

1 SHORE ROAD GLENWOOD LANDING, NEW YORK FORMER PENETREX PROCESSING SITE # 1-30-034

PERIODIC REVIEW REPORT

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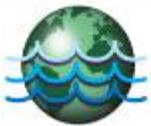


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LIST OF ACRONYMS

ACRONYM	DEFINITION
DO	Dissolved Oxygen
EC/ICs	Engineering and institutional controls
EE	Environmental Easement
GQS	Groundwater Quality Standards
IRM	Interim Remedial Measure
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
ORP	Oxygen-reduction potential
PE	Professional Engineer
PRAP	Proposed Remedial Action Plan
PWGC	P.W. Grosser Consulting, Inc.
QA/QC	Quality Assurance / Quality Control
ROD	Record of Decision
SMP	Site Management Plan
SSDS	Sub-Slab Depressurization System
SVOC	Semi-Volatile Organic Compound
UIC	Underground Injection Control
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

This *Periodic Review Report* (PRR) has been prepared by P.W. Grosser Consulting Inc. (PWGC) on behalf of Glenwood Realty of Roslyn Heights, New York, to document the groundwater and indoor air sampling events which occurred at the property located at 1 Shore Road, Glenwood Landing, New York (a Site Location Map is included as **Figure 1**), and to document the compliance with the requirements specified in the NYSDEC-approved *Site Management Plan* (SMP). The site is currently listed as a New York State Department of Environmental Conservation (NYSDEC) Class IV inactive hazardous waste disposal site identified as I.D. No. 130034.

A former dry cleaning business, known as Penetrex Processing, Inc. (Penetrex), is reported to have operated at the site for several years prior to abandoning the facility in 1984. During its operation at the site, Penetrex is reported to have discharged dry cleaning chemicals to an on-site sanitary system and a storm water leaching pool at the property.

PWGC began a Remedial Investigation (RI) in November 2001 at the site to obtain information necessary to determine the need for a remediation. The RI concluded that residual levels of volatile organic compounds (VOCs) in groundwater remained in the area of the eastern portion of the parking lot. The VOCs were likely due to former discharges of PCE to sanitary leaching pool DW-5 and to storm water leaching pool DW-1. An Interim Remedial Measure (IRM) included the injection of a chemical oxidant solution (potassium permanganate) to oxidize VOCs in groundwater. Post-IRM groundwater sampling at the subject site indicated that VOCs in groundwater were substantially reduced as a result of the IRM.

In order to mitigate sub-slab VOC vapors detected beneath the two site buildings, sub-slab depressurization systems (SSDS) were installed. Indoor air sampling results indicate that VOC vapors are not intruding to the interior spaces of these buildings and, therefore, the SSDS are functioning as intended.

Activities performed at the site during this Review Period included monitoring well groundwater sampling in April and October 2015, and indoor air sampling in April 2015. The analytical results of the groundwater sampling indicate residual concentrations of VOCs which are lower than detected in previous sampling rounds. The analytical results of the indoor air sampling indicate that sub-slab VOC vapors, if present, are not intruding into the interior spaces of the subject buildings. These results confirm that the SSDS are functioning as intended.

Based on the results obtained during this Review Period, residual chlorinated VOC concentrations in groundwater have not met requirements for the discontinuation of site management. At this time, PWGC does not recommend changes to the SMP and does not recommend changing the frequency of PRR submittal.

The Institutional and Engineering Controls Certification forms for the site are attached as **Appendix A**.

1.0 SITE OVERVIEW

The subject site consists of an approximately one-acre parcel located on the east side of Shore Road in the Hamlet of Glenwood Landing, Town of North Hempstead, Nassau County, New York. A site vicinity map is included as **Figure 1**. The property is improved with a two-story steel and masonry industrial building with no basement, a three-story wood-frame house with a basement, asphalt parking, communications tower and other ancillary improvements. A site plan is included as **Figure 2**.

The property is bounded to the west by Shore Road and to the east by West Street. The area to the east of West Street is developed with residential houses. The site is generally located north of Scudders Lane and is situated near and adjoining several major oil storage facilities, coastal terminals, and a municipal power station near Hempstead Harbor. Glenwood Oil Terminal Corp. is located northwest, diagonally across the property. The RI determined that concentrations of several VOCs, including PCE and TCE, exceeded NYSDEC Ambient Water Quality Standards in the Site's groundwater which is apparently the result of the improper discharge of dry cleaning chemicals to sanitary leaching pool DW-5 and/or storm water drywell DW-1 located in the eastern portion of the Site, and that these VOCs had created a potential soil vapor intrusion condition in the Site's buildings.

Soil vapor intrusion sampling was conducted to evaluate the potential for soil vapor intrusion into on-Site structures and to determine if there was substantial soil vapor contamination from the disposal of hazardous wastes. Sub-slab vapor samples were collected from beneath the on-site structures, which revealed soil vapor contamination.

Indoor air samples were collected from the on-site structures. Detected concentrations of VOCs were within the Air Guideline Values specified in the Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

The Interim Remedial Measure (IRM) to address subsurface groundwater contamination consisted of the installation of five (5) permanent monitoring wells (A total of 11 permanent monitoring wells are present at the site) and the injection of a chemical oxidant solution, potassium permanganate, in the delineated area of contamination in the eastern portion of the site's parking area. The intent of the chemical oxidant injection, which occurred in December 2008 and January 2009, was to significantly reduce the mass of contamination in the subsurface through the oxidation of VOCs in the high concentration area. Details of the IRM are included in the revised *IRM Report*, submitted by PWGC in August 2009 under separate cover.

Three (3) of the five (5) new wells (MW-8, MW-9, and MW-10) are screened at the water table to monitor the most impacted groundwater. Two (2) of the five (5) new monitoring wells (MW-8D and MW-9D) are screened at a 10-foot interval between 40 and 50 feet bgs to monitor IRM effectiveness at a greater depth. The previously-existing monitoring wells (MW-1 through MW-5 and MW-7) are screened at the water table. Monitoring well MW-6 could not be located during the April 2015 sampling and has apparently been destroyed. Monitoring well MW-6 was located off-property across Shore Road to the west of the subject property.

A baseline round of groundwater sampling was performed on September 18, 2008 to determine VOC concentrations prior to the injection of the chemical oxidant, and the initial post-injection round of sampling was performed on April 6, 2009. The analytical results were compared to NYSDEC Groundwater Standards and to each other, to determine the effectiveness of the chemical injection. The results indicated a substantial reduction in the mass of contamination at the subject site. This was best illustrated in the results from monitoring well MW-8, where the concentration of total VOCs decreased from 7,758 µg/L to 1,462 µg/L in the initial post-injection sampling, an 81% reduction in the concentration of total VOCs. VOC concentrations in samples collected from the other monitoring wells in the impacted area were significantly lower than in MW-8.

A site-specific SMP was prepared by PWGC and approved by the NYSDEC in March 2015. The SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the Site. The requirements include operation of two SSDS, maintenance of a ground cover system, semi-annual groundwater sampling, indoor air sampling, and an annual site-wide inspection to confirm that ICs and ECs are properly implemented and functioning as intended.

The SMP specifies that on a semi-annual basis the groundwater data will be evaluated relative to the need for additional ISCO injections. Specifically, the data will be reviewed and inspected for evidence that VOC levels have stabilized, or nearly stabilized (i.e., reached asymptotic levels). If stabilized levels are greater than five times the respective standard (e.g., >25 µg/L for PCE, using the PCE standard of 5 µg/L), or it appears that the levels will stabilize at or above this level, then an additional round of ISCO injections will be planned. Alternatively, if stabilized PCE levels are below 25 µg/L, or it appears that the levels will stabilize below 25 µg/L, then a petition may be made to NYSDEC to forego additional ISCO injections. If individual monitoring wells exhibit contaminant concentrations below the NYSDEC groundwater standards for two consecutive rounds, a petition may be made to remove them from future sampling events. The rationale for recommending the discontinuation of monitoring will depend on whether goals are achieved at all sampling points for two consecutive monitoring rounds. Any modifications or discontinuance of these monitoring activities will only occur after approval of such changes by the NYSDEC.

Due to the presence of elevated sub-slab VOCs, two SSDS are in operation at the Site to mitigate the potential for exposure. One SSDS was installed in the residential building in April 2007 and one SSDS was installed in the commercial building in June 2007. Both SSDS are active single loop systems with perforated piping located beneath the concrete slabs of the buildings. Riser pipes connect the systems to fans which draw out sub-slab vapors through the discharge vents above the rooflines of the respective buildings, and create a negative pressure beneath the slabs. The locations of the SSDS are indicated on the as-built drawings and are included in **Appendix B**. The fans run continuously to sustain a negative pressure beneath the slabs and mitigate the potential for vapor intrusion into the buildings. Communication tests performed for each system confirmed the effectiveness of the systems, that a negative pressure was created to draw out vapors from beneath the slabs of the structures. Based on the tests, the operation of the SSDS effectively mitigates the potential for soil vapor intrusion.

The active SSDS will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS are no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and NYSDOH.

2.0 SEMI-ANNUAL GROUNDWATER SAMPLING – APRIL AND OCTOBER 2015

Semi-annual groundwater sampling was performed on April 24 and October 28, 2015 to monitor contaminant trends at the subject site in accordance with the site-specific SMP. The April 24 sampling is detailed in PWGC's Semi-Annual Groundwater Sampling Report, previously submitted under separate cover.

During the October 2015 sampling, ten (10) monitoring wells were sampled utilizing a low stress (low flow) method to collect representative samples while producing a minimal amount of purge water. Monitoring well MW-5, located in the southern portion of the property, cross-gradient of the area of residual impact, was inaccessible due to a parked vehicle. Sampling was performed with a submersible pump with an adjustable flow rate. Purging of each well continued until turbidity was substantially reduced. Portable field instruments were used to collect measurements. At locations where turbidity did not decrease to 50 NTUs, the well was considered purged upon the stabilization of other parameters such as pH, conductivity, dissolved oxygen, and oxidation-reduction potential (ORP). Samples were collected directly from the polyethylene tubing into laboratory-supplied glassware upon stabilization of field parameters. Monitoring well sampling logs are included in **Appendix C**. Purge water was containerized in 55-gallon drums and staged on-site pending off-site disposal.

Monitoring well MW-5 was blocked during the October sampling by a parked car. Throughout previous sampling events, MW-5 has remained outside the area of impact.

Depth to water measurements were collected to determine groundwater flow direction. As with previous sampling events, a steep gradient toward Hempstead Harbor was calculated. A groundwater contour map is included as **Figure 3**.

During previous sampling events, the purple color of the potassium permanganate was observed in the water collected from monitoring wells in the injection area. The purple color was last observed in the samples from monitoring wells MW-7 and MW-9 during the April 2010 sampling. A purple color was not observed since that sampling event, indicating that the potassium permanganate is no longer present at the monitoring well locations.

2.1 Groundwater Laboratory Analysis

Collected groundwater samples were placed in a cooler packed with ice for transport to Alpha Analytical Laboratories (Alpha) of Westborough, Massachusetts, a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis of VOCs by EPA Method 8260. Laboratory Data Reports are included in **Appendix D**.

2.2 Quality Assurance / Quality Control

QA/QC for the groundwater sampling events included the following of ASP-B protocols, including the analysis of a trip blank, and the collection and analysis of a blind duplicate, a field blank, a matrix spike sample, and a matrix spike duplicate. The accuracy, precision, and completeness requirements were addressed by the laboratory for the data generated. Alpha indicated in an analytical narrative report of the sampling (included in **Appendix D**) that the samples were received in accordance with the chain of custody and no significant deviations were encountered during the preparation or analysis.

The October semi-annual sampling results were submitted to Stone Environmental, Inc. (Stone) of Montpelier, Vermont for a third-party quality assurance evaluation. Two monitoring well samples (MW-4 and MW-10) were considered for full data validation. Stone concluded that the overall quality of the data was acceptable and all results as qualified are considered usable. The Data Usability Summary Report is included as **Appendix E**.

2.3 Groundwater Analytical Results

Analytical results of the October 2015 semi-annual sampling event were compared to NYSDEC Groundwater Standards, and to the results of the baseline sampling event and the previous eight post-injection sampling events in order to evaluate the effectiveness of the IRM and monitor attenuation trends. The analytical results are summarized on **Tables 1** and **2** and the laboratory data sheets are included in **Appendix D**.

Overall, the analytical results indicate that VOC concentrations are similar to the results of the April 2015 sampling event.

PCE was detected in the sample collected at MW-1 (15 µg/L), which is slightly higher than the concentration detected in the April 2015 sample (10 µg/L), and slightly lower than the April 2011 Sampling. No other VOCs were detected at MW-1. Historical results indicate that MW-1 is located at the up-gradient perimeter of the impacted area.

PCE was detected at MW-2 (6.1 µg/L). MW-2 is located down-gradient of the area of residual impact. No other VOCs were detected at MW-2. VOC concentrations at MW-2 have historically remained near Groundwater Standards.

At MW-3, located down-gradient of the impacted area, total VOCs decreased compared to April 2015 results. PCE, TCE, cis-1,2-DCE, and vinyl chloride were detected. The highest VOC concentration at MW-3 remains that of cis-1,2-DCE (67 µg/L), indicating the continued reductive dechlorination of PCE.

VOCs remained below detectable levels in MW-4. This well is located to the south of the residually-impacted area.

The PCE concentration at MW-7, located along the perimeter of the impacted area, has decreased to 110 µg/L, the lowest concentration detected at that location. TCE was detected at 1 µg/L. No other VOCs were detected at MW-7.

Total VOCs in MW-8 have increased to 73 µg/L since the April 2015 sampling, but is significantly lower than the April 2011 sampling. The result is also substantially lower than the pre-IRM concentration of 7,700 µg/L.

VOCs in MW-9, located down-gradient of the center of impact, have substantially decreased since the previous sampling. PCE (270 µg/L) is similar to previous sampling events, while the TCE concentration has decreased 1,1,1-TCA concentration has decreased from 5.2 µg/L to below the detection limit.

The PCE concentration at MW-10 (66 µg/L) has increased since the April 2015 sampling event, but is lower than the April 2011 event. No other VOCs were detected at MW-10.

PCE was detected in deep well MW-8D at 3.8 µg/L. No other VOCs were detected at MW-8D. The PCE concentration in deep well MW-9D is 1 µg/L. No other VOCs were detected in MW-9D. The deep well results indicate that groundwater beneath the historical area of concern has been remediated.

The total mass of VOC impact at the site appears to have been substantially reduced by the chemical injection as evidenced by the analytical results, and as illustrated by the change in the total VOC contours between **Figure 4** and **Figure 5**.

3.0 ANNUAL INDOOR AIR SAMPLING

A total of six (6) ambient air samples were collected by PWGC on April 24, 2015 which included 5 indoor air samples (1 sample from each of the four main ground floor spaces in the commercial building and one from the basement of the house) and 1 outdoor air sample. The sampling was performed in accordance with the site-specific SMP. Sampling locations are indicated on **Figure 6**.

Sampling was conducted in accordance with the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in New York State (NYSDOH Vapor Intrusion Guidance). Samples were collected into 6-liter Summa[®] vacuum canisters fitted with 1-hour flow controllers. The samplers were certified clean by the laboratory. Alpha Analytical Laboratories, a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis of volatile organic compounds (VOCs) by USEPA Method TO-15-SIM.

In accordance with the NYSDOH Vapor Intrusion Guidance, the 5 samples were collected concurrently. Each of the indoor samples was collected from a height representing the breathing zone (between 3 and 5 feet above the floor). Sampling personnel avoided lingering in the sampling areas.

One outdoor air sample was collected approximately 10 feet to the southwest of the commercial building to determine site background concentrations which contribute to indoor air quality. The sample was collected from a height of approximately three feet above the ground in an upwind direction from the building. Sampling personnel avoided lingering in the sampling area. The sample was collected concurrently with the indoor air samples.

3.1 Indoor Air Analytical Results

The indoor air sampling results of this round were compared to the results of two previous indoor air sampling rounds performed prior to the installation of the site's two SSDS and chemical injection remediation. The sub-slab vapor contaminants of concern at the subject site are chlorinated VOCs. The sampling results are included on the attached **Table 3**. Historical indoor air results are included on **Table 4**. PCE was detected in the fitness center, the commercial space, and the house basement. However, the detected concentrations were substantially lower than the concentrations detected prior to vapor mitigation and groundwater remediation. The detected PCE concentrations are also well below the NYSDOH Air Guidance Value of 30 µg/m³.

Carbon tetrachloride was detected in each of the samples. However, the highest concentration was detected in the outdoor air sample, indicating that the presence of carbon tetrachloride is a result of background air quality, rather than an on-site source.

Other chlorinated VOCs, including TCE, 1,1,1-Trichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, and vinyl chloride, were not detected.

Acetone was detected in all the indoor air samples and the outdoor air sample, indicating that the detection of acetone is likely the result of laboratory interference. The highest concentration of acetone was detected in the house basement sample at a concentration of 504 $\mu\text{g}/\text{m}^3$. Historical sub-slab vapor sampling did not indicate elevated acetone concentrations. Based on this, the acetone in the basement may also be attributable to a solvent stored in the basement. The laboratory analytical report is included in **Appendix D**.

4.0 SITE-WIDE INSPECTION

The SMP was developed to confirm that the site remedy continues to be effective in protecting public health and the environment. The SMP specifies a site-wide inspection on an annual basis. During these inspections, an inspection form is completed (**Appendix F**). The form is used to compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the SMP; and
- Confirm that site records are up to date.

The site-wide inspection was performed on December 12, 2015 by John Eichler, a representative of PWGC. The components of the SSDS were visually inspected for signs of damage such as cracks in piping, fans, and alarms. The SSDS were deactivated to confirm that the low-pressure alarms were active. Pressure gauge readings were recorded to confirm that the SSDS were active. The inspection indicated that the SSDS were functioning properly.

The soil cover system was observed during the site-wide inspection. There was no evidence of site development or ground-intrusive activities that would disturb the soil cover system.

The groundwater monitoring system was inspected for signs of damage. Off-site monitoring well MW-6, located across Shore Road to the west of the subject site, could not be located and is presumed to be destroyed. The remaining monitoring wells appeared to be in good condition with plugs and protective covers. Based upon the findings of the site-wide inspection, no corrective actions are recommended at this time.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Indoor Air

PWGC collected five indoor air samples and one outdoor air sample at the subject site to determine if the subject site's two SSDS are effectively mitigating potential sub-slab chlorinated VOC vapors. The indoor air results of the sampling performed after the installation of the SSDS were compared to the indoor air results of the sampling performed before the installation of the SSDS. Chlorinated VOCs have decreased substantially in the indoor air since the installation of the SSDS. The results indicate that intrusion of sub-slab VOCs into the interior spaces of the buildings is mitigated by the slab and the SSDS.

Based on the presence of residual VOCs detected in the groundwater, PWGC recommends continued operation of the SSDS to mitigate potential vapor intrusion and indoor air sampling. The next indoor air sampling event will occur in April 2016.

Groundwater

The objective of the IRM was to substantially reduce the mass of VOC impact located at the subject site. The area of impact had been delineated and monitored during the remedial investigation to facilitate a focused remedial practice to accomplish this objective. The injection of the chemical oxidant, potassium permanganate, appears to have been successful at substantially reducing VOCs, including PCE, TCE and cis-1,2-DCE, in the center of the area of impact (monitoring well MW-8).

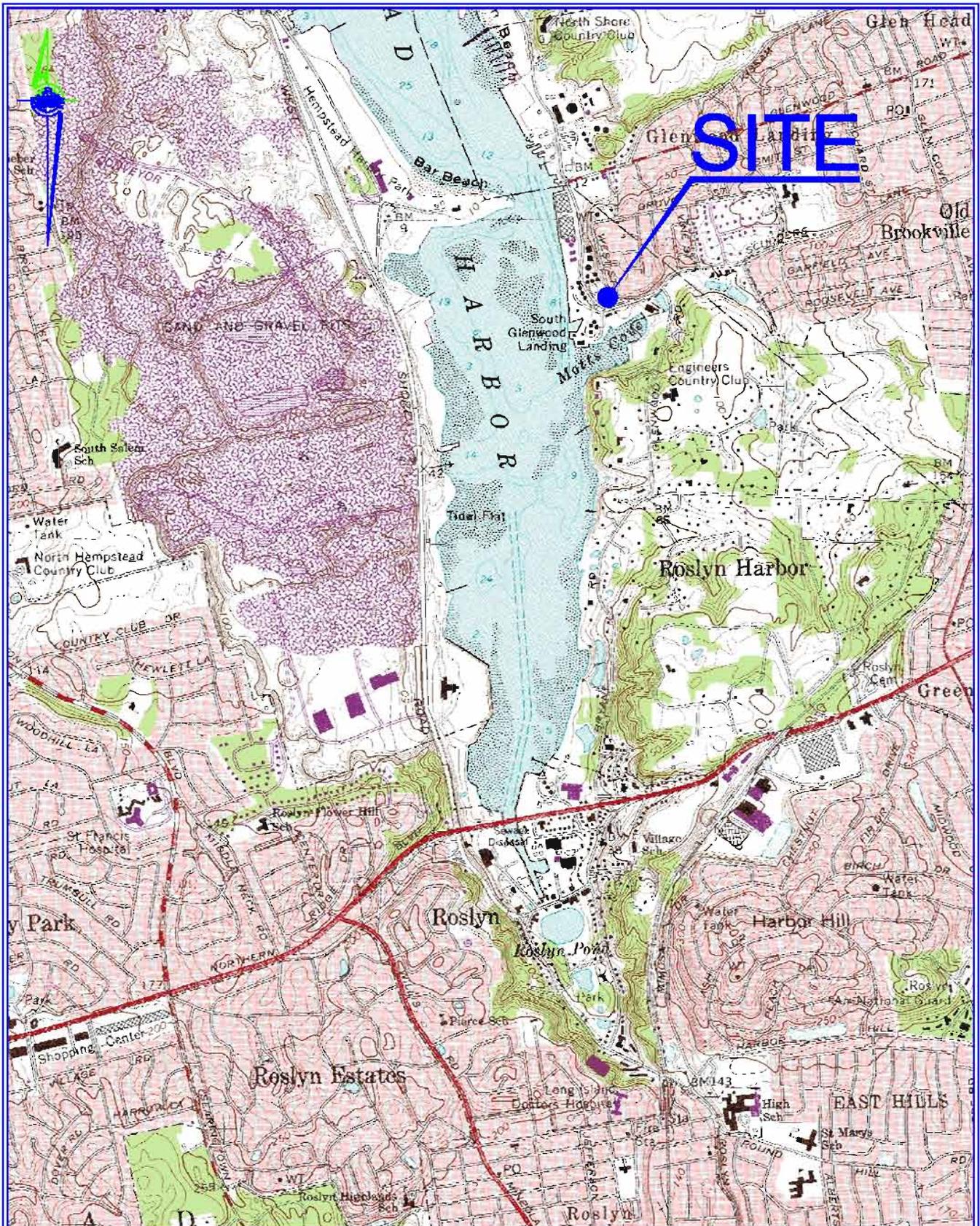
Historical analytical results indicate that down-gradient monitoring wells MW-2 through MW-6 have been outside the central area of impact, indicating that impacted groundwater has not substantially migrated toward the property boundary. The presence of TCE and 1,2-DCE in MW-3 indicate the reductive dechlorination of PCE.

Off-site monitoring well MW-6 could not be located and has apparently been destroyed since the previous sampling. MW-6 was located well outside and cross-gradient of the area of residual impact. Based on this, PWGC does not recommend the replacement of MW-6.

Based on the length of time since the last injection, it is likely that the potassium permanganate has completed its reaction with VOCs at the subject site. This is an indication that natural attenuation processes at the site are responsible for the reduction in VOCs since the previous sampling. VOCs are expected to follow this decreasing trend.

PWGC recommends continued semi-annual groundwater sampling. The next event will occur in April 2016.

FIGURES



SITE

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

VICINITY MAP
 SCALE: 1:24,000

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1 SHORE ROAD
 GLENWOOD LANDING, NY

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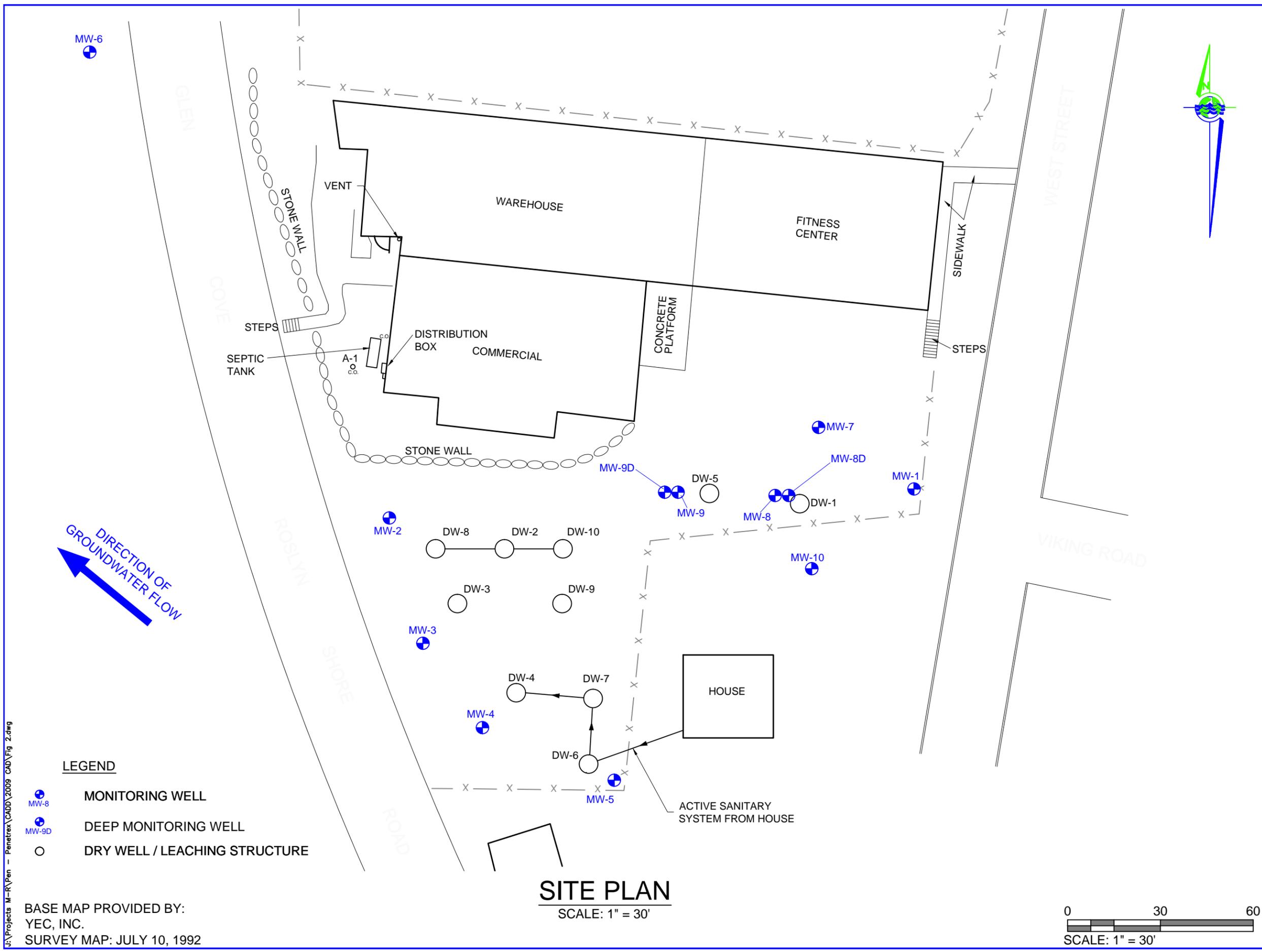
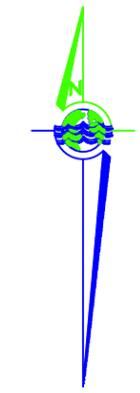
SITE PLAN

FORMER PENETREX PROESSING NYSDEC I.D. No. 130034

FIGURE NO

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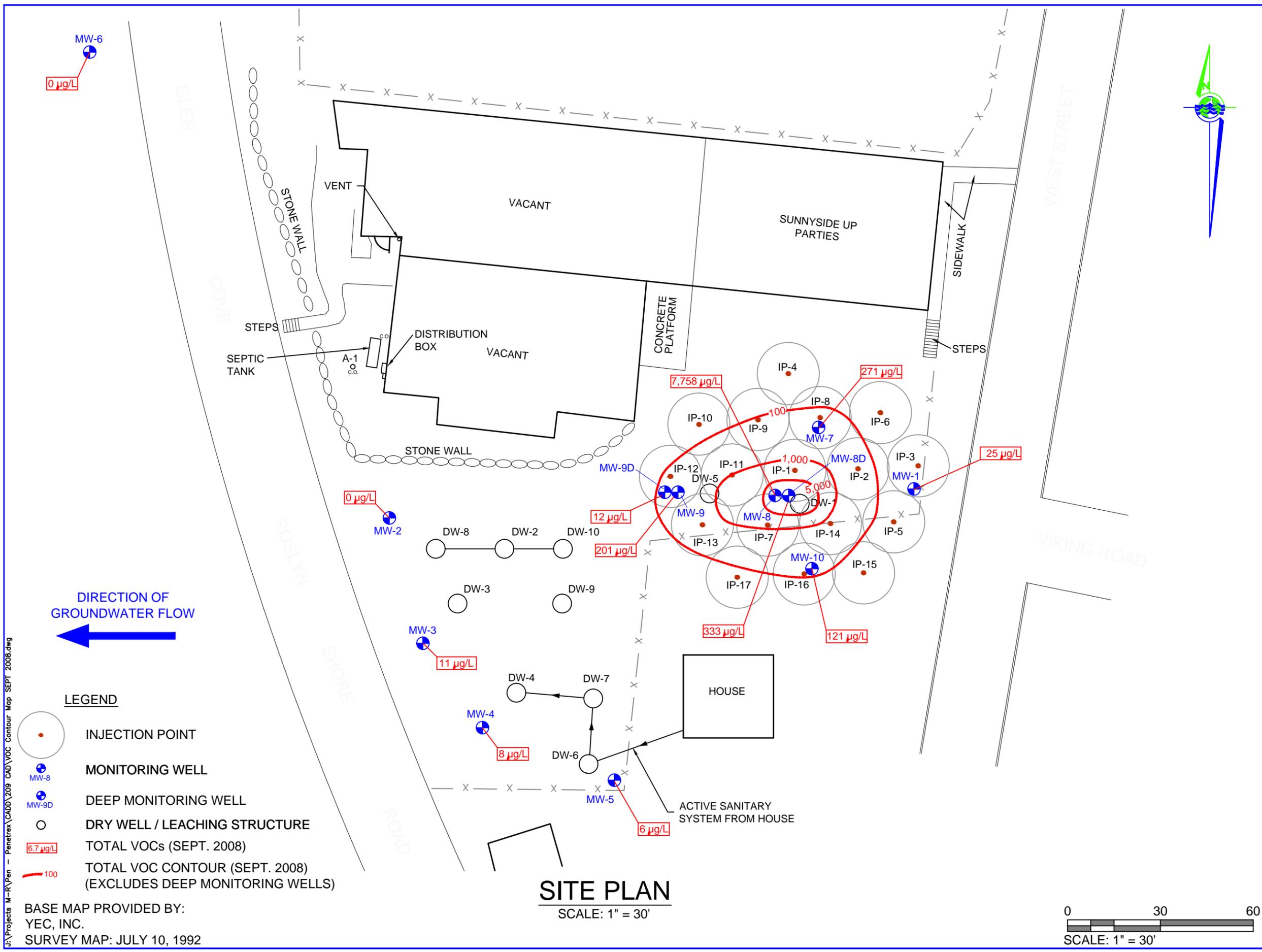
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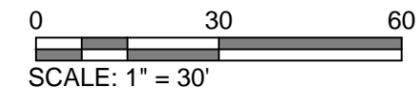
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**BASELINE TOTAL VOC CONTOURS AT WATER TABLE
SEPTEMBER 2008
FORMER PENETREX PROCESSING NYSDEC
I.D. No. 130034**



SITE PLAN
SCALE: 1" = 30'



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BASE MAP PROVIDED BY:
YEC, INC.
SURVEY MAP: JULY 10, 1992

TABLES

TABLE 1
October 2015 - Groundwater Analytical Results - VOCs
1 Shore Road, Glenwood Landing, New York

Sample ID Sampling Date Lab Sample ID	NYSDEC Groundwater Standards ⁽¹⁾	MW-1 10/28/2015	MW-2 10/28/2015	MW-3 10/28/2015	MW-4 10/28/2015	MW-5	MW-7 10/28/2015	MW-8 10/28/2015	MW-8D 10/28/2015	MW-9 10/28/2015	MW-9D 10/28/2015	MW-10 10/28/2015
Volatle Organic Compounds by 8260 - µg/L												
1,1,1,2-Tetrachloroethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,1,1-Trichloroethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,1,2,2-Tetrachloroethane	5	0.14 U	0.14 U	0.14 U	0.14 U	NC	0.14 U	0.14 U	0.14 U	0.58 U	0.14 U	0.14 U
1,1,2-Trichloroethane	1	0.5 U	0.5 U	0.5 U	0.5 U	NC	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U
1,1-Dichloroethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,1-Dichloroethene	5	0.14 U	0.14 U	0.14 U	0.14 U	NC	0.14 U	0.14 U	0.14 U	0.57 U	0.14 U	0.14 U
1,1-Dichloropropene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2,3-Trichlorobenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2,3-Trichloropropane	0.04	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2,4,5-Tetramethylbenzene	5	0.65 U	0.65 U	0.65 U	0.65 U	NC	0.65 U	0.65 U	0.65 U	2.6 U	0.65 U	0.65 U
1,2,4-Trichlorobenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2,4-Trimethylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2-Dibromo-3-chloropropane	0.04	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2-Dibromoethane	0.0006	0.65 U	0.65 U	0.65 U	0.65 U	NC	0.65 U	0.65 U	0.65 U	2.6 U	0.65 U	0.65 U
1,2-Dichlorobenzene	3	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,2-Dichloroethane	0.6	0.13 U	0.13 U	0.13 U	0.13 U	NC	0.13 U	0.13 U	0.13 U	0.53 U	0.13 U	0.13 U
1,2-Dichloroethene, Total	NS	0.7 U	0.7 U	68 J	0.7 U	NC	0.7 U	21	1.2 J	2.8 U	0.7 U	0.7 U
1,2-Dichloropropane	1	0.13 U	0.13 U	0.13 U	0.13 U	NC	0.13 U	0.13 U	0.13 U	0.53 U	0.13 U	0.13 U
1,3,5-Trimethylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,3-Dichlorobenzene	3	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,3-Dichloropropane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,3-Dichloropropene, Total	NS	0.14 U	0.14 U	0.14 U	0.14 U	NC	0.14 U	0.14 U	0.14 U	0.58 U	0.14 U	0.14 U
1,4-Dichlorobenzene	3	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
1,4-Dioxane	NS	41 U	41 U	41 U	41 U	NC	41 U	41 U	41 U	160 U	41 U	41 U
2,2-Dichloropropane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
2-Butanone	50	1.9 U	1.9 U	1.9 U	1.9 U	NC	1.9 U	1.9 U	1.9 U	7.8 U	1.9 U	1.9 U
2-Hexanone	50	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
4-Methyl-2-pentanone	NS	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
Acetone	50	1.5 U	1.5 U	1.5 U	1.5 U	NC	1.5 U	1.5 U	1.5 U	5.8 J	1.5 U	1.5 U
Acrylonitrile	5	1.5 U	1.5 U	1.5 U	1.5 U	NC	1.5 U	1.5 U	1.5 U	6 U	1.5 U	1.5 U
Benzene	1	0.16 U	0.16 U	0.16 U	0.16 U	NC	0.16 U	0.16 U	0.16 U	0.64 U	0.16 U	0.16 U
Bromobenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Bromochloromethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Bromodichloromethane	50	0.19 U	0.19 U	0.19 U	0.19 U	NC	0.19 U	0.19 U	0.19 U	0.77 U	0.19 U	0.19 U
Bromoform	50	0.65 U	0.65 U	0.65 U	0.65 U	NC	0.65 U	0.65 U	0.65 U	2.6 U	0.65 U	0.65 U
Bromomethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Carbon disulfide	60	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
Carbon tetrachloride	5	0.13 U	0.13 U	0.13 U	0.13 U	NC	0.13 U	0.13 U	0.13 U	0.54 U	0.13 U	0.13 U
Chlorobenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Chloroethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Chloroform	7	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Chloromethane	NS	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
cis-1,2-Dichloroethene	5	0.7 U	0.7 U	67	0.7 U	NC	0.7 U	21	1.2 J	2.8 U	0.7 U	0.7 U
cis-1,3-Dichloropropene	0.4	0.14 U	0.14 U	0.14 U	0.14 U	NC	0.14 U	0.14 U	0.14 U	0.58 U	0.14 U	0.14 U
Dibromochloromethane	50	0.15 U	0.15 U	0.15 U	0.15 U	NC	0.15 U	0.15 U	0.15 U	0.6 U	0.15 U	0.15 U
Dibromomethane	5	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
Ethyl ether	NS	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Ethylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Hexachlorobutadiene	0.5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Isopropylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Methyl tert butyl ether	10	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Methylene chloride	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
n-Butylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
n-Propylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Naphthalene	10	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
o-Chlorotoluene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
o-Xylene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
p-Chlorotoluene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
p-Diethylbenzene	NS	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
p-Ethyltoluene	NS	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
p-Isopropyltoluene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
p/m-Xylene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
sec-Butylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Styrene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
tert-Butylbenzene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Tetrachloroethene	5	15	6.1	37	0.18 U	NC	110	48	7.1	270	1	66
Toluene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
trans-1,2-Dichloroethene	5	0.7 U	0.7 U	0.86 J	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
trans-1,3-Dichloropropene	0.4	0.16 U	0.16 U	0.16 U	0.16 U	NC	0.16 U	0.16 U	0.16 U	0.66 U	0.16 U	0.16 U
trans-1,4-Dichloro-2-butene	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Trichloroethene	5	0.36 J	0.32 J	6.3	0.18 U	NC	1	4	0.33 J	8.9	0.18 U	0.26 J
Trichlorofluoromethane	5	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Vinyl acetate	NS	1 U	1 U	1 U	1 U	NC	1 U	1 U	1 U	4 U	1 U	1 U
Vinyl chloride	2	0.07 U	0.07 U	8.5	0.07 U	NC	0.07 U	0.35 J	0.07 U	0.28 U	0.07 U	0.07 U
Xylenes, Total	NS	0.7 U	0.7 U	0.7 U	0.7 U	NC	0.7 U	0.7 U	0.7 U	2.8 U	0.7 U	0.7 U
Total VOCs	NS	15	6.1	118.8	ND	NC	111	94	7.1	278.9	1	66

Notes:

⁽¹⁾ NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998, April 2000 addendum

* - Guidance Value

ND- Nondetect

NC- Not collected

D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

Q - Indicates the lab controlled sample did not meet the control limits required.

U - The compound was not detected at the indicated concentration

Bold / Shaded text denotes concentrations exceeding NYSDEC AWQS

Table 2

Historical Groundwater Monitoring Well Analytical Results for VOCs by EPA Method 8260

Compound	NYSDEC Standards ⁽¹⁾	MW-1													MW-2												
		11/13/01	1/19/05	9/6/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11	4/24/15	10/28/15	11/13/01	1/19/05	9/6/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11	4/24/15	
Volatile Organic Compounds by EPA Method 8260 in µg/L																											
1,1,1,2-Tetrachloroethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloropropene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trichloropropane	0.04	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4,5-Tetramethylbenzene	5	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dibromo-3-chloropropane	0.04	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dibromoethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichlorobenzene	3	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3-Dichlorobenzene	3	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3-Dichloropropane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	3	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,4-Diethylbenzene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
2,2-Dichloropropane	5	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	
2-Chloroethyl vinyl ether	NS	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	
2-Chlorotoluene	5	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	
2-Hexanone	50 G	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-propanol	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
4-Chlorotoluene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Acrolein	5 G	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Acrylonitrile	5	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromobenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromochloromethane	NS	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromoform	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Carbon Disulfide	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chlorodibromomethane	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Chlorodifluoromethane	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	5	ND	1	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,3-Dichloropropene	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dibromochloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dibromomethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorodifluoromethane	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Diisopropyl ether	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Ethanol	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Ethyl acetate	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Freon 113	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Freon-114	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Hexachlorobutadiene	0.5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Isopropyl acetate	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Isopropylbenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m + p Xylene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl Ethyl Ketone	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl Isobutyl Ketone	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl Tertiary Butyl Ether	10	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methylene Chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
n-Amyl acetate	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
Naphthalene	10	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
n-Butyl acetate	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	
n-Butylbenzene	5	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
n-Propyl acetate	NS	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA										

Table 2

Historical Groundwater Monitoring Well Analytical Results for VOCs by EPA Method 8260

Compound	NYSDEC Standards ⁽¹⁾	MW-3														MW-4												
		11/13/01	1/19/05	2/11/05	9/6/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11	4/24/15	10/28/15	11/13/01	1/19/05	9/6/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11	4/24/15	10/28/15
Volatile Organic Compounds by EPA Method 8260 f																												
1,1,1,2-Tetrachloroethane	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	1	1.2	0.91	0.89	0.87	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	5	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.04	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Diethylbenzene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
2,2-Dichloropropane	5	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND
2-Chloroethyl vinyl ether	NS	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND
2-Chlorotoluene	5	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND
2-Hexanone	50 G	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-propanol	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND
4-Chlorotoluene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	43	15	ND	ND	8.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	5 G	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Acrylonitrile	5	NA	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	NS	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Chlorodifluoromethane	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	97	14	ND	ND	6	1.8	ND	17	18	6.9	27	100	79	67	3	ND	ND	ND	0.77	ND	3	2	0.53	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diisopropyl ether	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Ethanol	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Ethyl acetate	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Ethyl Benzene	5	ND	79	27	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Freon-114	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Hexachlorobutadiene	0.5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl acetate	NS	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Isopropylbenzene	5	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m + p Xylene	10	ND	ND	124	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	NS	ND	ND	107	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertiary Butyl Ether	10	NA	NA																									

Table 2

Historical Groundwater Monitoring Well Analytical Results for VOCs by EPA Method 8260

Compound	NYSDEC Standards ⁽¹⁾	MW-5										MW-6										
		1/19/05	9/5/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11	4/24/15	1/19/05	9/6/06	9/17/08	4/6/09	7/7/09	10/7/09	1/20/10	4/8/10	10/13/10	4/20/11
Volatile Organic Compounds by EPA Method 8260 in																						
1,1,1,2-Tetrachloroethane	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	5	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.04	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Diethylbenzene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	5	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA	NA
2-Chloroethyl vinyl ether	NS	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA	NA
2-Chlorotoluene	5	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA	NA
2-Hexanone	50 G	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-propanol	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	5 G	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Acrylonitrile	5	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	NS	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NS	ND	ND	ND	ND	6.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorodibromomethane	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Chlorodifluoromethane	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Diisopropyl ether	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Ethanol	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Ethyl acetate	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Freon-114	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	0.5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Isopropyl acetate	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Isopropylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
m + p Xylene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertiary Butyl Ether	10	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Amyl acetate	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
Naphthalene	10	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
n-Butyl acetate	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
n-Butylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
n-Propyl acetate	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
n-Propylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
o Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Diethylbenzene	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
p-Ethyltoluene	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-butyl alcohol	NS	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA				

TABLE 3
Indoor Air Analytical Results - VOCs - April 24, 2015
1 Shore Road, Glenwood Landing, New York

LOCATION	NYSDOH AGV ¹	FITNESS CENTER	WAREHOUSE	OFFICE	COMMERCIAL	HOUSE	OUTDOOR
SAMPLE ID		IA-001	IA-002	IA-003	IA-004	IA-005	OA-001
SAMPLING DATE		4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015
LAB SAMPLE ID		L1508648-01	L1508648-02	L1508648-03	L1508648-04	L1508648-05	L1508648-06
SAMPLE TYPE		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Outdoor Air
Volatile Organic Compounds							
1,1,1-Trichloroethane	NS	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.276 U
1,1,2,2-Tetrachloroethane	NS	0.137 U	0.137 U	0.137 U	0.137 U	0.137 U	0.347 U
1,1,2-Trichloroethane	NS	0.109 U	0.109 U	0.109 U	0.109 U	0.109 U	0.276 U
1,1-Dichloroethane	NS	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.204 U
1,1-Dichloroethene	NS	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.2 U
1,2,4-Trichlorobenzene	NS	0.371 U	0.371 U	0.371 U	0.371 U	0.371 U	0.935 U
1,2,4-Trimethylbenzene	NS	1.73	0.423	0.162	4.64	0.28	0.261
1,2-Dibromoethane	NS	0.154 U	0.154 U	0.154 U	0.154 U	0.154 U	0.388 U
1,2-Dichlorobenzene	NS	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.304 U
1,2-Dichloroethane	NS	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.204 U
1,2-Dichloropropane	NS	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.233 U
1,3,5-Trimethylbenzene	NS	0.398	0.098	0.098 U	1.17	0.098 U	0.248 U
1,3-Butadiene	NS	0.155	0.044 U	0.044 U	0.044 U	0.044 U	0.112 U
1,3-Dichlorobenzene	NS	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.304 U
1,4-Dichlorobenzene	NS	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.304 U
1,4-Dioxane	NS	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.908 U
2,2,4-Trimethylpentane	NS	0.934 U	0.934 U	0.934 U	8.41	0.934 U	2.36 U
2-Butanone	NS	10.3	1.47 U	1.47 U	1.47 U	1.47 U	3.72 U
2-Hexanone	NS	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	2.07 U
3-Chloropropene	NS	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	1.58 U
4-Ethyltoluene	NS	0.413	0.108	0.098 U	1.07	0.098 U	0.248 U
4-Methyl-2-pentanone	NS	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	5.16 U
Acetone	NS	20.4	12	5.49	6.79	504	9.93
Benzene	NS	0.45	0.361	0.319 U	1.33	0.361	0.805 U
Benzyl chloride	NS	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	2.61 U
Bromodichloromethane	NS	0.134 U	0.134 U	0.134 U	0.134 U	0.134 U	0.338 U
Bromoform	NS	0.207 U	0.207 U	0.207 U	0.207 U	0.207 U	0.522 U
Bromomethane	NS	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.196 U
Carbon disulfide	NS	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	1.57 U
Carbon tetrachloride	NS	0.346	0.327	0.352	0.333	0.359	0.493
Chlorobenzene	NS	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.233 U
Chloroethane	NS	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.133 U
Chloroform	NS	0.098 U	0.098 U	0.127	0.098 U	0.098 U	0.247 U
Chloromethane	NS	1.26	0.999	0.985	0.95	1.07	1.36
cis-1,2-Dichloroethene	NS	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.2 U
cis-1,3-Dichloropropene	NS	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.229 U
Cyclohexane	NS	0.747	0.699	0.688 U	0.847	0.688 U	1.74 U
Dibromochloromethane	NS	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.43 U
Dichlorodifluoromethane	NS	1.57	1.57	1.87	1.72	1.37	2.5 U
Ethanol	NS	7.18	4.71 U	4.71 U	23.2	25.2	11.9 U
Ethyl Acetate	NS	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	4.54 U
Ethylbenzene	NS	0.743	0.5	0.178	2.79	0.43	0.539
Freon-113	NS	0.498	0.491	0.475	0.475	38.6	0.966 U
Freon-114	NS	0.078 U	0.349 U	0.349 U	0.349 U	0.349 U	0.881 U
Heptane	NS	2.27	0.82 U	0.82 U	2.17	0.82 U	2.07 U
Hexachlorobutadiene	NS	0.533 U	0.533 U	0.533 U	0.533 U	0.533 U	1.34 U
Isopropanol	NS	1.41	1.23 U	1.23 U	1.23 U	1.23 U	3.1 U
Methyl tert butyl ether	NS	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.182 U
Methylene chloride	60	10.6	41	1.74 U	3.27	1.74 U	4.38 U
n-Hexane	NS	0.881	2.63	0.705 U	3.09	0.705 U	1.78 U
o-Xylene	NS	0.812	0.5	0.182	3.64	0.304	0.362
p/m-Xylene	NS	2.68	1.71	0.56	9.56	1.27	1.58
Styrene	NS	0.192	0.085 U	0.085 U	0.085	0.085 U	0.215 U
Tetrachloroethene	30	1.15	0.136 U	0.136 U	0.136	2.45	0.342 U
Tetrahydrofuran	NS	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	3.72 U
Toluene	NS	4.41	7.16	0.957	17.2	4.86	0.81
trans-1,2-Dichloroethene	NS	0.079 U	0.079 U	0.079 U	0.079 U	0.079 U	0.2 U
trans-1,3-Dichloropropene	NS	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.229 U
Trichloroethene	5	0.107 U	0.107 U	0.107 U	0.107 U	0.107 U	0.271 U
Trichlorofluoromethane	NS	1.12	1.11	1.08	1.05	1.21	1.36
Vinyl bromide	NS	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	2.21 U
Vinyl chloride	NS	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.129 U

Notes:

All Concentrations are ug/m3

1 - Air Guideline Values, NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (applies to indoor/ambient air only)

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL).

U - Not detected at the reported detection limit for the sample.

Shaded text denotes indoor air concentrations exceed NYSDOH AGV

TABLE 4
Historical Indoor Air Analytical Results - VOCs
1 Shore Road, Glenwood Landing, New York

LOCATION SAMPLE ID SAMPLING DATE	NYSDOH AGV ¹	FITNESS CENTER IA-001			WAREHOUSE IA-002			OFFICE IA-003			COMMERCIAL IA-004			HOUSE IA-005		
		Aug-05	May-06	Apr-15	Aug-05	May-06	Apr-15	Aug-05	May-06	Apr-15	Aug-05	May-06	Apr-15	Aug-05	May-06	Apr-15
Volatile Organic Compounds																
1,1,1-Trichloroethane	NS	1.1 U	7.72 U	0.109 U	1.1 U	1.39 U	0.109 U	1.1 U	1.39 U	0.109 U	1.1 U	1.46 U	0.109 U	1.1 U	1.49 U	0.109 U
1,1,2,2-Tetrachloroethane	NS	1.4 U	9.77 U	0.137 U	1.4 U	1.76 U	0.137 U	1.4 U	1.76 U	0.137 U	1.4 U	1.85 U	0.137 U	1.4 U	1.88 U	0.137 U
1,1,2-Trichloroethane	NS	1.1 U	7.72 U	0.109 U	1.1 U	1.39 U	0.109 U	1.1 U	1.39 U	0.109 U	1.1 U	1.46 U	0.109 U	1.1 U	1.49 U	0.109 U
1,1-Dichloroethane	NS	0.81 U	7.63 U	0.081 U	0.81 U	1.38 U	0.081 U	0.81 U	1.38 U	0.081 U	0.81 U	1.44 U	0.081 U	0.81 U	1.47 U	0.081 U
1,1-Dichloroethene	NS	0.79 U	7.53 U	0.079 U	0.79 U	1.36 U	0.079 U	0.79 U	1.36 U	0.079 U	0.79 U	1.43 U	0.079 U	0.79 U	1.45 U	0.079 U
1,2,4-Trichlorobenzene	NS	3.7 U	9.58 U	0.371 U	3.7 U	1.73 U	0.371 U	3.7 U	1.73 U	0.371 U	3.7 U	1.81 U	0.371 U	3.7 U	1.84 U	0.371 U
1,2,4-Trimethylbenzene	NS	3.4	6.98 U	1.73	3.1	3.50	0.423	2.9	4.50	0.162	1.9	6.50	4.64	27	13.5	0.28
1,2-Dibromoethane	NS	1.5 U	10.9 U	0.154 U	1.5 U	1.97 U	0.154 U	1.5 U	1.97 U	0.154 U	1.5 U	2.06 U	0.154 U	1.5 U	2.09 U	0.154 U
1,2-Dichlorobenzene	NS	1.2 U	8.56 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.62 U	0.12 U	1.2 U	1.65 U	0.12 U
1,2-Dichloroethane	NS	0.81 U	5.77 U	0.081 U	0.81 U	1.04 U	0.081 U	0.81 U	1.04 U	0.081 U	0.81 U	1.09 U	0.081 U	0.81 U	1.11 U	0.081 U
1,2-Dichloropropane	NS	0.92 U	6.60 U	0.092 U	0.92 U	1.19 U	0.092 U	0.92 U	1.19 U	0.092 U	0.92 U	1.25 U	0.092 U	0.92 U	1.27 U	0.092 U
1,3,5-Trimethylbenzene	NS	1.3	6.98 U	0.398	0.98 U	1.26 U	0.098	0.98 U	2.00	0.098 U	0.98 U	2.50	1.17	7.4	3.50	0.098 U
1,3-Butadiene	NS	0.44 U	3.16 U	0.155	0.44 U	0.571 U	0.044 U	0.44 U	0.571 U	0.044 U	0.44 U	0.598 U	0.044 U	0.44 U	0.609 U	0.044 U
1,3-Dichlorobenzene	NS	1.2 U	8.56 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.62 U	0.12 U	1.2 U	1.65 U	0.12 U
1,4-Dichlorobenzene	NS	1.2 U	8.56 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.55 U	0.12 U	1.2 U	1.62 U	0.12 U	1.2 U	1.65 U	0.12 U
1,4-Dioxane	NS	18 U	5.12 U	0.36 U	18 U	0.924 U	0.36 U	18 U	0.924 U	0.36 U	18 U	0.968 U	0.36 U	18 U	0.984 U	0.36 U
2,2,4-Trimethylpentane	NS	1.1	6.60 U	0.934 U	3.3	1.19 U	0.934 U	3.0	1.19 U	0.934 U	1.3	1.25 U	8.41	1.0	5.23	0.934 U
2-Butanone	NS	7.1	4.18 U	10.3	9.4	0.756 U	1.47 U	12	0.756 U	1.47 U	14	0.792 U	1.47 U	2.9	0.805 U	1.47 U
2-Hexanone	NS	4.9	5.86 U	0.82 U	5.3	1.06 U	0.82 U	2.1	1.06 U	0.82 U	4.0	1.11 U	0.82 U	5.7	1.13 U	0.82 U
3-Chloropropene	NS	0.63 U	NS	0.626 U	0.63 U	NS	0.626 U	0.63 U	NS	0.626 U	0.63 U	NS	0.626 U	0.63 U	NS	0.626 U
4-Ethyltoluene	NS	2.5	6.98 U	0.413	2.2	3.99	0.108	2.2	1.26 U	0.098 U	1.5	4.99	1.07	16	17.5	0.098 U
4-Methyl-2-pentanone	NS	NS	NS	2.05 U	NS	NS	2.05 U	NS	NS	2.05 U	NS	NS	2.05 U	NS	NS	2.05 U
Acetone	NS	50	338	20.4	100	21.0	12	120	43.5	5.49	86	33.8	6.79	16	29.0	504
Benzene	NS	0.83	4.56 U	0.45	1.3	0.823 U	0.361	1.4	0.823 U	0.319 U	0.86	0.862 U	1.33	0.89	7.15	0.361
Benzyl chloride	NS	NS	9.39 U	1.04 U	NS	1.70 U	1.04 U	NS	1.70 U	1.04 U	NS	1.78 U	1.04 U	NS	1.81 U	1.04 U
Bromodichloromethane	NS	1.3 U	9.49 U	0.134 U	1.3 U	1.71 U	0.134 U	1.3 U	1.71 U	0.134 U	1.3 U	1.80 U	0.134 U	1.3 U	1.83 U	0.134 U
Bromoform	NS	2.1 U	14.7 U	0.207 U	2.1 U	2.65 U	0.207 U	2.1 U	2.65 U	0.207 U	2.1 U	2.78 U	0.207 U	2.1 U	2.83 U	0.207 U
Bromomethane	NS	0.78 U	7.35 U	0.078 U	0.78 U	1.33 U	0.078 U	0.78 U	1.33 U	0.078 U	0.78 U	1.39 U	0.078 U	0.78 U	1.41 U	0.078 U
Carbon disulfide	NS	2	4.46 U	0.623 U	1.6 U	0.806 U	0.623 U	1.6 U	0.806 U	0.623 U	1.6 U	0.845 U	0.623 U	1.6 U	0.859 U	0.623 U
Carbon tetrachloride	NS	1.3 U	8.93 U	0.346	1.3 U	1.61 U	0.327	1.3 U	1.61 U	0.352	1.3 U	1.69 U	0.333	1.3 U	1.72 U	0.359
Chlorobenzene	NS	0.92 U	6.51 U	0.092 U	0.92 U	1.18 U	0.092 U	0.92 U	1.18 U	0.092 U	0.92 U	1.23 U	0.092 U	0.92 U	1.25 U	0.092 U
Chloroethane	NS	0.53 U	5.02 U	0.053 U	0.53 U	0.907 U	0.053 U	0.53 U	0.907 U	0.053 U	0.53 U	0.950 U	0.053 U	0.53 U	0.967 U	0.053 U
Chloroform	NS	0.98 U	6.88 U	0.098 U	0.98 U	1.24 U	0.098 U	0.98 U	1.24 U	0.127	0.98 U	1.30 U	0.098 U	0.98 U	1.32 U	0.098 U
Chloromethane	NS	2.1	3.91 U	1.26	1.0 U	0.706 U	0.999	1.1	0.706 U	0.985	1.1 U	0.739 U	0.95	1.0 U	0.752 U	1.07
cis-1,2-Dichloroethene	NS	0.79 U	7.53 U	0.079 U	0.79 U	1.36 U	0.079 U	0.79 U	1.36 U	0.079 U	0.79 U	1.43 U	0.079 U	0.79 U	1.45 U	0.079 U
cis-1,3-Dichloropropene	NS	0.91 U	6.42 U	0.091 U	0.91 U	1.16 U	0.091 U	0.91 U	1.16 U	0.091 U	0.91 U	1.21 U	0.091 U	0.91 U	1.24 U	0.091 U
Cyclohexane	NS	0.69 U	4.93 U	0.747	0.86	0.890 U	0.699	0.69	0.890 U	0.688 U	0.69 U	0.933 U	0.847	0.69 U	0.949 U	0.688 U
Dibromochloromethane	NS	1.7 U	12.1 U	0.17 U	1.7 U	2.18 U	0.17 U	1.7 U	2.18 U	0.17 U	1.7 U	2.29 U	0.17 U	1.7 U	2.33 U	0.17 U
Dichlorodifluoromethane	NS	2.5 U	9.39 U	1.57	13	1.70 U	1.57	5.9	1.70 U	1.87	2.5 U	1.78 U	1.72	2.5	1.81 U	1.37
Ethanol	NS	NS	NS	7.18	NS	NS	4.71 U	NS	NS	4.71 U	NS	NS	23.2	NS	NS	25.2
Ethyl Acetate	NS	NS	5.21 U	1.8 U	NS	0.941 U	1.8 U	NS	0.941 U	1.8 U	NS	0.986 U	1.8 U	NS	1.00 U	1.8 U
Ethylbenzene	NS	2.3	6.14 U	0.743	2.3	1.77	0.5	2.7	1.11 U	0.178	2.0	1.16 U	2.79	96	7.95	0.43
Freon-113	NS	NS	NS	0.498	NS	NS	0.491	NS	NS	0.475	NS	NS	0.475	NS	NS	38.6
Freon-114	NS	NS	NS	0.078 U	NS	NS	0.349 U	NS	NS	0.349 U	NS	NS	0.349 U	NS	NS	0.349 U
Heptane	NS	1.5	5.77 U	2.27	1.8	1.04 U	0.82 U	2.0	1.04 U	0.82 U	4.5	1.09 U	2.17	1.8	11.7	0.82 U
Hexachlorobutadiene	NS	2.1 U	10.6 U	0.533 U	2.1 U	1.92 U	0.533 U	2.1 U	1.92 U	0.533 U	2.1 U	2.01 U	0.533 U	2.1 U	2.04 U	0.533 U
Isopropanol	NS	12 U	3.44 U	1.41	37	0.622 U	1.23 U	59	0.622 U	1.23 U	23	0.651 U	1.23 U	12 U	0.662 U	1.23 U
Methyl tert butyl ether	NS	1.8 U	5.12 U	0.072 U	1.8 U	0.924 U	0.072 U	1.8 U	0.924 U	0.072 U	1.8 U	0.968 U	0.072 U	1.8 U	0.984 U	0.072 U
Methylene chloride	60	6.3	6.60 U	10.6	110	1.19 U	41	170	1.19 U	1.74 U	800	1.25 U	3.27	1.7 U	1.27 U	1.74 U
n-Hexane	NS	1.2	5.02 U	0.881	3.3	0.907 U	2.63	2.8	0.907 U	0.705 U	1.7	0.950 U	3.09	1.2	7.51	0.705 U
o-Xylene	NS	2.6	6.14 U	0.812	2.6	2.21	0.5	3.2	1.11 U	0.182	2.0	2.21	3.64	65	12.4	0.304
p/m-Xylene	NS	7.4	6.14 U	2.68	7.4	3.97	1.71	8.7	1.77	0.56	5.6	3.09	9.56	270	16.3 U	1.27
Styrene	NS	6	6.05 U	0.192	2.6	1.09 U	0.085 U	3.4	1.09 U	0.085 U	6.4	1.14 U	0.085	0.85 U	1.16 U	0.085 U
Tetrachloroethene	30	55	28.3	1.15	9.5	6.90	0.136 U	7.5	4.83	0.136 U	14	6.90	0.136	11	10.4	2.45
Tetrahydrofuran	NS	15 U	4.18 U	1.47 U	15 U	0.756 U	1.47 U	15 U	0.756 U	1.47 U	15 U	0.792 U	1.47 U	15 U	0.805 U	1.47 U
Toluene	NS	27	11.1	4.41	31	5.75	7.16	26	8.43	0.957	34	6.90	17.2	9.0	38.3	4.86
trans-1,2-Dichloroethene	NS	0.79 U	5.58 U	0.079 U	0.79 U	1.01 U	0.079 U	0.79 U	1.01 U	0.079 U	0.79 U	1.06 U	0.079 U	0.79 U	1.07 U	0.079 U
trans-1,3-Dichloropropene	NS	0.91 U	6.42 U	0.091 U	0.91 U	1.16 U	0.091 U	0.91 U	1.16 U	0.091 U	0.91 U	1.21 U	0.091 U	0.91 U	1.24 U	0.091 U
Trichloroethene	5	1.1 U	7.63 U	0.107 U	1.1 U	1.38 U	0.107 U	1.5	1.38 U	0.107 U	1.1 U	1.44 U	0.107 U	1.1 U	1.47 U	0.107 U
Trichlorofluoromethane	NS	1.6	10.6 U	1.12	6.7	1.92 U	1.11	3.7	1.92 U	1.08	2.2	2.01 U	1.05	2.6	2.04 U	1.21
Vinyl bromide	NS	NS	6.23 U	0.874 U	NS	1.13 U	0.874 U	NS	1.13 U	0.874 U	NS	1.18 U	0.874 U	NS	1.20 U	0.874 U
Vinyl chloride	NS	0.51 U	4.84 U	0.051 U	0.51 U	0.874 U	0.051 U	0.51 U	0.874 U	0.051 U	0.51 U	0.915 U	0.051 U	0.51 U	0.931 U	0.051 U

Notes:

All Concentrations are ug/m3

1 - Air Guideline Values, NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (applies to indoor/ambient air only)

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL).

U - Not detected at the reported detection limit for the sample.

Shaded text denotes indoor air concentrations exceed NYSDOH AGV

APPENDIX A

IC/EC Certification Forms



**Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form**



	Site Details	Box 1
Site No. 130034		
Site Name Penetrex Processing Company		
Site Address: 1 Shore Road Zip Code: 11547		
City/Town: Glenwood Landing		
County: Nassau		
Site Acreage: 1.0		
Reporting Period: March 09, 2015 to January 01, 2016		
		YES NO
1. Is the information above correct?		<input checked="" type="checkbox"/> <input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/> <input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?		<input type="checkbox"/> <input checked="" type="checkbox"/>
		Box 2
		YES NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?		<input checked="" type="checkbox"/> <input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.		
A Corrective Measures Work Plan must be submitted along with this form to address these issues.		
Signature of Owner, Remedial Party or Designated Representative		Date
		2/23/16

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the Certification cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this Certification form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.
- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Description of Institutional Controls

Parcel
20-K-10

Owner *Glenwood Realty LLC*
c/o Lawrence Weinberger

DMW
Institutional Control
Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

The Institutional Controls (ICs) for the site consist of compliance with the Environmental Easement and Site Management Plan (SMP); Operation and maintenance (O&M) of the Engineering Controls per the O&M Plan in the SMP; Inspection of the Environmental Controls per the SMP; Monitoring of groundwater, soil vapor, and other environmental/public health monitoring per the SMP; and Reporting per the SMP.

ICs at the site also include the following restrictions: Only Restricted Residential Use is allowed unless there is additional remediation and amendment of the EE; Use of groundwater underlying the property without treatment is prohibited; The potential for vapor impacts must be evaluated prior to future building in area noted on Figure 2 in SMP; Vegetable gardens and farming on the property are prohibited; and certification statements are to be submitted in accordance with the SMP.

20-K-11

DMW
Glenwood Realty LLC
c/o Lawrence Weinberger

O&M Plan
IC/EC Plan
Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan

The Institutional Controls (ICs) for the site consist of compliance with the Environmental Easement and Site Management Plan (SMP); Operation and maintenance (O&M) of the Engineering Controls per the O&M Plan in the SMP; Inspection of the Environmental Controls per the SMP; Monitoring of groundwater, soil vapor, and other environmental/public health monitoring per the SMP; and Reporting per the SMP.

ICs at the site also include the following restrictions: Only Restricted Residential Use is allowed unless there is additional remediation and amendment of the EE; Use of groundwater underlying the property without treatment is prohibited; The potential for vapor impacts must be evaluated prior to future building in area noted on Figure 2 in SMP; Vegetable gardens and farming on the property are prohibited; and certification statements are to be submitted in accordance with the SMP.

20-K-12

DMW
Glenwood Realty LLC
c/o Lawrence Weinberger

Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

The Institutional Controls (ICs) for the site consist of compliance with the Environmental Easement and Site Management Plan (SMP); Operation and maintenance (O&M) of the Engineering Controls per the O&M Plan in the SMP; Inspection of the Environmental Controls per the SMP; Monitoring of groundwater, soil vapor, and other environmental/public health monitoring per the SMP; and Reporting per the SMP.

ICs at the site also include the following restrictions: Only Restricted Residential Use is allowed unless there is additional remediation and amendment of the EE; Use of groundwater underlying the property without treatment is prohibited; The potential for vapor impacts must be evaluated prior to future building in area noted on Figure 2

in SMP; Vegetable gardens and farming on the property are prohibited; and certification statements are to be submitted in accordance with the SMP.

Box 4

Description of Engineering Controls

Parcel

20-K-10

Engineering Control

Groundwater Treatment System
Vapor Mitigation
Cover System

Engineering Controls consist of a soil cover system with an excavation work plan containing procedures for addressing breaches in the cover system; Sub-slab depressurization systems (SSDSs) operated per the O&M Plan have been installed in two site buildings; and In-Situ Chemical Treatment via the existing on-site system can be completed as needed based on semi-annual groundwater monitoring data.

20-K-11

Groundwater Treatment System
Vapor Mitigation
Cover System

Engineering Controls consist of a soil cover system with an excavation work plan containing procedures for addressing breaches in the cover system; Sub-slab depressurization systems (SSDSs) operated per the O&M Plan have been installed in two site buildings; and In-Situ Chemical Treatment via the existing on-site system can be completed as needed based on semi-annual groundwater monitoring data.

20-K-12

Groundwater Treatment System
Vapor Mitigation
Cover System

Engineering Controls consist of a soil cover system with an excavation work plan containing procedures for addressing breaches in the cover system; Sub-slab depressurization systems (SSDSs) operated per the O&M Plan have been installed in two site buildings; and In-Situ Chemical Treatment via the existing on-site system can be completed as needed based on semi-annual groundwater monitoring data.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

2/23/16
Date

IC CERTIFICATIONS
SITE NO. 130034

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I David Weinberger at 99 Mineola Ave, Roslyn Heights, NY 11577
print name print business address

am certifying as Owner - Manager (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

[Signature]
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

2/23/16
Date

IC/EC CERTIFICATIONS

Box 7

Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I David Weinberger at 99 Mineola Ave, Roslyn Heights, NY 11577
print name print business address

am certifying as a Owner-Manager
(Owner or Remedial Party)

[Signature]

Signature of , for the Owner or Remedial Party,
Rendering Certification

Stamp
(Required for PE)

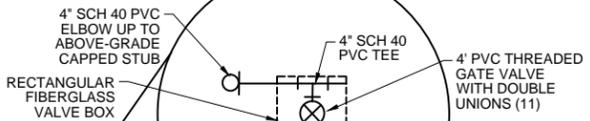
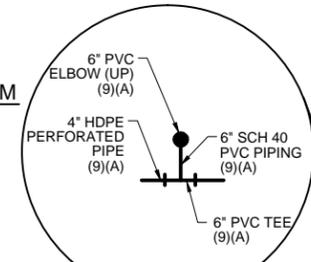
2/23/16

Date

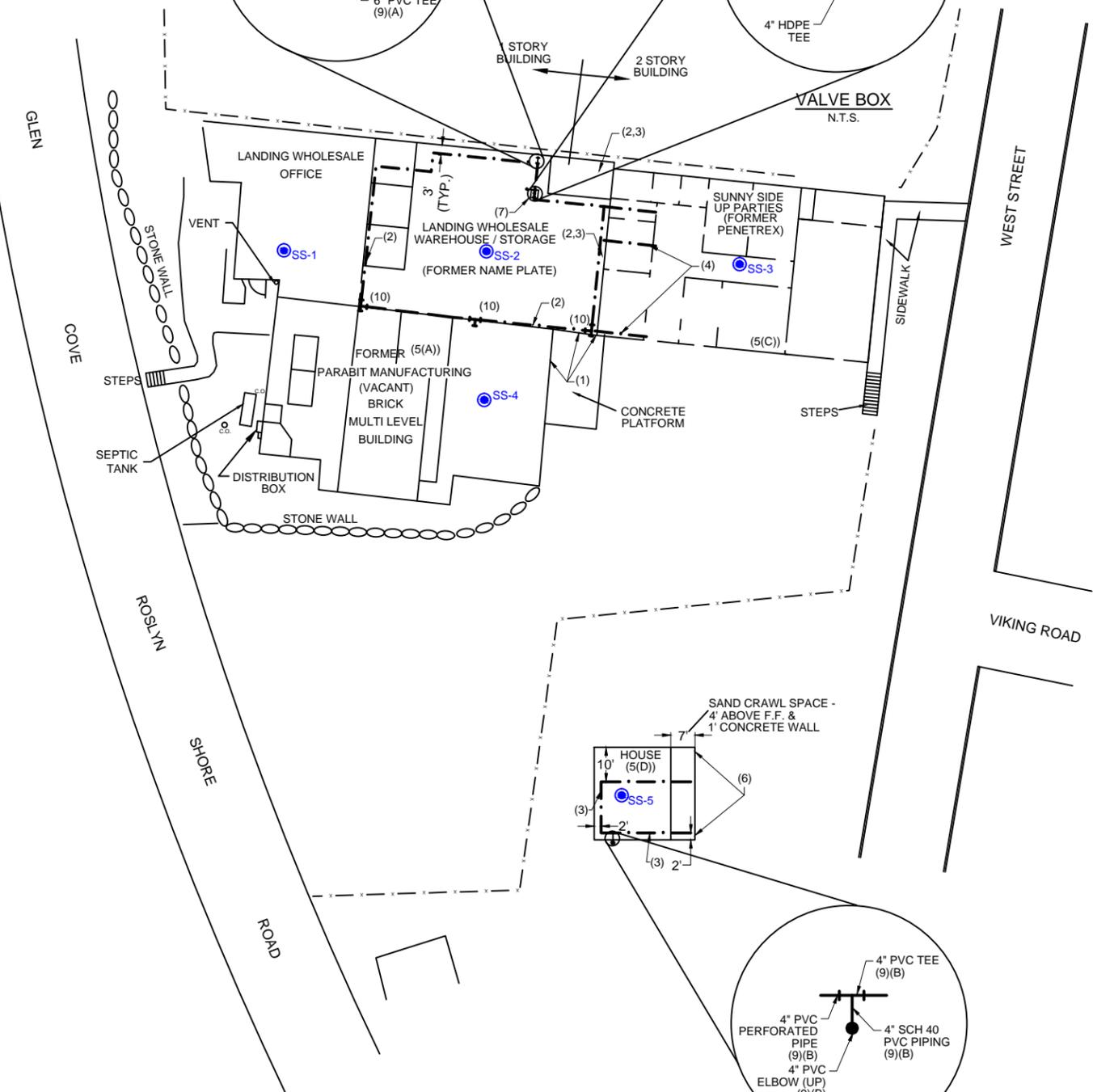
APPENDIX B

SSDS As-Built Drawings

STACK FOR COMMERCIAL SYSTEM
N.T.S.

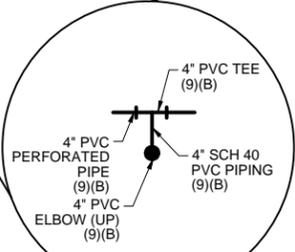


VALVE BOX
N.T.S.

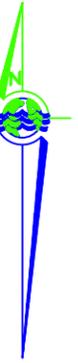


PLAN VIEW

STACK FOR RESIDENTIAL SYSTEM
N.T.S.

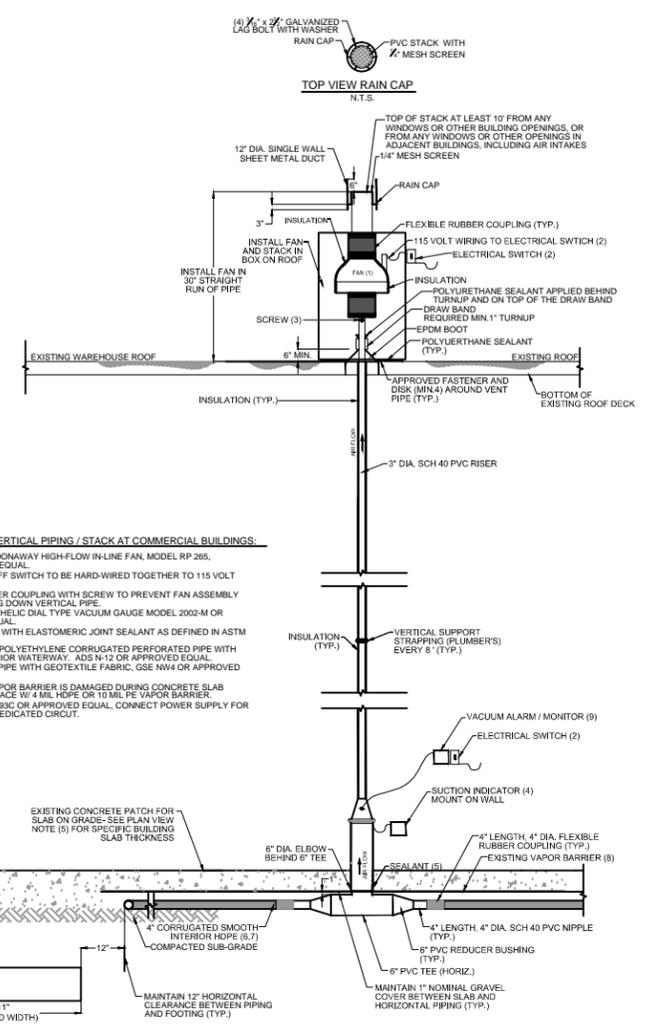


- NOTES:**
1. THE LAND WHOLESALE WAREHOUSE, SUNNY SIDE UP PARTIES, AND PARABIT MANUFACTURING BUILDINGS ARE ASSUMED TO HAVE SEPARATE FOUNDATIONS.
 2. INSTALL HDPE PERFORATED PIPING 3' FROM INTERIOR WALL. THIS ASSUMES FOOTINGS ARE 2' WIDE, FROM THE INTERIOR WALLS, AND THEREFORE THE PIPING IS 12" INSIDE OF THE FOOTINGS.
 3. INSTALL 4" DIA. SCH 40 PVC SOLID PIPE IN SAME TRENCH AS HDPE PERFORATED PIPE W/ 12" OF CLEARANCE FROM FOUNDATION WALL.
 4. INSTALL 3-15' SECTIONS OF 4" PVC PERFORATED PIPE W/ CAPPED ENDS. REFER TO CONSTRUCTION DETAILS (THIS SHEET). REMOVE CYLINDRICAL SECTIONS OF SOIL WITH HIGH PRESSURE AIR TO INSTALL PIPE.
 5. (A) 10" THICK EXIST. CONCRETE SLAB WITH VAPOR BARRIER. (B) 11" THICK EXIST. CONCRETE SLAB WITH VAPOR BARRIER. (C) 11" THICK EXIST. CONCRETE SLAB WITH VAPOR BARRIER. (D) 4" THICK EXIST. CONCRETE SLAB.
 6. INSTALL 2-8' SECTIONS OF 4" PVC PERFORATED PIPE. REFER TO (4) ABOVE FOR INSTALLATION DETAILS.
 7. INSTALL CAPPED STUB OF 4" PVC SOLID PIPE 4' ABOVE F.F. FOR POSSIBLE FUTURE CONNECTION TO STACK & FAN. FAN & STACK WILL BE INSTALLED IF CONTAMINANT CONCENTRATIONS BENEATH THE SUNNY SIDE SLAB ARE NOT REDUCED WITHIN THE TIME INDICATED BY THE SAMPLING PLAN. AT THAT TIME, THE GATE VALVE WHICH ALLOWS FLOW FROM THE SUNNY SIDE SYSTEM INTO THE LANDING SYSTEM WILL BE CLOSED, ISOLATING THE TWO SYSTEMS.
 8. INSTALL 4" CAPPED STUB FOR POSSIBLE FUTURE EXPANSION ON SOUTH SIDE OF BUILDING.
 9. (A) FOR DETAILS OF THE 6" PVC TEE, CONNECTING HORIZONTAL PIPING, VERTICAL PIPING, ABOVE GRADE EQUIPMENT & THE EXHAUST STACK, REFER TO SUB-SLAB DE-PRESSURIZATION SYSTEM DETAIL FOR COMMERCIAL BUILDINGS (THIS SHEET). (B) FOR DETAILS OF THE 4" PVC TEE, CONNECTING HORIZONTAL PIPING, VERTICAL PIPING, ABOVE GRADE EQUIPMENT & THE EXHAUST STACK, REFER TO SUB-SLAB DE-PRESSURIZATION SYSTEM-DETAIL FOR RESIDENTIAL BUILDING (THIS SHEET).
 10. INSTALL 4" HDPE TEES FOR POSSIBLE FUTURE EXPANSION OF SYSTEM.
 11. INFILTEC WVM-93C OR APPROVED EQUAL. CONNECT POWER SUPPLY FOR MONITOR ON DEDICATED CIRCUIT.

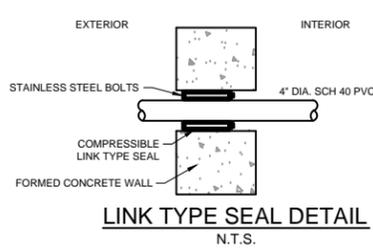


NOTES FOR VERTICAL PIPING / STACK AT COMMERCIAL BUILDINGS:

1. FAN TO BE RADONAWAY HIGH-FLOW IN-LINE FAN, MODEL RP 265, OR APPROVED EQUAL.
2. FAN AND ON/OFF SWITCH TO BE HARD-WIRED TOGETHER TO 115 VOLT CIRCUIT.
3. SECURE RUBBER COUPLING WITH SCREW TO PREVENT FAN ASSEMBLY FROM SLIPPING DOWN VERTICAL PIPE.
4. DWYER MAGNETIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
5. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
6. HIGH DENSITY POLYETHYLENE CORRUGATED PERFORATED PIPE WITH SMOOTH INTERIOR WATERWAY. ADS N-12 OR APPROVED EQUAL.
7. WRAP 4" HDPE PIPE WITH GEOTEXTILE FABRIC, GSE NW4 OR APPROVED EQUAL.
8. IF EXISTING VAPOR BARRIER IS DAMAGED DURING CONCRETE SLAB CUTTING, REPLACE W/ 4 MIL HDPE OR 10 MIL PE VAPOR BARRIER.
9. INFILTEC WVM-93C OR APPROVED EQUAL. CONNECT POWER SUPPLY FOR MONITOR ON DEDICATED CIRCUIT.



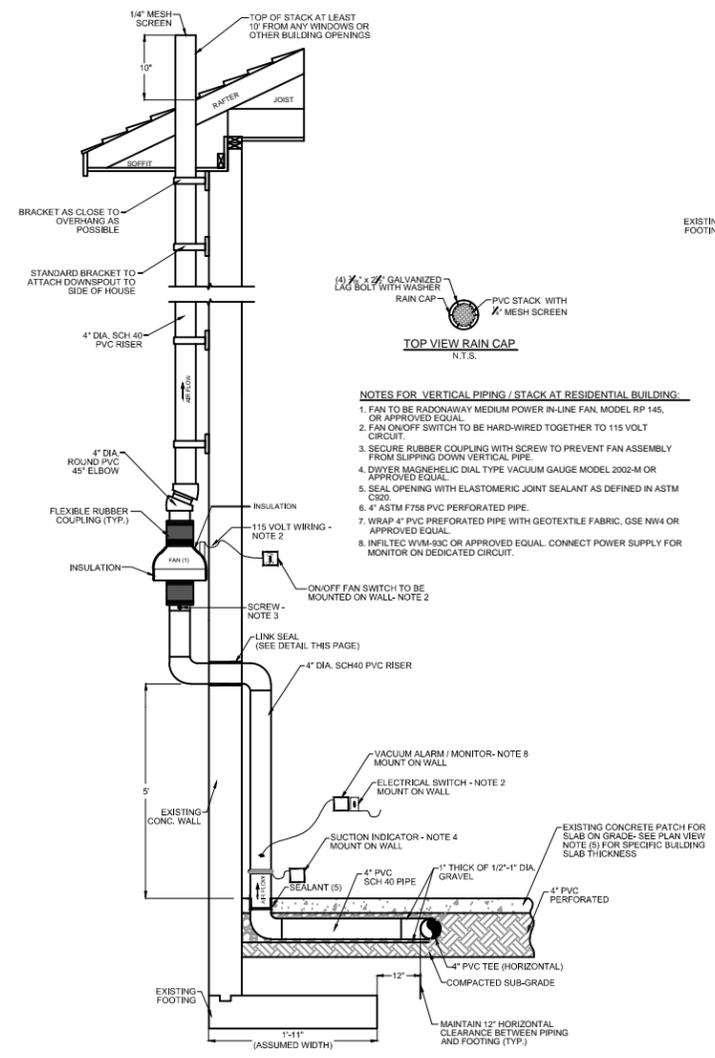
SUB-SLAB DE-PRESSURIZATION SYSTEM DETAIL FOR COMMERCIAL BUILDINGS
N.T.S.



LINK TYPE SEAL DETAIL
N.T.S.

NOTES FOR VERTICAL PIPING / STACK AT RESIDENTIAL BUILDING:

1. FAN TO BE RADONAWAY MEDIUM POWER IN-LINE FAN, MODEL RP 145, OR APPROVED EQUAL.
2. FAN ON/OFF SWITCH TO BE HARD-WIRED TOGETHER TO 115 VOLT CIRCUIT.
3. SECURE RUBBER COUPLING WITH SCREW TO PREVENT FAN ASSEMBLY FROM SLIPPING DOWN VERTICAL PIPE.
4. DWYER MAGNETIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
5. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
6. 4" ASTM F758 PVC PERFORATED PIPE.
7. WRAP 4" PVC PERFORATED PIPE WITH GEOTEXTILE FABRIC, GSE NW4 OR APPROVED EQUAL.
8. INFILTEC WVM-93C OR APPROVED EQUAL. CONNECT POWER SUPPLY FOR MONITOR ON DEDICATED CIRCUIT.



SUB-SLAB DE-PRESSURIZATION SYSTEM DETAIL FOR RESIDENTIAL BUILDING
N.T.S.

REVISIONS	DATE	INITIAL	COMMENTS

AS-BUILT SITE PLAN AND DETAILS
1 SHORE ROAD
GLENWOOD LANDING
FORMER PENETREX PROCESSING
NYSDEC I.D. No. 130034

PWGC
Strategic Environmental & Engineering Solutions
630 Johnson Ave. Suite 7 Bohemia, N.Y. 11716-2618
Ph: 631 588-6333 Fax: 631 588-6705 E-mail: info@pwgcss.com

Project: PEN0001	Approved By: PWG	Figure No: 7
Designed By: DD	Date: 8/15/07	
Drawn By: TC/LLG	Scale: AS SHOWN	

APPENDIX C

Monitoring Well Sampling Logs

APPENDIX D
Laboratory Reports



ANALYTICAL REPORT

Lab Number:	L1508648
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	John Eichler
Phone:	(631) 589-6353
Project Name:	FORMER PENETREX PROCESSING
Project Number:	PEN1101
Report Date:	04/30/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1508648-01	IA-001	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:02	04/24/15
L1508648-02	IA-002	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:15	04/24/15
L1508648-03	IA-003	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:19	04/24/15
L1508648-04	IA-004	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:23	04/24/15
L1508648-05	IA-005	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:30	04/24/15
L1508648-06	OA-001	AIR	1 SHORE RD, GLENWOOD LANDING, NY	04/24/15 11:36	04/24/15

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on April 20, 2015. The canister certification results are provided as an addendum.

Sample L1508648-04 results for Acetone should be considered estimated due to co-elution with a non-target peak.

Sample L1508648-06 : The canister vacuum measured on receipt at the laboratory was > 15 in. Hg and a smaller sample volume was used for analysis. The reporting limits have been elevated accordingly.

Sample Receipt

The sample designated OA-001 (L1508648-06) had a RPD for the pre- and post-flow controller calibration check (132% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 36.0 mL/minute; the final flow rate was 7.4 mL/minute. The final pressure recorded by the laboratory of the associated canister was -23.2 inches of mercury.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 04/30/15

AIR

Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-01
 Client ID: IA-001
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 18:46
 Analyst: RY

Date Collected: 04/24/15 11:02
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.317	0.200	--	1.57	0.989	--		1
Chloromethane	0.609	0.200	--	1.26	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	0.070	0.020	--	0.155	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	3.81	2.50	--	7.18	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	8.58	1.00	--	20.4	2.38	--		1
Trichlorofluoromethane	0.199	0.050	--	1.12	0.281	--		1
Isopropanol	0.573	0.500	--	1.41	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	3.06	0.500	--	10.6	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.065	0.050	--	0.498	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	3.48	0.500	--	10.3	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-01
 Client ID: IA-001
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Date Collected: 04/24/15 11:02
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	0.250	0.200	--	0.881	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.141	0.100	--	0.450	0.319	--		1
Carbon tetrachloride	0.055	0.020	--	0.346	0.126	--		1
Cyclohexane	0.217	0.200	--	0.747	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.553	0.200	--	2.27	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.17	0.050	--	4.41	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.169	0.020	--	1.15	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	0.171	0.020	--	0.743	0.087	--		1
p/m-Xylene	0.616	0.040	--	2.68	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.045	0.020	--	0.192	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-01

Date Collected: 04/24/15 11:02

Client ID: IA-001

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.187	0.020	--	0.812	0.087	--		1
4-Ethyltoluene	0.084	0.020	--	0.413	0.098	--		1
1,3,5-Trimethylbenzene	0.081	0.020	--	0.398	0.098	--		1
1,2,4-Trimethylbenzene	0.352	0.020	--	1.73	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	86		60-140
bromochloromethane	86		60-140
chlorobenzene-d5	93		60-140



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-02
 Client ID: IA-002
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 19:50
 Analyst: RY

Date Collected: 04/24/15 11:15
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.317	0.200	--	1.57	0.989	--		1
Chloromethane	0.484	0.200	--	0.999	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	5.04	1.00	--	12.0	2.38	--		1
Trichlorofluoromethane	0.197	0.050	--	1.11	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	11.8	0.500	--	41.0	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.064	0.050	--	0.491	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-02
 Client ID: IA-002
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Date Collected: 04/24/15 11:15
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	0.746	0.200	--	2.63	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.113	0.100	--	0.361	0.319	--		1
Carbon tetrachloride	0.052	0.020	--	0.327	0.126	--		1
Cyclohexane	0.203	0.200	--	0.699	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.90	0.050	--	7.16	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	0.115	0.020	--	0.500	0.087	--		1
p/m-Xylene	0.394	0.040	--	1.71	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-02

Date Collected: 04/24/15 11:15

Client ID: IA-002

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.115	0.020	--	0.500	0.087	--		1
4-Ethyltoluene	0.022	0.020	--	0.108	0.098	--		1
1,3,5-Trimethylbenzene	0.020	0.020	--	0.098	0.098	--		1
1,2,4-Trimethylbenzene	0.086	0.020	--	0.423	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	89		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	90		60-140



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-03
 Client ID: IA-003
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 20:22
 Analyst: RY

Date Collected: 04/24/15 11:19
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.378	0.200	--	1.87	0.989	--		1
Chloromethane	0.477	0.200	--	0.985	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.31	1.00	--	5.49	2.38	--		1
Trichlorofluoromethane	0.193	0.050	--	1.08	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.062	0.050	--	0.475	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.026	0.020	--	0.127	0.098	--		1



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-03
 Client ID: IA-003
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Date Collected: 04/24/15 11:19
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	0.056	0.020	--	0.352	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.254	0.050	--	0.957	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	0.041	0.020	--	0.178	0.087	--		1
p/m-Xylene	0.129	0.040	--	0.560	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-03

Date Collected: 04/24/15 11:19

Client ID: IA-003

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.042	0.020	--	0.182	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.033	0.020	--	0.162	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	88		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	92		60-140



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-04
 Client ID: IA-004
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 20:54
 Analyst: RY

Date Collected: 04/24/15 11:23
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.347	0.200	--	1.72	0.989	--		1
Chloromethane	0.460	0.200	--	0.950	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	12.3	2.50	--	23.2	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.86	1.00	--	6.79	2.38	--		1
Trichlorofluoromethane	0.186	0.050	--	1.05	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	0.940	0.500	--	3.27	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.062	0.050	--	0.475	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-04
 Client ID: IA-004
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Date Collected: 04/24/15 11:23
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	0.878	0.200	--	3.09	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.416	0.100	--	1.33	0.319	--		1
Carbon tetrachloride	0.053	0.020	--	0.333	0.126	--		1
Cyclohexane	0.246	0.200	--	0.847	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	1.80	0.200	--	8.41	0.934	--		1
Heptane	0.530	0.200	--	2.17	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	4.56	0.050	--	17.2	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.020	0.020	--	0.136	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	0.643	0.020	--	2.79	0.087	--		1
p/m-Xylene	2.20	0.040	--	9.56	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.020	0.020	--	0.085	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-04

Date Collected: 04/24/15 11:23

Client ID: IA-004

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.838	0.020	--	3.64	0.087	--		1
4-Ethyltoluene	0.218	0.020	--	1.07	0.098	--		1
1,3,5-Trimethylbenzene	0.237	0.020	--	1.17	0.098	--		1
1,2,4-Trimethylbenzene	0.943	0.020	--	4.64	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	93		60-140



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-05
 Client ID: IA-005
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 21:26
 Analyst: RY

Date Collected: 04/24/15 11:30
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.278	0.200	--	1.37	0.989	--		1
Chloromethane	0.520	0.200	--	1.07	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	13.4	2.50	--	25.2	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	212	1.00	--	504	2.38	--		1
Trichlorofluoromethane	0.215	0.050	--	1.21	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	5.04	0.050	--	38.6	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

SAMPLE RESULTS

Lab ID: L1508648-05
 Client ID: IA-005
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Date Collected: 04/24/15 11:30
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.113	0.100	--	0.361	0.319	--		1
Carbon tetrachloride	0.057	0.020	--	0.359	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.29	0.050	--	4.86	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.362	0.020	--	2.45	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	0.099	0.020	--	0.430	0.087	--		1
p/m-Xylene	0.292	0.040	--	1.27	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-05

Date Collected: 04/24/15 11:30

Client ID: IA-005

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.070	0.020	--	0.304	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.057	0.020	--	0.280	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	80		60-140
bromochloromethane	79		60-140
chlorobenzene-d5	90		60-140



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-06 D
 Client ID: OA-001
 Sample Location: 1 SHORE RD, GLENWOOD LANDING,
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/29/15 18:14
 Analyst: RY

Date Collected: 04/24/15 11:36
 Date Received: 04/24/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.505	--	ND	2.50	--		2.525
Chloromethane	0.659	0.505	--	1.36	1.04	--		2.525
Freon-114	ND	0.126	--	ND	0.881	--		2.525
Vinyl chloride	ND	0.051	--	ND	0.129	--		2.525
1,3-Butadiene	ND	0.051	--	ND	0.112	--		2.525
Bromomethane	ND	0.051	--	ND	0.196	--		2.525
Chloroethane	ND	0.051	--	ND	0.133	--		2.525
Ethanol	ND	6.31	--	ND	11.9	--		2.525
Vinyl bromide	ND	0.505	--	ND	2.21	--		2.525
Acetone	4.18	2.52	--	9.93	5.99	--		2.525
Trichlorofluoromethane	0.242	0.126	--	1.36	0.708	--		2.525
Isopropanol	ND	1.26	--	ND	3.10	--		2.525
1,1-Dichloroethene	ND	0.051	--	ND	0.200	--		2.525
Methylene chloride	ND	1.26	--	ND	4.38	--		2.525
3-Chloropropene	ND	0.505	--	ND	1.58	--		2.525
Carbon disulfide	ND	0.505	--	ND	1.57	--		2.525
Freon-113	ND	0.126	--	ND	0.966	--		2.525
trans-1,2-Dichloroethene	ND	0.051	--	ND	0.200	--		2.525
1,1-Dichloroethane	ND	0.051	--	ND	0.204	--		2.525
Methyl tert butyl ether	ND	0.051	--	ND	0.182	--		2.525
2-Butanone	ND	1.26	--	ND	3.72	--		2.525
cis-1,2-Dichloroethene	ND	0.051	--	ND	0.200	--		2.525
Ethyl Acetate	ND	1.26	--	ND	4.54	--		2.525
Chloroform	ND	0.051	--	ND	0.247	--		2.525



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-06 D

Date Collected: 04/24/15 11:36

Client ID: OA-001

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrahydrofuran	ND	1.26	--	ND	3.72	--		2.525
1,2-Dichloroethane	ND	0.051	--	ND	0.204	--		2.525
n-Hexane	ND	0.505	--	ND	1.78	--		2.525
1,1,1-Trichloroethane	ND	0.051	--	ND	0.276	--		2.525
Benzene	ND	0.252	--	ND	0.805	--		2.525
Carbon tetrachloride	0.078	0.051	--	0.493	0.318	--		2.525
Cyclohexane	ND	0.505	--	ND	1.74	--		2.525
1,2-Dichloropropane	ND	0.051	--	ND	0.233	--		2.525
Bromodichloromethane	ND	0.051	--	ND	0.338	--		2.525
1,4-Dioxane	ND	0.252	--	ND	0.908	--		2.525
Trichloroethene	ND	0.051	--	ND	0.271	--		2.525
2,2,4-Trimethylpentane	ND	0.505	--	ND	2.36	--		2.525
Heptane	ND	0.505	--	ND	2.07	--		2.525
cis-1,3-Dichloropropene	ND	0.051	--	ND	0.229	--		2.525
4-Methyl-2-pentanone	ND	1.26	--	ND	5.16	--		2.525
trans-1,3-Dichloropropene	ND	0.051	--	ND	0.229	--		2.525
1,1,2-Trichloroethane	ND	0.051	--	ND	0.276	--		2.525
Toluene	0.215	0.126	--	0.810	0.475	--		2.525
2-Hexanone	ND	0.505	--	ND	2.07	--		2.525
Dibromochloromethane	ND	0.051	--	ND	0.430	--		2.525
1,2-Dibromoethane	ND	0.051	--	ND	0.388	--		2.525
Tetrachloroethene	ND	0.051	--	ND	0.342	--		2.525
Chlorobenzene	ND	0.051	--	ND	0.233	--		2.525
Ethylbenzene	0.124	0.051	--	0.539	0.219	--		2.525
p/m-Xylene	0.364	0.101	--	1.58	0.439	--		2.525
Bromoform	ND	0.051	--	ND	0.522	--		2.525
Styrene	ND	0.051	--	ND	0.215	--		2.525
1,1,2,2-Tetrachloroethane	ND	0.051	--	ND	0.347	--		2.525



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**SAMPLE RESULTS**

Lab ID: L1508648-06 D

Date Collected: 04/24/15 11:36

Client ID: OA-001

Date Received: 04/24/15

Sample Location: 1 SHORE RD, GLENWOOD LANDING,

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
o-Xylene	0.083	0.051	--	0.362	0.219	--		2.525
4-Ethyltoluene	ND	0.051	--	ND	0.248	--		2.525
1,3,5-Trimethylbenzene	ND	0.051	--	ND	0.248	--		2.525
1,2,4-Trimethylbenzene	0.053	0.051	--	0.261	0.248	--		2.525
Benzyl chloride	ND	0.505	--	ND	2.61	--		2.525
1,3-Dichlorobenzene	ND	0.051	--	ND	0.304	--		2.525
1,4-Dichlorobenzene	ND	0.051	--	ND	0.304	--		2.525
1,2-Dichlorobenzene	ND	0.051	--	ND	0.304	--		2.525
1,2,4-Trichlorobenzene	ND	0.126	--	ND	0.935	--		2.525
Hexachlorobutadiene	ND	0.126	--	ND	1.34	--		2.525

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	64		60-140
bromochloromethane	73		60-140
chlorobenzene-d5	68		60-140



Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 04/29/15 14:52

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-06 Batch: WG780410-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 04/29/15 14:52

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-06 Batch: WG780410-4								
Chloroform	ND	0.020	--	ND	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1

Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 04/29/15 14:52

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-06 Batch: WG780410-4								
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Parameter	LCS	Qual	LCSD	Qual	%Recovery	RPD	Qual	RPD
	%Recovery		%Recovery		Limits			Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG780410-3								
Propylene	101		-		70-130	-		25
Dichlorodifluoromethane	81		-		70-130	-		25
Chloromethane	86		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	91		-		70-130	-		25
Vinyl chloride	86		-		70-130	-		25
1,3-Butadiene	89		-		70-130	-		25
Bromomethane	91		-		70-130	-		25
Chloroethane	81		-		70-130	-		25
Ethyl Alcohol	81		-		70-130	-		25
Vinyl bromide	87		-		70-130	-		25
Acetone	97		-		70-130	-		25
Trichlorofluoromethane	88		-		70-130	-		25
iso-Propyl Alcohol	95		-		70-130	-		25
Acrylonitrile	75		-		70-130	-		25
1,1-Dichloroethene	84		-		70-130	-		25
Methylene chloride	88		-		70-130	-		25
3-Chloropropene	87		-		70-130	-		25
Carbon disulfide	79		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	88		-		70-130	-		25
Halothane	85		-		70-130	-		25
trans-1,2-Dichloroethene	78		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG780410-3								
1,1-Dichloroethane	87		-		70-130	-		25
Methyl tert butyl ether	83		-		70-130	-		25
Vinyl acetate	108		-		70-130	-		25
2-Butanone	97		-		70-130	-		25
cis-1,2-Dichloroethene	104		-		70-130	-		25
Ethyl Acetate	109		-		70-130	-		25
Chloroform	94		-		70-130	-		25
Tetrahydrofuran	90		-		70-130	-		25
1,2-Dichloroethane	89		-		70-130	-		25
n-Hexane	87		-		70-130	-		25
1,1,1-Trichloroethane	86		-		70-130	-		25
Benzene	90		-		70-130	-		25
Carbon tetrachloride	87		-		70-130	-		25
Cyclohexane	88		-		70-130	-		25
1,2-Dichloropropane	94		-		70-130	-		25
Bromodichloromethane	89		-		70-130	-		25
1,4-Dioxane	96		-		70-130	-		25
Trichloroethene	95		-		70-130	-		25
2,2,4-Trimethylpentane	90		-		70-130	-		25
cis-1,3-Dichloropropene	99		-		70-130	-		25
4-Methyl-2-pentanone	101		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG780410-3								
trans-1,3-Dichloropropene	88		-		70-130	-		25
1,1,2-Trichloroethane	97		-		70-130	-		25
Toluene	100		-		70-130	-		25
2-Hexanone	115		-		70-130	-		25
Dibromochloromethane	99		-		70-130	-		25
1,2-Dibromoethane	107		-		70-130	-		25
Tetrachloroethene	104		-		70-130	-		25
1,1,1,2-Tetrachloroethane	92		-		70-130	-		25
Chlorobenzene	105		-		70-130	-		25
Ethylbenzene	105		-		70-130	-		25
p/m-Xylene	105		-		70-130	-		25
Bromoform	101		-		70-130	-		25
Styrene	112		-		70-130	-		25
1,1,1,2,2-Tetrachloroethane	106		-		70-130	-		25
o-Xylene	104		-		70-130	-		25
Isopropylbenzene	101		-		70-130	-		25
4-Ethyltoluene	105		-		70-130	-		25
1,3,5-Trimethylbenzene	91		-		70-130	-		25
1,2,4-Trimethylbenzene	108		-		70-130	-		25
Benzyl chloride	105		-		70-130	-		25
1,3-Dichlorobenzene	111		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Project Number: PEN1101

Lab Number: L1508648

Report Date: 04/30/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG780410-3								
1,4-Dichlorobenzene	108		-		70-130	-		25
sec-Butylbenzene	100		-		70-130	-		25
p-Isopropyltoluene	94		-		70-130	-		25
1,2-Dichlorobenzene	110		-		70-130	-		25
n-Butylbenzene	108		-		70-130	-		25
1,2,4-Trichlorobenzene	125		-		70-130	-		25
Naphthalene	117		-		70-130	-		25
1,2,3-Trichlorobenzene	119		-		70-130	-		25
Hexachlorobutadiene	119		-		70-130	-		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102				70-130

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Project Number: PEN1101

Lab Number: L1508648

Report Date: 04/30/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG780410-5 QC Sample: L1508648-01 Client ID: IA-001						
Dichlorodifluoromethane	0.317	0.314	ppbV	1		25
Chloromethane	0.609	0.646	ppbV	6		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	0.070	0.072	ppbV	3		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	3.81	4.01	ppbV	5		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	8.58	9.16	ppbV	7		25
Trichlorofluoromethane	0.199	0.213	ppbV	7		25
Isopropanol	0.573	0.608	ppbV	6		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	3.06	3.25	ppbV	6		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	0.065	0.071	ppbV	9		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Project Number: PEN1101

Lab Number: L1508648

Report Date: 04/30/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG780410-5 QC Sample: L1508648-01 Client ID: IA-001					
Methyl tert butyl ether	ND	ND	ppbV	NC	25
2-Butanone	3.48	3.68	ppbV	6	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	0.250	0.249	ppbV	0	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	0.141	0.146	ppbV	3	25
Carbon tetrachloride	0.055	0.055	ppbV	0	25
Cyclohexane	0.217	0.220	ppbV	1	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	0.553	0.558	ppbV	1	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Project Number: PEN1101

Lab Number: L1508648

Report Date: 04/30/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG780410-5 QC Sample: L1508648-01 Client ID: IA-001					
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	1.17	1.20	ppbV	3	25
2-Hexanone	ND	ND	ppbV	NC	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	0.169	0.176	ppbV	4	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.171	0.175	ppbV	2	25
p/m-Xylene	0.616	0.632	ppbV	3	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	0.045	0.048	ppbV	6	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.187	0.195	ppbV	4	25
4-Ethyltoluene	0.084	0.087	ppbV	4	25
1,3,5-Trimethylbenzene	0.081	0.084	ppbV	4	25
1,2,4-Trimethylbenzene	0.352	0.360	ppbV	2	25
Benzyl chloride	ND	ND	ppbV	NC	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER PENETREX PROCESSING

Project Number: PEN1101

Lab Number: L1508648

Report Date: 04/30/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG780410-5 QC Sample: L1508648-01 Client ID: IA-001					
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name: FORMER PENETREX PROCESSING

Serial_No:04301516:00
 Lab Number: L1508648

Project Number: PEN1101

Report Date: 04/30/15

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1508648-01	IA-001	0574	#90 AMB	04/20/15	202604		-	-	-	Pass	35.4	36.1	2
L1508648-01	IA-001	150	2.7L Can	04/20/15	202604	L1507336-01	-	-29.7	-4.6	-	-	-	-
L1508648-02	IA-002	0453	#30 SV	04/20/15	202604		-	-	-	Pass	36.0	34.9	3
L1508648-02	IA-002	459	2.7L Can	04/20/15	202604	L1507336-01	-	-29.7	-4.8	-	-	-	-
L1508648-03	IA-003	0208	#16 AMB	04/20/15	202604		-	-	-	Pass	35.1	43.0	20
L1508648-03	IA-003	251	2.7L Can	04/20/15	202604	L1507336-01	-	-29.5	1.4	-	-	-	-
L1508648-04	IA-004	0252	#90 AMB	04/20/15	202604		-	-	-	Pass	35.9	37.0	3
L1508648-04	IA-004	507	2.7L Can	04/20/15	202604	L1507336-01	-	-29.7	-2.7	-	-	-	-
L1508648-05	IA-005	0454	#30 AMB	04/20/15	202604		-	-	-	Pass	29.3	27.5	6
L1508648-05	IA-005	321	2.7L Can	04/20/15	202604	L1507336-01	-	-29.7	-9.5	-	-	-	-
L1508648-06	OA-001	0336	#90 SV	04/20/15	202604		-	-	-	Pass	36.0	7.4	132
L1508648-06	OA-001	468	2.7L Can	04/20/15	202604	L1507336-01	-	-29.7	-23.2	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01
 Client ID: CAN 234 SHELF 15
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/14/15 00:33
 Analyst: MB

Date Collected: 04/13/15 10:03
 Date Received: 04/13/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01 Date Collected: 04/13/15 10:03
 Client ID: CAN 234 SHELF 15 Date Received: 04/13/15
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01
 Client ID: CAN 234 SHELF 15
 Sample Location:

Date Collected: 04/13/15 10:03
 Date Received: 04/13/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01 Date Collected: 04/13/15 10:03
 Client ID: CAN 234 SHELF 15 Date Received: 04/13/15
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	91		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01
 Client ID: CAN 234 SHELF 15
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/14/15 00:33
 Analyst: MB

Date Collected: 04/13/15 10:03
 Date Received: 04/13/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01
 Client ID: CAN 234 SHELF 15
 Sample Location:

Date Collected: 04/13/15 10:03
 Date Received: 04/13/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1507336
Report Date: 04/30/15

Air Canister Certification Results

Lab ID: L1507336-01
 Client ID: CAN 234 SHELF 15
 Sample Location:

Date Collected: 04/13/15 10:03
 Date Received: 04/13/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	92		60-140



Project Name: FORMER PENETREX PROCESSING**Lab Number:** L1508648**Project Number:** PEN1101**Report Date:** 04/30/15**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1508648-01A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)
L1508648-02A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)
L1508648-03A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)
L1508648-04A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)
L1508648-05A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)
L1508648-06A	Canister - 2.7 Liter	N/A	NA		Y	Absent	TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a "Total" result is defined as the summation of results for individual isomers or Aroclors. If a "Total" result is requested, the results of its individual components will also be reported. This is applicable to "Total" results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report



Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

Data Qualifiers

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1508648
Report Date: 04/30/15

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



AIR ANALYSIS

PAGE 1 OF 1

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

CHAIN OF CUSTODY

Client Information

Client: PWGC
 Address: 630 Johnson Ave
Bohemia, NY 11716
 Phone: 631-589-6353
 Fax: _____
 Email: John.e@pwgrosser.com

These samples have been previously analyzed by Alpha

Project Information

Project Name: Former Penetrex Processing
 Project Location: 1 Shore Rd, Greenwood Landing, NY
 Project #: 3 PEN1101
 Project Manager: John Eichler
 ALPHA Quote #: _____

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due: 5/1/15 Time: _____

Date Rec'd in Lab: 4/25/15

Report Information - Data Deliverables

FAX
 ADEX
 Criteria Checker: _____
 (Default based on Regulatory Criteria Indicated)
 Other Formats: _____
 EMAIL (standard pdf report)
 Additional Deliverables:
ASP-B
 Report to: (if different than Project Manager)

ALPHA Job #: L1508648

Billing Information

Same as Client info PO #: _____

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection					Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
		Date	Start Time	End Time	Initial Vacuum	Final Vacuum													
<u>08648-01</u>	<u>IA-001</u>	<u>4-24-15</u>	<u>1002</u>	<u>1102</u>	<u>-29.7</u>	<u>-5.0</u>	<u>AA</u>	<u>KC</u>	<u>2.7L</u>	<u>150</u>	<u>0574</u>	<u>X</u>							
<u>-02</u>	<u>IA-002</u>		<u>1015</u>	<u>1115</u>	<u>-29.7</u>	<u>-6.2</u>				<u>459</u>	<u>0453</u>								
<u>-03</u>	<u>IA-003</u>		<u>1019</u>	<u>1119</u>	<u>-29.5</u>	<u>-0.1</u>				<u>251</u>	<u>0208</u>								
<u>-04</u>	<u>IA-004</u>		<u>1023</u>	<u>1123</u>	<u>-29.7</u>	<u>-3.8</u>				<u>507</u>	<u>0252</u>								
<u>-05</u>	<u>IA-005</u>		<u>1030</u>	<u>1130</u>	<u>-29.7</u>	<u>-10.4</u>				<u>321</u>	<u>0454</u>								
<u>-06</u>	<u>OA-001</u>		<u>1033</u>	<u>1136</u>	<u>-29.7</u>	<u>-23.8</u>				<u>468</u>	<u>0336</u>								

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type

S

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:

Date/Time

Received By:

Date/Time

John Eichler
John Eichler - AAH
John Eichler

4/24/15 1900
4-25-15 0040

John Eichler - AAH
John Eichler

4/24/15 14:50
4/24/15 1900
4/25/15 0040

APPENDIX E
Data Usability Summary Report



DATA USABILITY SUMMARY REPORT (DUSR)

Site Name: Penetrex Site, Glenwood Landing, New York

Performing Laboratory: Alpha Analytical Laboratories, Westborough, Massachusetts

P.W. Grosser Project No. PEN1101, October 2015 Sampling

Project Manager John D. Eichler, Project Manager

Stone Project Number: 14020 – Penetrex Site, October 2015 Sampling.

Analyses/Methods: VOAs by Method 8260C

Data Validation Level Full on 10% or two samples in the SDG.

Prepared by: Kim Watson, Stone Environmental, Inc. Completed on: 12/8/2015

Reviewed by: Morgan Greenwald, Stone Environmental, Inc. SDG No.: L1527896

Stone Environmental, Inc. (Stone) has completed the validation and quality assurance (QA) evaluation on the analytical data prepared by Alpha Analytical Laboratories in Westborough, Massachusetts for 11 water samples, one field blank, and one trip blank collected October 28, 2015. The laboratory reported the data under Sample Delivery Group (SDG) No. L1527896 received by Stone on November 20, 2015. The sample and laboratory identifiers and the selected analyses as shown on the chain of custody records are provided in Attachment A. Volatile organic analyses were performed according to SW846 Methods 5030B and 8260C. The target compound lists were limited to the standard New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B list for volatiles in waters. This DUSR is based on review of the laboratory SDG case narrative and the full “Tier III” third-party data validation report, which are provided in Attachment B and Attachment C, respectively. Full Tier III data validation was performed on 10% of the data, or two samples for volatiles, in accordance with EPA Region II’s Standard Operating Procedures (SOPs) for validating organic analyses and NYSDEC’s Technical Guidance for Site Investigation and Remediation (DRAFT DER-10, Nov. 2009) Appendix 2B, Guidance for Data Deliverables and Development of Data Usability Summary Reports. Professional judgment was applied as necessary and appropriate. The remaining data in this SDG received a summary validation or Tier II validation as defined by EPA Region I guidelines.

This DUSR data evaluation included a review of the following as based on the case narrative, data summary tables, and the full data validation:

- Technical holding times
- Sample preservation
- Instrument tuning and calibration
- Instrument and preparation blanks
- Surrogate and internal standard recoveries
- Laboratory control and field sample spike recoveries
- Field and laboratory duplicates

- Sample quantitation and quantitation limits
- Calculation checks (not evaluated in a Tier II validation)

All laboratory deliverables were received in accordance with the work plan and general reporting requirements from NYSDEC's ASP (2005) with the exception that the original case narrative did not include a summary of the unacceptable QC outages. Upon request, the narrative was corrected and updated to include the unacceptable QC outages observed in the QC samples. Any deviations from acceptable QC specifications are discussed in detail in the case narrative and data validation report, and laboratory qualifiers (as defined in the data deliverables) were added to the data, when appropriate, to indicate potential concerns with data usability. These qualifiers were reported on the Form I's by the laboratory and by the third-party validator on the validator EDD. Final validated results are annotated with the following codes, as defined in EPA Region II SOPs.

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit. The associated numerical value is the sample quantitation limit. The sample quantitation limit accounts for sample-specific dilution factors and percent solids corrections or sample sizes that deviate from those required by the method.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. The "J" data may be biased high or low.
- 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.
- 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 such as dilutions and reanalyses, a result may be indicated as "rejected" to avoid confusion when a more quantitatively accurate result is available.

Summary of Data Usability

The validation and usability assessments indicate that the data from this sample set are usable as qualified during the validation assessment with the exception of the rejected data for 1,2,3-trichlorobenzene in MW-2, MW-3, MW-9 and MW-9D. The overall quality control data provided in the laboratory report and in the case narrative indicate that the data are representative of adequate method accuracy and precision with regard to project objectives. As noted in the full data validation report, results for several compounds were qualified as estimated (J, UJ) due to laboratory quality control outliers. These qualifications are summarized in the full validation report and are summarized below:

- Based on unacceptable percent relative standard deviation (%RSD) and percent difference (%D) values in the associated calibration standards, results for dichlorodifluoromethane, chloromethane, carbon disulfide, vinyl acetate, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene, bromoform, trans-1,4-dichloro-2-butene, bromochloromethane, 1,2-dichloroethane, tetrachloroethene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene and naphthalene in MW-3 and MW-9D were qualified as estimated (J, UJ).
- Based on the extremely high %D (>90%) in the associated continue calibration standard, results for 1,2,3-trichlorobenzene were rejected (R) in MW-3 and MW-9D. Other affected samples in the associated batch include MW-2 and MW-9.

- Based on laboratory contamination, the result for acetone in MW-9 was qualified as less than the reported limit (U).
- Based on the low recoveries in the LCS/LCSD pair, results for chloromethane in MW-3 and MW-9D were qualified as estimated biased low (UJ).
- Based on the low recoveries in the MS/MSD pair, results for vinyl acetate, chloromethane and trans-1,4-dichloro-2-butene in MW-2 were qualified as estimated biased low (J, UJ). Compounds that were acceptable in the MS sample but not in the MSD sample were qualified since the LCS/LCSD recoveries were not acceptable. No data were qualified for the compounds with high recoveries since these compounds were not detected in the associated sample.

Although data were rejected, the overall completeness level attained for the analysis of the field samples was greater than 95%. With the exceptions of 1,2,3-trichlorobenzene in MW-2, MW-3, MW-9 and MW-9D, the overall quality of the data was acceptable and all results as qualified (estimated results) are considered usable.

ATTACHMENT A

**CHAIN OF CUSTODY RECORD
SDG No. L1527896
Volatiles in Water Samples**



NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page
1 of 2

Date Rec'd in Lab 10/29/15

ALPHA Job # 1152796

Client: WVFC
Address: 620 Johnson Ave.
Bohemia, NY 11716
Phone: 631-589-6353
Fax: _____
Email: Sohne@wvgrasser.com

Project Name: Former Penetrex Processing
Project Location: 1 Shore Rd, Glenwood Landing, NY
Project # PEN1101

Project Manager: John Fichler
ALPHA Quote #: _____
Turn-Around Time
Standard Rush (only if pre approved)

Deliverables
 ASP-A
 ASP-B
 EQULS (1 File)
 EQULS (4 File)
 Other

Billing Information
 Same as Client Info
PO # _____

Client Information
Client: WVFC
Address: 620 Johnson Ave.
Bohemia, NY 11716
Phone: 631-589-6353
Fax: _____
Email: Sohne@wvgrasser.com

Project Information
Project Name: Former Penetrex Processing
Project Location: 1 Shore Rd, Glenwood Landing, NY
Project # PEN1101

Project Manager: John Fichler
ALPHA Quote #: _____
Turn-Around Time
Standard Rush (only if pre approved)

Deliverables
 ASP-A
 ASP-B
 EQULS (1 File)
 EQULS (4 File)
 Other

Billing Information
 Same as Client Info
PO # _____

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility: _____
 NJ NY
 Other: _____

Regulatory Requirement
 NY TOGS
 NY Part 375
 AWQ Standards
 NY CP-51
 NY Restricted Use
 Other
 NY Unrestricted Use
 NYC Sewer Discharge

Other project specific requirements/comments:

Sample Filtration
 Done
 Lab to do Preservation
 Lab to do
(Please Specify below)
Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Container Type	Preservative
		Date	Time				
1152796-01	MW-2/MS/MSD	10-28-15	0615	G-W	KC	V	
02	MW-3		0640				
03	MW-9		0720				
04	MW-9D		0735				
05	MW-8D		0800				
06	MW-8		0825				
07	MW-10		0850				
08	MW-1		0920				
09	MW-7		1005				
10	MW-4		1045				

Westboro: Certification No: MA935
Mansfield: Certification No: MA015
Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle
O = Other

Relinquished By: John Fichler
Date/Time: 10/29/15 1830
Received By: Paul Schue-AAA
Date/Time: 10/29/15 9:50

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Service Centers
 Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
 Albany, NY 12205: 14 Walker Way
 Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Project Name: **Former Penetrex Processing**
 Project Location: **1 Shore Rd, Glenwood Landing, NY**
 Project # **PEV1101**
 (Use Project name as Project #)
 Project Manager: **John Eichler**
 ALPHAQuote #: _____
 Turn-Around Time _____
 Standard Rush (only if pre approved)
 Due Date: _____ # of Days: _____
 Email: **John.Eichler@pwwrpress.com**

These samples have been previously analyzed by Alpha
 Other project specific requirements/comments: _____
 Please specify Metals or TAL. _____

Page # of	ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Sample Specific Comments
			Date	Time			
1	22896-11	Field Blank	10/28/15	1100	GW	LC	
2	12	DUPOOL	10/28/15	XX	GW	LC	
3	13	TRIP BLANK	10/27/15	XX	WT	MS	

ALPHA Job # **1527896**
 Date Rec'd in Lab **10/29/15**
 Page **2 of 2**

Billing Information
 Same as Client Info
 PO # _____

Deliverables
 ASP-A
 ASP-B
 EQULS (1 File)
 EQULS (4 File)
 Other

Disposal Site Information
 Please identify below location of applicable disposal facilities.
 Disposal Facility: _____
 NJ NY Other: _____

REGULATORY REQUIREMENT
 NY TOGS NY Part 375
 AWQ Standards NY CP-51
 NY Restricted Use Other
 NY Unrestricted Use
 NYC Sewer Discharge

ANALYSIS
 VOC NYTCL-8260

Sample Filtration
 Done
 Lab to do Preservation
 Lab to do
 (Please Specify below)

Westboro: Certification No: MA935
 Mansfield: Certification No: MA015

Container Code: _____
 Container Type: **V**
 Preservative Code: _____
 Preservative: **B**

Relinquished By: **John Eichler** Date/Time: **10/29/15 18:30**
 Received By: **John Eichler** Date/Time: **10/29/15 18:30**

Form No: 01-25 HC (rev. 30-Sept-2013)

ATTACHMENT B

**CASE NARRATIVE
SDG No. L1527896
Volatiles in Water Samples**

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1527896
Report Date: 11/24/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1527896-01	MW-2	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 06:15	10/29/15
L1527896-02	MW-3	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 06:40	10/29/15
L1527896-03	MW-9	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 07:20	10/29/15
L1527896-04	MW-9D	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 07:35	10/29/15
L1527896-05	MW-8D	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 08:00	10/29/15
L1527896-06	MW-8	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 08:25	10/29/15
L1527896-07	MW-10	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 08:50	10/29/15
L1527896-08	MW-1	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 09:20	10/29/15
L1527896-09	MW-7	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 10:05	10/29/15
L1527896-10	MW-4	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 10:45	10/29/15
L1527896-11	FIELD BLANK	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 11:00	10/29/15
L1527896-12	DUP001	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 00:00	10/29/15
L1527896-13	TRIP BLANK	WATER	1 SHORE RD., GLENWOOD LANDING, NY	10/28/15 00:00	10/29/15

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1527896
Report Date: 11/24/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1527896
Report Date: 11/24/15

Case Narrative (continued)

Report Submission

This report replaces the report issued November 5, 2015. At the client's request, all sample narratives are now included.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

The WG836780-1/-2 LCS/LCSD recoveries, associated with L1527896-01 through -04, are outside the acceptance criteria for chloromethane (60%/54%), vinyl acetate (LCSD 68%), bromochloromethane (LCS 141%), hexachlorobutadiene (LCS 137%), naphthalene (181%/180%), 1,2,3-trichlorobenzene (196%/178%), 1,2,4-trichlorobenzene (158%/140%), and trans-1,4-dichloro-2-butene (LCSD 66%), but within the overall method allowances.

The WG836780-1/-2 LCS/LCSD RPDs, associated with L1527896-01 through -04, are above the acceptance criteria for bromoform (21%), n-butylbenzene (21%), p-isopropyltoluene (22%), 1,2,4-trimethylbenzene (21%), 1,4-dioxane (22%) and 1,2,4,5-tetramethylbenzene (22%).

The WG836927-1/-2 LCS/LCSD recoveries, associated with L1527896-07, -08, -09, -11, -12, and -13, are outside the acceptance criteria for chloromethane (LCS 62%), naphthalene (165%/183%), 1,2,3-trichlorobenzene (176%/186%), 1,2,4-trichlorobenzene (148%/150%), and trans-1,4-dichloro-2-butene (67%/69%), but within the overall method allowances.

The WG837225-1/-2 LCS/LCSD recoveries, associated with L1527896-05, are outside the acceptance criteria for 4-methyl-2-pentanone (142%/144%) and 2,2-dichloropropane (143%/138%), but within the overall method allowances.

The WG837278-1/-2 LCS/LCSD recoveries, associated with L1527896-06 and -10, are outside the acceptance criteria for trans-1,3-dichloropropene (LCSD 68%), 4-methyl-2-pentanone (LCSD 55%), 2-hexanone (LCSD 53%), naphthalene (65%/55%), and trans-1,4-dichloro-2-butene (LCSD 60%), but within the overall method allowances.

The WG837278-1/-2 LCS/LCSD RPDs, associated with L1527896-06 and -10, are above the acceptance

Project Name: FORMER PENETREX PROCESSING
Project Number: PEN1101

Lab Number: L1527896
Report Date: 11/24/15

Case Narrative (continued)

criteria for methylene chloride (27%), 1,1-dichloroethane (28%), chloroform (28%), carbon tetrachloride (29%), 1,2-dichloropropane (28%), dibromochloromethane (31%), 1,1,2-trichloroethane (30%), tetrachloroethene (27%), chlorobenzene (29%), trichlorofluoromethane (30%), 1,2-dichloroethane (29%), 1,1,1-trichloroethane (30%), bromodichloromethane (30%), trans-1,3-dichloropropene (31%), cis-1,3-dichloropropene (30%), 1,1-dichloropropene (29%), bromoform (29%), 1,1,2,2-tetrachloroethane (27%), benzene (29%), toluene (29%), ethylbenzene (28%), chloromethane (27%), bromomethane (32%), vinyl chloride (30%), chloroethane (33%), 1,1-dichloroethene (27%), trans-1,2-dichloroethene (28%), trichloroethene (28%), 1,2-dichlorobenzene (26%), 1,3-dichlorobenzene (27%), 1,4-dichlorobenzene (27%), methyl tert butyl ether (29%), p/m-xylene (29%), o-xylene (29%), cis-1,2-dichloroethene (27%), dibromomethane (30%), 1,2,3-trichloropropane (26%), acrylonitrile (28%), styrene (30%), dichlorodifluoromethane (28%), acetone (28%), carbon disulfide (30%), 2-butanone (25%), vinyl acetate (31%), 4-methyl-2-pentanone (25%), 2-hexanone (23%), bromochloromethane (28%), 2,2-dichloropropane (29%), 1,2-dibromoethane (31%), 1,3-dichloropropane (29%), 1,1,1,2-tetrachloroethane (29%), bromobenzene (26%), n-butylbenzene (28%), sec-butylbenzene (28%), tert-butylbenzene (30%), o-chlorotoluene (27%), p-chlorotoluene (27%), 1,2-dibromo-3-chloropropane (24%), hexachlorobutadiene (27%), isopropylbenzene (28%), p-isopropyltoluene (29%), n-propylbenzene (29%), 1,2,4-trichlorobenzene (24%), 1,3,5-trimethylbenzene (29%), 1,2,4-trimethylbenzene (29%), 1,4-diethylbenzene (30%), 4-ethyltoluene (28%), 1,2,4,5-tetramethylbenzene (31%), ethyl ether (31%), and trans-1,4-dichloro-2-butene (27%).

The WG836780-4/-5 MS/MSD recoveries, performed on L1527896-01, are outside the acceptance criteria for chloromethane (MSD 60%), vinyl acetate (68%/67%), naphthalene (138%/140%), 1,2,3-trichlorobenzene (139%/137%) and trans-1,4-dichloro-2-butene (57%/57%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative

Date: 11/24/15

ATTACHMENT C

**DATA VALIDATION REPORT
SDG No. L1527896
Volatiles in Water Samples**

**DATA VALIDATION
FOR
PENETREX SITE
GLENWOOD LANDING, NEW YORK**

October 2015 Sampling Round

**ORGANIC ANALYSIS DATA
Volatiles in Water Samples**

Sample Delivery Group (SDG) No. L1527896

Chemical Analyses Performed By:

**Alpha Analytical
Eight Walkup Drive
Westborough, MA 01581-101**

For:

**John D. Eichler
P.W. Grosser Consulting
630 Johnson Avenue, Suite 7
Bohemia, NY 11716**

Data Validation Report By:

**Kim B. Watson, RGAP-GLP
Stone Environmental, Inc.
535 Stone Cutters Way
Montpelier, VT 05602**

December 8, 2015

Reference #14-020 Penetrex 10/2015
Validation Report_L1527896/kbw

EXECUTIVE SUMMARY

Stone Environmental, Inc. (Stone) has completed third-party data validation on volatile organic analyses (VOA) data in water samples as prepared by Alpha Analytical from the Penetrex Site in Glenwood Landing, New York. The laboratory reported the data under Sample Delivery Group (SDG) No. L1527896 that was submitted as a single data package received by Stone (electronically) on November 20, 2015. As requested in the Project Plan and by P.W. Grosser, approximately 10% or two samples from this SDG were considered for full data validation. The samples below were selected for validation as follows:

Sample No.	Laboratory ID	Parameter
MW-3	L1527896-02	VOA
MW-9D	L1527896-04	VOA

The samples in this data set represent samples collected on October 28, 2015. The samples were received at the laboratory the following day (October 29, 2015). Other samples reviewed during the validation effort were the field duplicates (DUP001) and the field QC samples identified as the field blank and the trip blank.

Based on the validation effort, results in all samples were determined to be valid as reported with the following exceptions:

- Results for dichlorodifluoromethane, chloromethane, carbon disulfide, vinyl acetate, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene, bromoform, trans-1,4-dichloro-2-butene, bromochloromethane, 1,2-dichloroethane, tetrachloroethene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene and naphthalene in MW-3 and MW-9D were qualified as estimated (J, UJ).
- Results for 1,2,3-trichlorobenzene were rejected (R) in MW-3 and MW-9D. Other affected samples in the associated batch include MW-2 and MW-9.
- The result for acetone in MW-9 was qualified as less than the reported limit (U).
- Results for chloromethane in MW-3 and MW-9D were qualified as estimated biased low (UJ).

- Results for vinyl acetate, chloromethane and trans-1,4-dichloro-2-butene in MW-2 were qualified as estimated biased low (J, UJ). Compounds that were acceptable in the MS sample but not in the MSD sample were qualified since the LCS/LCSD recoveries were not acceptable. No data were qualified for the compounds with high recoveries since these compounds were not detected in the associated sample.

The laboratory appropriately applied “J” qualifiers to the sample Form I’s when the concentration of an analyte was less than the sample-specific quantitation limit. The validator did not remove these qualifiers. All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column on the Form 1 summaries. All non-detects have been reported with a “U” on the EDD. The validator recommends that the non-detects reported to the MDL be reported as estimated “UJ” since these values are not supported with a calibration point on the initial calibration curve.

Documentation problems observed in the data package and on the chain of custody records are described in Section XIII.

This validation report shall be considered part of the data package for all future distributions of the volatiles analysis data.

The Overall Evaluation of Data (Section XII) presents the rationale for the decisions that have been implemented and are summarized above. The validation findings and conclusions for each analytical parameter are detailed in the remaining sections of this report and are based on the following information.

QC Criteria	Were acceptance criteria met for Contaminants of Concern?		
	Yes	No	NA
Chain of custody (COC)/sample integrity/holding times	√		
Data completeness	√		
Holding times and sample preservation	√		
GC/MS performance checks	√		
Calibrations		√	
Laboratory method blanks/equipment blanks		√	
Matrix spike/matrix spike duplicate (MS/MSD) results		√	
Laboratory control samples		√	
Field duplicate results	√		
Surrogate recoveries	√		
Internal standard results	√		
Compound identification	√		
Sample results	√		

QC Criteria	Were acceptance criteria met for Contaminants of Concern?		
	Yes	No	NA
Calculations/transcriptions	√		
<i>NA - Not applicable; indicates that either the QC is not applicable to this data set or is not required by the method. Note: Upon request the case narrative was corrected and updated in the data package.</i>			

INTRODUCTION

Analyses of water samples were performed according to US EPA SW846 Methodologies: Method 8260 GC/MS analyses for volatiles. The target compound lists included all standard target analytes typically specified under these methods under the NYS ASP Category B Deliverables.

To the extent possible, Stone's validation was performed in conformance with Tier III guidelines as defined by EPA Region I, "Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses", dated March 1996. The data were evaluated in accordance with EPA Region II's Standard Operating Procedures (SOPs) from the EPA Hazardous Waste Support Branch: SOP#HW-24 "SOP for the Validation of Organic Data Acquired Using SW-846 Method 8260" (Rev. 2, December 1996). EPA's "National Functional Guidelines for Organic Data Review" (EPA 540/R-99/008, October 1999) were also considered during the evaluation, and professional judgment was applied as necessary and appropriate.

As requested by P.W. Grosser, an independent third party data validation was performed on 10% of the sample data. In addition, the validation effort was used to complete the data usability evaluation for the data collected during the remediation investigation. The data usability summary report (DUSR) was prepared based on findings in this validation report and extrapolated to all samples in the deliverables for usability.

The data validation process evaluates data on a technical basis for chemical analyses conducted under the CLP or other well-defined methods. Contract compliance is evaluated only in specific situations. Issues pertaining to contractual compliance are noted where applicable. It is assumed that the data package is presented in accordance with the CLP requirements. It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

Results of sample analyses are reported by the laboratory as either qualified or unqualified; various qualifier codes are used by the laboratory to denote specific information regarding the analytical results. During the validation process, laboratory data are verified against all available supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data validator as necessary and appropriate. Raw data are examined in detail to check calculations, compound identification, and/or transcription errors in reference to samples in the Executive Summary only. Validated results are either qualified or unqualified; if results are unqualified, this means that the reported values may be used without reservation. Final validated results are annotated with the following codes, as defined in EPA Region II Standard Operating Procedures:

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated numerical value is the sample quantitation limit. The sample quantitation limit accounts for sample-specific dilution factors and percent solids corrections or sample sizes that deviate from those required by the method.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. The "J" data may be biased high or low.

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.

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.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

These codes indicate qualifications placed on the data as a result of the validation effort. They are recorded on the Validation EDD submitted electronically as Attachment A. The electronic data file is L1527896_ny1_validationcodes.xls, which contains the validated data in tabular format.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is completely unusable. The analysis is invalid due to significant quality control problems and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they have no useful purpose under any circumstances. Second, no analyte concentration is guaranteed to be accurate even if all associated quality control is acceptable. While strict quality control conformance provides well-defined confidence in the reported results, any analytical result will always contain some uncertainty as demonstrated in the laboratory-derived control limits.

The user is also cautioned that the validation effort is based on the materials provided by the laboratory. Software manipulation, resulting in misleading raw data printouts, cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

Detailed Findings of Measurement Error Associated with the Analytical Analysis

I. Preservation and Technical Holding Times (Sample Integrity)

The water samples for these analyses were collected on October 28, 2015. The samples were received at the laboratory the following day (October 29, 2015). Other samples reviewed during the validation effort were the field duplicates (DUP001) and the field QC samples identified as the field blank and the trip blank. According to chain of custody records, laboratory receipt records, and laboratory runlogs, all samples were appropriately preserved in the field prior to collection and confirmed by the laboratory to have a pH < 2. All holding times for analysis were met for all samples. All samples were received at the laboratory at the appropriate temperature (4.3 °C; <10°C limit).

II. GC/MS Instrument Performance Check (Tuning)

The tuning of the instruments for VOA analyses was demonstrated with the analysis of 4-bromofluorobenzene (BFB). Tunes were analyzed for each shift (12-hour period) during which the samples or associated standards were analyzed. All tunes as recorded on Form V-like summaries in this data set were acceptable.

Initial and continuing calibration verifications were performed for the VOA analyses and were acceptable with the following exceptions:

Analysis Date (file Id)	Analysis Time	Compound	%RSD % D/ Average RRF ¹	Action	Associated Samples
IC 10/11/2015 Gonzo.i	17:26- 21:18	acrolein	0.01728	None	All
		1,4-dioxane	0.00196	None	
10/12/2015 (1011A16.D) ICV	00:38	dichlorodifluoromethane	-29.0	UJ	All
		chloromethane	-23.1	UJ	
		carbon disulfide	-22.3	UJ	
		vinyl acetate	-60.0	UJ	
		2,2-dichloropropane	-41.6	UJ	
		carbon tetrachloride	-34.5	UJ	
		trans-1,3-dichloropropene	-23.9	UJ	
		bromoform	-21.2	UJ	
trans-1,4-dichloro-2-butene	-21.0	UJ			
11/2/2015 (1102A01.D)	12:09	chloromethane	-39.7	UJ	MW-3 MW-9D
		vinyl acetate	-21.0	UJ	
		bromochloromethane	41.0	UJ	
		1,2-dichloroethane	22.7	UJ	
		tetrachloroethene	25.2	J, UJ	
Trans-1,4-dichloro-2-butene	-22.5	UJ			

Analysis Date (file Id)	Analysis Time	Compound	%RSD % D/ Average RRF ¹	Action	Associated Samples
		1,2-dibromo-3-chloropropane	23.9	UJ	
		1,2,4-trichlorobenzene	58.6	UJ	
		hexachlorobutadiene	37.4	UJ	
		naphthalene	81.0	UJ	
		1,2,3-trichlorobenzene	96.0	R	

Initial Calibration (IC) limits = $\leq 20\%$ RSD or < 0.995 , Continuing Calibration (CC) limits = 20% D, AVE RRF < 0.050

¹It should be noted that pursuant to the National Functional Guidelines document, results for certain compounds such as 1,4-dioxane in all samples in this data set warranted qualification based on the low average RRF achieved. However, this compound was spiked into the laboratory control samples and the matrix spike pairs and satisfactory recoveries were demonstrated on the recovery summaries, therefore, results for this compound were not qualified. The CLP methodology and the SW846 8260 methodology specify that some compounds may exhibit RRFs < 0.05 , which is acceptable. Therefore, based on professional judgment, no data were qualified on this basis.

It should be noted that negative percent difference values will result in a low bias for positive detects and a positive percent difference will result in a high bias for positive detects.

Based on unacceptable percent relative standard deviation (%RSD) and percent difference (%D) values in the associated calibration standards, results for dichlorodifluoromethane, chloromethane, carbon disulfide, vinyl acetate, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene, bromoform, trans-1,4-dichloro-2-butene, bromochloromethane, 1,2-dichloroethane, tetrachloroethene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene and naphthalene in MW-3 and MW-9D were qualified as estimated (J, UJ).

Based on the extremely high %D ($> 90\%$) in the associated continue calibration standard, results for 1,2,3-trichlorobenzene were rejected (R) in MW-3 and MW-9D. Other affected samples in the associated batch include MW-2 and MW-9.

III. Blanks: Laboratory Method Blanks, Field and Trip Blanks

Laboratory method blanks (MB) were prepared with each analytical batch and reviewed by the validator. No target analytes were detected in any of the VOA MBs with the exception of acetone in MB WG836927Blank and WG837225-3BLANK (2.0 ug/L and 2.1 ug/L, respectively) on 11/03/2015. Based on laboratory contamination, the result for acetone in MW-9 was qualified as less than the reported limit (U).

A trip blank (TB) and a field blank (FB) were submitted with the samples in this data set. No target analytes were detected in the TB and no target analytes were detected in the FB.

IV. Surrogate Compounds (Organic)

Percent recoveries of the VOA surrogates (1,2-dichloroethane-d4, 4-bromofluorobenzene, dibromofluoromethane, toluene-d8) were correctly reported on the Form summaries and were within acceptance limits for the samples.

V. Internal Standards (IS)

All IS areas and retention times (RT), as reported on the Form VIII summaries, were within the established QC limits for all reported sample analyses in this data package.

VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample MW-2 was prepared as a water-matrix MS/MSD pair. Percent recoveries (%R) and relative percent differences (%RPD) between paired recoveries were correctly calculated and accurately reported on the Form III summaries for the spiked analytes in the organic analyses. All reported %Rs and RPD values for laboratory precision were acceptable with the following exceptions: recoveries were below the acceptance criteria in the MS/MSD pair for vinyl acetate (68%/67%), trans-1,4-dichloro-2-butene (57%/57%) and for chloromethane (60%) in the MSD. Recoveries exceeded the limits for naphthalene (138%/140%) and 1,2,3-trichlorobenzene (139%/137%).

Based on the low recoveries in the MS/MSD pair, results for vinyl acetate, chloromethane and trans-1,4-dichloro-2-butene in MW-2 were qualified as estimated biased low (J, UJ). Compounds that were acceptable in the MS sample but not in the MSD sample were qualified since the LCS/LCSD recoveries were not acceptable. No data were qualified for the compounds with high recoveries since these compounds were not detected in the associated sample.

VII. Field Duplicate Precision

Sample DUP001 was identified as a field duplicate of MW-3. All target analytes greater than the quantitation limit exhibited acceptable reproducibility (0-7%RPD; <30%RPD-Limit).

VIII. Laboratory Control Samples/Accuracy Check

Laboratory control samples and/or laboratory control sample duplicates (LCS/LCSD) were performed at the required frequency and results were provided on Form III-like summaries for all analyses. Recoveries were acceptable and within the laboratory derived recovery limits with the exceptions noted below:

Sample ID	Compound	LCS %R	LCSD %R	RPD	RPD limits/QC Limits	Action	Associated Samples
WG836780-1/2 LCS/LCSD 11/2/2015	chloromethane	60	54	11	20/64-130	UJ	MW-3 MW-9D
	Bromochloromethane	141	118	20	20/70-130	None	
	Hexachlorobutadiene	137	112	20	20/70-130	None	
	Naphthalene	181	180	1	20/70-130	None	
	1,2,3-Trichlorobenzene	196	178	10	20/70-130	Q-note	
	1,2,4-Trichlorobenzene	158	140	12	20/70-130	None	
	1,2,4-Trimethylbenzene	95	77	21	20/70-130	None	
	Bromoform	114	92	21	20/70-130	None	
	Vinyl acetate	79	68	15	20/70-130	None	
	n-butylbenzene	90	73	21	20/53-136	None	
	p-Isopropyltoluene	100	80	22	20/70-130	None	
	1,4-dioxane	118	95	22	20/56-162	None	
	1,2,4,5-tetramethylbenzene	97	78	22	20/70-130	None	
trans-1,4-Dichloro-2-butene	78	66	20	20/70-130	UJ		

Q-note: results for 1,2,3-trichlorobenzene were subsequently rejected due to the CCV and the R qualifier takes precedence. As does the J, UJ based on the calibration standards.

No action was taken on the RPD values alone that were marginally outside the limits since recoveries were acceptable in both the LCS/LCSD analyses. In addition, no action was taken on recoveries that exceeded the limits since these compounds were non-detect in the samples.

Based on the low recoveries in the LCS/LCSD pair, results for chloromethane in MW-3 and MW-9D were qualified as estimated biased low (UJ).

IX. Target Compound Identification

Reported target compounds were correctly identified with supporting spectra present for all field samples in this data set.

X. Compound Quantitation and Reported Quantitation Limits

Target compound concentrations and quantitation limits were appropriately reported on the Form Is.

The laboratory appropriately applied "J" qualifiers to the sample Form I's when the concentration of an analyte was less than the sample-specific quantitation limit. The validator did not remove these qualifiers. All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column on the Form 1 summaries. All non-detects have been reported with a "U" on the EDD. The validator recommends that the non-detects reported to the MDL be reported as estimated "UJ" since these values are not supported with a calibration point on the initial calibration curve.

The laboratory-generated quantitation limits are provided on the Form I and on the electronic data deliverables. Qualifications placed on the data as a result of the validation effort are highlighted and recorded on the validation electronic data deliverables (EDD) (L1527896_ny1_validationcodes.xls). The validation EDDs are submitted electronically in Attachment A.

XI. System Performance

The analytical systems appear to have been work satisfactorily at the time of these analyses based on evaluation of the available raw data. Due to the unacceptable calibration exceedances and the recoveries outside the limits in the LCS/LCSD it is highly suggested that new initial calibrations be performed.

XII. Overall Evaluation of Data

Based on the validation effort, results for the VOA analytes in these samples were determined to be valid as reported with the following exceptions:

- Based on unacceptable percent relative standard deviation (%RSD) and percent difference (%D) values in the associated calibration standards, results for dichlorodifluoromethane, chloromethane, carbon disulfide, vinyl acetate, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene, bromoform, trans-1,4-dichloro-2-butene, bromochloromethane, 1,2-dichloroethane, tetrachloroethene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene and naphthalene in MW-3 and MW-9D were qualified as estimated (J, UJ).
- Based on the extremely high %D (>90%) in the associated continue calibration standard, the result for 1,2,3-trichlorobenzene was rejected (R) in MW-3 and MW-9D. Other affected samples in the associated batch include MW-2 and MW-9.
- Based on laboratory contamination, the result for acetone in MW-9 was qualified as less than the reported limit (U).

- Based on the low recoveries in the LCS/LCSD pair, results for chloromethane in MW-3 and MW-9D were qualified as estimated biased low (UJ).
- Based on the low recoveries in the MS/MSD pair, results for vinyl acetate, chloromethane and trans-1,4-dichloro-2-butene in MW-2 were qualified as estimated biased low (J, UJ). Compounds that were acceptable in the MS sample but not in the MSD sample were qualified since the LCS/LCSD recoveries were not acceptable. No data were qualified for the compounds with high recoveries since these compounds were not detected in the associated sample.

The laboratory appropriately applied “J” qualifiers to the sample Form 1’s when the concentration of an analyte was less than the sample-specific quantitation limit. The validator did not remove these qualifiers. All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column on the Form 1 summaries. All non-detects have been reported with a “U” on the EDD. The validator recommends that the non-detects reported to the MDL be reported as estimated “UJ” since these values are not supported with a calibration point on the initial calibration curve.

XIII. Documentation

The chain of custody records were present and accurately completed for all reported samples in this data set and the data package was complete with the following exception:

- The original case narrative did not note any of the QC failures that were observed in the data package as required by the NYS ASP Appendix B deliverables and NELAP reporting. The validator requested that a revised narrative be provided so that the unacceptable QC data were documented by the laboratory. The updated narrative was provided on December 7, 2015.
- It should be noted that the method detection limits (MDL) study provided in the data package is over a year old (2009) and according to the SW846 methodologies these should be updated annually. The MDLs reported on the Form 1 do not match the MDLs reported on the MDL Summary Form; however, the values are within the documented LOD range specified.

These issues do not directly affect the validity of the analytical data, but could be problematic if the results were to be used in a litigation situation. These data packages were submitted to the validator electronically. Data are archived at the analytical laboratory.

This validation report shall be considered part of the data package for all future distributions of the volatiles analysis data.

ATTACHMENT A

**Electronic Data Deliverables Summary Tables
SDG No. L1527896
Volatiles in Water Samples
(Submitted Electronically)**

APPENDIX F
Site-Wide Inspection Form

Annual Inspection Checklist

FORMER PENETREX PROCESSING FACILITY
1 SHORE ROAD
GLENWOOD LANDING, NEW YORK

Date/time: 12/12/15

Inspector (name/organization): John Eichler / P.W. Grosser Consulting, Inc.

Detail the condition of the first floor concrete slab, make note of any significant penetrations through the concrete slab: The condition of the slabs are good. No significant penetrations were observed.

Detail the condition of sub-slab depressurization system, including, above grade piping, two blowers, and two pressure alarms: No damage was observed in the above-grade piping and the two blowers. The pressure readings indicated that the blowers were functioning as intended. The pressure alarms were tested by deactivating the SSDS, at which time the alarms sounded, indicating that the alarms were functioning properly.

Are any repairs and/or maintenance needed at this time? If so, conduct another inspection following repairs.

No repairs are needed at this time. There were no signs of development or ground-intrusive activities having been performed since the implementation of the SMP. Off-site monitoring well MW-6 was destroyed before the April 2015 groundwater sampling. The other monitoring wells were not damaged.

John Eichler

Name



Signature

2/22/16

Date