor air and outdoor air samples were also fitted with one hour regulators. These samples were collected in 6.0 L Summa™ canisters. Using the same method identified above, the seal around the sub-slab sample was reassessed for evidence of leaks at the end of the sampling period and none were detected.

Samples were collected in Summa™ canisters provided by Chemtech. Samples were shipped to Chemtech under chain-of-custody seal. These samples were analyzed for VOCs according to USEPA Method TO-15.

3.2 Quality Assurance/Quality Control

As stated in the RIWP, the overall quality assurance/quality control (QA/QC) objective for the field investigation was to develop and implement procedures that provide data of known and documented quality. QA/QC characteristics for data include precision, accuracy, representativeness, completeness, and comparability. The purpose of the QA/QC activities developed for this site was to verify the integrity of the work performed at the site

to assure that the data collected are of the appropriate type and quality needed for the intended use.

The QA/QC program included the preparation and analysis of field QA/QC samples such as field blanks, field duplicates, and matrix spike duplicates. Third party data validation was performed on ten percent of the laboratory results of soil, soil-vapor, and groundwater samples submitted for analysis.

3.3.1 QA/QC Samples

To assess the adequacy of sample collection and decontamination procedures performed in the field, QA/QC samples were collected and analyzed throughout the field sampling program. In general, QA/QC samples confirmed that the procedures performed in the field were consistent and acceptable. Reported detections in the equipment blanks did not impact the interpretation of sample data. As specified in the RIWP, QA/QC samples collected for laboratory analysis included equipment blanks (EB), blind/field duplicates (FD), matrix spike (MS), and matrix spike duplicates (MSD). The EB samples were collected daily for each sampling method that used non-disposable equipment such as the hand auger and peristaltic pump. FD and MS/MSD samples were submitted at a minimum of one each per twenty samples.

Type	Frequency
Equipment Blank	One per day per sample matrix
Blind/Field Duplicate	One per 20 samples per matrix
Matrix Spike/Matrix Spike Duplicate	One per 20 samples per matrix

During the project, a total of four equipment blanks were collected. Equipment blanks were collected by pouring laboratory-supplied deionized water over sampling equipment and collecting the water in the appropriate sample container(s). In order to evaluate the precision of the field sampling and laboratory analyses, PWGC collected two soil field duplicates and one groundwater field duplicate.

3.3.2 Data Validation

PWGC retained the services of Stone Environmental, Inc. (Stone), of Montpellier, Vermont to perform validation of data obtained during the RI. Full data validation was performed on 10% of the data or two samples from the sample delivery group for volatiles and metals in water samples. The remaining data received a summary validation. A copy of the Data Validation Report (DVR) is included as **Appendix F**.

3.3.3 Data Usability

Based on the review of the results reported by the laboratory, the overall Quality Control data provided in the laboratory reports and the case narrative; the data are representative of adequate method accuracy and precision with regard to the project objectives. As noted in the full validation report, some of the data pints were qualified as estimated (J/UJ) due to laboratory accuracy and precision outliers or potential interferences. However, the completeness level attained for the analysis of the field samples was greater than 95%. For all data, the overall quality of the data is acceptable and all results as qualified as estimated are considered usable.

3.4 Standards, Criteria and Guidance Values

Based upon the site history and previous investigations the identified contaminants of concern (COCs) at the site are VOCs, SVOCs, and metals.

Soil analytical results for the surface and subsurface investigation were compared to the restricted residential use soil cleanup objectives (RRSCOs) specified in Table 375-6.8(b) of the NYSDEC 6 NYCRR Part 375 Subparts 375-1 to 375-4 and 375-6 (Part 375, RUSCOs for the protection of public health). In the absence of an applicable clean-up objective under the Part 375 RRSCOs, the recommended soil cleanup objectives (RSCOs) from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 were substituted.

Soil/sludge analytical results for the UIC investigation were compared to both the restricted RRSCOs and the Action Levels specified in the SCDHS Article 12, Standard Operation Procedure (SOP) 9-95, Pumpout and Soil Cleanup Criteria, January 7, 1999.

Groundwater analytical results were compared to the NYSDEC Ambient Water Quality Standards and Guidance Values (AWQS) for Class GA groundwater, as specified in Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values on Groundwater Effluent Limitations, June 1998.

New York State currently does not have any standards, criteria or guidance values for concentrations of compounds in soil vapor. Soil vapor sampling results are reviewed "as a whole," in conjunction with the results of other environmental sampling and the site conceptual model, to identify trends and spatial variations in the data.

3.5 Analytical Results

Analytical results for the samples collected from the underground injection control structures are summarized on **Tables 2** through **4,** soil samples are summarized in **Tables 5** through **6** and groundwater results are summarized in **Tables 7** through **9**. Laboratory analytical reports are included as **Appendix G**.

UIC Samples

VOCs were not detected above laboratory detection limits with the exception of naphthalene in each of the three samples. Concentrations of naphthalene did not exceed the RRSCO or the SCDHS Action Level in the three samples. VOC analytical data is summarized in **Table 2**.

SVOCs were detected above RRSCOs in the sample collected from CP-1. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and ideno(1,2,3-cd)pyrene were detected at concentrations exceeding their respective RRSCOs. SVOCs were not detected above laboratory detection limits

in the samples collected from DW-1 and DW-3. SVOC analytical data is summarized in **Table 3**.

Several inorganic metals were detected above RRSCOs in CP-1 and DW-3. Concentrations of lead exceeded RRSCOs in both samples. Additionally, Cadmium, lead, and mercury exceeded their respective RRSCOs in CP-1. No metals were detected above RRSCOs in DW-1. TAL metal analytical data is summarized in **Table 4**.

Surface Soil

VOCs were not detected above laboratory detection limits with the exception of 2-butanone and acetone in the surface sample collected from the S-6 location. However, the concentrations of 2-butanone and acetone were detected below their RRSCO. VOC analytical data is summarized in **Table 5**.

Metals were detected above laboratory detection limits in the 10 soil samples. The detected concentrations of metals did not exceed their respective RRSCOs. Magnesium does not have a value for RRSCO and the NYSDEC RSCO is labeled as Site Background (SB). Magnesium is naturally occurring and the detections are most likely not associated with an on-site source of contamination. Metal analytical data is summarized in **Table 6**.

Sub-surface Soil

VOCs were not detected above laboratory detection limits in the five soils samples collected from directly above the water table (16 to 18 feet bgs). VOCs were detected above laboratory detection limits in three of the five soil samples collected from the 22 to 24 feet bgs range. VOC concentrations detected in the soils did not exceed the NYSDEC RRSCO's. VOC analytical data is summarized in **Table 5A**.

Groundwater

VOCs were detected above NYSDEC groundwater standards in five of the six samples. The VOCs detected above standards were ethylbenzene, isoproylbenzene, m/p xylene, and o-xylene. Concentrations in GW-1 did not exceed standards. VOC analytical data is summarized in **Table 7**.

SVOCs were detected below NYSDEC groundwater standards with the exception of Naphthalene in GW-3 and MW-9. SVOC analytical data is summarized in **Table 8**.

Metals were detected above NYSDEC groundwater standards in each of the six samples. Beryllium, chromium, iron, lead, manganese, selenium, and sodium were detected above their specific groundwater standards. Slight decreases in metal concentrations were identified in the filtered metal results from GW-1 through GW-3. Metal analytical data is summarized in **Table 9**.

Soil-Gas

VOCs were detected in the four soil gas, indoor air, and outdoor air sampling locations above laboratory detection limits. Twenty-seven different VOCs were detected throughout the site. Sixteen of the twenty-seven compounds were detected in the soil gas samples and not in the indoor or outdoor air samples. Analytical data is summarized on **Table 10.**

3.6 Waste Management

Under the direction of PWGC, AEAC removed and properly disposed of the investigation derived wastes (IDW), both solids and liquids, discussed below.

3.6.1 Investigative Derived Waste (IDW)

Three 55-gallon drums of liquid (decontamination, development, and purge water), and four 55-gallon drums of soils (drill cuttings and excess soil samples) were generated during the investigation.

3.6.3 Waste Transportation and Disposal

The 55-gallon drums of IDW were transported by AEAC (USEPA ID # NYR00000044412) to Chemical Pollution Control (CPC), USEPA ID # NYD082785429, Bay Shore, New York for treatment/disposal. Waste manifests are included in **Appendix H**.

4.0 HYDROGEOLOGIC ASSESSMENT AND PHYSICAL SETTING

The following section describes site topography, surrounding property use and regional and site geology/hydrogeology.

4.1 Site Topography

On April 22, 2009, PWGC performed a preliminary site inspection. The site is located approximately 40 feet above mean sea level. The site's topography is relatively undisturbed. No recent disturbances were observed; small trees and shrubs have almost re-vegetated the entire area north of the one story building.

No erosion of surface areas was noted. A single storm-water drywell is located near the southeast corner of the building. Precipitation recharges directly into the subsurface or the storm water drywell with no evidence of overland flow away from the site towards surface-water bodies.

The nearest surface-water body is Dunton Lake located approximately 5,000 feet to the south-southeast (**Figure 1**). Based upon site topography, overland flow to this surface-water body is unlikely.

4.2 Surrounding Land Use

The site is located at 1401 Montauk Highway in East Patchogue, New York. The site adjacent to and west of the site is occupied by a convenience store. Immediately east and south of the site are commercial buildings.

The nearest residential properties are located adjacent to and north of the site **(Figure 1)**. These residential areas have municipal water service provided by the Suffolk County Water Authority (SCWA).

4.3 Regional Geology / Hydrogeology

The geologic setting of Long Island is well documented and consists of crystalline bedrock composed of schist and gneiss overlain by layers of unconsolidated deposits. Immediately overlying the bedrock is the Raritan Formation, consisting of the Lloyd sand confined by the Raritan clay Member. The Lloyd sand is an aquifer and consists of discontinuous layers of gravel, sand, sandy and silty clay, and solid clay. The Raritan clay is a solid and silty clay with that is gray, red or white in color with few lenses of sand and gravel and abundant lignite and pyrite.

Above the Raritan Clay lies the Magothy Formation. The Magothy aquifer consists of layers of fine to coarse sand of moderate to high permeability, with inter-bedded lenses of silt and clay of low permeability resulting in areas of preferential horizontal flow. Therefore, this aquifer generally becomes more confined with depth. The Magothy Formation is overlain by the Upper Glacial deposits which contains the Upper Glacial aquifer. The Upper Glacial aquifer is the water-table aquifer at this location and is comprised of medium to coarse sand and gravel with occasional thin lenses of fine sand and brown clay. This aquifer extends from the water table to the top of the

Magothy and, therefore, is hydraulically connected to the Magothy aquifer.

4.4 Site Geology / Hydrogeology

The aquifer of concern at the former Bellport Gas Station site is the Upper Glacial aquifer which is an unconsolidated mixture of sand and gravel. The Upper Glacial aquifer is approximately 100 feet at the site, and has an estimated average horizontal hydraulic conductivity (permeability) of 270 feet/day and a vertical hydraulic conductivity of 27 feet/day (Franke & Cohen, 1972).

Clay layers, such as the Gardiners clay and the "20-Foot-clay," where present, may act as local confining units, separating the Upper Glacial aquifer from the underlying Magothy aquifer which is the principal source of drinking water in Suffolk County. These clay layers extend throughout much of the south shore of Long Island.

Based on data collected during monitoring well installation, depth to groundwater ranged from approximately 18.84 to 19.46 feet bgs. No confining unit (clay) was present at the monitoring well locations. Regional groundwater flow at the site is to the south. Based upon the groundwater measurements obtained from the site monitoring wells on June 6, 2009, local groundwater flow direction was determined to be to the south-southwest (**Figure 6**).

5.0 NATURE AND EXTENT OF CONTAMINATION

The following section describes the investigation techniques used to determine the nature and extent of contamination identified at the subject property.

5.1 Identification of Source Areas

Sampling conducted at the site identified residual VOC impacts in the smear zone in the former tank area, beneath the groundwater table. VOC contamination was not identified in the surface soils samples collected on the property. Although a previous investigation identified the presence of VOC impacted soils, these area were resampled as part of this investigation and no elevated concentrations of VOCs were detected. SVOC and metal contamination were identified in two of the three UIC structures.

5.2 Extent of Contamination in Soil

Subsurface soil samples were collected at two depths during the RI Investigation; 16-18 feet bgs and 22-24 feet bgs. Surface soil samples were collected at two depths during the RI Investigation; 0-2 inches bgs and 1-1.5 feet bgs. Soil/sludge samples were collected from the base of on-site UIC structures during the RI Investigation. Soil/sludge samples collected from the bases of the UIC structures were analyzed for VOCs, SVOCs and metals in accordance with SCDHS SOP 9-95 procedures and protocol. Surface soil samples were analyzed for the presence of VOCs and metals, while subsurface sample were analyzed for VOCs only.

None of the samples collected contained concentrations of VOCs above RRSCO's. A sample collected from one of the UIC structures (CP-1) contained concentrations of SVOCs above both the RRSCOs and the SCDHS Action Levels. In addition, samples collected from two of the UIC structures (CP-1 and DW-3) contained concentrations of metals above both the RRSCOs and the SCDHS Action Levels.

Although VOCs were detected in the subsurface soils in the vicinity of the former USTs, the concentrations were below the RRSCOs. The residual levels of VOCs detected in the smear zone may be a source of VOCs detected in the groundwater. Spread or migration of SVOCs and metals within the UIC structures should be limited as these structures (DW-3 and CP-1) are not currently receiving discharges and these compounds typically tend to adhere to soils and are not easily leached.

5.3 Extent of Contamination in Groundwater

Concentrations of VOCs slightly exceeding the NYSDEC Groundwater Standards were detected in each of the three groundwater monitoring wells and two of the three temporary Geoprobe wells. It is evident that residual VOC impact exists down gradient of the former UST area. However, an off-site source of VOC contamination may exist as slightly elevated concentrations of VOCs were detected in up-gradient and side-gradient wells.

In addition, concentrations of metals slightly exceeding the NYSDEC Groundwater Standard were detected in each of groundwater samples collected. However, many of these metals are naturally occurring and are

common in shallow groundwater. Concentrations of metals in groundwater are shown to be greatly reduced when the samples are filtered, as metals tend to adhere to sediments in turbid samples. It should be noted that elevated concentrations of metals are contained only in the samples collected from the permanent monitoring wells. The reason for the elevated concentrations of some of these metals, such as chromium and lead are unknown, as significant sources of these metals in the soils were not encountered during the Remedial Investigation. It is not believed that the metals detected in the groundwater samples are a result of an onsite source of contamination.

5.4 Extent of Contamination in Soil Gas

VOCs were detected in each of the four soil gas points at concentrations slightly above laboratory method detection limits. Several of the detected compounds are common constituents in gasoline (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, toluene, m+p-xylene, and o-xylene). Based upon the detected concentrations in the soil and in the outdoor air, these compounds are most likely attributed to subsurface VOCs. The highest concentrations were observed in the sample collected from SV-2 located near the northern property boundary. The concentrations for SV-1, SV-3, and SV-4 are similar when compared to each other. The detections in SV-1, SV-3, and SV-4 are most likely associated with the VOCs detected in the groundwater throughout the site. The higher concentrations in SV-2, may be attributed to an off-site source.

A sub-slab soil vapor sample (SV-1) and an indoor air sample were collected to evaluate soil vapor intrusion. As previously mentioned, VOCs were detected in both SV-1 and the indoor air sample. The concentrations in SV-1 were significantly higher when compared to the indoor air sample. In addition the compounds detected in the indoor air sample were also detected in the outdoor air sample at similar concentrations. Using the outdoor air sample as a comparison to the indoor air concentration versus SV-1 concentrations, VOCs do not appear to be intruding into the building.

5.5 Qualitative Exposure Assessment

The following sections discuss the qualitative exposure assessments. The qualitative exposure assessments include an evaluation of contaminant sources, potential receptors and contaminant release and transport.

5.5.1 Human Health Exposure Assessment

Contaminant Source

Soil analytical results indicate that the sediments within the leaching cesspool and drywell are contaminated with SVOC compounds benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and ideno(1,2,3-cd)pyrene, and metal compounds cadmium, lead, and mercury above their respective RRSCOs.

Benzo(a)anthracene is commonly identified as colorless to yellow-brown fluorescent flakes or powder. Dust explosion is possible if in powder or granular form. Benzo(a)anthracene can have an adverse affect on human health and can be absorbed after oral, inhalation, or dermal exposure. This substance may be carcinogenic to humans.

Benzo(a)pyrene is found in the form of pale yellow crystals. It reacts with strong oxidants causing fire and explosion hazards. The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion. This substance is carcinogenic to humans.

Benzo(b)fluoranthene is found in the form of colorless crystals. Upon heating, toxic fumes are released. Benzo(b)fluoranthene can have an adverse affect on human health and can be absorbed after inhalation or dermal exposure. This substance may be carcinogenic to humans.

Benzo(k)fluoanthene is found in the form of yellow crystals. Upon heating, toxic fumes are released. The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion. This substance is possibly carcinogenic to humans.

Cadmium appears as soft blue-white metal lumps or a grey powder. The substance can react with other substances and form an explosive gas. Cadmium can have an adverse affect on human health and can be absorbed after oral or inhalation exposure. Acute exposure symptoms may include headaches and respiratory irritation. Chronic exposure may cause kidney impairment and the substance is a known carcinogen.

Chrysene is found as a crystalline powder. Chysene can have an adverse affect on human health and can be absorbed after oral, inhalation, or dermal exposure. This substance may be carcinogenic to humans.

Ideno(1,2,3-cd)pyrene is found in the form of yellow crystals. Upon heating, toxic fumes are released. The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion. This substance is possibly carcinogenic to humans.

Lead may appear as a bluish-white or silvery-grey solid in various forms. The substance, when heated releases toxic fumes. Lead can have an adverse affect on human health and can be absorbed after inhalation or oral exposure. Chronic exposure may have effects on the blood, bone marrow, central nervous system, resulting in anemia.

Potential Receptor Populations

The site is within an area containing a mix of both commercial and residential uses. The nearest residential properties are served by municipal water through the SCWA. The SCWA's water supply wells are located more than 0.5 miles from the site; in a hydraulically upgradient location.

Contaminant Release and Transport

SVOCs and metals were detected in two of the UIC structures at the site. These two structures are not currently in use. Therefore, the migration of these contaminants is unlikely.

Groundwater samples collected on the site, and immediately offsite, contained elevated concentrations of VOCs. The full extent of VOC impacts has been identified as part of a previous investigation. The results of this previous investigation concluded that the VOCs in groundwater are not a threat to human health. However, the migration of VOCs in groundwater is likely.

Points of Exposure

There are no plausible off-site pathways for oral, inhalation, or dermal exposure to SVOCs or metals from the contamination identified at the site. There is very little potential for exposure to SVOCs and metals, as these compounds are contained in below grade drywells, which are inaccessible.

5.6 Fish and Wildlife Resource Impact Assessment

On August 24, 2009, PWGC performed a survey to determine the ecological communities of the site and those within 0.5 miles of the site according to the classifications described in *The Ecological Communities of New York State* (Edinger et al., 2002). The site is characterized as an urban vacant lot with sparse vegetation. Several young sugar maple (Acer saccharum) trees have started to grow towards the north side of the lot. Very few shrubs were present at the site as much of the herbaceous layer was inhabited by alsike clover (Trifolium hybridium), common dandelion (Taraxacum officinale), wild carrot (Daucus carota), and long headed thimble weed (Anemone cylindrical). Trumpet-creeper (Campsis radicans) has grown across the south side of the abandoned building.

The areas surrounding the site consist of residential areas characterized as mowed lawn with trees and/or mowed roadside/pathway. Typical plant species observed included sugar maple (Acer saccharum), American crabapple (Malus coronaria), pitch pine (Pinus rigida), white oak (Quercus alba), wild carrot (Daucus carota), and tall goldenrod (Solidago altissima).

Two species of songbirds, american robin (Turdus migratorius) and brown thrasher (Toxostoma rufum), were observed on the site and adjacent properties during the field investigation. Mammals expected to utilize the site and adjacent properties may include house mouse (Mus musculus), eastern chipmunk (Tamias striatus), eastern gray squirrel (Sciurus carolinensis), eastern cottontail (Sylvilagus floridanus), raccoon (Procryon lotor) and opossum (Didelphos marsupialis)

The vegetation present on the subject property appeared to be healthy and did not show any obvious visual indications of contamination. The few species of invertebrates, birds, and mammals that inhabit the site do not appear to be adversely impacted by the contaminants.

A review of the NYSDEC environmental resource database indicates that no state-regulated freshwater wetlands are located within 0.5 mile radius of the site. The hedges creek state-regulated wetland is the nearest wetland in the down-gradient direction. Spread of contamination off-site is limited as documented during the groundwater sampling event and it is not likely to affect the hedges creek wetland.

Based on the Fish and Wildlife Resources Impact Analysis Decision Key contained in Appendix 3C of the NYSDEC DER-10 Technical Guidance for Site Investigations and Remediation, no formal fish and wildlife impact analysis is required.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following sections discuss the conclusions and recommendations based upon the results obtained during the Remedial Investigation.

6.1 Conclusions

PWGC performed a subsurface investigation at the former Bellport Gas Station site, 1401 Montauk Highway, East Patchogue, New York. The investigation consisted of the location of two UIC structures and soil, soil/sludge, soil-gas and groundwater sampling. Based upon the site history and previous investigations, the identified Contaminants of Concern (COCs) were VOCs, SVOCs and Metals.

The UIC investigation identified a single on-site cesspool and a single leaching drywell associated with the floor drain inside the service station. Soil/sludge analytical data indicated SVOCs and/or metals were detected in the on-site sanitary cesspool and the leaching storm water drywell associated with the floor drain above both the RRSCOs and the SCDHS Action Levels.

No VOCs were detected at concentrations exceeding the RRSCOs in the surface soil samples collected. Although elevated concentrations of VOCs were detected in the surface soils during a previous investigation, the more intensive sampling program performed as part of this investigation failed to identify elevated concentrations of VOCs in the surface soils.

VOC's were identified in subsurface soils within the smear zone beneath the groundwater table (in the vicinity of the former USTs); however concentrations did not exceed the RRSCOs. The residual VOCs detected in the subsurface soils may be a source of VOC impacts to site groundwater.

VOCs were detected in soil gas samples at concentrations slightly exceeding the laboratory detection limits across the site. The most common VOCs detected are associated with gasoline. While SV-1, SV-3, and SV-4 concentrations are relatively the same, SV-2 concentrations are significantly higher. The concentrations in SV-2, located away from any known source of contamination, may be due to an off-site source. The concentrations in SV-1, SV-2, and SV-3 may be a result of the VOCs detected in the groundwater beneath the site.

A soil vapor intrusion analysis was performed for the abandoned building located at the site. Based upon a comparison of SV-1, indoor air, and outdoor air, soil vapor intrusion does not appear to be occurring.

A qualitative exposure assessment was completed for the site. Based upon the information collected during the RI, it was determined that there is no plausible off-site exposure scenario for the on-site soil and off-site groundwater contamination. The only possible on-site exposure pathway is by ingestion or dermal exposure by a trespasser. There is very little potential for exposure to SVOCs and metals, as these compounds are contained in below grade drywells, which are inaccessible. In addition, there is very little potential for exposure to VOCs as

these compounds are contained within groundwater, which is not used onsite. It is likely that a deed restriction, preventing groundwater use will be required for the property.

Based on the information gathered as part of the human health exposure assessment and the fish and wildlife impact assessment, it was concluded that VOCs, SVOCs, and metals at the site are not expected to have a significant adverse impact to ecological resources and that an ecological impact assessment is not warranted.

6.2 Analysis of Remedial Alternatives

In accordance with the requirement of the NYSDEC for Environmental Restoration Projects, an analysis of remedial alternatives has been prepared. In order to select the most reasonable alternative, remedial alternatives have been analyzed based upon effectiveness, implementability, and cost. In addition, potential exposure and contaminant transport were also investigated as part of the analysis of remedial alternatives.

As described above, the Remedial Investigation has determined that the following areas of impact exist on the subject property:

- SVOC and/or metals impacts in a sanitary leaching cesspool and a leaching drywell;
- VOC impacts in surface soils in two areas of the site;
- VOC impacts to soil and groundwater in the vicinity of former USTs.

A discussion of each area of impact and remedial alternatives are discussed in the sections below.

Impacts to UIC Structures

The Remedial Investigation identified concentrations of SVOCs and/or metals exceeding both the RRSCOs and the SCDHS Action Levels in two of the three UIC structures. These structures include CP-1 and DW-3 and are located on the north side of the building. These structures are not accessible via covers at grade and required the use of a backhoe to expose each structure for sampling. Following sample collection, the cover on each structure was replaced and the excavations were backfilled to existing grades. Since these structures are not accessible via covers at grade, human and ecological exposure to the contaminants within the structures is unlikely. In addition, since the drainage structures are not in use, the likely hood of transport and/or leaching of the contaminants identified within the structures is minimal.

Remedial alternatives for the impacted UIC structures include no action and the removal and disposal of impacted sediment from the base of each structure. **Appendix I** includes a table which provides a comparative analysis of remedial alternatives, the effectiveness, the reliability/implementability, and costs.

Based on the analysis performed, it is recommended that the impacted UIC structures be remediated by removing and disposing of impacted sediments from the base of each structure. This alternative will achieve both the RRSCOs and the standard and cleanup objectives specified in the SCDHS SOP-9-95. In addition, this alternative is cost effective and is easily implemented.

Residual Soil and Groundwater Impacts

The Remedial Investigation identified slightly elevated concentrations of VOCs in the soil and groundwater beneath the site. As indicated in Section 5.5, a very low potential for human exposure to these contaminants exists as the contaminants are contained at a depth of greater than 20 feet and groundwater at the site is not used. In addition, the NYSDEC has completed an extensive off-site groundwater investigation in order to determine the extent of impact. Based on information obtained during the offsite groundwater investigation, the NYSDEC concluded that impacts to private wells were eliminated through connections to public water, MTBE exposure at Dunton Lake and tidal creeks was not expected to cause adverse impacts to aquatic or terrestrial organism populations, and impacts to Bellport Bay were expected to be minimal. Based on these results, the NYSDEC closed the spill file, indicating that no further investigation or remediation was warranted. However, residual VOCs detected in the subsurface soils may be a source of VOC impacts to the groundwater beneath the site.

Remedial alternatives for the residual soil groundwater impacts include:

- Alternative 1 - No action
- Alternative 2 - Implementation of institutional/engineering controls (asphalt capping) to reduce potential mobility of residual impacts
- Alternative 3 – Air sparge/soil vapor extraction system installation
- Alternative 4 – In-situ chemical oxidation

Appendix I includes a table which provides a comparative analysis of remedial alternatives, the effectiveness, the reliability/implementability, and costs.

Based on the analysis performed, it is recommended that in-situ chemical oxidation be performed in the vicinity of the former USTs in order to reduce VOC concentrations in the soils and groundwater

6.3 Recommendations

Based upon the findings of this investigation and the analysis of remedial alternatives, PWGC recommends that the following remedial actions be performed:

- Removal and proper disposal of sediments from the bases of CP-1 and DW-3
- Cleanout and closure of the floor drain (FD-1)
- Removal and disposal of SVOC impacted sediments which are stored in the building
- In-situ chemical oxidation of VOC impact to soil and groundwater in the former UST excavation

These remedial actions will be detailed in a Remedial Work Plan (RWP), as described in the Brownfields Cleanup Program (BCP).

7.0 REFERENCES

- *O'Brien and Gere Site Characterization Report; 2006.*
- *Franke, O.L. and Cohen, Philip, Regional Rates of Ground-Water Movement on Long Island, New York, United States Geological Survey Professional Paper 800C; 1972.*
- *New York State Department of Environmental Conservation (NYSDEC), 6 NYCRR Part 375 Subparts 375-1 to 375- 4 & 375-6; Restricted Use Soil Cleanup Objectives (RUSCOs) for the Protection of Public Health—Residential, December 2006..*
- *NYSDEC, Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values; June 1998.*
- *NYSDEC, Technical and Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives (RSCOs); January 1994.*
- *NYSDEC, Draft Brownfield Cleanup Program Guide; May 2004.*
- *P.W. Grosser Consulting, Inc. (PWGC), Remedial Investigation Work Plan and Health and Safety Plan; December 2008.*

TABLES

TABLE 1

Groundwater / Monitoring Well Survey Data

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

June 4, 2009

Well Designation	Screened Aquifer Zone	Depth of Well (ft bmp)	Reference Elevation (ft rad)	Depth to Water (ft bmp)	Water Elevation
MW-9	Water Table	26.30	25.22	19.46	5.76
MW-10	Water Table	26.20	25.31	19.34	5.97
MW-11	Water Table	26.45	24.51	18.84	5.67

Notes:
ft - feet
bmp - below marked point
rad - relative to arbitrary datum

TABLE 2
Soil Analytical Results for UIC Samples - Volatile Organic Compounds
USEPA Method 8260 (SCDHS Analyte List)

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York
May 15, 2009

Analyte	SCDHS Action Levels [1]	Unrestricted Use SCO [2]	Residential SCO[3]	Restricted Residential SCO[3]	Commercial SCO[3]	Industrial SCO[3]	CP-1		DW-1		DW-3	
Volatile Organic Compounds - USEPA Method 8260 - ug/kg												
1,1,1-Trichloroethane	1,600	680	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	9.2	U	5.5	U	5	U
1,1,1,2-Tetrachloroethane	600	NS	NS	NS	NS	NS	4.5	UJ	2.7	U	2.4	U
1,1,2,2-Tetrachloroethane	1,200	NS	NS	NS	NS	NS	4.8	UJ	2.9	U	2.6	U
1,1,2-Trichloroethane	600	NS	NS	NS	NS	NS	9.4	U	5.6	U	5.1	U
1,1,2-Trichlorotrifluoroethane	NS	NS	NS	NS	NS	NS	14	U	8.3	U	7.6	U
1,1-Dichloroethane	400	270	19,000	26,000	240,000	480,000	9.8	U	5.9	U	5.3	U
1,1-Dichloroethene	800	330	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	15	U	9.2	U	8.4	U
1,1-Dichloropropene	600	NS	NS	NS	NS	NS	4.8	U	2.9	U	2.6	U
1,2,3-Trichlorobenzene	800	NS	NS	NS	NS	NS	5.2	UJ	3.1	U	2.8	U
1,2,3-Trichloropropane	800	NS	NS	NS	NS	NS	5.1	UJ	3.1	U	2.8	U
1,2,4,5-tetramethylbenzene	15,000	NS	NS	NS	NS	NS	52	UJ	31	U	28	U
1,2,4-Trichlorobenzene	6,800	NS	NS	NS	NS	NS	7.3	UJ	4.4	U	4	U
1,2,4-Trimethylbenzene	4,800	3,600	47,000	52,000	190,000	380,000	5.2	UJ	3.1	U	2.8	U
1,2-Dibromo-3-Chloropropane	1000	NS	NS	NS	NS	NS	9.1	UJ	5.4	U	4.9	U
1,2-Dibromoethane	600	NS	NS	NS	NS	NS	6.7	U	4	U	3.6	U
1,2-Dichlorobenzene	15,000	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	6.5	UJ	3.9	U	3.5	U
1,2-Dichloroethane	200	20[c]	2,300	3,100	30,000	60,000	6.7	U	4	U	3.6	U
1,2-Dichloropropane	600	NS	NS	NS	NS	NS	2.7	U	1.6	U	1.5	U
1,3,5-Trimethylbenzene	5,200	8,400	47,000	52,000	190,000	380,000	4.7	UJ	2.8	U	2.6	U
1,3-Dichlorobenzene	3,200	2,400	17,000	49,000	280,000	560,000	3.9	UJ	2.3	U	2.1	U
1,3-Dichloropropane	600	NS	NS	NS	NS	NS	7.7	U	4.6	U	4.2	U
1,4-Dichlorobenzene	15,000	1,800	9,800	13,000	130,000	250,000	4.3	UJ	2.6	U	2.3	U
2,2-Dichloropropane	600	NS	NS	NS	NS	NS	11	U	6.5	U	5.9	U
2-Butanone	NS	120	100,000[c]	100,000[c]	500,000[b]	1,000,000[c]	32	U	19	U	18	U
2-Chlorotoluene	3,600	NS	NS	NS	NS	NS	7.7	UJ	4.6	U	4.2	U
4-Chlorotoluene	3,600	NS	NS	NS	NS	NS	6.5	UJ	3.9	U	3.5	U
4-Methyl-2-Pentanone	NS	NS	NS	NS	NS	NS	30	U	18	U	17	U
Acetone	**	50	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	31	U	19	U	17	U
Benzene	120	60	2,900	4,800	44,000	89,000	4	U	2.4	U	2.2	U
Bromobenzene	1,600	NS	NS	NS	NS	NS	5.4	UJ	3.2	U	3	U
Bromochloromethane	400	NS	NS	NS	NS	NS	8.2	U	4.9	U	4.5	U
Bromodichloromethane	600	NS	NS	NS	NS	NS	6.5	U	3.9	U	3.5	U
Bromoform	1,000	NS	NS	NS	NS	NS	7.7	UJ	4.6	U	4.2	U
Carbon Tetrachloride	1,200	760	1,400	2,400	22,000	44,000	10	U	6.2	U	5.6	U
Chlorobenzene	3,400	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	5.2	UJ	3.1	U	2.8	U
Chloroethane	400	NS	NS	NS	NS	NS	15	UJ	8.8	UJ	8	U
Chloroform	600	370	10,000	49,000	350,000	700,000	7.7	U	4.6	U	4.2	U
cis-1,2-Dichloroethene	600	250	59,000	100,000[c]	500,000[b]	1,000,000[c]	9.3	U	5.6	U	5.1	U
cis-1,3-Dichloropropene	600	NS	NS	NS	NS	NS	7.5	U	4.5	U	4.1	U
Dibromochloromethane	600	NS	NS	NS	NS	NS	5.6	U	3.4	U	3.1	U
Dibromomethane	400	NS	NS	NS	NS	NS	8.1	U	4.9	U	4.4	U
Dichlorodifluoromethane	600	NS	NS	NS	NS	NS	6.8	U	4.1	U	3.7	U
Ethyl Benzene	11,000	1,000	30,000	41,000	390,000	780,000	6.5	UJ	3.9	U	3.5	U
Hexachlorobutadiene	15,000	NS	NS	NS	NS	NS	8.2	UJ	4.9	U	4.5	U
Isopropylbenzene	5,200	NS	NS	NS	NS	NS	5	UJ	3	U	2.7	U
Methyl tert-butyl Ether	1,200	930	62,000	100,000[a]	500,000[b]	1,000,000[c]	10	U	6	U	5.5	U
Methylene Chloride	200	50	51,000	100,000[a]	500,000[b]	1,000,000[c]	15	U	8.9	U	8.1	U
Naphthalene	15,000	NS	NS	NS	NS	NS	190	J	23	J	40	
n-Butylbenzene	6,800	NS	NS	NS	NS	NS	4.8	UJ	2.9	U	2.6	U
n-propylbenzene	5,000	3,900	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.8	UJ	2.2	U	2	U
p-diethylbenzene	7,600	NS	NS	NS	NS	NS	52	UJ	31	U	28	U
p-ethyltoluene	3,600	NS	NS	NS	NS	NS	52	UJ	31	U	28	U
p-Isopropyltoluene	7,800	NS	NS	NS	NS	NS	3	UJ	1.8	U	1.6	U
sec-Butylbenzene	10,000	11,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	5.4	UJ	3.2	U	3	U
Styrene	2,000	NS	NS	NS	NS	NS	4.7	UJ	2.8	U	2.6	U
t-1,3-Dichloropropene	600	NS	NS	NS	NS	NS	8.2	U	4.9	U	4.5	U
tert-Butylbenzene	6,800	5,900	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	6.1	UJ	3.7	U	3.4	U
Tetrachloroethene	2,800	1,300	5,500	19,000	150,000	300,000	11	U	6.3	U	5.7	U
Toluene	3,000	700	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	6.7	U	4	U	3.6	U
Total Xylenes	2,400	260	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	15	UJ	8.8	U	8	U
trans-1,2-Dichloroethene	600	190	100,000[c]	100,000[c]	500,000[b]	1,000,000[c]	7.2	U	4.3	U	3.9	U
Trichloroethene	1,400	47	10,000	21,000	200,000	400,000	9	U	5.4	U	4.9	U
Trichlorofluoromethane	1,600	NS	NS	NS	NS	NS	14	U	8.2	U	7.5	U
Vinyl Chloride	400	20	210	900	13,000	27,000	13	U	7.7	U	7	U

Notes:
[1] Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.

(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8a 12/06
(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.
b - The SCOs for commercial use were capped at a maximum value of 500 ppm.
c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.
f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
NS - Not specified
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
** - Remediation determined on a case by case basis
Bold / Shaded text denotes concentrations exceeding NYSDEC Restricted Residential SCO

TABLE 3

Soil Analytical Results for UIC Samples - Semi-volatile Organic Compounds

USEPA Method 8270 (SCDHS Analyte List)

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

May 15, 2009

Analyte	SCDHS Action Levels [1]	Unrestricted Use SCO [2]	Residential SCO[3]	Restricted Residential SCO[3]	Commercial SCO[3]	Industrial SCO[3]	CP-1		DW-1		DW-3	
Semi-volatile Organic Compounds - USEPA Method 8270 - ug/kg												
Acenaphthene	75,000	20,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	200	U	120	U	210	U
Anthracene	75,000	NS	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	140	U	85	U	150	U
Benzo(a)anthracene	6,000	1,000[c]	1,000[f]	1,000[f]	5,600	11,000	**11,000**		200	U	360	U
Benzo(a)pyrene	22,000	1,000[c]	1,000[f]	1,000[f]	1,000[f]	1,100	**10,000**		90	U	160	U
Benzo(b)fluoranthene	2,200	1,000[c]	1,000[f]	1,000[f]	5,600	11,000	**17,000**		140	U	250	U
Benzo(g,h,i)perylene	75,000	100,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3,600	J	170	U	310	U
Benzo(k)fluoranthene	2,200	800[c]	1,000	3,900	56,000	110,000	**6,100**	**J**	200	U	360	U
Chrysene	800	1,000[c]	1,000[f]	3,900	56,000	110,000	**11,000**		190	U	340	U
Dibenzo(a,h)anthracene	75,000	330[b]	330[c]	330[c]	560	1,100	200	U	120	U	220	U
Fluoranthene	75,000	100,000[a]	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	8,100		83	U	150	U
Fluorene	75,000	30,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	260	U	160	U	290	U
Indeno(1,2,3-cd)pyrene	6,400	500[c]	500[f]	500[f]	5,600	11,000	**2,300**	**J**	140	U	250	U
Phenanthrene	75,000	100,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	1,600	J	110	U	200	U
Pyrene	75,000	100,000	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	8,600		100	U	180	U

Notes:

[1]Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.

(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8a 12/06

(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.

b - The SCOs for commercial use were capped at a maximum value of 500 ppm.

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

Bold / Shaded text denotes concentrations exceeding NYSDEC Restricted Residential SCO

TABLE 4

Soil Analytical Results for UIC Samples - Metals

USEPA Method 6010 (SCDHS Analyte List)

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

May 15, 2009

Analyte	SCDHS Action Levels [1]	Unrestricted Use SCO [2]	Residential SCO[3]	Restricted Residential SCO[3]	Commercial SCO[3]	Industrial SCO[3]	CP-1	DW-1	DW-3
Metals - USEPA Method 6010 - mg/kg									
Arsenic	25	13[c]	16[f]	16[f]	16[f]	16[f]	5.72	0.94	13
Beryllium	8	7	14	72	590	2,700	0.16 J	0.1 J	0.11 J
Cadmium	10	2.5[c]	2.5[f]	4.3	9.3	60	**10.3 J**	0.61	3.2
Chromium	100	30[c]	36	180	1,500	6,800	28.1	6.48	13.8
Copper	500	50	270	270	270	10,000[d]	**291**	18.9	44.4
Lead	400	63[c]	400	400	1,000	3,900	**784**	32.6	**947**
Mercury	2	0.18[c]	0.81[j]	0.81[j]	2.8[j]	5.7[j]	**2.1 J**	0.013	0.094
Nickel	1,000	30	140	310	310	10,000[d]	14	7	3.96
Silver	100	2	36	180	1,500	6,800	2.22	0.12	0.11

Notes:

[1]Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.

(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8a 12/06

(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.

b - The SCOs for commercial use were capped at a maximum value of 500 ppm.

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.

d - The SCOs for metals were capped at a maximum value of 10,000 ppm.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

j - This SCO is the lowe of the values for mercury.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Bold / Shaded text denotes concentrations exceeding NYSDEC Restricted Residential SCO

TABLE 5
Soil Analytical Results for Surface Soil Samples - Volatile Organic Compounds
USEPA Method 8260

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York
May 15, 2009

Analyte	NYSDEC RSCO (1)	Unrestricted Use SCO (2)	Residential SCO[3]	Restricted Residential SCO[3]	Commercial SCO[3]	Industrial SCO[3]	S-1 (0 - 2")	S-2 (0 - 2")	S-3 (0 - 2")	S-4 (0 - 2")	S-5 (0 - 2")	S-6 (0 - 2")	S-6 (1-1.5')	S-7 (0 - 2")	S-8 (0 - 2")	SS-9 (0 - 2")	SS-10 (0 - 2")
Volatile Organic Compounds - USEPA Method 8260 - ug/kg																	
1,1,1-Trichloroethane	800	680	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	5.0 U	4.8 U	5.1 U	5.1 U	5.2 U	5.1 U	4.7 U	5.5 U	4.9 U	4.8 U	4.8 U
1,1,2,2-Tetrachloroethane	600	NS	NS	NS	NS	NS	2.6 U	2.5 U	2.6 U	2.6 U	2.7 U	2.6 U	2.5 U	2.9 U	2.6 U	2.5 U	2.5 U
1,1,2-Trichlorotrifluoroethane	NS	NS	NS	NS	NS	NS	7.6 U	7.3 U	7.6 U	7.6 U	7.8 U	7.6 U	7.2 U	8.3 U	7.4 U	7.3 U	7.3 U
1,1,2 Trichloroethane	NS	NS	NS	NS	NS	NS	5.1 U	4.9 U	5.2 U	5.2 U	5.3 U	5.2 U	4.8 U	5.6 U	5.0 U	4.9 U	4.9 U
1,1 Dichloroethane	200	270	19,000	26,000	240,000	480,000	5.3 U	5.2 U	5.4 U	5.4 U	5.5 U	5.4 U	5.1 U	5.9 U	5.2 U	5.2 U	5.2 U
1,1 Dichloroethene	400	330	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	8.4 U	8.1 U	8.4 U	8.4 U	8.6 U	8.4 U	7.9 U	9.2 U	8.2 U	8.1 U	8.1 U
1,2,4-Trichlorobenzene (v)	3,400	NS	NS	NS	NS	NS	4.0 U	3.8 U	4.0 U	4.0 U	4.1 U	4.0 U	3.8 U	4.4 U	3.9 U	3.8 U	3.8 U
1,2 Dibromo 3 chloropropane	NS	NS	NS	NS	NS	NS	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.7 U	4.9 U	4.9 U	4.9 U	4.9 U
1,2 Dibromoethane	NS	NS	NS	NS	NS	NS	3.6 U	3.5 U	3.7 U	3.7 U	3.8 U	3.7 U	3.4 U	4.0 U	3.6 U	3.5 U	3.5 U
1,2 Dichlorobenzene (v)	7,900	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.5 U	3.4 U	3.6 U	3.6 U	3.6 U	3.6 U	3.3 U	3.9 U	3.4 U	3.4 U	3.4 U
1,2 Dichloroethane	100	20[c]	2,300	3,100	30,000	60,000	3.6 U	3.5 U	3.7 U	3.7 U	3.8 U	3.7 U	3.4 U	4.0 U	3.6 U	3.5 U	3.5 U
1,2 Dichloropropane	NS	NS	NS	NS	NS	NS	1.5 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.4 U	1.6 U	1.4 U	1.4 U	1.4 U
1,3 Dichlorobenzene (v)	1,600	2,400	17,000	49,000	280,000	560,000	2.1 U	2.0 U	2.1 U	2.1 U	2.2 U	2.1 U	2.0 U	2.3 U	2.1 U	2.0 U	2.0 U
1,4 Dichlorobenzene (v)	8,500	1,800	9,800	13,000	130,000	250,000	2.3 U	2.3 U	2.4 U	2.4 U	2.4 U	2.4 U	2.2 U	2.6 U	2.3 U	2.3 U	2.3 U
2-Butanone	300	120	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	18 U	17 U	18 U	18 U	18 U	240	17 U	19 U	18 U	17 U	17 U
2-Hexanone	NS	NS	NS	NS	NS	NS	22 U	22 U	23 U	23 U	23 U	23 U	21 U	24 U	22 U	22 U	22 U
4-Methyl-2-pentanone	1,000	NS	NS	NS	NS	NS	17 U	16 U	17 U	17 U	17 U	17 U	16 U	18 U	16 U	16 U	16 U
Acetone	200	50	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	17 U	17 U	17 U	17 U	18 U	260	16 U	19 U	17 U	17 U	17 U
Benzene	60 or MDL	60	2,900	4,800	44,000	89,000	2.2 U	2.1 U	2.2 U	2.2 U	2.2 U	2.2 U	2.0 U	2.4 U	2.1 U	2.1 U	2.1 U
Bromochloromethane	NS	NS	NS	NS	NS	NS	3.5 U	3.4 U	3.6 U	3.6 U	3.6 U	3.6 U	3.3 U	3.9 U	3.4 U	3.4 U	3.4 U
Bromoform	NS	NS	NS	NS	NS	NS	4.2 U	4.1 U	4.3 U	4.3 U	4.4 U	4.3 U	4.0 U	4.6 U	4.1 U	4.1 U	4.1 U
Bromomethane	NS	NS	NS	NS	NS	NS	14 U	13 U	14 U	14 U	14 U	14 U	13 U	15 U	14 U	13 U	13 U
Carbon Disulfide	2,700	NS	NS	NS	NS	NS	6.0 U	5.8 U	6.1 U	6.1 U	6.2 U	6.1 U	5.7 U	6.6 U	5.9 U	5.8 U	5.8 U
Carbon Tetrachloride	600	760	1,400	2,400	22,000	44,000	5.6 U	5.4 U	5.7 U	5.7 U	5.8 U	5.7 U	5.3 U	6.2 U	5.5 U	5.4 U	5.4 U
Chlorobenzene	1,700	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	2.8 U	2.7 U	2.9 U	2.9 U	2.9 U	2.9 U	2.7 U	3.1 U	2.8 U	2.7 U	2.7 U
Chloroethane	1900	NS	NS	NS	NS	NS	8.0 U	7.7 U	8.0 U	8.0 U	8.2 U	8.0 U	7.5 U	8.2 U	8.2 U	8.1 U	7.7 U
Chloroform	300	370	10,000	49,000	350,000	700,000	4.2 U	4.1 U	4.3 U	4.3 U	4.4 U	4.3 U	4.0 U	4.6 U	4.1 U	4.1 U	4.1 U
Chloromethane	NS	NS	NS	NS	NS	NS	4.9 U	4.7 U	4.9 U	4.9 U	5.1 U	4.9 U	4.6 U	5.4 U	4.8 U	4.7 U	4.7 U
Cyclohexane	NS	NS	NS	NS	NS	NS	5.7 U	5.5 U	5.8 U	5.8 U	5.9 U	5.8 U	5.4 U	6.3 U	5.6 U	5.5 U	5.5 U
c-1,2-Dichloroethene	NS	250	59,000	100,000[a]	500,000[b]	1,000,000[c]	5.1 U	4.9 U	5.1 U	5.1 U	5.2 U	5.1 U	4.8 U	5.6 U	4.9 U	4.9 U	4.9 U
c-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	4.1 U	4.0 U	4.1 U	4.1 U	4.1 U	4.5 U	3.9 U	4.1 U	4.5 U	4.0 U	4.0 U
Dibromochloromethane	NS	NS	NS	NS	NS	NS	3.1 U	3.0 U	3.1 U	3.1 U	3.2 U	3.1 U	2.9 U	3.4 U	3.0 U	3.0 U	3.0 U
Dichlordifluoromethane	NS	NS	NS	NS	NS	NS	3.7 U	3.6 U	3.7 U	3.7 U	3.8 U	3.7 U	3.5 U	4.1 U	3.6 U	3.6 U	3.6 U
Ethyl Benzene	5,500	1,000	30,000	41,000	390,000	780,000	3.5 U	3.4 U	3.6 U	3.6 U	3.6 U	3.6 U	3.3 U	3.9 U	3.4 U	3.4 U	3.4 U
Isopropylbenzene	2,300	NS	NS	NS	NS	NS	2.7 U	2.6 U	2.8 U	2.8 U	2.8 U	2.8 U	2.6 U	3.0 U	2.7 U	2.6 U	2.6 U
m + p Xylene	1,200*	260	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	4.1 U	4.0 U	4.1 U	4.1 U	4.2 U	4.1 U	3.9 U	4.5 U	4.0 U	4.0 U	4.0 U
ter.ButylMethylEther	120	930	62,000	100,000[a]	500,000[b]	1,000,000[c]	5.5 U	5.3 U	5.5 U	5.5 U	5.6 U	5.5 U	5.2 U	6.0 U	5.3 U	5.3 U	5.3 U
Methyl Acetate	NS	NS	NS	NS	NS	NS	8.6 U	8.3 U	8.7 U	8.7 U	8.9 U	8.7 U	8.1 U	9.4 U	8.4 U	8.3 U	8.3 U
Methylcyclohexane	NS	NS	NS	NS	NS	NS	6.0 U	5.8 U	6.1 U	6.1 U	6.2 U	6.1 U	5.7 U	6.6 U	5.9 U	5.8 U	5.8 U
Methylene Chloride	100	50	51,000	100,000[a]	500,000[b]	1,000,000[c]	8.1 U	7.8 U	8.2 U	8.2 U	8.4 U	8.2 U	7.6 U	8.9 U	7.9 U	7.8 U	7.8 U
o Xylene	1,200*	260	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.9 U	3.7 U	3.9 U	3.9 U	4.0 U	3.9 U	3.7 U	4.2 U	3.8 U	3.7 U	3.7 U
Styrene	NS	NS	NS	NS	NS	NS	2.6 U	2.5 U	2.6 U	2.6 U	2.6 U	2.6 U	2.4 U	2.8 U	2.5 U	2.5 U	2.5 U
Tetrachloroethene	1,400	1,300	5,500	19,000	150,000	300,000	5.7 U	5.5 U	5.8 U	5.8 U	5.9 U	5.8 U	5.4 U	6.3 U	5.6 U	5.5 U	5.5 U
Toluene	1,500	700	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.6 U	3.5 U	3.7 U	3.7 U	3.8 U	3.7 U	3.4 U	4.0 U	3.6 U	3.5 U	3.5 U
t-1,2-Dichloroethene	300	190	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.9 U	3.8 U	4.0 U	4.0 U	4.1 U	4.0 U	3.7 U	4.3 U	3.8 U	3.8 U	3.8 U
t-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	4.5 U	4.3 U	4.5 U	4.5 U	4.6 U	4.5 U	4.2 U	4.9 U	4.4 U	4.3 U	4.3 U
Trichloroethene	NS	47	10,000	21,000	200,000	400,000	4.9 U	4.7 U	4.9 U	4.9 U	5.1 U	4.9 U	4.6 U	5.4 U	4.8 U	4.7 U	4.7 U
Trichlorofluoromethane	NS	NS	NS	NS	NS	NS	7.5 U	7.3 U	7.6 U	7.6 U	7.8 U	7.6 U	7.1 U	8.2 U	7.3 U	7.3 U	7.3 U
Vinyl Chloride	200	20	210	900	13,000	27,000	7.0 U	6.8 U	7.1 U	7.1 U	7.2 U	7.1 U	6.6 U	7.7 U	6.8 U	6.8 U	6.8 U

Notes:
NS - No Standard
MDL - Method Detection Limit
*-Sum of all isomers
(1) NYSDEC Recommended Soil Cleanup Objectives (RSCO), Technical and Administrative Guidance Memorandum (TAGM) #4046, 12/00
(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8a 12/06
(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.
b - The SCOs for commercial use were capped at a maximum value of 500 ppm.
c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.
f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.
Bold / Shaded text denotes concentrations exceeding NYSDEC Restricted Residential SCO

TABLE 5A
Soil Analytical Results for Subsurface Soil Samples - Volatile Organic Compounds
USEPA Method 8260

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	NYSDEC RSCO (1)	Unrestricted Use SCO (2)	Residential SCO[3]	Restricted Residential SCO[3]	Commercial SCO[3]	Industrial SCO[3]	SB-4 16-18' 5/19/2009	SB-4 22-24' 5/19/2009	SB-5 16-18' 5/19/2009	SB-5 22-24' 5/19/2009	SB-6 16-18' 5/19/2009	SB-6 22-24' 5/19/2009	SB-7 16-18' 5/19/2009	SB-7 22-24' 5/19/2009	SB-8 16-18' 5/19/2009	SB-8 22-24' 5/19/2009
Volatile Organic Compounds - USEPA Method 8260 - ug/kg																
1,1,1-Trichloroethane	800	680	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	5.6 U	5.5 U	4.6 U	5.6 U	4.7 U	5.4 U	5.4 U	5.4 U	4.9 U	5.6 U
1,1,2,2-Tetrachloroethane	600	NS	NS	NS	NS	NS	2.9 U	2.9 U	2.4 U	2.9 U	2.4 U	2.8 U	2.8 U	2.8 U	2.6 U	2.9 U
1,1,2-Trichlorotrifluoroethane	NS	NS	NS	NS	NS	NS	5.7 U	5.6 U	4.7 U	5.8 U	4.8 U	5.6 U	5.6 U	5.5 U	5.1 U	5.7 U
1,1,2 Trichloroethane	NS	NS	NS	NS	NS	NS	8.4 U	8.3 U	6.9 U	8.5 U	7.1 U	8.2 U	8.2 U	8.1 U	7.5 U	8.4 U
1,1 Dichloroethane	200	270	19,000	26,000	240,000	480,000	5.9 U	5.9 U	4.9 U	6 U	5 U	5.8 U	5.8 U	5.7 U	5.3 U	5.9 U
1,1 Dichloroethene	400	330	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	9.3 U	9.2 U	7.7 U	9.4 U	7.8 U	9.1 U	9.1 U	9 U	8.3 U	9.3 U
1,2,4-Trichlorobenzene (v)	3,400	NS	NS	NS	NS	NS	4.4 U	4.4 U	3.6 U	4.5 U	3.7 U	4.3 U	4.3 U	4.3 U	3.9 U	4.4 UJ
1,2 Dibromo 3 chloropropane	NS	NS	NS	NS	NS	NS	5.5 U	5.4 U	4.5 U	5.6 U	4.6 U	5.4 U	5.4 U	5.3 U	4.9 U	5.5 U
1,2 Dibromoethane	NS	NS	NS	NS	NS	NS	4.1 U	4 U	3.3 U	4.1 U	3.4 U	4 U	4 U	3.9 U	3.6 U	4.1 U
1,2 Dichlorobenzene (v)	7,900	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.9 U	3.9 U	3.2 U	4 U	3.3 U	3.8 U	3.8 U	3.8 U	3.5 U	3.9 U
1,2 Dichloroethane	100	20[c]	2,300	3,100	30,000	60,000	4.1 U	4 U	3.3 U	4.1 U	3.4 U	4 U	4 U	3.9 U	3.6 U	4.1 U
1,2 Dichloropropane	NS	NS	NS	NS	NS	NS	1.6 U	1.6 U	1.4 U	1.7 U	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
1,3 Dichlorobenzene (v)	1,600	2,400	17,000	49,000	280,000	560,000	2.3 U	2.3 U	1.9 U	2.4 U	2 U	2.3 U	2.3 U	2.3 U	2.1 U	2.3 U
1,4 Dichlorobenzene (v)	8,500	1,800	9,800	13,000	130,000	250,000	2.6 U	2.6 U	2.1 U	2.6 U	2.2 U	2.5 U	2.5 U	2.5 U	2.3 U	2.6 U
2-Butanone	300	120	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	20 U	19 U	16 U	20 U	17 U	19 U	19 U	19 U	17 U	20 U
2-Hexanone	NS	NS	NS	NS	NS	NS	25 U	24 U	20 U	25 U	21 U	24 U	24 U	24 U	22 U	25 U
4-Methyl-2-pentanone	1,000	NS	NS	NS	NS	NS	18 U	18 U	15 U	19 U	16 U	18 U	18 U	18 U	16 U	18 U
Acetone	200	50	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	19 U	19 U	16 U	19 U	16 U	19 U	19 U	18 U	17 U	19 U
Benzene	60 or MDL	60	2,900	4,800	44,000	89,000	2.4 U	2.4 U	2 U	2.4 U	2 U	2.3 U	2.3 U	2.3 U	2.1 U	2.4 U
Bromochloromethane	NS	NS	NS	NS	NS	NS	3.9 U	3.9 U	3.2 U	4 U	3.3 U	3.8 U	3.8 U	3.8 U	3.5 U	3.9 U
Bromoform	NS	NS	NS	NS	NS	NS	4.7 U	4.6 U	3.9 U	4.7 U	3.9 U	4.6 U	4.6 U	4.5 U	4.2 U	4.7 U
Bromomethane	NS	NS	NS	NS	NS	NS	16 U	15 U	13 U	16 U	13 U	15 U	15 U	15 U	14 U	16 U
Carbon Disulfide	2,700	NS	NS	NS	NS	NS	6.7 U	6.6 U	5.5 U	6.8 U	5.6 U	6.5 U	6.5 U	6.5 U	6 U	6.7 U
Carbon Tetrachloride	600	760	1,400	2,400	22,000	44,000	6.3 U	6.2 U	5.2 U	6.3 U	5.3 U	6.1 U	6.1 U	6 U	5.6 U	6.3 U
Chlorobenzene	1,700	1,100	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	3.2 U	3.1 U	2.6 U	3.2 U	2.7 U	3.1 U	3.1 U	3 U	2.8 U	3.2 U
Chloroethane	1900	NS	NS	NS	NS	NS	8.9 U	8.8 U	7.3 U	9 U	7.4 U	8.6 U	8.6 U	8.5 U	7.9 U	8.9 U
Chloroform	300	370	10,000	49,000	350,000	700,000	4.7 U	4.6 U	3.9 U	4.7 U	3.9 U	4.6 U	4.6 U	4.5 U	4.2 U	4.7 U
Chloromethane	NS	NS	NS	NS	NS	NS	5.4 U	5.4 U	4.5 U	5.5 U	4.6 U	5.3 U	5.3 U	5.2 U	4.8 U	5.4 U
Cyclohexane	NS	NS	NS	NS	NS	NS	5.6 U	5.6 U	4.6 U	5.7 U	4.7 U	5.5 U	5.5 U	5.4 U	5 U	5.6 U
c-1,2-Dichloroethene	NS	250	59,000	100,000[a]	500,000[b]	1,000,000[c]	4.6 U	4.5 U	3.8 U	4.6 U	3.8 U	4.4 U	4.4 U	4.4 U	4 U	4.6 U
c-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	6.4 U	55	5.3 U	6.5 U	5.4 U	31	6.2 U	6.2 U	5.7 U	600
Dibromochloromethane	NS	NS	NS	NS	NS	NS	3.4 U	3.4 U	2.8 U	3.5 U	2.9 U	3.3 U	3.3 U	3.3 U	3 U	3.4 U
Dichlorodifluoromethane	NS	NS	NS	NS	NS	NS	4.1 U	4.1 U	3.4 U	4.2 U	3.5 U	4 U	4 U	4 U	3.7 U	4.1 U
Ethyl Benzene	5,500	1,000	30,000	41,000	390,000	780,000	3.9 U	3.9 U	3.2 U	4 U	3.3 U	3.8 U	3.8 U	3.8 U	3.5 U	11,000 D
Isopropylbenzene	2,300	NS	NS	NS	NS	NS	3 U	3 U	2.5 U	3.1 U	2.6 U	3 U	3 U	2.9 U	2.7 U	1,100 J
m + p Xylene	1,200*	260	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	4.6 U	4.5 U	3.8 U	4.6 U	3.8 U	4.4 U	4.4 U	4.4 U	4 U	46,000 D
ter.ButylMethylEther	120	930	62,000	100,000[a]	500,000[b]	1,000,000[c]	9.6 U	9.4 U	7.9 U	9.7 U	8 U	9.3 U	9.3 U	9.2 U	8.5 U	9.6 U
Methyl Acetate	NS	NS	NS	NS	NS	NS	6.1 U	6 U	5 U	6.2 U	5.1 U	5.9 U	5.9 U	5.9 U	5.4 U	6.1 U
Methylcyclohexane	NS	NS	NS	NS	NS	NS	6.7 U	18 J	5.5 U	6.8 U	5.6 U	40	6.5 U	6.5 U	6 U	1,200 J
Methylene Chloride	100	50	51,000	100,000[a]	500,000[b]	1,000,000[c]	9 U	8.9 U	7.4 U	9.1 U	7.6 U	8.8 U	8.8 U	8.7 U	8 U	9 U
o Xylene	1,200*	260	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	4.3 U	4.2 U	3.5 U	4.4 U	3.6 U	4.2 U	4.2 U	4.1 U	3.8 U	23,000 D
Styrene	NS	NS	NS	NS	NS	NS	2.8 U	2.8 U	2.3 U	2.9 U	2.4 U	2.8 U	2.8 U	2.7 U	2.5 U	2.8 U
Tetrachloroethene	1,400	1,300	5,500	19,000	150,000	300,000	5 U	4.9 U	4.1 U	5.1 U	4.2 U	4.9 U	4.9 U	4.8 U	4.4 U	5 U
Toluene	1,500	700	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	6.4 U	6.3 U	5.3 U	6.5 U	5.4 U	6.2 U	6.2 U	6.2 U	5.7 U	6.4 U
t-1,2-Dichloroethene	300	190	100,000[a]	100,000[a]	500,000[b]	1,000,000[c]	4.1 U	4 U	3.3 U	4.1 U	3.4 U	4 U	4 U	3.9 U	3.6 U	4.1 U
t-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	4.4 U	4.3 U	3.6 U	4.4 U	3.7 U	4.3 U	4.3 U	4.2 U	3.9 U	4.4 U
Trichloroethene	NS	47	10,000	21,000	200,000	400,000	5.4 U	5.4 U	4.5 U	5.5 U	4.6 U	5.3 U	5.3 U	5.2 U	4.8 U	5.4 U
Trichlorofluoromethane	NS	NS	NS	NS	NS	NS	8.4 U	8.2 U	6.9 U	8.5 U	7 U	8.1 U	8.1 U	8 U	7.4 U	8.4 U
Vinyl Chloride	200	20	210	900	13,000	27,000	7.8 U	7.7 U	6.4 U	7.9 U	6.5 U	7.6 U	7.6 U	7.5 U	6.9 U	7.8 UJ

Notes:
NS - No Standard
MDL - Method Detection Limit
*-Sum of all isomers
(1) NYSDEC Recommended Soil Cleanup Objectives (RSCO), Technical and Administrative Guidance Memorandum (TAGM) #4046, 12/00
(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8a 12/06
(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.
b - The SCOs for commercial use were capped at a maximum value of 500 ppm.
c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.
f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
Bold / Shaded text denotes concentrations exceeding NYSDEC Restricted Residential SCO

TABLE 6
Soil Analytical Results for Surface Soil Samples - Metals
USEPA Method 6010

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York
May 15, 2009

Analyte	NYSDEC RSCO [1]	Eastern USA Background	Unrestricted Use SCO [2]	Residential SCO [3]	Restricted Residential SCO [3]	Commercial SCO [3]	Industrial SCO [3]	S-1 (0 - 2")	S-2 (0 - 2")	S-3 (0 - 2")	S-4 (0 - 2")	S-5 (0 - 2")	S-6 (0 - 2")	S-7 (0 - 2")	S-8 (0 - 2")	SS-9 (0 - 2")	SS-10 (0 - 2")
Metals by 6010 - mg/kg																	
Aluminum as Al	SB	33,000	NS	NS	NS	NS	NS	3,440	3,350	3,420	3,290	2,760	2,690	3,480	2,140	3,820	2,240
Antimony as Sb	SB	N/A	NS	NS	NS	NS	NS	0.42 U	0.41 U	0.42 U	1.910 J	0.44 U	0.43 U	0.47 U	0.41 U	0.40 U	0.40 U
Arsenic as As	7.5 or SB	3-12**	13[c]	16[f]	16[f]	16[f]	16[f]	2.390	2.970	2.190	1.530	1.720	1.980	4.640	1.270	2.210	1.350
Barium as Ba	300 or SB	15-600	350[c]	350[f]	400	400	10,000[d]	13.6	14.7	18.6	24.5	22.4	21.9	21.3	22.9	17.8	27.2
Beryllium as Be	0.16 or SB	0-1.75	7	14	72	590	2,700	0.14 J	0.12 J	0.08 J	0.11 J	0.09 J	0.10 J	0.12 J	0.08 J	0.11 J	0.09 J
Cadmium as Cd	1 or SB	0.1-1	2.5[c]	2.5[f]	4.3	9.3	60	0.51	0.53	0.45	0.50	0.45	0.56	0.28	0.38	0.38	0.37
Calcium as Ca	SB	130-35,000	NS	NS	NS	NS	NS	77,400	62,700	21,400	9,670	13,500	33,400	2,570	5,930	25,200	5,360
Chromium as Cr	10 or SB	1.5-40**	30[c]	36	180	1,500	6,800	5.960	4.490	6.090	8.740	11.8	12.6	11.3	15.4	6.330	12.2
Cobalt as Co	30 or SB	2.5-60**	NS	NS	NS	NS	NS	1.620	1.540	1.460	1.780	2.040	1.780	1.490	1.390	1.370	1.760
Copper as Cu	25 or SB	1-50	50	270	270	270	10,000[d]	9.140	7.880	11.6	16.9	19.5	23.8	22.9	25.2	8.270	18.1
Iron as Fe	2,000 or SB	2,000-550,000	NS	NS	NS	NS	NS	5,000	4,830	6,150	6,940	6,920	7,760	7,380	7,100	5,250	13,700
Lead as Pb	500***	****	NS	NS	NS	NS	NS	57.9	40.5	81.4	87.3	51.3	36.1	36.5	32.8	67.4	57.7
Magnesium as Mg	SB	100-5,000	NS	NS	NS	NS	NS	48,600	39,800	12,600	4,400	6,520	14,300	1,370	3,220	15,400	2,060
Manganese as Mn	SB	50-5,000	1,600[c]	2,000[f]	2,000[f]	10,000[d]	10,000[d]	95.5	71.2	72.0	87.5	68.4	93.6	68.6	65.3	60.9	80.1
Mercury as Hg	0.1	0.001-0.2	0.18[c]	0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.025	0.031	0.105	0.037	0.024	0.021	0.054	0.016	0.068	0.007 J
Nickel as Ni	13 or SB	0.5-25	30	140	310	310	10,000[d]	5.200	3.470	3.250	6.410	5.080	5.610	4.660	5.050	3.370	6.600
Potassium as K	SB	8,500-43,000**	NS	NS	NS	NS	NS	241	197	184	322	218	236	204	187	181	152
Selenium as Se	2 or SB	0.1-3.9	3.9[c]	36	180	1,500	6,800	0.72 J	0.63 J	0.91	1.080	0.99	0.72	1.120	0.80	0.79	0.82
Silver as Ag	SB	N/A	2	36	180	1,500	6,800	0.11 U	0.11 U	0.11 U	0.12 U	0.12 U	0.11 U	0.12 U	0.11 U	0.11 U	0.11 U
Sodium as Na	SB	6,000-8,000	NS	NS	NS	NS	NS	147	108	113	109	142	176	300	316	156	139
Thallium as Tl	SB	N/A	NS	NS	NS	NS	NS	0.20 U	0.20 U	0.20 U	0.21 U	0.21 U	0.21 U	0.22 U	0.20 U	0.20 U	0.19 U
Vanadium as V	150 or SB	1-3000	NS	NS	NS	NS	NS	8.670	9.280	11.0	13.0	10.9	10.7	11.2	12.2	8.770	9.240
Zinc as Zn	20 or SB	9-50	109[c]	2,200	10,000[d]	10,000[d]	10,000[d]	41.9	40.8	61.4	83.5	76.1	77.5	77.7	105	49.6	58.7

Notes:
(1) NYSDEC Recommended Soil Cleanup Objectives (RSCO), Technical and Administrative Guidance Memorandum (TAGM) #4046, 12/00
(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
(3) NYSDEC 6 NYCRR Environmental Remediation Programs Part Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.
b - The SCOs for commercial use were capped at a maximum value of 500 ppm.
c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
j - This SCO is the lower of the values for mercury.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
** - New York State Background
**** - Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

TABLE 7
Groundwater Analytical Results - Volatile Organic Compounds
USEPA Method 8260

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	NYSDEC Groundwater Standards**	GW-1 5/19/2009	GW-2 5/19/2009	GW-3 5/19/2009	MW-9 6/4/2009	MW-10 6/4/2009	MW-11 6/4/2009
Volatile Organic Compounds by 8260 - ug/L							
1,1,1-Trichloroethane	5	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	5	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1,2-Trichloroethane	1	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1 Dichloroethane	4	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,1 Dichloroethene	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1-Dichloropropene	5	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
1,2,4-Trichlorobenzene (v)	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	4.6
1,2-Dibromo-3-Chloropropane	NS	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2 Dibromoethane	NS	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,2 Dichlorobenzene (v)	3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,2 Dichloroethane	0.6	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
1,2 Dichloropropane	1	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,3 Dichlorobenzene (v)	3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
1,4 Dichlorobenzene (v)	3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
2-Butanone	NS	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	50*	1.9 U	1.9 U	1.9 U	4.8 J	1.9 U	1.9 U
4-Methyl-2-pentanone	NS	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	50*	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Benzene	1	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Bromodichloromethane	50*	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromoform	50*	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
Bromomethane	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Carbon Disulfide	60***	0.54 U	0.54 U	0.54 U	0.83 J	0.54 U	0.54 U
Carbon Tetrachloride	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Chlorobenzene	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
Chloroethane	5	0.66 U	0.66 U	0.66 U	3.2 J	0.66 U	0.66 U
Chloroform	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane	5	0.54 U	0.54 U	0.54 U	1.9 J	0.54 U	0.54 U
cis-1,2-Dichloroethene	5	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	0.4	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Cyclohexane	NS	0.55 U	43	25	37	0.55 U	0.55 U
Dibromochloromethane	NS	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Dichlorodifluoromethane	5	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Ethyl Benzene	5	0.53 U	0.53 U	**140**	**7.7**	0.53 U	0.53 U
Isopropylbenzene	5	0.45 U	**66**	**46**	**30**	0.45 U	2.5
m/p Xylene	5	0.95 U	0.95 U	**120 D**	**43**	**9.9**	**10**
Methyl Acetate	NS	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
ter.ButylMethylEther	10	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Methylcyclohexane	NS	11	95	50	94	0.68 U	7.6
Methylene Chloride	5	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
o-Xylene	5	0.43 U	0.43 U	**81**	**7.6 J**	0.43 U	0.43 U
Styrene	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
t-1,3-Dichloropropene	NS	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Tetrachloroethene	NS	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Toluene	0.4 (1)	0.37 U	0.37 U	0.37 U	0.84 J	0.52 J	0.37 U
trans-1,2-Dichloroethene	5	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Trichloroethene	NS	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Trichlorofluoromethane	5	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Vinyl Chloride	2	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U

Notes:
(1) Applies to sum of cis and trans 1,3
* - Guidance Value
** - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998
*** - NYSDEC Ambient Water Quality Standards and Guidance Values, Addendum April 2000
NS - No Standard
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 8
Groundwater Analytical Results - Semi-volatile Organic Compounds
USEPA Method 8270

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Compound	NYSDEC Groundwater Standards**	GW-1		GW-2		GW-3		MW-9		MW-10		MW-11	
Semi-Volatile Organic Compounds by 8270 - ug/L													
1,1-Biphenyl	NS	0.15	U	0.15	U	0.15	U	3.4	J	0.15	U	0.15	U
2,2-oxybis(1-Chloropropane)	NS	0.18	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U
2,4,5-Trichlorophenol	1	0.41	U	0.4	U	0.41	U	0.4	U	0.4	U	0.4	U
2,4,6-Trichlorophenol	NS	0.58	U	0.56	U	0.57	U	0.56	U	0.56	U	0.56	U
2,4-Dichlorophenol	1	0.68	U	0.66	U	0.67	U	0.66	U	0.66	U	0.66	U
2,4-Dimethylphenol	NS	0.73	U	0.71	U	0.72	U	0.71	U	0.71	U	0.71	U
2,4-Dinitrophenol	5	2.2	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
2,4-Dinitrotoluene	5	1.1	U	1	U	1.1	U	1	U	1	U	1	U
2,6-Dinitrotoluene	5	0.33	U	0.32	U	0.33	U	0.32	U	0.32	U	0.32	U
2-Chloronaphthalene	10	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
2-Chlorophenol	50	0.56	U	0.54	U	0.55	U	0.54	U	0.54	U	0.54	U
2-Methylnaphthalene	NS	0.33	U	0.32	U	15		74	R	0.32	U	1.1	J
2-Methylphenol	5	0.25	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U
2-Nitroaniline	5	0.51	U	0.49	U	0.5	U	0.49	U	0.49	U	0.49	U
2-Nitrophenol	5	0.54	U	0.52	U	0.53	U	0.52	U	0.52	U	0.52	U
3,3'-Dichlorobenzidine	5	7.1	U	6.9	U	7.1	U	6.9	U	6.9	U	6.9	U
3+4-Methylphenols	50	0.39	U	0.38	U	0.39	U	0.38	U	0.38	U	0.38	U
3-Nitroaniline	5	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
4,6-Dinitro-2-methylphenol	NS	0.76	U	0.74	U	0.76	U	0.74	U	0.74	U	0.74	U
4-Bromophenyl phenyl ether	NS	0.24	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U
4-Chloro-3-methylphenol	5	0.41	U	0.4	U	0.41	U	0.4	U	0.4	U	0.4	U
4-Chloroaniline	5	2.9	U	2.9	U	2.9	U	2.9	U	2.9	U	2.9	U
4-Chlorophenyl phenyl ether	NS	0.22	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
4-Nitroaniline	5	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
4-Nitrophenol	5	12	U	12	U	12	U	12	U	12	U	12	U
Acenaphthene	20	0.22	U	0.21	U	0.21	U	2	J	0.21	U	0.21	U
Acenaphthylene	20	0.72	U	0.7	U	0.71	U	0.7	U	0.7	U	0.7	U
Acetophenone	NS	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Anthracene	50*	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
Atrazine	NS	0.41	U	0.4	U	0.41	U	0.4	U	0.4	U	0.4	U
Benzaldehyde	NS	0.79	U	0.77	U	0.79	U	0.77	U	0.77	U	0.77	U
Benz(a)anthracene	0.002	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
Benzo(a)pyrene	ND	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Benzo(b)fluoranthene	0.002	0.3	U	0.29	U	0.3	U	0.29	U	0.29	U	0.29	U
Benzo(ghi)perylene	NS	0.3	U	0.29	U	0.3	U	0.29	U	0.29	U	0.29	U
Benzo(k)fluoranthene	0.002	0.19	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Bis(2-chloroethoxy)methane	5	0.57	U	0.55	U	0.56	U	0.55	U	0.55	U	0.55	U
Bis(2-chloroethyl)ether	1	0.57	U	0.55	U	0.56	U	0.55	U	0.55	U	0.55	U
Bis(2-ethylhexyl)phthalate	5	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
BenzylButylPhthalate	50	0.2	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U
Caprolactam	NS	4.6	U	4.5	U	4.6	U	4.5	U	4.5	U	4.5	U
Carbazole	NS	0.23	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
Chrysene	0.002	0.19	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Dibenzo(a,h)anthracene	50	0.43	U	0.42	U	0.43	U	0.42	U	0.42	U	0.42	U
Dibenzofuran	NS	0.25	U	0.24	U	0.24	U	1.4	J	0.24	U	0.24	U
Diethyl Phthalate	50	0.39	U	0.38	U	0.39	U	0.38	U	0.38	U	0.38	U
Dimethyl Phthalate	50	0.23	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
Di-n-Butyl Phthalate	50	2.5	U	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U
Di-n-octyl Phthalate	50*	0.53	U	0.51	U	0.52	U	0.51	U	0.51	U	0.51	U
Fluoranthene	50	0.41	U	0.4	U	0.41	U	0.4	U	0.4	U	0.4	U
Fluorene	50	0.32	U	0.31	U	0.32	U	3.5	J	0.31	U	0.31	U
Hexachlorobenzene	0.04	0.19	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Hexachlorobutadiene	0.5	0.26	U	0.25	U	0.26	U	0.25	U	0.25	U	0.25	U
Hexachlorocyclopentadiene	5	0.25	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U
Hexachloroethane	5	0.26	U	0.25	U	0.26	U	0.25	U	0.25	U	0.25	U
Indeno(1,2,3-cd)pyrene	0.002	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
Isophorone	50	0.31	U	0.3	U	0.31	U	0.3	U	0.3	U	0.3	U
Naphthalene(sv)	10	0.12	U	0.12	U	**45**		**31**		0.12	U	0.12	U
Nitrobenzene	0.4	0.7	U	0.68	U	0.69	U	0.68	U	0.68	U	0.68	U
N-Nitrosodi-n-propylamine	50	0.21	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
N-Nitrosodiphenylamine	50*	0.62	U	0.6	U	0.61	U	0.6	U	0.6	U	0.6	U
Pentachlorophenol	1	1.8	U	1.7	U	1.8	U	1.7	U	1.7	U	1.7	U
Phenanthrene	50	0.27	U	0.26	U	0.27	U	4	J	0.26	U	0.26	U
Phenol	1	0.22	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
Pyrene	50	0.21	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

Notes:
* - Guidance Value
** - NYSDEC Ambient Water Quality Standards and Guidance Values 6/199
(1) Applies to each isomer (1,2 - 1,3 and 1,4) individually
ND - Non-detect
NS - No Standard
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample
R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. The R replaces the numerical value or sample quantitation limit. In some instances (e.g., a dilution) a result may be indicated as "rejected" to avoid confusion when a more quantitatively accurate result is available.
Bold/shaded text indicates concentrations exceeding the NYSDEC Groundwater Standard

TABLE 9
Groundwater Analytical Results - Metals
USEPA Method 6010

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Compound	NYSDEC Groundwater Standards**	GW-1 Total	GW-1 Dissolved	GW-2 Total	GW-2 Dissolved	GW-3 Total	GW-3 Dissolved	MW-9 Total	MW-10 Total	MW-11 Total
Metals by 6010 - mg/L										
Aluminum as Al	NS	0.0545 J	0.0442 J	0.198	0.0875 J	0.0733 J	0.0643 J	40.1	59.9	15.9
Antimony as Sb	0.003	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Arsenic as As	0.025	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0199	0.0414	0.0164
Barium as Ba	1	0.0114 J	0.00984 J	0.0126 J	0.012 J	0.0175 J	0.0173 J	0.178	0.248	0.0647
Beryllium as Be	0.003	0.0007 U	0.0007 U	0.0007 U	0.0007 U	0.0007 U	0.0007 U	0.0022 J	**0.00443**	0.00128 J
Cadmium as Cd	0.005	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 J	0.0018 J	0.0005 U
Calcium as Ca	NS	13.8	13.8	26.4	26.4	31.8	30.8	32	14	24.7
Chromium as Cr	0.05	0.0011 U	0.0011 U	0.00189 J	0.0011 U	0.0011 U	0.0011 U	**0.0785**	**0.0826**	0.0301
Cobalt as Co	NS	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0117 J	0.0285	0.00721 J
Copper as Cu	0.2	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.079	0.123	0.0476
Iron as Fe	0.5	**1.03**	**0.904**	**3.47**	**2.08**	**2.82**	**1.94**	**57.3**	**83.7**	**33.3**
Lead as Pb	0.025	0.003 J	0.0026 U	0.0027 J	0.0026 U	0.00469 J	0.00288 J	**0.152**	**0.108**	**0.0836**
Magnesium as Mg	35	4.74	4.7	5.28	5.16	7.27	7.15	14.6	10.9	9.14
Manganese as Mn	0.3	0.0621	0.0782	0.0468	0.0432	0.0633	0.0651	**0.364**	**1.64**	0.202
Mercury as Hg	0.0007	0.00009 U	0.00009 U	0.00009 U	0.00009 U	0.00009 U	0.00009 U	0.00038	0.00019 J	0.00012 J
Nickel as Ni	0.1	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0285	0.0476	0.0117 J
Potassium as K	NS	1.6	1.55	1.77	1.73	3	3.07	6.89	6.07	3.16
Selenium as Se	0.01	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.00635 J	0.00566 J	**8.82 J**	0.00729 J	0.00893 J
Silver as Ag	0.05	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U
Sodium as Na	20	6.35	6.24	4.32	4.36	**62.9**	**62.7**	**34.6**	8.66	7.87
Thallium as Tl	0.0005	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
Vanadium as V	NS	0.0061 U	0.0061 U	0.0061 U	0.0061 U	0.0061 U	0.0061 U	0.108	0.153	0.0768
Zinc as Zn	2	0.0274	0.0204	0.0213	0.0187 J	0.0174 J	0.0186 J	0.322	0.259	0.138

Notes:
** - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998
ND - Non-detect
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
* - Guidance Value
NS - No Standard
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 10
Soil Gas Analytical Results - Volatile Organic Compounds
USEPA Method TO-15

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	SV-1 5/20/2009		SV-2 5/20/2009		SV-3 5/20/2009		SV-4 5/20/2009		Indoor Air 5/20/2009		Outdoor Air 5/20/2009		DUP-03 5/20/2009	
Volatile Organic Compounds by TO-15 - µg/m^3														
1,1,1-Trichloroethane	0.22	U	0.22	U	0.22	U	0.22	J	0.22	U	0.22	U	0.22	U
1,1,2,2-Tetrachloroethane	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U
1,1,2- Trichloroethane	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,1,2-Trichlorotrifluoroethane	0.31	U	0.31	U	0.31	U	0.31	U	0.31	U	0.31	U	0.31	U
1,1 Dichloroethane	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
1,1 Dichloroethene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
1,2,4-Trichlorobenzene	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
1,2,4-Trimethylbenzene	4.87		18.29		4.03		4.33		0.49	U	2.21	J	0.49	U
1,2 Dibromoethane	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U
1,2 Dichlorobenzene (v)	0.42	U	0.42	U	0.42	U	0.42	U	0.42	U	0.42	U	0.42	U
1,2 Dichloroethane	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
1,2 Dichloropropane	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
1,3,5-Trimethylbenzene	1.62	J	7.96		1.08	J	1.28	J	0.44	U	0.44	U	0.44	U
1,3 Butadiene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
1,3 Dichlorobenzene (v)	1.92	J	2.28	J	4.09		3.55		0.48	U	0.48	U	0.48	U
1,4 Dichlorobenzene (v)	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U
1,4-Dioxane	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U
2,2,4-Trimethylpentane	3.64		204.11	D	26.2		8.17		0.19	UJ	0.19	U	0.56	J
2-Butanone	109.42	D	84.05	D	97.03	D	87.59	D	4.25	J	0.97	J	0.8	J
2-Hexanone	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
p-Ethyltoluene	1.18	J	5.21		0.88	J	0.98	J	0.39	U	0.39	U	0.39	U
4-Methyl-2-pentanone	2.13		1.72	J	0.94	J	0.9	J	0.25	U	0.25	U	0.25	U
Acetone	80.53	D	32.81		35.28		62.47	D	13.42	J	10.9		7.67	
Allyl Chloride	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U
Benzene	2.49		55.59	D	5.24		8.66		0.77	J	0.67	J	0.96	J
Bromodichloromethane	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
Bromoethene	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
Bromoform	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U	0.52	U
Bromomethane	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U
Carbon disulfide	8.97		1.21	J	1.03	J	11.12		0.16	U	0.16	U	0.16	U
Carbon Tetrachloride	0.38	J	0.38	J	0.25	U	0.25	U	0.44	J	0.5	J	0.5	J
Chlorobenzene	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U
Chloroethane	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Chloroform	0.54	J	0.1	U	0.1	U	0.54	J	0.1	U	0.1	U	0.1	U
Chloromethane	0.87	J	0.99	J	0.27	J	0.68	J	1.07		1.16		1.16	
c-1,2-Dichloroethene	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U
c-1,3Dichloropropene	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U
Cyclohexane	197.23	D	31.22		2.68		1.34	J	0.28	U	0.48	J	0.28	U
Chlorodibromomethane	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U
Dichlorodifluoromethane	2.52		2.42	J	1.78	J	1.78	J	2.13	J	2.47	J	2.47	J
Dichlorotetrafluoroethane	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Ethyl Benzene	2.35		25.84		2.69		3.78		0.35	U	0.35	U	0.35	U
Heptane	16.31		89.34	D	10.49		4.02		0.25	U	0.25	U	0.25	U
Hexachlorobutadiene	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Hexane	4.44		143.79	D	17.37		7.44		0.63	J	0.81	J	1.02	J
m + p Xylene	7.99		76.97		9.38		12.08		0.48	UJ	0.48	U	0.52	J
Methyl Methacrylate	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U
ter.ButylMethylEther	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Methylene Chloride	3.51		2.71		0.97	J	2.74		0.87	J	1.46	J	1.7	J
o Xylene	2.78		25.93		3.13		3.95		0.3	U	0.3	U	0.3	U
Styrene	0.94	J	0.72	J	0.3	U	2.04	J	0.3	U	0.3	U	0.3	U
t-1,3Dichloropropene	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U
tert-Butyl alcohol	8.58		3.88		5.18		3.33		0.3	U	0.3	U	0.3	U
Tetrachloroethene	3.59		1.42	J	0.68	J	5.97		0.2	U	2.92	J	0.2	U
Tetrahydrofuran	1.59		1.5		1.21	J	1.03	J	0.24	U	0.24	U	0.24	U
Toluene	12.78		256.26	D	20.43		18.99		1.28	J	2.56		1.7	J
t-1,2-Dichloroethene	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U
Trichloroethene	0.21	U	0.27	J	0.21	U	0.21	U	0.21	UJ	0.21	U	0.21	J
Trichlorofluoromethane	4.66		2.08	J	1.57	J	2.25	J	1.18	J	1.46	J	1.29	J
Vinyl Chloride	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U

Notes:
NS - Not Specified
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

TABLE 11
QA/QC Analytical Results - Volatile Organic Compounds
USEPA Method 8260

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	Unrestricted Use SCO[1]	SCDHS Action Levels[2]	DUP-01 (CP-01)*	DUP-02 (SB-8 (22-24'))**	Target Indoor Air Concentrations**	DUP-03 (Indoor Air) 5/20/2009	NYSDEC Groundwater Standards[3]	DUP-04 (MW-9)	EB-01	EB-02	EB-03	EB-04	Trip Blank 5/15/2009	Trip Blank 5/19/2009	Trip Blank 6/4/2009
Volatile Organic Compounds - USEPA Method 8260 - ug/kg					**Volatile Organic Compounds by TO-15 - µg/m3**		**Volatile Organic Compounds - USEPA Method 8260 - ug/L**								
1,1,1-Trichloroethane	680	1,600	8 U	5.5 U	2,200	0.22 U	5	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1,2-Tetrachloroethane	NS	600	3.9 U	-	0.42	0.69 U	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	NS	1,200	4.2 UJ	2.9 U	-	-	5	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1,2 Trichloroethane	NS	600	8.2 U	5.6 U	1.5	0.44 U	1	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1,2-Trichlorotrifluoroethane	NS	NS	12 U	8.3 U	3,000	0.31 U	NS	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,1 Dichloroethane	270	400	8.5 U	5.9 U	500	0.16 U	4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,1 Dichloroethene	330	800	13 U	9.2 U	500	0.2 U	5	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
1,1-Dichloropropene	NS	600	4.2 U	-	-	-	5	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	NS	800	4.5 UJ	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	NS	800	4.5 UJ	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4,5-tetramethylbenzene	NS	15,000	45 UJ	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene (v)	NS	6,800	6.4 UJ	4.4 UJ	200	0.3 U	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
1,2,4-Trimethylbenzene	NS	4,800	4.5 UJ	-	6	0.49 U	-	-	-	-	-	-	-	-	-
1,2 Dibromo 3 chloropropane	NS	1000	7.9 UJ	5.4 U	-	-	NS	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2 Dibromoethane	NS	600	5.8 U	4 U	0.11	0.54 U	NS	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
1,2 Dichlorobenzene (v)	1,100	15,000	5.6 UJ	3.9 U	200	0.42 U	3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,2 Dichloroethane	20[c]	200	5.8 U	4 U	0.94	0.28 U	0.6	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
1,2 Dichloropropane	NS	600	2.4 U	1.6 U	4	0.28 U	1	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,3,5-Trimethylbenzene	NS	5,200	4.1 UJ	-	6	0.44 U	-	-	-	-	-	-	-	-	-
1,3 Butadiene	NS	NS	-	-	0.087	0.2 U	-	-	-	-	-	-	-	-	-
1,3 Dichlorobenzene (v)	2,400	3,200	3.4 UJ	2.3 U	110	0.48 U	3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
1,3-Dichloropropane	NS	600	6.7 U	-	-	-	-	-	-	-	-	-	-	-	-
1,4 Dichlorobenzene (v)	1,800	15,000	3.7 UJ	2.6 U	800	0.36 U	3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,4-Dioxane	NS	NS	-	-	NS	0.32 U	-	-	-	-	-	-	-	-	-
2,2,4-Trimethylpentane	NS	NS	-	-	NS	0.56 J	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	NS	600	9.5 U	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	120	NS	28 U	19 U	1,000	0.8 J	NS	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Chlorotoluene	NS	3,600	6.7 UJ	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	NS	NS	-	24 U	NS	0.52 U	50*	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
p-ethyltoluene	NS	3,600	45 UJ	-	NS	0.39 U	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	NS	3,600	5.6 UJ	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	NS	NS	27 U	18 U	NS	0.25 U	NS	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	50	**	27 U	19 U	350	7.67 J	50*	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Allyl Chloride	NS	NS	-	-	NS	0.16 U	-	-	-	-	-	-	-	-	-
Benzene	60	120	3.5 U	2.4 U	3.1	0.96 J	1	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Bromobenzene	NS	1,600	4.7 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	NS	400	7.2 U	-	1.4	0.33 U	-	-	-	-	-	-	-	-	-
Bromodichloromethane	NS	600	5.6 U	3.9 U	-	-	50*	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromoethene	NS	NS	-	-	NS	0.13 U	-	-	-	-	-	-	-	-	-
Bromoform	NS	1,000	6.7 U	4.6 U	22	0.52 U	50*	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
Bromomethane	NS	NS	-	15 U	5	0.12 U	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Carbon Disulfide	NS	NS	-	6.6 U	700	0.16 U	60***	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
Carbon Tetrachloride	760	1,200	9 U	6.2 U	1.6	0.5 J	5	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Chlorobenzene	1,100	3,400	4.5 U	3.1 U	60	0.41 U	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
Chloroethane	NS	400	13 UJ	8.8 U	10,000	0.18 U	5	0.66 UJ	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
Chloroform	370	600	6.7 U	4.6 U	1.1	0.1 U	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane	NS	NS	-	5.4 U	24	1.16	5	0.54 UJ	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
c-1,2-Dichloroethene	250	600	8.1 U	5.6 U	35	0.24 U	5	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
c-1,3-Dichloropropene	NS	600	6.5 U	4.5 U	NS	0.27 U	0.4	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Cyclohexane	NS	NS	-	690	NS	0.28 U	NS	36	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Chlorodibromomethane	NS	NS	-	-	1	0.43 U	-	-	-	-	-	-	-	-	-
Dibromochloromethane	NS	600	4.9 U	3.4 U	-	-	NS	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Dibromomethane	NS	400	7.1 U	-	-	-	-	-	-	-	-	-	-	-	-
Dichlordifluoromethane	NS	600	5.9 U	4.1 U	200	2.47 J	5	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Dichlorotetrafluoroethane	NS	NS	-	-	NS	0.28 U	-	-	-	-	-	-	-	-	-
Ethyl Benzene	1,000	11,000	5.6 U	20,000 DR	22	0.35 U	5	**6.8**	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Heptane	NS	NS	-	-	NS	0.25 U	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	NS	15,000	7.2 UJ	-	1.1	0.85 U	-	-	-	-	-	-	-	-	-
Hexane	NS	NS	-	-	200	1.02 J	-	-	-	-	-	-	-	-	-
Isopropylbenzene	NS	5,200	4.4 UJ	2,200 DR	-	-	5	**36**	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
m + p Xylene	260	-	-	86,000 DR	7,000	0.52 J	5	**42**	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
Methyl Methacrylate	NS	NS	-	-	700	0.41 U	-	-	-	-	-	-	-	-	-
ter.ButylMethylEther	930	1,200	8.7 U	6 U	3,000	0.18 U	10	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Methyl Acetate	NS	NS	-	9.4 U	-	-	NS	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
Methylcyclohexane	NS	NS	-	3,800 DR	-	-	NS	98	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Methylene Chloride	50	200	13 U	8.9 U	52	1.7 J	5	0.41 U	0.41 U	0.41 U	1.4	1.4	0.41 U	0.41 U	0.41 U
Naphthalene	NS	15,000	4.1 UJ	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	NS	6,800	4.2 UJ	-	-	-	-	-	-	-	-	-	-	-	-
n-propylbenzene	NS	5,000	3.3 UJ	-	-	-	-	-	-	-	-	-	-	-	-
o Xylene	260	-	-	43,000 DR	7,000	0.3 U	5	3.9 J	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
p-diethylbenzene	NS	7,600	45 UJ	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	NS	7,800	2.6 UJ	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	NS	10,000	4.7 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	NS	2,000	4.1 U	2.8 U	1,000	0.3 U	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
t-1,3-Dichloropropene	NS	600	7.2 U	4.9 U	NS	0.32 U	NS	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
tert-Butyl alcohol	NS	NS	-	-	NS	0.3 U	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	NS	6,800	5.4 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	1,300	2,800	9.2 U	6.3 U	8.1	0.2 U	NS	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Tetrahydrofuran	NS	NS	-	-	NS	0.24 U	-	-	-	-	-	-	-	-	-
Toluene	700	3,000	5.8 U	4 U	400	1.7 J	0.4[1]	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Total Xylenes	NS	2,400	13 U	-	-	-	-	-	-	-	-	-	-	-	-
t-1,2-Dichloroethene	190	600	6.3 U	4.3 U	70	0.24 U	5	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Trichloroethene	47	1,400	7.8 U	5.4 U	0.22	0.21 J	NS	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Trichlorofluoromethane	NS	1,600	12 U	8.2 U	700	1.29 J	5	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Vinyl Chloride	20	400	11 U	7.7 UJ	2.8	0.18 U	2	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U

Notes:
(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestricted Use Soil Cleanup Objectives Table 375-6.8a 12/06
(2)Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.
(3) - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998
* - Compared to (2)
** - Compared to (1)
a - The SCO for residential, restricted residential and ecological resources use were capped at a maximum value of 100 ppm.
b - The SCOs for commercial use were capped at a maximum value of 500 ppm.
c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm.
f - For constituents where the calculated SCO was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.
UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. The R replaces the numerical value or sample quantitation limit. In some instances (e.g., a dilution) a result may be indicated as "rejected" to avoid confusion when a more quantitatively accurate result is available.
Bold / Shaded text denotes concentrations exceeding NYSDEC Unrestricted Use SCO

TABLE 12

QA/QC Analytical Results - Semi-Volatile Organic Compounds

USEPA Method 8270

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	SCDHS Action Levels[2]	DUP-01 (CP-01)		DUP-04 (MW-9)		NYSDEC Groundwater Standards[2]	EB-01		EB-03		EB-04	
Semi-Volatile Organic Compounds - USEPA Method 8260 - ug/kg						**Semi-Volatile Organic Compounds - USEPA Method 8260 - ug/L**						
1,1-Biphenyl	-	-		3.6	J	NS	-		0.17	U	0.17	U
2,2-oxybis(1-Chloropropane)	-	-		0.17	U	NS	-		0.2	U	0.2	U
2,4,5-Trichlorophenol	-	-		0.4	U	1	-		0.46	U	0.46	U
2,4,6-Trichlorophenol	-	-		0.56	U	NS	-		0.64	U	0.64	U
2,4-Dichlorophenol	-	-		0.66	U	1	-		0.76	U	0.76	U
2,4-Dimethylphenol	-	-		0.71	U	NS	-		0.82	U	0.82	U
2,4-Dinitrophenol	-	-		2.1	U	5	-		2.4	U	2.4	U
2,4-Dinitrotoluene	-	-		1	U	5	-		1.2	U	1.2	U
2,6-Dinitrotoluene	-	-		0.32	U	5	-		0.37	U	0.37	U
2-Chloronaphthalene	-	-		0.16	U	10	-		0.18	U	0.18	U
2-Chlorophenol	-	-		0.54	U	50	-		0.62	U	0.62	U
2-Methylnaphthalene	-	-		85	R	NS	-		0.37	U	0.37	U
2-Methylphenol	-	-		0.24	U	5	-		0.28	U	0.28	U
2-Nitroaniline	-	-		0.49	U	5	-		0.56	U	0.56	U
2-Nitrophenol	-	-		0.52	U	5	-		0.6	U	0.6	U
3,3'-Dichlorobenzidine	-	-		6.9	U	5	-		8	U	8	U
3+4-Methylphenols	-	-		0.38	U	50	-		0.44	U	0.44	U
3-Nitroaniline	-	-		1.1	U	5	-		1.3	U	1.3	U
4,6-Dinitro-2-methylphenol	-	-		0.74	U	NS	-		0.85	U	0.85	U
4-Bromophenyl phenyl ether	-	-		0.23	U	NS	-		0.26	U	0.26	U
4-Chloro-3-methylphenol	-	-		0.4	U	5	-		0.46	U	0.46	U
4-Chloroaniline	-	-		2.9	U	5	-		3.3	U	3.3	U
4-Chlorophenyl phenyl ether	-	-		0.21	U	NS	-		0.24	U	0.24	U
4-Nitroaniline	-	-		1.4	U	5	-		1.6	U	1.6	U
4-Nitrophenol	-	-		12	U	5	-		14	U	14	U
Acenaphthene	75,00	340	U	1.6	J	20	0.21	U	0.24	U	0.24	U
Acenaphthylene	-	-		0.7	U	20	-		0.8	U	0.8	U
Acetophenone	-	-		0.14	U	NS	-		0.16	U	0.16	U
Anthracene	75,000	250	U	0.16	U	50*	0.16	U	0.18	U	0.18	U
Atrazine	-	-		0.4	U	NS	-		0.46	U	0.46	U
Benzaldehyde	-	-		0.77	U	NS	-		0.89	U	0.89	U
Benz(a)anthracene	6,000	12,000		0.16	U	0.002	0.16	U	0.18	U	0.18	U
Benzo(a)pyrene	22,000	12,000	J	0.14	U	ND	0.14	U	0.16	U	0.16	U
Benzo(b)fluoranthene	2,200	19,000		0.29	U	0.002	0.3	U	0.33	U	0.33	U
Benzo(ghi)perylene	75,000	4,900	J	0.29	U	NS	0.3	U	0.33	U	0.33	U
Benzo(k)fluoranthene	2,200	6,500	J	0.18	U	0.002	0.18	U	0.21	U	0.21	U
Bis(2-chloroethoxy)methane	-	-		0.55	U	5	-		0.63	U	0.63	U
Bis(2-chloroethyl)ether	-	-		0.55	U	1	-		0.63	U	0.63	U
Bis(2-ethylhexyl)phthalate	-	-		0.16	U	5	-		0.18	U	0.18	U
BenzylButylPhthalate	-	-		0.19	U	50	-		0.22	U	0.22	U
Caprolactam	-	-		4.5	U	NS	-		5.1	U	5.1	U
Carbazole	-	-		0.22	U	NS	-		0.25	U	0.25	U
Chrysene	800	13,000		0.18	U	0.002	0.18	U	0.21	U	0.21	U
Dibenzo(a,h)anthracene	75,000	350	U	0.42	U	50	0.43	U	0.48	U	0.48	U
Dibenzofuran	-	-		1.2	J	NS	-		0.28	U	0.28	U
Diethyl Phthalate	-	-		0.38	U	50	-		0.44	U	0.44	U
Dimethyl Phthalate	-	-		0.22	U	50	-		0.25	U	0.25	U
Di-n-Butyl Phthalate	-	-		2.4	U	50	-		2.8	U	2.8	U
Di-n-octyl Phthalate	-	-		0.51	U	50*	-		0.59	U	0.59	U
Fluoranthene	75,000	9,400		0.4	U	50	0.41	U	0.46	U	0.46	U
Fluorene	75,000	460	U	2.9	J	50	0.32	U	0.36	U	0.36	U
Hexachlorobenzene	-	-		0.18	U	0.04	-		0.21	U	0.21	U
Hexachlorobutadiene	-	-		0.25	U	0.5	-		0.29	U	0.29	U
Hexachlorocyclopentadiene	-	-		0.24	U	5	-		0.28	U	0.28	U
Hexachloroethane	-	-		0.25	U	5	-		0.29	U	0.29	U
Indeno(1,2,3-cd)pyrene	6,400	3,600	J	0.15	U	0.002	0.15	U	0.17	U	0.17	U
Isophorone	-	-		0.3	U	50	-		0.34	U	0.34	U
Naphthalene(sv)	-	-		**35**		10	-		0.14	U	0.14	U
Nitrobenzene	-	-		0.68	U	0.4	-		0.78	U	0.78	U
N-Nitrosodi-n-propylamine	-	-		0.2	U	50	-		0.23	U	0.23	U
N-Nitrosodiphenylamine	-	-		0.6	U	50*	-		0.69	U	0.69	U
Pentachlorophenol	-	-		1.7	U	1	-		2	U	2	U
Phenanthrene	75,000	1,800	J	3	J	50	0.27	U	0.3	U	0.3	U
Phenol	-	-		0.21	U	1	-		0.24	U	0.24	U
Pyrene	75,000	9,900	J	0.2	U	50	0.2	U	0.23	U	0.23	U

Notes:

[1]Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.

(2) - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The assocaited numerical value is the sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. The R replaces the numerical value or sample quantitation limit. In some instances (e.g., a dilution) a result may be indicated as "rejected" to avoid confusion when a more quantitatively accurate result is available.

Bold / Shaded text denotes concentrations exceeding NYSDEC Unrestricted Use SCO

TABLE 13

QA/QC Analytical Results - Metals

USEPA Method 6010

Former Bellport Gas Station - 1401 Montauk Highway - East Patchogue - New York

Analyte	SCDHS Action Levels[2]	DUP-01 (CP-01)	NYSDEC Groundwater Standards[2]	DUP-04 (MW-9)	EB-03 Total	EB-03 Dissolved	EB-04 Total
Metals - USEPA Method 6010 - mg/kg			**Metals - USEPA Method 6010 - mg/L**				
Aluminum as Al	-	-	NS	34	0.0416 J	0.0413 J	0.0427 J
Antimony as Sb	-	-	0.003	0.008 U	0.008 U	0.008 U	0.008 U
Arsenic as As	25	6.16	0.025	0.0156	0.0042 U	0.0042 U	0.0042 U
Barium as Ba	-	-	1	0.16	0.004 U	0.004 U	0.004 U
Beryllium as Be	8	0.13 J	0.003	0.00158 J	0.0007 U	0.0007 U	0.0007 U
Cadmium as Cd	10	5.41 J	0.005	0.00075 J	0.0005 U	0.0005 U	0.0005 U
Calcium as Ca	-	-	NS	31.5	1.03	0.917 J	0.755 J
Chromium as Cr	100	22.1	0.05	**0.0663**	0.0011 U	0.0011 U	0.0011 U
Cobalt as Co	-	-	NS	0.01 J	0.0058 U	0.0058 U	0.0058 U
Copper as Cu	500	214	0.2	0.0678	0.0066 U	0.0066 U	0.0066 U
Iron as Fe	-	-	0.5	**48.6**	0.0332 J	0.0405 J	0.191
Lead as Pb	400	773	0.025	0.128	0.0026 U	0.0026 U	0.0026 U
Magnesium as Mg	-	-	35	14	0.0455 J	0.0792 J	0.0904 J
Manganese as Mn	-	-	0.3	**0.305**	0.00192 J	0.00234 J	0.00304 J
Mercury as Hg	2	0.687 J	0.0007	0.00031	0.00009 U	0.00009 U	0.00009 U
Nickel as Ni	1,000	9.9	0.1	0.0238	0.0042 U	0.0042 U	0.0042 U
Potassium as K	-	-	NS	7.02	0.345 J	0.346 J	0.293 J
Selenium as Se	-	-	0.01	0.00731 J	0.0048 U	0.0048 U	0.0048 U
Silver as Ag	100	2.29	0.05	0.0015 U	0.0015 U	0.0015 U	0.0015 U
Sodium as Na	-	-	20	**36.9**	1.08	1.2	0.402 J
Thallium as Tl	-	-	0.0005	0.0024 U	0.0024 U	0.0024 U	0.0024 U
Vanadium as V	-	-	NS	0.0939	0.0061 U	0.0061 U	0.0061 U
Zinc as Zn	-	-	2	0.265	0.00726 J	0.0153 J	0.0118 J

Notes:

[1]Suffolk County Dept. of Health Services, Article 12 - SOP 9-95, Action Levels, July 1998.

(2) - NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998

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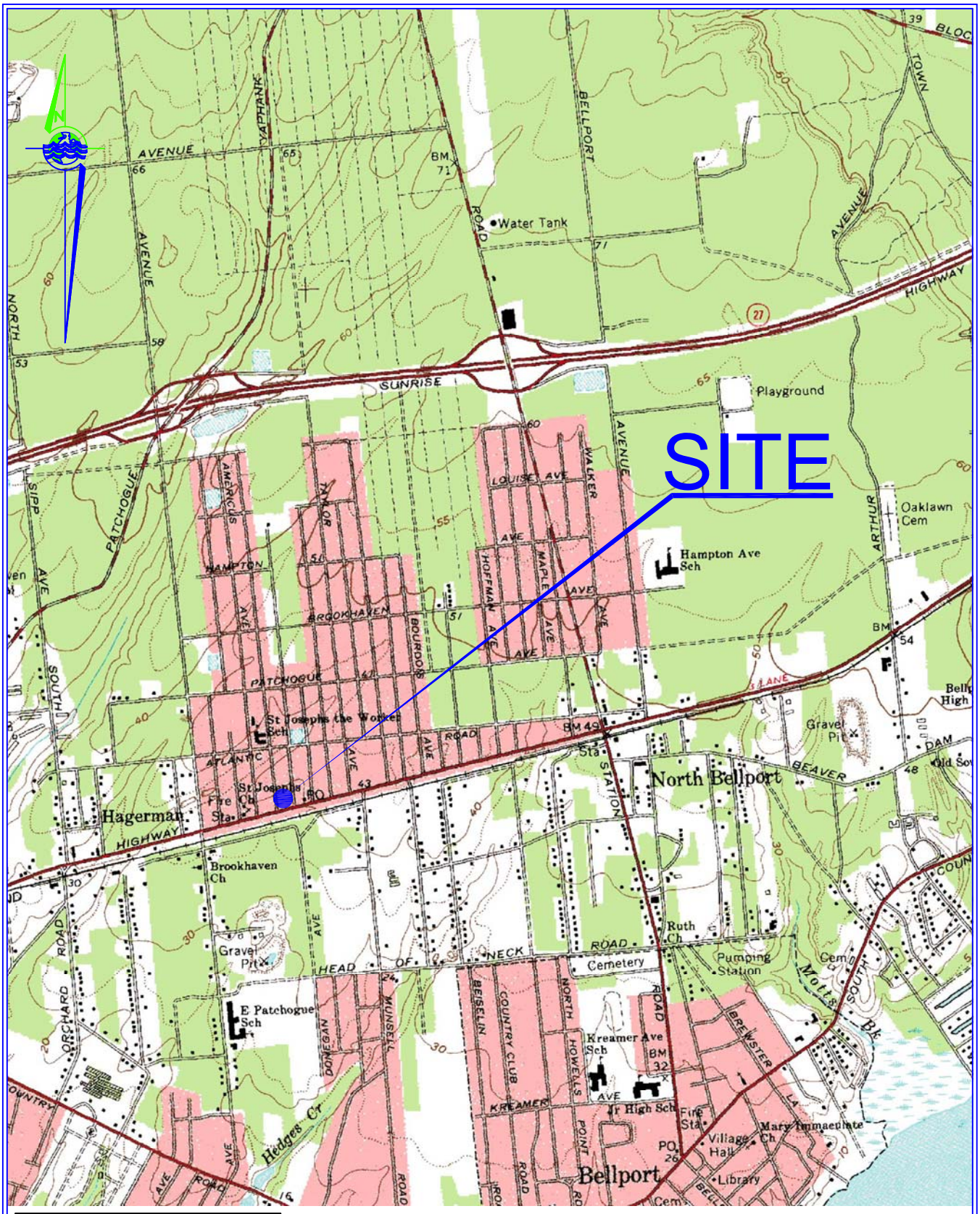
Bold / Shaded text denotes concentrations exceeding NYSDEC Unrestricted Use SCC

FIGURES



Mapped, edited, and published by the Geological Survey
Revised in cooperation with New York
Department of Transportation
Control by USGS, USC&GS, and New Jersey Geodetic Survey

VICINITY MAP

SCALE: 1:24,000

J:Projects S-Z\SHD\0902 - Bellport\CAD\dwgs as of 6-22-09\Vicinity Map.dwg

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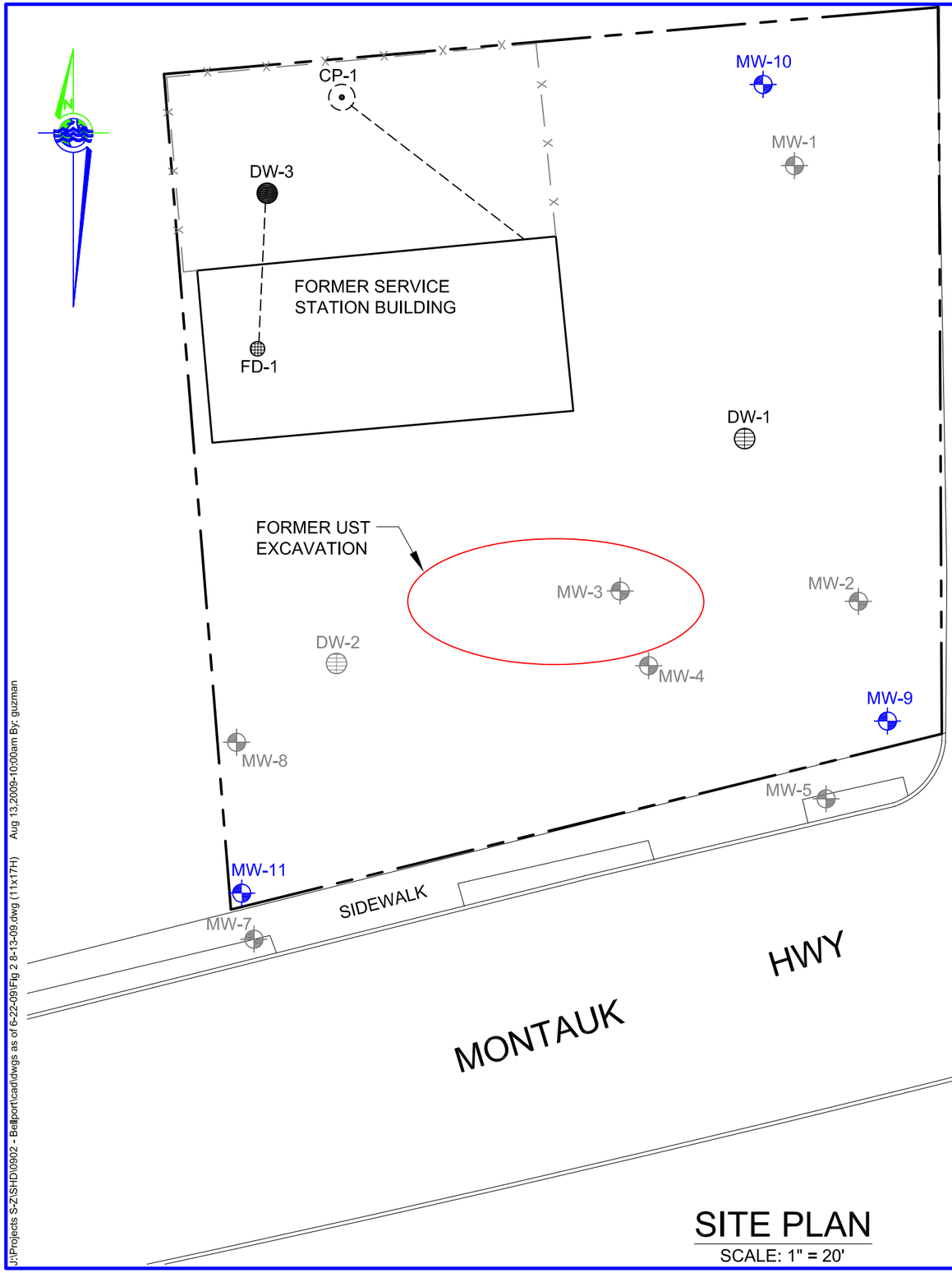
1401 MONTAUK HWY
E. PATCHOGUE, NY

Project: SHD0902	Figure No: 1
Designed by: DE	
Approved By: PWG	
Drawn By: LLG	Date: 6/22/09



LENOX AVENUE

LEGEND

MW-10	GROUNDWATER MONITORING WELL
	EXISTING PIPE
CP-1	EXISTING CESSPOOL
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL
MW-5	ABANDONED GROUNDWATER MONITORING WELL

BASEMAP & INFORMATION PROVIDED BY:
O'BRIEN & GERE ENGINEERS INC.

0 20 40
SCALE: 1" = 20'

SITE PLAN
SCALE: 1" = 20'

J:\Projects S-Z\SHD\0902 - Bellport\cad\dwgs as of 6-22-09\Fig 2 8-13-09.dwg (11x17H) Aug 13,2009-10:00am By: guzman

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DRAWINGS PREPARED FOR

REVISION	DATE	INITIAL	COMMENTS
DRAWING INFORMATION			

PROJECT:	SHD0902	APPROVED BY:	PWG
DESIGNED BY:	DE	DATE:	6/22/09
DRAWN BY:	LLG	SCALE:	AS SHOWN

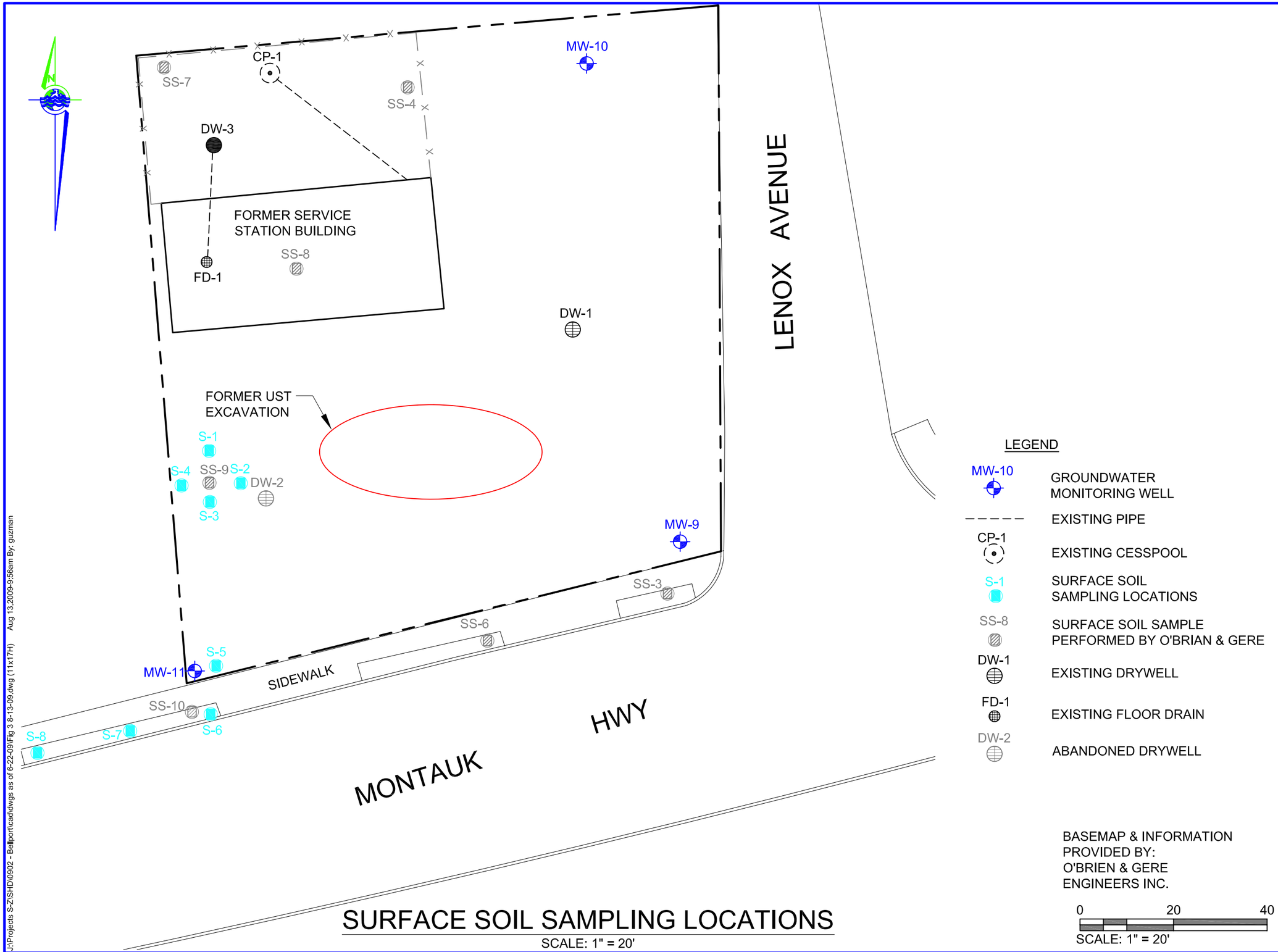
SHEET TITLE

SITE PLAN

FORMER BELLPORT GAS STATION SITE
1401 MONTAUK HWY
E. PATCHOGUE, NY

FIGURE NO
2

SHEET - OF -



LEGEND

MW-10	GROUNDWATER MONITORING WELL
-----	EXISTING PIPE
CP-1	EXISTING CESSPOOL
S-1	SURFACE SOIL SAMPLING LOCATIONS
SS-8	SURFACE SOIL SAMPLE PERFORMED BY O'BRIAN & GERE
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL

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SCALE: 1" = 20'

SURFACE SOIL SAMPLING LOCATIONS

SCALE: 1" = 20'

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DRAWN BY:	LLG	SCALE:	AS SHOWN

SHEET TITLE

SURFACE SOIL SAMPLING LOCATIONS

FORMER BELLPORT GAS STATION SITE
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FIGURE NO 3

SHEET - OF -

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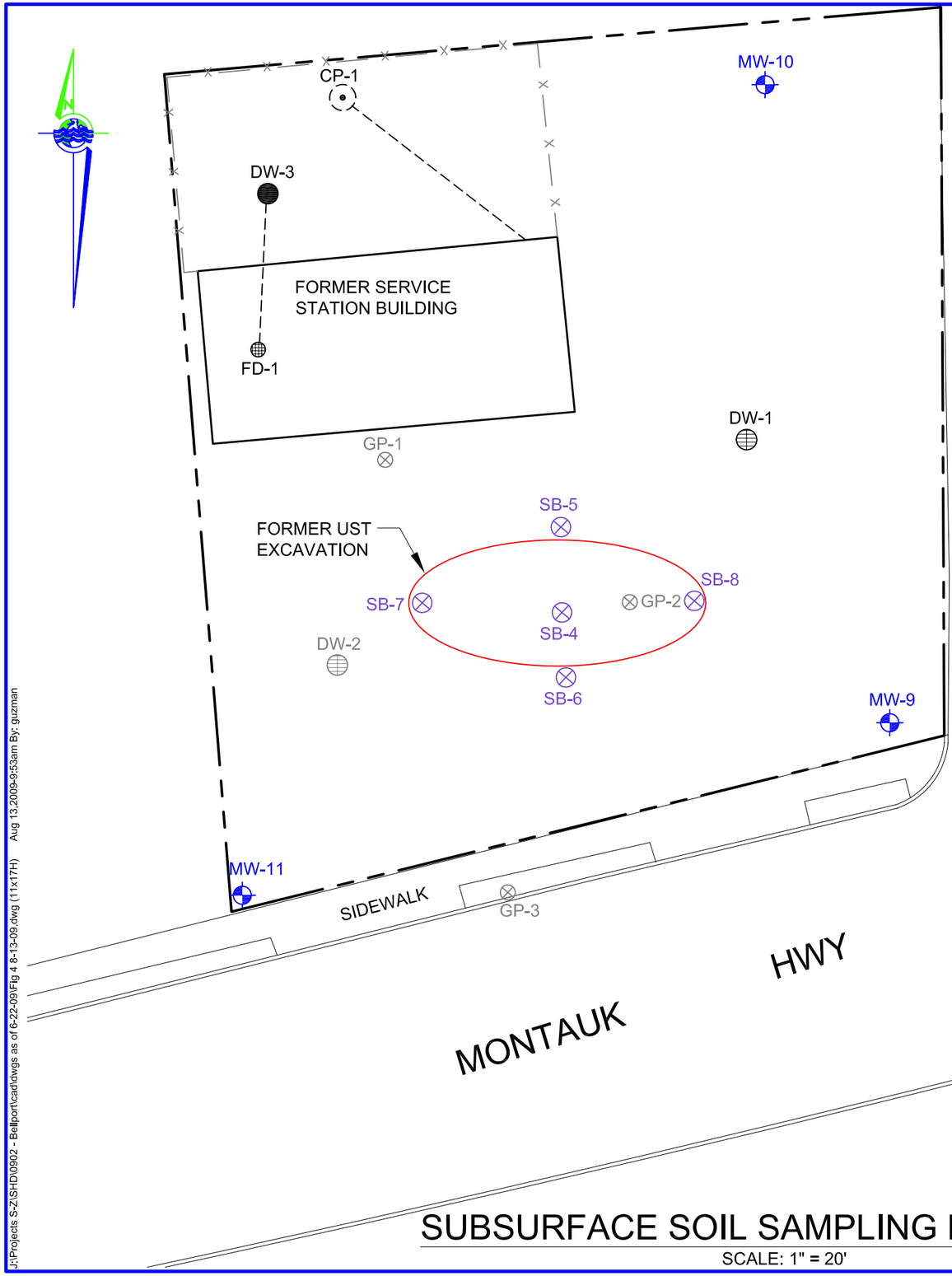

LEGEND

MW-10	GROUNDWATER MONITORING WELL
------	EXISTING PIPE
CP-1	EXISTING CESSPOOL
SB-1	SUBSURFACE SOIL SAMPLING LOCATIONS
GP-1	GEOPROBE SAMPLING LOCATIONS PERFORMED BY: O'BRIEN & GERE
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL

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SCALE: 1" = 20'

SUBSURFACE SOIL SAMPLING LOCATIONS

SCALE: 1" = 20'

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DESIGNED BY:	DE	DATE:	6/22/09
DRAWN BY:	LLG	SCALE:	AS SHOWN

SHEET TITLE

SUBSURFACE SOIL SAMPLING LOCATIONS

FORMER BELLPORT GAS STATION SITE
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FIGURE NO 4

SHEET - OF -

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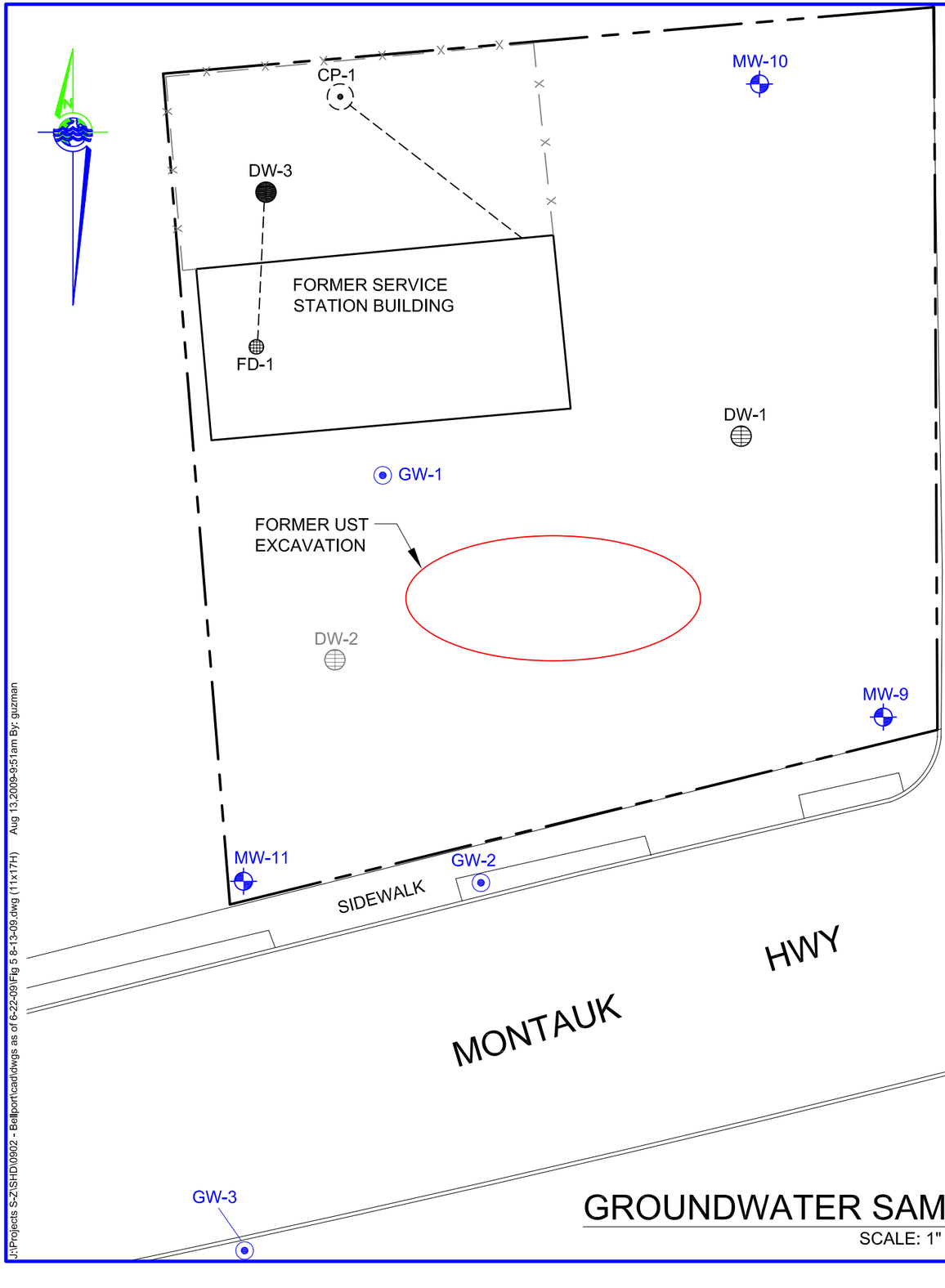

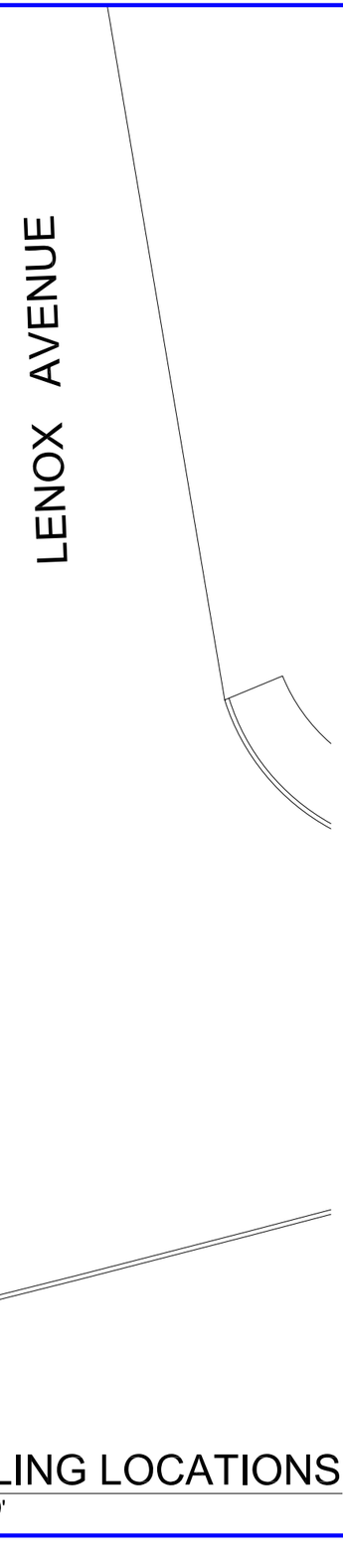

LEGEND

MW-10	GROUNDWATER MONITORING WELL
- - - - - -	EXISTING PIPE
CP-1	EXISTING CESSPOOL
GW-1	GROUNDWATER SAMPLING LOCATIONS
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL

BASEMAP & INFORMATION PROVIDED BY:
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0 20 40
SCALE: 1" = 20'

GROUNDWATER SAMPLING LOCATIONS

SCALE: 1" = 20'

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DESIGNED BY:	DE	DATE:	6/22/09
DRAWN BY:	LLG	SCALE:	AS SHOWN

SHEET TITLE

GROUNDWATER SAMPLING LOCATIONS

FORMER BELLPORT GAS STATION SITE
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E. PATCHOGUE, NY

FIGURE NO
5

SHEET - OF -

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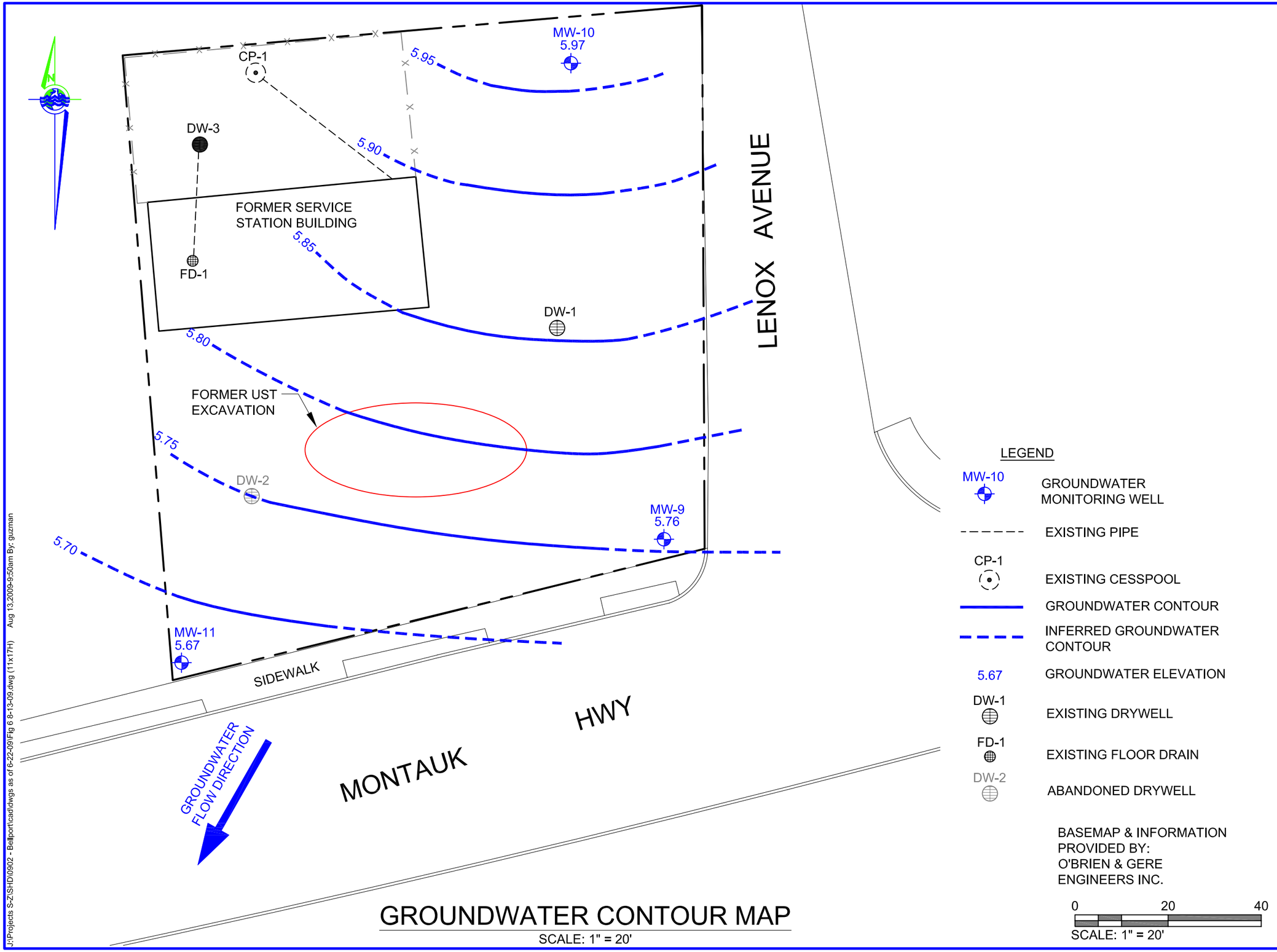

GROUNDWATER CONTOUR MAP

SCALE: 1" = 20'

LEGEND

MW-10	GROUNDWATER MONITORING WELL
	EXISTING PIPE
CP-1	EXISTING CESSPOOL
	GROUNDWATER CONTOUR
	INFERRED GROUNDWATER CONTOUR
5.67	GROUNDWATER ELEVATION
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL

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SCALE: 1" = 20'

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DESIGNED BY:	DE	DATE:	6/22/09
DRAWN BY:	LLG	SCALE:	AS SHOWN

SHEET TITLE

GROUNDWATER CONTOUR MAP

FORMER BELLPORT GAS STATION SITE
1401 MONTAUK HWY
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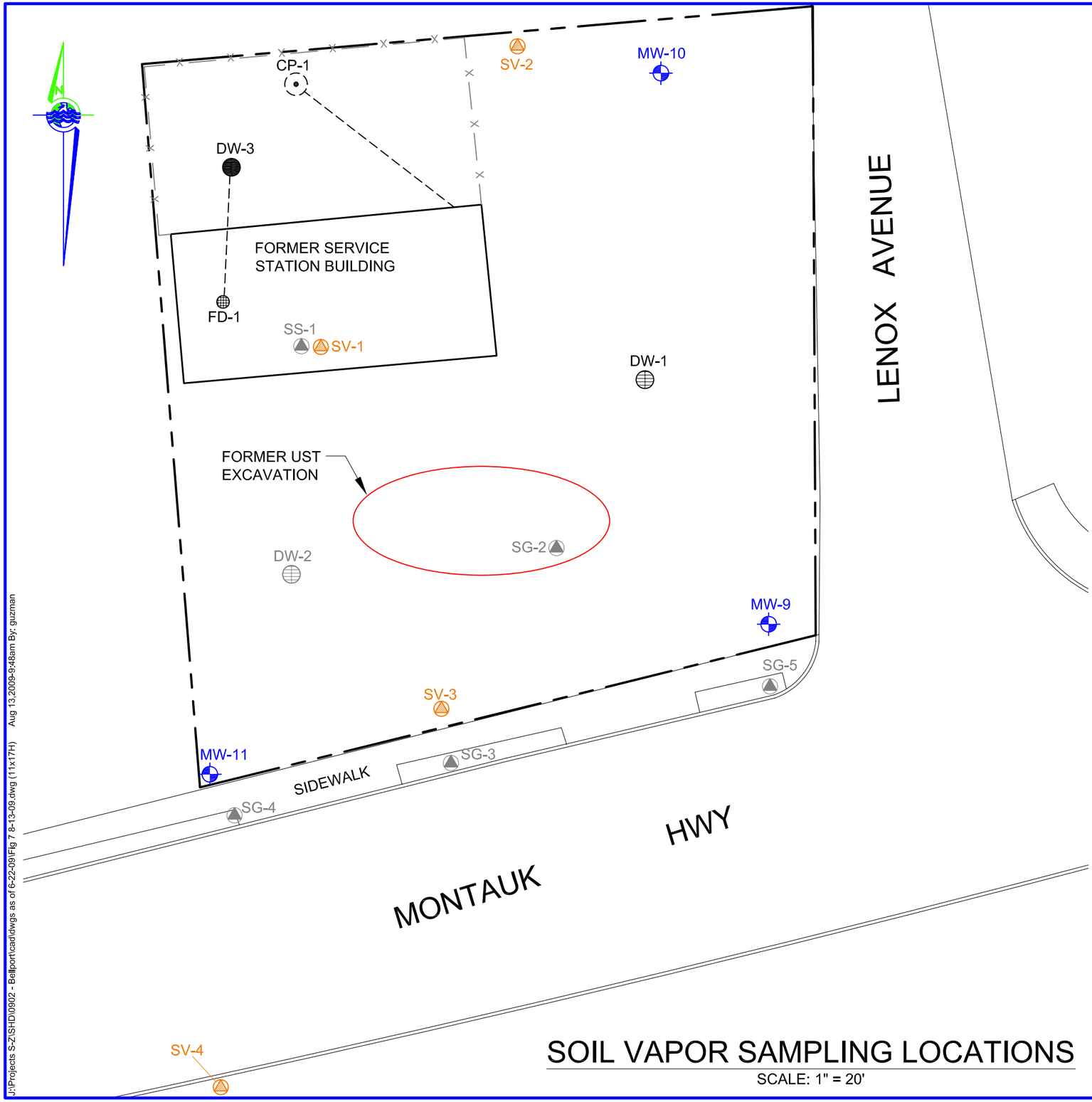
FIGURE NO 6

SHEET - OF -

J:\Projects S-Z\SHD\0902 - Bellport\cad\dwgs as of 6-22-09\Fig 6 8-13-09.dwg (11x17H) Aug 13,2009-9:50am By: guzman



SOIL VAPOR SAMPLING LOCATIONS

SCALE: 1" = 20'

LEGEND

MW-10	GROUNDWATER MONITORING WELL
	EXISTING PIPE
CP-1	EXISTING CESSPOOL
SV-1	SOIL VAPOR SAMPLING LOCATIONS
SG-5	SOIL GAS SAMPLE PERFORMED BY: O'BRIEN & GERE
DW-1	EXISTING DRYWELL
FD-1	EXISTING FLOOR DRAIN
DW-2	ABANDONED DRYWELL

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SCALE: 1" = 20'

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DESIGNED BY:	DE	DATE:	6/22/09
DRAWN BY:	LLG	SCALE:	AS SHOWN

SHEET TITLE

SOIL VAPOR SAMPLING LOCATIONS

FORMER BELLPORT GAS STATION SITE
1401 MONTAUK HWY
E. PATCHOGUE, NY

FIGURE NO 7

SHEET - OF -

J:\Projects S-Z\SHD\0902 - Bellport\cad\dwgs as of 6-22-09\Fig 7 8-13-09.dwg (11x17H) Aug 13,2009-9:48am By: guzman

APPENDIX A

SCDHS EMERGENCY IRM INFORMATION

DW-2 SOIL REMEDIATION

The Former Bellport Gas Station
1401 Montauk Highway, East Patchogue
DEC Site Number E152194

Emergency Intermediate Remedial Action (IRM) DW-2 Soil Remediation

On October 7, 2008 between 8:30 AM and 1:30 PM, SCDPW performed an emergency IRM remedial action of DW-2. SCDHS provided oversight and obtained endpoint samples.

A supersucker was used to skim off the storm water from the recent storms. There was about 3.5 feet of storm water. The hose was measured and marked off so that sludge and soil was not yet removed (Photo #1 attached). The clean storm water (verified by past sampling) was discharged to another storm drain DW-1 on the site. This storm drain will be sampled under the workplan being prepared by the county's consultant PW Grosser. After the removal of the water, the supersucker was used to remove the solids from the bottom of the drain. Solids were removed from a depth of about 7' bgs to a depth of about 12' bgs. The approved IRM workplan called for a removal to a depth of 10'. An extra 2' of solids was removed. Endpoints samples for VOCs, SVOCs and metals were obtained by Ed Geoghegan of the SCDHS Office of Pollution Control. The endpoint sample was a clean stain free sandy material with no noticeable odors (Photo #2 attached). Samples will be analyzed for VOCs and heavy metals by the SCDHS laboratory. SVOCs will be analyzed by Long Island Analytical in Holtsville. All samples placed in cooler with ice and delivered to the labs the same day.

A double 5 mil plastic sheeting (Photo #3 attached) was spread out behind the eastern most bay door, which was removed. The solid material was dumped out the back of the supersucker onto the tarp, which is over a concrete floor. There was approx. 5 yards of solids removed from the storm drain (Photo #4 attached). The bay drain was reframed and boarded up with plywood (picture attached). The solids will be properly disposed at a later date along with other materials as per the workplan, which is being prepared by the PW Grosser.

The DW-2 storm drain was backfilled with 12 yards of "certified clean fill". The area was brought to grade and marked off with SCDPW road marker drums (Photo #5 attached)

The Former Bellport Gas Station
1401 Montauk Highway, East Patchogue
DEC Site Number E152194

Photo#1

Photo #2

Photo#3

The Former Bellport Gas Station
1401 Montauk Highway, East Patchogue
DEC Site Number E152194

Photo#4

Photo #5

Field#: 001720081007

Date Collected: 10/07/08

Time Collected: 11:00 AM
(00:00 – 24:00)

Collected By: Geoghegan
(Last Name)

Suffolk County Department of Health Services
Division of Environmental Quality
Public & Environmental Health Labor
ELAP#10528

Industrial Sample
Analysis Request Fo

10-08-00143
Labworks ID: PJ00143
Field#: 001-720-081007
Date Collected: 10/7/2008
Location Code: INDSOIL

Source of Sample (to appear on reports): Former Bellport 945
1401 Montauk Hwy. East Patchogue, N.Y. 11772

Comments: PW # 2 Endpoint

Collection Point: ☐ Sanitary Pool ☐ Septic Tank ☒ ~~Storm~~ Drain ☐ SPDES Outfall
☐ Tank ☐ Kitchen ☐ Bathroom ☐ Outside Tap ☐ Well ☐ Other

☐ Samples Thermally Preserved

☒ **Volatile Organics**	☐ Semi-Volatile Organics	☐ Colilert / E. Coli	☐ Metals (Filtered / Soluble)
☐ Chlorinated Pesticides	☐ Herbicide Metabolites	☐ MPN	☐ **pH**, Sp. Conductance
☐ Microextractibles	☐ Aldicarb Pesticides	☐ SPC	☐ Inorganics (NO_3,Cl, etc.)
☐ Chlorinated Acids	☐ Dacthal	☐ Enterococci	☐ Perchlorate
☐ Total Hardness	☐ PCB ☐ PAH	☐ Vitek	☐ MBAS ☐ **Mercury**
☐ Calcium Hardness	☐ **TPH** ☐ **TCLP**	☐ BT	☐ Total Alkalinity
☐ **Total Solids**	☐ **Cyanide**	☐ CPA-T ☐ CPA-F	☐ **TKN** ☐ DKN
☐ **Suspended Solids**	☐ **Phenols**	☐ **Radiology** (Tritium, Gross Alpha, Gross Beta)	☐ TP ☐ DP
☐ **Dissolved Solids**	☐ **Oil & Grease**		☐ TN ☐ DN
☐ TOC ☐ DOC	☐ **Fluoride**	☐ Asbestos	☐ Total Fe ☐ Total Mn
☐ Histamine ☐ EP Tox	☐ **Hexavalent Chromium**	☐ **Flash Point**	☒ ~~**Total Metals (raw)**~~

* Test Well is for wells used for testing only, not for drinking water wells. Development wells are Private.

Additional Field Data:

Sample Matrix: SOIL

Chain of Custody Requested [ ]

Custody Section

Relinquished By:

Name _____ Date _____ Name _____ Date _____

Signature _____ Time _____ Signature _____ Time _____

Received By:

Name _____ Date _____ Name _____ Date _____

Signature _____ Time _____ Signature _____ Time _____

Received By:

Name _____ Date _____ Name _____ Date _____

Signature _____ Time _____ Signature _____ Time _____

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF ENVIRONMENTAL QUALITY
PUBLIC AND ENVIRONMENTAL HEALTH LABORATORY - ELAP #10528

Field Number: 001-720-081007
Collection Date: 10/7/2008
Collection Time: 11:00:00 AM
Collected By: GEOGHEGAN

Lab Number: **10-08-00143**
Submission Date: 10/7/2008
Sample ID: PJ00143
Sample Type: Solid

Source: Former Bellport Gas, 1401 Montauk Hwy, East Patchogue/DW#2 Endpoint

VOLATILE ORGANIC ANALYSIS - EPA Method 8260B

* Indicates compound is on 597 Hazardous Substance List

DB#	Analyte	Conc.(ppb)
436	*Dichlorodifluoromethane	< 40
610	*Chloromethane	< 40
306	*Vinyl chloride	< 40
611	Bromomethane	< 40
612	Chloroethane	< 40
439	*Trichlorofluoromethane	< 40
453	*Diethyl ether	< 40
320	*Freon 113	< 40
307	*1,1-Dichloroethene	< 40
618	*Acetone	< 200
455	*Carbon Disulfide	< 40
466	*Allyl chloride	< 40
305	*Methylene chloride	< 40
309	*trans-1,2-Dichloroethene	< 40
614	tert-Butyl methyl ether	< 40
456	*Acrylonitrile	< 40
323	*1,1-Dichloroethane	< 40
457	*Vinyl acetate	< 200
650	tert-Butyl ethyl ether	< 40
450	2,2-Dichloropropane	< 40
308	*cis-1,2-Dichloroethene	< 40
619	*Methyl ethyl ketone	< 200
621	*Tetrahydrofuran	< 40
290	*Bromochloromethane	< 40
300	*Chloroform	< 40
321	*1,1,1-Trichloroethane	< 40
304	*Carbon tetrachloride	< 40
613	1,1-Dichloropropene	< 40
250	*Benzene	< 40
651	tert-Amyl methyl ether	< 40
324	*1,2-Dichloroethane	< 40
310	*Trichloroethene	< 40

DB#	Analyte	Conc.(ppb)
405	*1,2-Dichloropropane	< 40
458	*Methyl methacrylate	< 40
292	*Dibromomethane	< 40
302	*Bromodichloromethane	< 40
468	*2-Nitropropane	< 200
452	*2-Chloroethyl vinyl ether	< 200
407	cis-1,3-Dichloropropene	< 40
459	*Methyl isobutyl ketone	< 200
251	*Toluene	< 40
465	*Methyl isothiocyanate	< 40
408	*trans-1,3-Dichloropropene	< 40
469	Ethyl methacrylate	< 40
322	*1,1,2-Trichloroethane	< 40
311	*Tetrachloroethene	< 40
451	*1,3-Dichloropropane	< 40
474	2-Hexanone	< 200
475	*n-Butyl acetate	< 40
303	*Chlorodibromomethane	< 40
293	*1,2-Dibromoethane	< 40
258	*Chlorobenzene	< 40
259	*Ethylbenzene	< 40
409	*1,1,1,2-Tetrachloroethane	< 40
255	*Total Xylene	< 40
600	*Ethenylbenzene (Styrene)	< 40
301	*Bromoform	< 40
601	*Isopropylbenzene	< 40
257	Bromobenzene	< 40
295	*1,1,2,2-Tetrachloroethane	< 40
602	n-Propylbenzene	< 40
433	1,2,3-Trichloropropane	< 40
434	p-Ethyltoluene	< 40
419	1,3,5-Trimethylbenzene	< 40

DB#	Analyte	Conc.(ppb)
418	1,2,4-Trimethylbenzene	< 40
265	Total Chlorotoluene	< 40
603	tert-Butylbenzene	< 40
604	sec-Butylbenzene	< 40
460	d-Limonene	< 40
605	p-Isopropyltoluene	< 40
462	*1,3-Dichlorobenzene	< 40
463	*1,4-Dichlorobenzene	< 40
432	p-Diethylbenzene	< 40
652	trans-decahydronaphthalene	< 40
606	n-Butylbenzene	< 40
412	*1,2-Dichlorobenzene	< 40
653	cis-decahydronaphthalene	< 40
435	1,2,4,5-Tetramethylbenzene	< 40
437	*1,2,4-Trichlorobenzene	< 40
607	*Hexachlorobutadiene	< 40
701	*Naphthalene	< 40
438	1,2,3-Trichlorobenzene	< 40
654	*Hexane	< 100
655	Octane	< 100
656	Nonane	< 100
657	Decane	< 100
658	Undecane	< 100

87 Components

Note: Results based on wet weight (as received).

☐ GC/MS Analysis indicates presence of Hydrocarbons similar to those found in a petroleum distillate.

☐ Some surrogate standard values are not within the acceptable limits.

Comments:

Analyst(s): JC

Report Date: 10/10/2008

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
DIVISION OF ENVIRONMENTAL QUALITY
PUBLIC AND ENVIRONMENTAL HEALTH LABORATORY - ELAP #10528

SOLID and HAZARDOUS WASTE ANALYSIS

Field#: 001-720-081007

Collector: GEOGHEGAN
Collection Date: 10/7/2008
Collection Time: 11:00:00 AM

Lab#: 10-08-00143

Submission Date 10/7/2008
Submission Time 2:30:00 PM
Labworks ID: PJ00143

Source Former Bellport Gas, 1401 Montauk Hwy, East Patchogue/DW#2 Endpoint

Type: IND

Metal Analyses on Soil - Method SW846 6010B

DB#	Analyte	Result	Units
C0132	Aluminum	221.	ug/g
C0427	Antimony	< 10	ug/g
C0120	Arsenic	< 10	ug/g
C0121	Barium	< 10	ug/g
C0426	Beryllium	< 1	ug/g
C0122	Cadmium	< 2	ug/g
C0000	Calcium	< 100	ug/g
C0104	Chromium	< 10	ug/g
C0128	Cobalt	< 10	ug/g
C0102	Copper	< 10	ug/g
C0100	Iron	< 500	ug/g
C0123	Lead	< 10	ug/g
C0000	Magnesium	< 100	ug/g
C0101	Manganese	< 10	ug/g
C0129	Molybdenum	< 10	ug/g
C0131	Nickel	< 10	ug/g
C0000	Potassium	< 100	ug/g
C0125	Selenium	< 10	ug/g
C0126	Silver	< 2	ug/g
C0106	Sodium	< 500	ug/g
C0000	Strontium	< 10	ug/g
C0425	Thallium	< 10	ug/g
C0116	Tin	< 10	ug/g
C0115	Vanadium	< 10	ug/g
C0103	Zinc	< 10	ug/g

25 Components Note: Results based on wet weight (as received).

	% Moisture	14.4	%

Analyst(s): MAE

Remarks:

Report Date: 10/23/2008

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
110 Colin Drive • Holbrook, New York 11741 • Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialine.com

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

(10)

0041060

CLIENT NAME/ADDRESS: SCDH DPW

CONTACT:

PHONE:

FAX:

SAMPLER (SIGNATURE) Edward Geoghegan DATE 10-7-08 TIME 11:00AM SAMPLE(S) SEALED (YES) NO

SAMPLER NAME (PRINT) EDWARD Geoghegan DATE 10-7-08 TIME 11:00AM CORRECT CONTAINER(S) YES / NO

PROJECT LOCATION: former Bellport GAS 401 Montauk Hwy Bellp

SAMPLES RECEIVED AT 3 °C

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

LABORITORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: SVOC's	# OF CONTAINERS
1. 1165803	SoL	G						DW #2	X	1
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										

RECEIVED
OCT 10 2008
DEPT. OF PUBLIC WORKS
INDUSTRIAL WASTE UNIT

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_3O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: X ☑ NORMAL ☐ STAT BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
Edward Geoghegan	10-7-08 11:35				
Edward Geoghegan	10-7-08 1135				
			RECEIVED BY SAMPLE CUSTODIAN	10-7-08 1130AM	

Client: ~~SCDPW~~ SEDITS	Client ID: Former Bellport Gas, Bellport (DW #2)
Date received: 10/7/08	Laboratory ID: 1165803
Date extracted: 10/7/08	Matrix: Soil
Date analyzed: 10/7/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
N-NITROSODIMETHYLAMINE	62-75-9	43 ug/kg	<43	
PHENOL	108-95-2	43 ug/kg	<43	
ANILINE	62-53-3	43 ug/kg	<43	
2-CHLOROPHENOL	95-57-8	43 ug/kg	<43	
Bis(2-CHLOROETHYL)ETHER	111-44-4	43 ug/kg	<43	
1,3-DICHLOROBENZENE	541-73-1	43 ug/kg	<43	
1,4-DICHLOROBENZENE	106-46-7	43 ug/kg	<43	
BENZYL ALCOHOL	100-51-6	43 ug/kg	<43	
1,2-DICHLOROBENZENE	95-50-1	43 ug/kg	<43	
2-METHYLPHENOL	95-48-7	43 ug/kg	<43	
Bis(2-CHLOROISOPROPYL)ETHER	108-60-1	43 ug/kg	<43	
HEXACHLOROETHANE	67-72-1	43 ug/kg	<43	
3+4-METHYLPHENOL	15831-10-4	43 ug/kg	<43	
N-NITROSODI-n-PROPYL AMINE	621-64-7	43 ug/kg	<43	
NITROBENZENE	98-95-3	43 ug/kg	<43	
ISOPHORONE	78-59-1	43 ug/kg	<43	
2-NITROPHENOL	88-75-5	43 ug/kg	<43	
2,4-DIMETHYLPHENOL	105-67-9	43 ug/kg	<43	
BENZOIC ACID	65-80-8	43 ug/kg	<43	
Bis(2-CHLOROETHOXY)METHANE	111-91-1	43 ug/kg	<43	
2,4-DICHLOROPHENOL	102-83-2	43 ug/kg	<43	
1,2,4-TRICHLOROBENZENE	120-82-1	43 ug/kg	<43	
NAPHTHALENE	91-20-3	43 ug/kg	<43	
4-CHLOROANILINE	106-47-8	43 ug/kg	<43	
HEXACHLOROBUTADIENE	87-68-3	43 ug/kg	<43	
4-CHLORO-3-METHYLPHENOL	59-50-7	43 ug/kg	<43	
2-METHYLNAPHTHALENE	91-57-6	43 ug/kg	<43	
HEXACHLOROCYCLOPENTADIENE	77-47-4	43 ug/kg	<43	
2,4,6-TRICHLOROPHENOL	88-06-2	43 ug/kg	<43	
2,4,5-TRICHLOROPHENOL	95-95-4	43 ug/kg	<43	
2-CHLORONAPHTHALENE	91-58-7	43 ug/kg	<43	
2-NITROANILINE	88-74-4	43 ug/kg	<43	
DIMETHYLPHTHALATE	131-11-3	43 ug/kg	<43	
ACENAPHTHYLENE	208-96-8	43 ug/kg	<43	
2,6-DINITROTOLUENE	606-20-2	43 ug/kg	<43	
3-NITROANILINE	99-09-2	43 ug/kg	<43	

MDL = Minimum Detection Limit. Calculated on a dry weight basis

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
110 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: SCDPW SCDHS	Client ID: Former Bellport Gas, Bellport (DW #2)
Date received: 10/7/08	Laboratory ID: 1165803
Date extracted: 10/7/08	Matrix: Soil
Date analyzed: 10/7/08	ELAP #: 11693

EPA METHOD 8270

Parameter	CAS No.	MDL	Results ug/kg	Flag
ACENAPHTHENE	83-32-9	43 ug/kg	<43	
2,4-DINITROPHENOL	51-28-5	43 ug/kg	<43	
DIBENZOFURAN	132-64-9	43 ug/kg	<43	
4-NITROPHENOL	100-02-7	43 ug/kg	<43	
2,4-DINTROTOLUENE	121-14-2	43 ug/kg	<43	
FLUORENE	86-73-7	43 ug/kg	<43	
DIETHYLPHTHALATE	84-66-2	43 ug/kg	<43	
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	43 ug/kg	<43	
4-NITROANILINE	100-01-6	43 ug/kg	<43	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	43 ug/kg	<43	
N-NITROSODIPHENYLAMINE	86-30-6	43 ug/kg	<43	
AZOBENZENE	103-33-3	43 ug/kg	<43	
4-BROMOPHENYL-PHENYL ETHER	101-55-3	43 ug/kg	<43	
HEXACHLOROBENZENE	118-74-1	43 ug/kg	<43	
PENTACHLORPHENOL	87-86-5	43 ug/kg	<43	
PHENANTHRENE	85-01-8	43 ug/kg	<43	
ANTHRACENE	120-12-7	43 ug/kg	<43	
CARBAZOLE	86-74-8	43 ug/kg	<43	
Di-n-BUTYLPHTHALATE	84-74-2	533 ug/kg	<533	
FLUORANTHENE	206-44-0	43 ug/kg	<43	
PYRENE	129-00-0	43 ug/kg	<43	
BUTYLBENZYLPHTHALATE	85-68-7	43 ug/kg	<43	
BENZO-a-ANTHRACENE	56-55-3	43 ug/kg	<43	
CHRYSENE	218-01-9	43 ug/kg	<43	
3,3-DICHLOROBENZIDINE	91-94-1	43 ug/kg	<43	
Bis(2-ETHYLEXYL)PHTALATE	117-81-7	533 ug/kg	<533	
DI-n-OCTYLPHTHALATE	117-84-0	43 ug/kg	<43	
BENZO-b-FLUOROANTHENE	205-99-2	43 ug/kg	<43	
BENZO-k-FLUOROANTHENE	207-08-9	43 ug/kg	<43	
BENZO-a-PYRENE	50-32-8	43 ug/kg	<43	
INDENO(1,2,3-c,d)PYRENE	193-39-5	43 ug/kg	<43	
DIBENZO-a,h-ANTHRACENE	53-70-3	43 ug/kg	<43	
BENZO-g,h,i-PERYLENE	191-24-2	43 ug/kg	<43	

MDL = Minimum Detection Limit.

Calculated on a dry weight basis

Michael Veraldi

Michael Veraldi-Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

110 Colin Drive • Holbrook, New York 11741

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Roanoke
Sand & Gravel Corp
104 Rocky Point Road • Middle Island, N.Y. 11953 • (631) 924-4100 • FAX (631) 924-4705

AGGREGATE CERTIFICATION

October 3, 2008

Bove Industries
16 Hulse Road
East Setauket, New York 11733

Dear Valued Customer,

Roanoke Sand & Gravel certifies that the natural sand and gravel products mined and processed at our Middle Island, NY plant conform to the standard specification for Concrete Aggregates - Designation C-33 -03 as published in the annual book of ASTM Standards, and NYSDOT Materials Item 703-07 Concrete Sand. To the best of our knowledge, our sand products are free of any hazardous materials or contamination and are clean virgin materials.

Our sand and gravel products are also currently approved by the NEW YORK STATE DEPARTMENT OF TRANSPORTATION and appear on their approved list of fine and coarse aggregates. Our current Source Number is 10-16F,G, G1: our current Sand Test Number is 06AF169; our current Screened Gravel Test Number is 06AG41, and our current Crushed Gravel Test Number is 07AG38C.

Our mining site operates under the Environmental Conservation Law with a permit authorized by the New York State Department Of Environmental Conservation.

You may also visit us at our website : Roanokesand.com

If you require any additional technical information or assistance, please contact Tom O'Connor @ 631 924-4100 ext. 110.

We appreciate your business and look forward to continue supplying you with quality aggregates.

Sincerely,

Daniel Barker
Roanoke Sand & Gravel Corp.

ATTN: Eric Young & Blood
Here is the Certificate for the clean Fill. Let me know if this is OK. I'm holding delivery.

Thank you
Shaun Fitzpatrick
852-4261

cliffmitchell

FAXED 10/3/08

Forward to Kathy Laguardia

DIV. # : HWY08-04 7

(P.O. #) P.D.Q :

SHOP # :

SUFFOLK COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF

DPW REQUISITION

DATE : 10/2/2008

FUND/ORG/OBJ. 105-5110-3230

DELIVERY DATE :

SHIP TO CODE : 147

SUGGESTED VENDOR : BOVE INDUSTRIES

LOCATION : Yaphank DPW HWY Maint. - BLDG. 342

16 HULSE RD.

Yaphank Ave. Yaphank NY 11980

EAST SETAUKET, NY 11733

CONTRACT NO. : NO

VENDOR ID # 112733094

CONTRACT EXPIRES :

CONTACT PERSON : (631)331-8500 Fax : 331-8523

BSR NO. :

JUSTIFICATION : BACKFILL STORM DRAIN AT 1401 MONTAUK HWY, NORTH BELLPORT EMERGENCY

COMM CODE	ITEM NO.	QTY.	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
75077	1	12	YDS	CLEANFILL	$58.34	$700.08
				CERTIFICATION LETTER NEED Fax to 631-852-4146 ~~4261~~		
				DELIVER TO 1401 MONTAUK HWY, NORTH BELLPORT		
					Total :	$700.08

Deliver Monday 10/6/08

Attention Eric

Vendors, in order to expedite payment please have the following statement on each invoice and have an officer of the company sign: I hereby certify that this invoice is just and true and has not been paid.

C. Mitchell — 852-4261

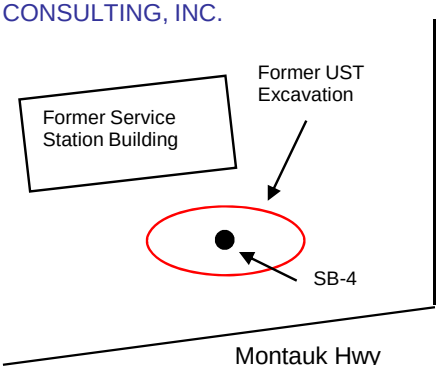
RESPONSIBLE PERSON — PHONE # — DPW BUDGET APPROVAL — DATE

DIV. HEAD APPROVAL — DATE — DPW PURCHASING APPROVAL — DATE

APPENDIX B

SOIL BORING LOGS

P.W. GROSSER
CONSULTING, INC.

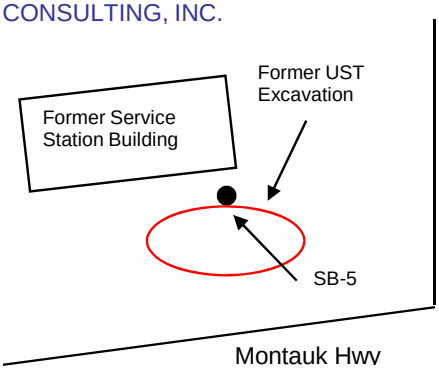


Approximate borehole locations at site

Boring # **SB-4**	MW#	Page 1	of 5
PROJECT: Former Bellport Gas Station - East Patchogue			
JOB # SHD0902			
LOGGED BY:	DE	PRJ. MNGR.:	ZY
DRILLING CONTRACTOR: Land Air Water			
DRILL METHOD: Geoprobe			
DRILLER: Ernesto & Anthony			
Borehole diameter/drill bit type: **Macrocore (2" diameter)**		total depth	**25'**
		elevation	**NA**
HAMMER WT: NA		DROP: NA	
START TIME: 9:45		DATE: 5/19/2009	
COMPLETION TIME: 10:23		DATE: 5/19/2009	
BACKFILL TIME: 10:25		DATE: 5/19/2009	

Sample Depth	Advance (ft)	Recovered (ft)	Soil Description Unified Soil Classification System	Notes
				Casing depth: NA
				Screen depth: NA
0-4'	4	2.5	0-2': 0.25' Asphalt. 1' Dry, well graded dark brown sand. (SW)	PID = 0.3 ppm
			2-4': 1.25' Dry, well graded brown sand with gravel. (SW)	PID = 0.8 ppm
4-8'	4	2	4-6': 1' Dry, well graded brown sand with gravel. (SW)	PID = 2.8 ppm
			6-8': 0.5' Dry, well graded brown sand with gravel. (SW) 0.5' Moist, clayey gray sand.	PID = 1.7 ppm
8-12'	4	2.5	8-10': 1.25' Dry, well graded light brown sand with gravel. (SW)	PID = 2.0 ppm
			10-12': 1.25' Dry, well graded light brown sand with gravel. (SW)	PID = 1.4 ppm
12-16'	4	2.5	12-14': 1.25' Dry, well graded light brown sand with gravel. (SW)	PID = 0.8 ppm
			14-16': 1.25' Dry, well graded light brown sand with gravel. (SW)	PID = 1.5 ppm
16-20'	4	3	16-18': 1.5' Moist, well graded light brown sand with gravel. (SW)	PID = 0.9 ppm
			18-20': 0.75' Moist, well graded light brown sand with gravel. (SW) 0.75' Wet, well graded light brown sand with gravel. (SW)	PID = 1.0 ppm
20-24'	4	3	20-22': 1.5' Wet, well graded light brown sand with gravel. (SW)	PID = 1.5 ppm
			22-24': 0.75' Wet, well graded light brown sand with gravel. (SW) 0.75' Wet, well graded gray sand with gravel. (SW)	PID = 265 ppm
24-25'	1	1	24-25': 1' Wet, well graded light brown sand with gravel. (SW)	PID = 5.3 ppm
				Soil samples collected from 16-18' @ 10:22 & from 22-24' @ 10:23.

P.W. GROSSER
CONSULTING, INC.

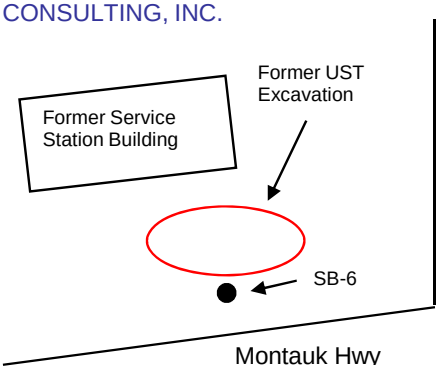


Approximate borehole locations at site

Boring # **SB-5**	MW#	Page 2	of 5
PROJECT: Former Bellport Gas Station - East Patchogue			
JOB # SHD0902			
LOGGED BY:	DE	PRJ. MNGR.:	ZY
DRILLING CONTRACTOR: Land Air Water			
DRILL METHOD: Geoprobe			
DRILLER: Ernesto & Anthony			
Borehole diameter/drill bit type: **Macrocore (2" diameter)**		total depth	**25'**
		elevation	**NA**
HAMMER WT: NA		DROP: NA	
START TIME: 10:48		DATE: 5/19/2009	
COMPLETION TIME: 11:12		DATE: 5/19/2009	
BACKFILL TIME: 11:13		DATE: 5/19/2009	

Sample Depth	Advance (ft)	Recovered (ft)	Soil Description Unified Soil Classification System	Notes
				Casing depth: NA Screen depth: NA
0-4'	4	3.5	0-2': 0.5' Asphalt. 1.25' Dry, poorly graded brown sand. (SP)	PID = 0.6 ppm
			2-4': 1.75' Dry, well graded brown sand with gravel. (SW)	PID = 0.1 ppm.
4-8'	4	3.5	4-6': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
			6-8': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
8-12'	4	3.5	8-10': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
			10-12': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
12-16'	4	3.5	10-12': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
			12-14': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
16-20'	4	3.5	16-18': 1.75' Moist, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
			12-14': 1' Moist, well graded light brown sand with gravel. (SW) 1' Wet, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
20-24'	4	3.5	20-22': 1.75' Wet, well graded light brown sand with gravel. (SW)	PID = 0.2 ppm.
			22-24': 1.75' Wet, well graded light brown sand with gravel. (SW)	PID = 610 ppm.
24-25'	1	0.5	24-25': 0.5' Wet, well graded light brown sand with gravel. (SW)	PID = 3.8 ppm.
				Soil samples collected from 16-18' @ 11:11 & from 22-24' @ 11:12.

P.W. GROSSER
CONSULTING, INC.



Approximate borehole locations at site

Boring # **SB-6**	MW#	Page 3	of 5
PROJECT: Former Bellport Gas Station - East Patchogue			
JOB # SHD0902			
LOGGED BY:	DE	PRJ. MNGR.:	ZY
DRILLING CONTRACTOR: Land Air Water			
DRILL METHOD: Geoprobe			
DRILLER: Ernesto & Anthony			
Borehole diameter/drill bit type: **Macrocore (2" diameter)**		total depth	**25'**
		elevation	**NA**
HAMMER WT: NA		DROP: NA	
START TIME: 11:21		DATE: 5/19/2009	
COMPLETION TIME: 11:51		DATE: 5/19/2009	
BACKFILL TIME: 11:54		DATE: 5/19/2009	

Sample Depth	Advance (ft)	Recovered (ft)	Soil Description Unified Soil Classification System	Notes / Casing depth: NA / Screen depth: NA
0-4'	4	3	0-2': 1.5' Dry, poorly graded dark brown sand. (SP)	PID = 0.0 ppm.
			2-4': 1.5' Dry, well graded reddish-brown sand with gravel. (SW)	PID = 1.3 ppm.
4-8'	4	3.5	4-6': 1.75' Dry, well graded brown sand with gravel. (SW)	PID = 0.8 ppm.
			6-8': 1.75' Dry, well graded brown sand with gravel. (SW)	PID = 0.6 ppm.
8-12'	4	3.5	8-10': 0.5' Dry, well graded brown sand with gravel. (SW) 1.25' Dry, well graded light brown sand with gravel. (SW)	PID = 1.0 ppm.
			10-12': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.0 ppm.
12-16'	4	3	12-14': 1.5' Dry, well graded light brown sand with gravel. (SW)	PID = 0.4 ppm.
			14-16': 1.5' Moist, well graded light brown sand with gravel. (SW)	PID = 1.3 ppm.
16-20'	4	3	16-18': 1.5' Moist, well graded brown sand with gravel. (SW)	PID = 0.6 ppm.
			18-20': 1.5' Wet, well graded brown sand with gravel. (SW)	PID = 1.6 ppm.
20-24'	4	3.5	20-22.5': 1.75' Wet, well graded gray sand. (SW)	PID = 42.6 ppm.
			22.5-25': 1.75' Wet, well graded gray sand. (SW)	PID = 78 ppm.
24-25'	1	0.5	24-25': 0.5' Wet, well graded light brown sand with gravel. (SW)	PID = 15.1 ppm.
				Soil samples collected from 16-18' @ 11:50 & from 22-24' @ 11:51.

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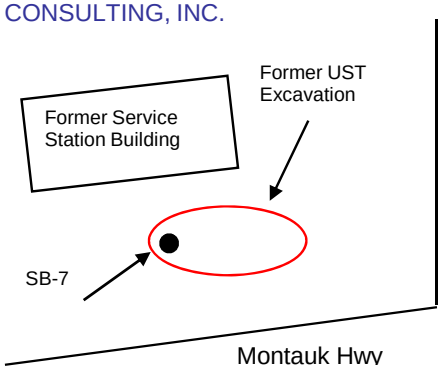

Approximate borehole locations at site

Boring # **SB-7**	MW#	Page 4	of 5
PROJECT: Former Bellport Gas Station - East Patchogue			
JOB # SHD0902			
LOGGED BY:	DE	PRJ. MNGR.:	ZY
DRILLING CONTRACTOR: Land Air Water			
DRILL METHOD: Geoprobe			
DRILLER: Ernesto & Anthony			
Borehole diameter/drill bit type: **Macrocore (2" diameter)**		total depth	**25'**
		elevation	**NA**
HAMMER WT: NA		DROP: NA	
START TIME: 12:50		DATE: 5/19/2009	
COMPLETION TIME: 13:15		DATE: 5/19/2009	
BACKFILL TIME: 13:16		DATE: 5/19/2009	

Sample Depth	Advance (ft)	Recovered (ft)	Soil Description Unified Soil Classification System	Notes / Casing depth: NA / Screen depth: NA
0-4'	4	2.5	0-2': 0.25' Asphalt. 1' Dry, poorly graded dark brown sand. (SP)	PID = 0.6 ppm.
			2-4': 1.25' Dry, well graded dark brown sand. (SW)	PID = 2.4 ppm.
4-8'	4	3	4-6': 1.5' Dry, well graded reddish-brown sand. (SW)	PID = 1.0 ppm.
			6-8': 1.5' Dry, well graded reddish-brown sand. (SW)	PID = 1.2 ppm.
8-12'	4	3.5	8-10': 1' Moist, clayey gray sand. (SC) 0.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.4 ppm.
			10-12': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.8 ppm.
12-16'	4	3.5	12-14': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 1.0 ppm.
			14-16': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.4 ppm.
16-20'	4	3.5	16-18': 1.75' Moist, well graded light brown sand with gravel. (SW)	PID = 0.8 ppm.
			18-20': 1.75' Wet, well graded light brown sand with gravel. (SW)	PID = 0.9 ppm.
20-24'	4	3.5	20-22': 1.75' Wet, well graded light brown sand with gravel. (SW)	PID = 0.6 ppm.
			22-24': 1' Wet, well graded light brown sand with gravel. (SW) 0.75' Wet, well graded gray sand with gravel. (SW)	PID = 99.4 ppm.
24-25'	1	0.5'	24-25': 0.5' Wet, well graded light brown sand with gravel. (SW)	PID = 4.8 ppm.
				Soil samples collected from 16-18' @ 13:15 & from 22-24' @ 13:15.

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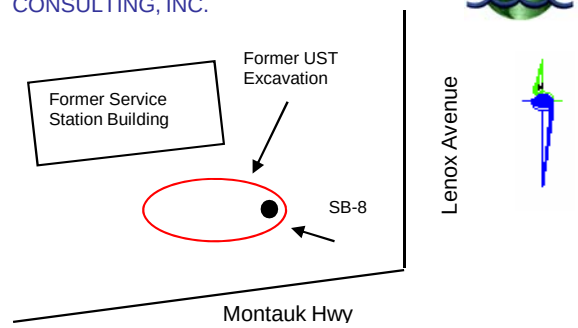


Approximate borehole locations at site

Boring # **SB-8**	MW#	Page 5	of 5
PROJECT: Former Bellport Gas Station - East Patchogue			
JOB # SHD0902			
LOGGED BY:	DE	PRJ. MNGR.:	ZY
DRILLING CONTRACTOR: Land Air Water			
DRILL METHOD: Geoprobe			
DRILLER: Ernesto & Anthony			
Borehole diameter/drill bit type: **Macrocore (2" diameter)**		total depth	**30'**
		elevation	**NA**
HAMMER WT: NA		DROP: NA	
START TIME: 08:50		DATE: 5/19/2009	
COMPLETION TIME: 10:45		DATE: 5/19/2009	
BACKFILL TIME: 10:50		DATE: 5/19/2009	

Casing depth: NA
Screen depth: NA

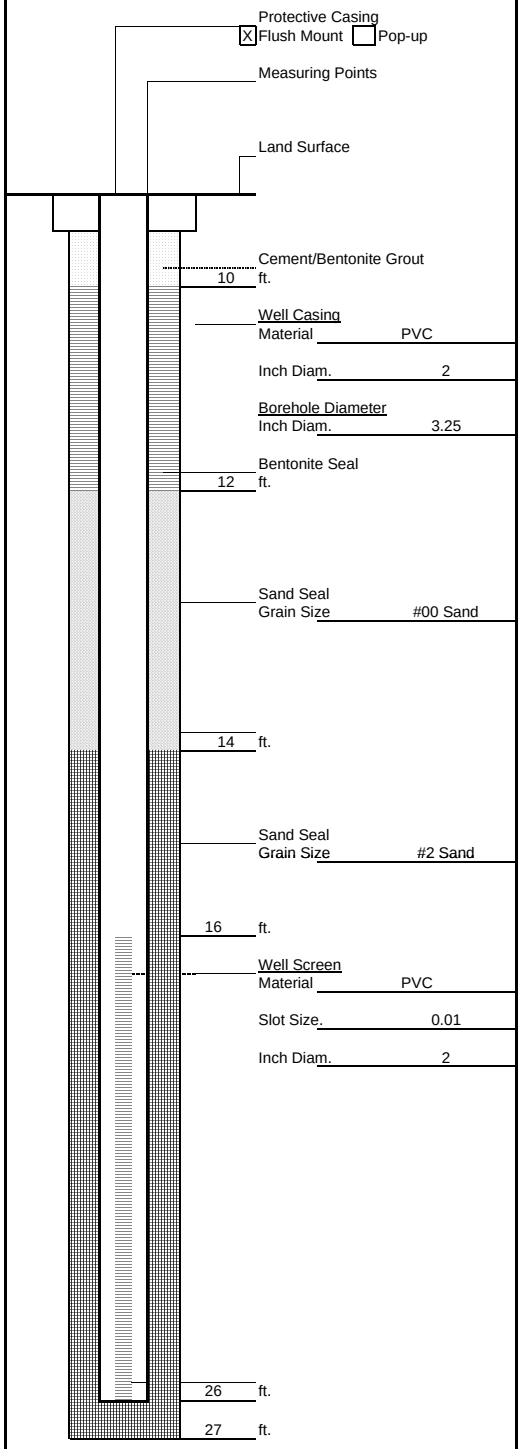
Sample Depth	Advance (ft)	Recovered (ft)	Soil Description Unified Soil Classification System	Notes
0-4'	4	2.5	0-2': 0.25' Asphalt. 0.75' Moist, well graded dark brown sand. (SW)	PID = 0.0 ppm
			2-4': 1.5' Dry, well graded brown sand with gravel. (SW)	PID = 0.0 ppm
4-8'	4	3.5	4-6': 1.5' Dry, well graded brown sand with gravel. (SW)	PID = 0.1 ppm
			6-8': 2' Dry, well graded light brown sand with gravel. (SW)	PID = 0.3 ppm
8-12'	4	3	8-10': 1.5' Dry, well graded light brown sand with gravel. (SW)	PID = 0.6 ppm
			10-12': 1.5' Dry, well graded light brown sand with gravel. (SW)	PID = 0.9 ppm
12-16'	4	3.5	12-14': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 1.0 ppm
			14-16': 1.75' Dry, well graded light brown sand with gravel. (SW)	PID = 0.6 ppm
16-20'	4	3	16-18': 1.5' Moist, well graded light brown sand with gravel. (SW)	PID = 1.6 ppm
			18-20': 0.75' Moist, well graded light brown sand with gravel. (SW) 0.75' Wet, well graded light brown sand with gravel. (SW)	PID = 1.6 ppm
20-24'	4	3.5	20-22': 1.75' Wet, well graded light brown sand with gravel. (SW)	PID = 10.7 ppm
			22-24': 1.75' Wet, well graded gray sand with gravel. (SW)	PID = 1,294 ppm
24-28'	4	4	24-26': 1' Wet, well graded gray sand with gravel. (SW) 1' Wet, well graded brown sand with gravel. (SW)	PID = 2.1 ppm
			26-28': 2' Wet, well graded light brown sand with gravel. (SW)	PID = 1.2 ppm
28-30'	2	2	28-30': 2' Wet, well graded light brown sand with gravel. (SW)	PID = 0.4 ppm
				Soil samples collected from 16-18' @ 9:27 & from 22-24' @ 9:28.

APPENDIX C

MONITORING WELL CONSTRUCTION LOGS

Monitoring Well

Construction Log

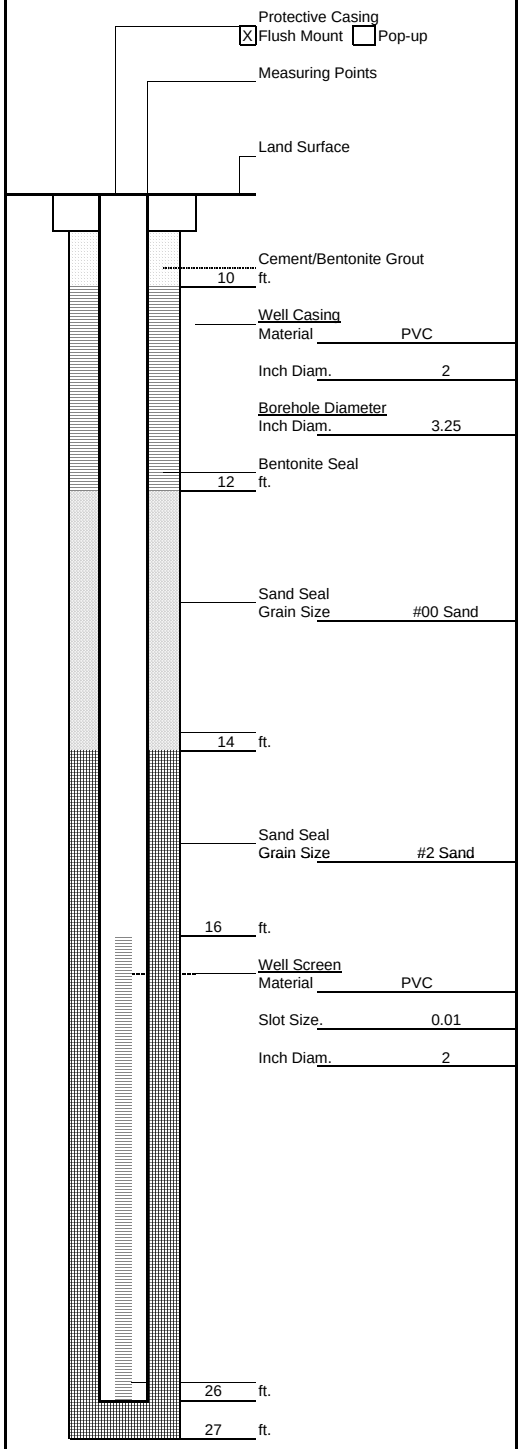


Note: Drawing is not to scale.
Depths are given in feet below land surface.

Well No.	MW-9
Project	SHP-0902
Surveyor	P.W. Grosser Consulting
Measuring Point Elevation	25.22
Installation Date	5/18/2009
Drilling Contractor	Land Air Water Environmental Services
Drilling Method	Hollow Stem Auger
Drilling Fluid	None
Development Technique (s) and Date (s)	Over-Pumping / 5/20/2009
Fluid Loss During Drilling	0 Gallons
Water Removed During Development	30 Gallons
Static Depth to Water/Product	19.54 / NA
Pumping Depth to Water	NA
Pumping Duration	28 minutes
Well Purpose	Monitoring
Hydrogeologist	DNE
Company Name	P.W. Grosser Consulting Inc.
Notes	

Monitoring Well

Construction Log

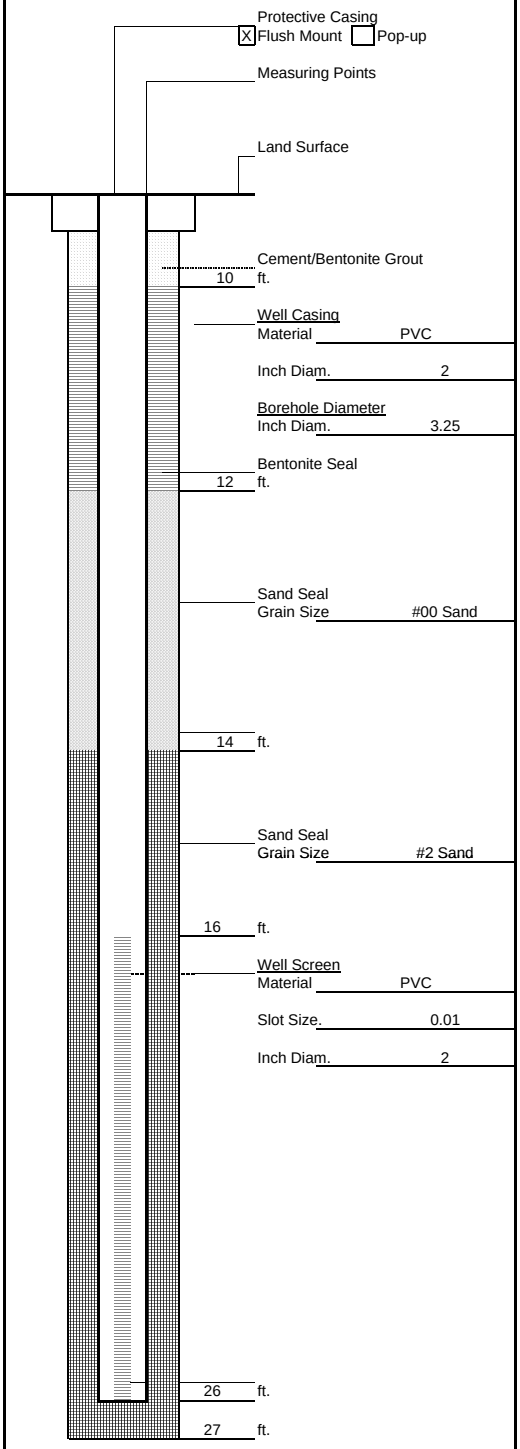


Note: Drawing is not to scale.
Depths are given in feet below land surface.

Well No.	MW-10
Project	SHP-0902
Surveyor	P.W. Grosser Consulting
Measuring Point Elevation	25.31
Installation Date	5/18/2009
Drilling Contractor	Land Air Water Environmental Services
Drilling Method	Hollow Stem Auger
Drilling Fluid	None
Development Technique (s) and Date (s)	Over-Pumping / 5/20/2009
Fluid Loss During Drilling	0 Gallons
Water Removed During Development	28 Gallons
Static Depth to Water/Product	19.45 / NA
Pumping Depth to Water	NA
Pumping Duration	28 minutes
Well Purpose	Monitoring
Hydrogeologist	DNE
Company Name	P.W. Grosser Consulting Inc.
Notes	

Monitoring Well

Construction Log



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Well No.	MW-11
Project	SHP-0902
Surveyor	P.W. Grosser Consulting
Measuring Point Elevation	24.51
Installation Date	5/18/2009
Drilling Contractor	Land Air Water Environmental Services
Drilling Method	Hollow Stem Auger
Drilling Fluid	None
Development Technique (s) and Date (s)	Over-Pumping / 5/20/2009
Fluid Loss During Drilling	0 Gallons
Water Removed During Development	24 Gallons
Static Depth to Water/Product	18.90 / NA
Pumping Depth to Water	NA
Pumping Duration	24 minutes
Well Purpose	Monitoring
Hydrogeologist	DNE
Company Name	P.W. Grosser Consulting Inc.
Notes	

APPENDIX D

MONITORING WELL DEVELOPMENT LOGS

P.W. GROSSER CONSULTING, INC.

Monitoring Well Development Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Highway, East Patchogue (SHD0902)		
DEVELOPMENT POINT	MW-9	DEVELOPED BY	KER
DATE DEVELOPED	5/20/2009	WELL DIAMETER (inches)	2
STATIC WATER ELEVATION (feet)	19.54	TOTAL WELL DEPTH (feet)	26.3

DEVELOPMENT INFORMATION

PURGE METHOD	Submersible Pump	PURGE TIME (Min)	28
PURGE RATE (GPM)	see below	GALLONS	30

DEVELOPMENT PARAMETERS

Time	Flow Rate (mL/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
10:37	3520	6.82	415	-	12.9
10:41	3520	6.82	415	-	12.5
10:45	3520	6.82	412	-	12.4
10:49	3520	6.82	399	-	12.2
10:53	3520	6.82	398	-	12.3
10:57	3520	6.82	396	-	12.3
11:01	3520	6.82	396	-	12.3
11:05	3520	6.82	396	-	12.4

P.W. GROSSER CONSULTING, INC.

Monitoring Well Development Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Highway, East Patchogue (SHD0902)		
DEVELOPMENT POINT	MW-10	DEVELOPED BY	KER
DATE DEVELOPED	5/20/2009	WELL DIAMETER (inches)	2
STATIC WATER ELEVATION (feet)	19.45	TOTAL WELL DEPTH (feet)	26.15

DEVELOPMENT INFORMATION

PURGE METHOD	Submersible Pump	PURGE TIME (Min)	28
PURGE RATE (GPM)	see below	GALLONS	28

DEVELOPMENT PARAMETERS

Time	Flow Rate (mL/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
9:43	3785	6.82	148.5	-	13.6
9:47	3785	6.82	135.1	-	13.1
9:51	3785	6.82	117.8	-	12.8
9:55	3785	6.82	117.9	-	12.8
9:59	3785	6.82	120.2	-	12.9
10:03	3785	6.82	120.0	-	12.8
10:07	3785	6.82	120.9	-	12.9
10:11	3785	6.8	120.8	-	12.8

P.W. GROSSER CONSULTING, INC.

Monitoring Well Development Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Highway, East Patchogue (SHD0902)		
DEVELOPMENT POINT	MW-11	DEVELOPED BY	KER
DATE DEVELOPED	5/20/2009	WELL DIAMETER (inches)	2
STATIC WATER ELEVATION (feet)	18.9	TOTAL WELL DEPTH (feet)	26.83

DEVELOPMENT INFORMATION

PURGE METHOD	Submersible Pump	PURGE TIME (Min)	24
PURGE RATE (GPM)	see below	GALLONS	24

DEVELOPMENT PARAMETERS

Time	Flow Rate (mL/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
11:21	3785	6.82	240	496	13.0
11:25	3785	6.82	253	216	12.0
11:29	3785	6.82	253	72	12.0
11:33	3785	6.82	246	21	12.0
11:37	3785	6.82	246	4	11.9
11:41	3785	6.82	249	2	11.8
11:45	3785	6.82	249	2	11.9

APPENDIX E

GROUNDWATER SAMPLING LOGS

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	MW-9	SAMPLED BY	KER
DATE SAMPLED	6/4/2009	TIME SAMPLED	1245
STATIC WATER ELEVATION (feet)	19.46	TOTAL WELL DEPTH (feet)	26.3
WELL DIAMETER (inches)	2		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
PURGE RATE (GPM)	see below	PURGE TIME (Min)	see below
CASING VOLUMES REMOVED	3	GALLONS	3.4
SAMPLE APPEARANCE	Lt Brown (sheen)	ODORS OBSERVED	Petrol
ANALYSIS	VOCs. SVOCs, TAL Metals	LABORATORY	Chemtech
DATE SHIPPED	6/4/2009	SHIPPING METHOD	Hand delivered

SAMPLING PARAMETERS

Time	Flow Rate (Gal/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	ORP (mV)	Temp. (ºC)
1220	0.75	6.35	144.9	523	-102	13.3
1224	0.75	6.36	141.1	353	-132	13.1
1228	0.75	6.41	137.3	17	-144	12.9
1232	0.75	6.44	132.7	5	-142	12.9

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	MW-10	SAMPLED BY	KER
DATE SAMPLED	6/4/2009	TIME SAMPLED	1125
STATIC WATER ELEVATION (feet)	19.34	TOTAL WELL DEPTH (feet)	26.2
WELL DIAMETER (inches)	2		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
PURGE RATE (GPM)	see below	PURGE TIME (Min)	see below
CASING VOLUMES REMOVED	3	GALLONS	3.4
SAMPLE APPEARANCE	Brown/Orange, Turbid	ODORS OBSERVED	None
ANALYSIS	VOCs, SVOCs, TAL Metals	LABORATORY	Chemtech
DATE SHIPPED	6/4/2009	SHIPPING METHOD	Hand delivered

SAMPLING PARAMETERS

Time	Flow Rate (Gal/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	ORP (mV)	Temp. (ºC)
1101	0.75	7.80	47.6	1000	-192	13.4
1106	0.75	6.40	52.9	86	-211	13.1
1111	0.75	6.13	56.3	17	-199	13.1
1114	0.75	6.00	59.1	3	-199	13.1

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	MW-11	SAMPLED BY	KER
DATE SAMPLED	6/4/2009	TIME SAMPLED	1350
STATIC WATER ELEVATION (feet)	18.84	TOTAL WELL DEPTH (feet)	26.45
WELL DIAMETER (inches)	2		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
PURGE RATE (GPM)	see below	PURGE TIME (Min)	see below
CASING VOLUMES REMOVED	3	GALLONS	3.7
SAMPLE APPEARANCE	Lt Brown/Yellow	ODORS OBSERVED	Petrol
ANALYSIS	VOCs, SVOCs, TAL Metals	LABORATORY	Chemtech
DATE SHIPPED	6/4/2009	SHIPPING METHOD	Hand delivered

SAMPLING PARAMETERS

Time	Flow Rate (Gal/min)	pH	Cond. (µS/cm)	Turbidity (NTU)	ORP (mV)	Temp. (ºC)
1327	0.75	6.48	94.4	175	-122	12.9
1331	0.75	6.46	94.6	64	-75	12.8
1335	0.75	6.43	94.8	10	-84	12.6
1339	0.75	6.39	95.1	3	-84	12.6

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	GW-1	SAMPLED BY	DNE
DATE SAMPLED	5/19/2009	TIME SAMPLED	14:57
STATIC WATER ELEVATION (feet)	NA	TOTAL WELL DEPTH (feet)	18-22'
WELL DIAMETER (inches)	0.65		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
CASING VOLUMES REMOVED	4	GALLONS	1
ANALYSIS	VOCS / SVOCs/Metals	LABORATORY	Chemtech
DATE SHIPPED	5/19/2009	SHIPPING METHOD	UPS

SAMPLING PARAMETERS

Casing Volumes	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
1	7.64	252	827	18.3
2	7.38	148.4	56	16.8
3	7.27	126.1	26	16.4
4	7.13	110.1	13	16.2

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	GW-2	SAMPLED BY	DNE
DATE SAMPLED	5/19/2009	TIME SAMPLED	15:35
STATIC WATER ELEVATION (feet)	NA	TOTAL WELL DEPTH (feet)	18-22'
WELL DIAMETER (inches)	0.65		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
CASING VOLUMES REMOVED	4	GALLONS	1
ANALYSIS	VOCS / SVOCs/Metals	LABORATORY	Chemtech
DATE SHIPPED	5/19/2009	SHIPPING METHOD	UPS

SAMPLING PARAMETERS

Casing Volumes	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
1	6.88	72.1	945	16.5
2	6.82	68.6	182	15.5
3	6.77	65.3	53	14.8
4	6.73	60.1	36	14.5

P.W. GROSSER CONSULTING, INC.

Monitoring Well Sampling Log

SITE INFORMATION

SITE ID/PROJECT NUMBER:	Former Bellport Gas Station, 1401 Montauk Hwy, East Patchogue (SHD0902)		
SAMPLING POINT	GW-3	SAMPLED BY	DNE
DATE SAMPLED	5/19/2009	TIME SAMPLED	16:05
STATIC WATER ELEVATION (feet)	NA	TOTAL WELL DEPTH (feet)	18-22'
WELL DIAMETER (inches)	0.65		

SAMPLING INFORMATION

PURGE METHOD	Peristaltic Pump	SAMPLE METHOD	Peristaltic Pump
CASING VOLUMES REMOVED	4	GALLONS	1
ANALYSIS	VOCS / SVOCs/Metals	LABORATORY	Chemtech
DATE SHIPPED	5/19/2009	SHIPPING METHOD	UPS

SAMPLING PARAMETERS

Casing Volumes	pH	Cond. (µS/cm)	Turbidity (NTU)	Temp. (ºC)
1	6.81	101.7	217	14.6
2	6.8	90.9	23	13.8
3	6.79	90.7	12	13.7
4	6.79	90.3	15	13.6

APPENDIX F

DATA VALIDATION REPORT (On CD)

APPENDIX G

LABORATORY ANALYTICAL REPORTS (On CD)

APPENDIX H

INVESTIGATION DERIVED WASTE MANIFESTS

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A	1	(631) 586-2000	501066

GENERATOR

5. Generator's Name and Mailing Address
FARMICOS BELLPORT SERVICE STATION c/o SCDOH
1401 MONTAUK HWY, BELLPORT NY 13363
Generator's Phone: 631-567-6353

Generator's Site Address (if different than mailing address)
630 JOHNSON AVE, SUITE 7
BOHEMIA NY 11716
c/o ZOE YOUNGMAN

6. Transporter 1 Company Name
AMERICAN ENVIRONMENTAL ASSESSMENT CORP.
U.S. EPA ID Number
NYR000044412

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
PSC - CHEMICAL POLLUTION CONTROL
120 S. FOURTH ST. BAYSHORE NY 11706
Facility's Phone: 631-586-0333
U.S. EPA ID Number
NYD082-785-429

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON RCRA, NON DOT REGULATED SOLID (DRILL CUTTINGS)	XX4	DM	XX1500	P	414236-00
2.	NON RCRA, NON DOT REGULATED LIQUID (PURGE + G.W.)	XX3	DM	XX165	G	419245-00
3.						
4.						

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: D. RUCKS ON THE BEHALF
Signature:
Month: 6 Day: 23 Year: 09

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bobby Peasley
Signature:
Month: 06 Day: 23 Year: 09

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: 06 Day: 24 Year: 09

APPENDIX I

TABLES - COMPARATIVE ANALYSIS OF ALTERNATIVES

APPENDIX I

TABLES - COMPARATIVE ANALYSIS OF ALTERNATIVES

Comparative Analysis of Alternatives

Former Bellport Service Station

Impacts to UIC Structures

	EFFECTIVENESS						RELIABILITY/IMPLEMENTABILITY					COST
ALTERNATIVE	**Overall Protection of Public Health and the Environment**	**Compliance with Standards, Criteria & Guidance (SCG)**	**Compliance with Remedial Objectives**	**Long Term Effectiveness and Permanence**	**Reduction of Toxicity, Mobility, or Volume Through Treatment**	**Short Term Effectiveness**	**Technical Feasibility and Reliability**	**Administrative Feasibility**	**Availability of Services and Materials**	**Regulatory Acceptance**	**Community Acceptance**	**Present Worth**
Alternative 1: No Action	Provides limited protection since the impact is below grade and not easily leached	Does not comply with SCDHS Action Levels or RRSCOs	Does not meets remedial objectives	Ineffective due to contaminant stability and persistence in the environment	Does not actively reduce toxicity, mobility or volume.	No short term effectiveness	No Feasibity or Reliability issues	No Feasibity issues	Not Applicable	Unlikely	Unlikely	$0.00
Alternative 2: Removal & Off-site Disposal	Provides protection	Complies with SCGs	Meets remedial objectives	Effective due to elimination of site contaminants	Significantly reduces or eliminates toxicity, mobility and volume	Eliminates human and environmental exposure risk	No significant Feasibity or Reliability issues	No significant Feasibility issues	Readily Available	Likely	Likely	$20,000-$30,000*

* - These costs assume the removal and proper disposal of impacted sediments using a vacuum truck. Costs include endpoint sample collection, analysis and remediation report preparation.

Comparative Analysis of Alternatives

Former Bellport Service Station

Residual Soil and Groundwater Impacts

ALTERNATIVE	EFFECTIVENESS						RELIABILITY/IMPLEMENTABILITY					COST
	Overall Protection of Public Health and the Environment	**Compliance with Standards, Criteria & Guidance (SCG)**	**Compliance with Remedial Objectives**	**Long Term Effectiveness and Permanence**	**Reduction of Toxicity, Mobility, or Volume Through Treatment**	**Short Term Effectiveness**	**Technical Feasibility and Reliability**	**Administrative Feasibility**	**Availability of Services and Materials**	**Regulatory Acceptance**	**Community Acceptance**	**Present Worth**
Alternative 1: No Action	Does not provide protection	Does not comply with NYSDEC Groundwater Standards	Does not meets remedial objectives	Effective due to attenuation processes, however impacted soil remains	Does not actively reduce toxicity, mobility or volume.	Minimal human exposure risk identified	No Feasibity or Reliability issues	No Feasibity issues	Not Applicable	Likely	To be determined through public participation	$0.00
Alternative 2: Institutional Engineering Controls (asphalt capping)	Provides protection	Does not comply with NYSDEC Groundwater Standards	Does not meets remedial objectives	Effective due to attenuation processes, however impacted soil remains	Reduces mobility but does not actively reduce toxicity or volume.	Reduces human exposure risk	No significant Feasibity or Reliability issues	Requires Institutional Controls, Environmental Easement	Readily Available	Likely	To be determined through public participation	$10,000-$20,000*
Alternative 3: Air Sparge/SVE System Construction	Provides protection	Complies with SCGs	Meets remedial objectives	Effective due to elimination of site contaminants	Significantly reduces or eliminates toxicity, mobility and volume	Eliminates human and environmental exposure risk	No significant Feasibity or Reliability issues	No significant Feasibility issues	Readily Available	Likely	Likely	$300,000-$500,000**
Alternative 4: In-situ Chemical Oxidation	Provides protection	Complies with SCGs	Meets remedial objectives	Effective due to destruction of contaminants via oxidation	Will reduce toxicity, mobility and volume.	Eliminates human and environmental exposure risk	No significant Feasibity or Reliability issues	Remedial action requires permits	Readily Available	Likely	Likely	$150,000 - 200,000***

* - Includes material and maintenance costs.
** - Includes costs associated with remediation system design and construciton. Also inlcudes costs associated with 7 years of mainenance, monitoirng and reporting.
*** - Includes costs associated with design and implementation of the injection program. Also includes costs associated with 5 years of monitoring and reporting.