



# AEI Consultants

Environmental & Engineering Services

February 8, 2016

## SUPPLEMENTAL SITE INVESTIGATION REPORT

### Property Identification:

Nu-Clear Cleaners  
180 East Park Avenue  
Long Beach, New York 11561

Nassau County Section 59, Block 110, Lots 32-35  
EPA ID No. NYD068030782

Project #341998

### Prepared for:

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180 East Park Avenue  
Long Beach, New York 11561

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Attachment 1 Site Investigation Report, August 20, 2015, Nu-Clear Cleaners, 180 East Park Avenue, Long Beach, New York. Prepared by AEI Consultants.

## 1.0 Introduction

AEI Consultants (AEI) is pleased to provide this report which describes the activities and results of the Remedial Investigation (RI) performed at 180 East Park Avenue, in Long Beach, New York (Site) in accordance with 6 NYCRR Part 375, Subparts 375-1 to 375- 4 & 375-6. The Site location is shown on Figure 1. This investigation was completed in general accordance with the scope of services outlined in our authorized proposal and is subject to the limitations presented in Section 7.

### 1.1 Site Description

Nu-Clear Drive-In Cleaners (Nu-Clear) operates a commercial dry cleaning facility on the Site. The Site is located in a highly urbanized area of the City of Long Beach, which is situated approximately in the center of a barrier island located on the southwest shore of Long Island, New York. The location of the Site is depicted on Figure 1. The Site is defined on the Nassau County Tax Assessor records as Section 59, Block 110, Lots 32-35.

The Site is bordered to the north by East Park Avenue, to the east by Long Beach Boulevard, to the south by a municipally-owned paved parking area, and to the west by a private commercial/retail property. The Site covers approximately 0.7 acres, and includes a one-story masonry building housing a commercial office and dry-cleaning operations. The remainder of the Site is covered with asphaltic or concrete pavement. Topography in the vicinity of the site is generally flat, with elevations generally less than 10 feet above mean sea level (ft-msl).<sup>1</sup>

### 1.2 Background Information

On November 19, 2014, the NYSDEC issued a Notice of Violation (NOV) to Nu-Clear regarding a release of tetrachloroethylene (PCE) at the Site. The NOV specified a requirement to perform sampling at the Site, which was subsequently performed by Nu-Clear and the New York State Department of Environmental Conservation (NYSDEC) on January 15, 2015. The samples were reportedly collected from soil beneath/around the southeast corner of the existing dry cleaning building on the Site. Although the specific analytical results for the January 2015 soil sampling have not been made available to AEI, the results reportedly indicated elevated levels of PCE indicative of a suspected release. Based on these results, the NYSDEC notified Nu-Clear via a

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<sup>1</sup> Saccardi & Schiff, Inc., “Environmental Resources, Draft-November 2007”, <http://www.longbeachny.gov/vertical/sites/%7BC3C1054A-3D3A-41B3-8896-814D00B86D2A%7D/uploads/%7BA071434D-4F1A-435E-B7BD-434FD5DEDC9B%7D.PDF>, accessed April 8, 2015.

letter dated March 3, 2015, that a Work Plan was required to conduct additional sampling of soil and groundwater at the Site.

AEI conducted the required soil and groundwater sampling between July 15 and July 22, 2015 in accordance with a NYSDEC-approved Site Investigation Work Plan. The investigation included sampling of five (5) temporary soil vapor probes, two (2) temporary well points, three (3) permanent monitoring wells, and sediment and standing water in a stormwater collection basin in the municipal parking lot to the south of the Site. The results of the investigation were provided in a Site Investigation (SI) report prepared by AEI and dated August 20, 2015 (Attachment 1). In general, the results were consistent with the January 2015 sampling results, which indicated elevated concentrations of PCE in groundwater near the southeastern portion of the existing Site building. The maximum concentrations detected were 4,700 micrograms per liter (ug/l) in a temporary well point east of the site building. Petroleum-related volatile organic compounds (VOCs) (not suspected of being associated with the dry cleaning operations) were detected in a monitoring well in the northern parking area of the Site, suggesting potential migration of petroleum compounds onto the Site from an offsite source. The results also indicated that sediment and standing water in the dry well/drainage basin of the adjacent municipal parking lot were impacted with PCE, and soil vapor near the on-site building contained elevated levels of PCE [4,750,000 micrograms per cubic meter (ug/m<sup>3</sup>)] and related chlorinated VOCs (CVOCs) such as trichloroethylene (TCE) (331,000 ug/m<sup>3</sup>) and vinyl chloride (3,480 ug/m<sup>3</sup>). Additional investigation was recommended to characterize the magnitude and extent of CVOCs in soil and groundwater proximal to the Site.

As requested by Nu-Clear, AEI conducted further investigation of soil and groundwater impacts at the Site between December 7 and December 15, 2015. The work included using a Membrane Interface Probe (MIP) /direct-push rig to conduct real-time screening of total VOCs and CVOCs (including PCE and related compounds) at seven (7) locations both on-site and off-site. The MIP/direct-push technology provided data to characterize the magnitude of CVOC impacts along with the soil permeability and conductivity values at various depths. The work also included seven (7) additional soil borings to twenty feet beneath ground surface (bgs) in the southeast portion of the Site, and the municipal lot south of the Site. Five (5) additional permanent monitoring wells were also installed to the south and east of the Site. The site investigation sample locations are depicted on Figure 2. The methods and findings of this investigation are described in the following sections.

## 2.0 Report Organization

The remainder of this report is divided into the following sections:

**Section 3.0 Site Investigation Activities:** Summarizes field activities associated with the SI, including subsurface soil investigations, sediment sampling, soil vapor investigations, and groundwater investigations. Relevant technical correspondence documenting field activities are also summarized in this section.

**Section 4.0 Findings:** Presents the results of SI, both natural and chemical components and contaminants in subsurface soils, sediment, soil vapor, and groundwater. This section includes comparisons of the data with established and published standards, criteria and guidance values (SCG) including: New York State Standards as well as Federal requirements (as applicable).

**Section 5.0 Summary and Conclusions:** Provides an evaluation of data gathered during the SI, and potential migration pathways and contaminant persistence and/or migration. Recommendations regarding additional investigation warranted for the Site are also provided in this section.

**Section 6.0 Schedule:** Provides a tentative schedule for executing subsequent remedial activities for the Site.

## Section 7.0 Report Limitations and Reliance

### **3.0 Site Investigation Activities**

#### **3.1 Permitting and Utility Clearance**

Drilling permits were obtained from the City of Long Beach for this investigation, attached as Appendix A. Zebra Drilling of Lynbrook, New York was contracted to notify dig alert and to identify public utilities in the work area at least 72 hours prior to field activities.

#### **3.2 Geophysical Survey**

On December 7, 2015, a geophysical survey using Ground Penetrating Radar (GPR) was conducted by GPRS. The purpose of the survey was to locate subsurface anomalies and utilities near the proposed borings/monitoring wells, and provide boring safety clearance. The geophysical survey was conducted using a Radio-Detection RD 1000 cart-mounted GPR unit. GPRS conducted the survey in a grid pattern around the proposed borings/monitoring wells.

#### **3.3 Membrane Interface Probe Investigation**

On December 8, 2015 and December 9, 2015, seven (7) membrane Interface Probe (MIP) soil borings were advanced. The borings were advanced by Zebra Drilling using a track mounted geoprobe drill rig and a MIP installed in a van. The borings were advanced to a maximum of sixty (60) feet below ground surface (ft-bgs). The location of each boring is listed below, and depicted graphically on Figure 2:

- MIP-E1: 8 feet east of the Site building, on the sidewalk
- MIP-E2: Across Long Beach Boulevard east of the site, on the sidewalk near Pier one
- MIP-E3: 45 feet east of the site building, on Long Beach Boulevard
- MIP-E4: 25 feet east of the site building, on Long Beach Boulevard
- MIP-SE1: Across Long Beach Boulevard southeast of the site, on the sidewalk near residence 30 feet southeast of the site building southeast corner, on the sidewalk
- MIP-SE2: 30 feet southeast of the site building southeast corner, on the sidewalk
- MIP-S1: 120 feet south of the Site building, on the sidewalk near East Walnut Street

Zebra advanced the MIP in one foot increments. The MIP is a percussion tolerant VOC sensor that can continuously log volatile organics that diffuse through a semi-permeable membrane. The MIP membrane is heated to between 80° C and 125° C as it is advanced through the subsurface. Volatile organic compounds (VOCs) present in the subsurface partition into the membrane and migrate through it by diffusion into a carrier gas line that runs through the inside of the tooling from the probe to the following detectors:

- Flame ionization detector (FID) that measures any compound that has a hydrogen bond.

- Photoionization detector (PID) using a 10.2 electron vole (eV) lamp that detects most aromatic hydrocarbons and halogenated VOCs that have a double bond such as PCE and TCE.
- Halogen specific detector (XSD) that responds to the presence of halogenated VOCs.
- Electron Capture (ECD) that responds to the presence of chlorinated VOCs, mainly PCE and TCE

As indicated, the above three detectors each measure the presence of VOCs; however, where the FID will identify any compound with a hydrogen bond, the PID identifies more specific types of VOCs, and the XSD and ECD are the most precise in that they will detect only halogenated VOCs such as TCE and PCE, which are the compounds of concern in this investigation. The present investigation was designed to determine the distribution of the halogenated compound PCE around the site.

In addition to the above, the MIP measures the following characteristics of subsurface lithology:

- Hydraulic conductivity using a hydraulic profile tool (HPT) that measures the hydraulic permeability of subsurface formations by ejecting water at a specific rate into the surrounding soil formation and measuring resistance to the flow.
- Electrical conductivity (EC), measured in milliSiemens/meter (mS/m), distinguishes between coarse grained soils such as coarse sand and fine gravel, and finer grained soils such as fine sands, silts, and clays.

Interpretation of the HPT and EC measurements will estimate the relative porosity and therefore the hydraulic conductivity of subsurface soils:

- Greater resistance measured by the HPT indicates higher hydraulic pressure that corresponds to a lower hydraulic rate of flow or conductivity. Likewise, greater EC values indicate finer grained soils such as fine sands, silts, and clays that have a lower hydraulic conductivity.
- Less resistance measured by the HPT indicates lower hydraulic pressure that corresponds to a higher hydraulic rate of flow, and correspondingly lesser EC values indicate more porous soils such as coarse sand and fine gravel that have a higher hydraulic conductivity.

The relative rate of groundwater flow or K value may be calculated from the HPT and EC measurements and is reported in feet per day (ft/day).

The MIP collected continuous readings as it was advanced in one foot intervals. As the probe was advanced, the data that was collected was printed out as individual peaks on a vertical graph that corresponded to measurements taken at that particular one foot interval (see



Appendix B). There is a separate graph for each detector and for the EC and HPT readings. In addition the calculated K value is illustrated on a sixth graph. When the MIP data from each borehole was logged and analyzed, the MIP tooling was removed and cleaned between each sample location.

### **3.4 Drilling and Soil Sample Collection**

Drilling was conducted December 7, 2015, December 10, 2015 and December 15, 2015. A total of seven (7) borings, AEI-SB6 through AEI-SB12, were advanced south and southeast of the site building. A total of twelve (12) samples were collected from the seven (7) borings. The borings were advanced by Zebra drilling using a track mounted geoprobe drill rig. The borings were advanced to a maximum of forty-five (45) feet below ground surface (ft-bgs). The location of each boring is listed below, and depicted graphically on Figure 2:

- AEI-SB6: 60 feet southwest of the site building, in the municipal lot, near a residence
- AEI-SB7: 35 feet south of the site building, in the municipal lot, near a dry well
- AEI-SB8: 85 feet south of the site building, in the municipal lot, near a dry well
- AEI-SB9: 8 feet south of the site buildings southeast corner, on the sidewalk
- AEI-SB10: 15 feet east of the site buildings southeast corner, on the sidewalk
- AEI-SB11: 70 feet south of the site building, in the municipal lot
- AEI-SB12: 60 feet south of the site building, in the municipal lot.

The borings were advanced using three (3) inch outer diameter rods and samples were collected by advancing the rods with acetate sample liners in approximately five foot intervals. After each interval, the core was retrieved, core barrel disassembled, and the sample liner was removed and transferred to the onsite geologist. The cores were measured and soils logged using the Unified Soil Classification System. A photo ionization detector (PID) was used to screen soils in the field and the PID readings are included on each boring log (Appendix C). PID readings were taken every six (6) inches, and ranged from 0 to 3,620 ppm.

### **3.5 Monitoring Well & Temporary Well Installations**

On December 14, 2015 and December 15, 2015, five (5) permanent groundwater monitoring wells (MW-4D through MW-8) and two (2) temporary monitoring wells were installed by Zebra Drilling (Figure 2). The permanent monitoring well boreholes were advanced using steel casing and direct-push drilling techniques, while temporary well points were installed using direct-push equipment. Soils were continuously logged and field screened using a calibrated PID for evidence of impacts from ground surface to the final depth of each boring/monitoring well. Well cuttings from the borehole were containerized in a 55-gallon drum and temporarily staged onsite for future disposal pending receipt of the analytical results.

Temporary well points TWP-7 and TWP-9 were installed to the south and southeast, respectively, of the Site building. The wells were constructed of one-inch diameter schedule 40 polyvinyl chloride (PVC), including a 10-foot long screen set at the base of each borehole. TWP-7 and TWP-9 were installed to a depth of 20 ft-bgs.

The permanent monitoring wells were constructed of threaded, flush mount schedule 40 PVC installed to a depth of 30-45 ft-bgs.

- Monitoring well (MW-4D) was installed east of the building on the Site to a depth of 45 ft-bgs. Advancement of the boring at MW-1 was terminated at 45 ft-bgs based on the MIP investigation and to vertically delineate the PCE plume at the "hot spot".
- Monitoring well MW-5 was installed east of the building on the Site to a depth of 30 ft-bgs, just south of MW-4D. Advancement of the borings at MW-5 through MW-8 were terminated at 30 ft-bgs based on the MIP investigation showing significant decrease in ECD readings at this depth, and the presence of a potential confining layer (i.e., clay lens) encountered around 25-30 ft-bgs throughout the site.
- Monitoring well MW-6 was installed east of the site building on Long Beach Boulevard to a depth of 30 ft-bgs.
- Monitoring well MW-7 was installed southeast of the site building on the sidewalk to a depth of 30 ft-bgs.
- Monitoring well MW-8 was installed south of the site building on the sidewalk near East Walnut Street to a depth of 30 ft-bgs.

Upon completion of the well boreholes, 10 feet of 2-inch diameter PVC, pre-packed 0.010-slotted well screen was installed through the hollow casing. The well was extended to ground surface using 2-inch diameter solid PVC riser pipe. The pre-packed PVC screen includes about 3/4 inch of silica sand filter pack surrounding the PVC. Once the well is installed through the hollow casing, the casing is removed, and the remaining hole is filled with bentonite chips. A flush-mount metal casing/lid set in a concrete pad was installed to complete the well at ground surface, and the PVC well casing was secured with a lockable cap.

Following their completion, the permanent monitoring wells were developed by purging the screened interval using a whale pump for approximately 10 minutes until the water was free of silt and apparent turbidity. The development water was containerized in a 55-gallon drum and temporarily staged onsite for future disposal pending receipt of the analytical results.

### **3.6 Groundwater Sample Collection**

On December 7, 2015, groundwater samples were collected from temporary wells AEI-TWP7 and AEI-TWP9. The well points were initially purged using a peristaltic pump until the water was relatively clear and sediment free. Groundwater samples were collected using disposable polyethylene bailers, placed in laboratory-supplied containers, preserved as appropriate, and

submitted under chain-of-custody in an ice-filled cooler to a NY-certified analytical laboratory. After sample collection, the temporary well casing and screen was removed from the borehole, the borehole sealed using bentonite pellets, and finished at ground surface to match surrounding conditions.

On December 18, 2015, eight (8) groundwater samples were collected from MW-1 through MW-8. Prior to collecting groundwater samples, the monitoring wells were gauged for groundwater depth and non-aqueous phase liquid (NAPL) using a decontaminated oil-water interface probe. Groundwater samples were collected from each well using low flow sampling techniques by dedicated polyethylene tubing and a peristaltic pump. During purging, groundwater field parameters including pH, specific conductivity, temperature, turbidity, and dissolved oxygen were measured using a calibrated water quality meter equipped with a flow-through cell. Analytical samples were collected when water quality parameter measurements had stabilized. Groundwater purging and sampling data sheets are included as Appendix D.

Appropriate QA/QC samples were collected for the groundwater sampling event including one trip blank and one field duplicate sample. Subsequent to sample collection, the groundwater samples were preserved and placed in an ice-filled shipping cooler, and transported under chain-of-custody to a NY-certified analytical laboratory.

### **3.7 Soil Vapor Sample Collection**

On December 10, 2015 one (1) soil vapor sample was conducted on the site (Figure 2). The sampling was conducted in accordance with the guidelines outlined in Guidance for Evaluating Soil Vapor Intrusion in the State of New York by the New York State Department of Health. The location of each sample port is listed below:

- Probe AEI-SV-6 was advanced southwest of the site in the municipal lot, near the residence.

At the soil vapor sampling location, a ¼-inch by 6-inch long stainless steel slotted probe was inserted into the direct-push boring, the subsurface annular space was filled with #00 washed silica sand up to three (3) inches below ground surface, an annular seal of hydrated powdered bentonite completed the seal to ground surface, 0.25-inch Teflon tubing was inserted into the Teflon slotted probe. At least three (3) tubing and sample probe volumes were purged from the temporary sample point prior to the collection of each sample.

After soil vapor point installation and prior to sample collection, an enclosure was placed over the sealed borehole. The enclosure was filled with helium gas and a helium detector was used to verify the integrity of the ground surface-tubing seal. After the seal integrity was verified by the absence of helium tracer gas, the tubing was connected to a laboratory-supplied vacuum canister and a sample collected. The flow rate was calibrated at the laboratory to a rate of

approximately 200 ml/min. Each soil vapor sample was collected over a period of approximately ten (10) minutes. After sample collection, the vapor point was removed and the ground surface repaired to match surrounding conditions.

The soil gas sample was collected in a 2.7-liter summa canister. The canister was individually checked, tested, and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a vacuum gauge attached to the regulator was used to measure and record the initial summa canister vacuum. Once sampling was complete, each summa canister valve was shut tightly while maintaining a slight vacuum prior to sealing.

### **3.8 Laboratory Analyses**

The samples were transferred under appropriate chain-of-custody documentation to Alpha Laboratories of Westborough MA, certified by the New York State Department of Health to perform Contract Laboratory Program (CLP) analysis on all media sampled during this investigation. The laboratory performed the sample analysis in accordance with the most recent NYSDEC Analytical Services Protocol (ASP). Laboratory analytical documentation is provided in Appendix E. Laboratory analysis of the samples consisted of the following:

#### **Soil Samples SB-6 through SB-12:**

- Volatile Organic Compounds (VOCs) via EPA Method 8260.

#### **Soil Vapor Samples AEI-SV 6:**

- Volatile Organic Compounds (VOCs) via TO-15.

#### **Groundwater Samples AEI TWP-7, AEI TWP-9, AEI-MW-1 through AEI-MW-8:**

- Volatile Organic Compounds (VOCs) via EPA Method 8260.

### **3.9 Dry Well Waste Removal**

Due to the previous detection of elevated concentrations of PCE and other VOCs in the water and sediments in the dry well located in the public parking lot adjacent to the south of the Site building, on July 23, 2015, AEI retained AARCO Environmental to remove the standing water and sediments from the dry well. Nine (9) drums of water and four (4) drums of sediments were removed from the dry well. The drums were transported off-site on January 7, 2016 to Ross Incineration Services, Inc for proper disposal. Copies of the waste manifests are presented in Appendix F.

### **3.10 Investigation Derived Waste/Boring Abandonment**

Following completion of sample collection, the temporary well points and soil vapor points were backfilled with sand and hydrated bentonite chips. The borings were completed at the surface to match existing conditions. Soil boring cuttings and purge water from the monitoring wells were placed in 55 gallon drums for future disposal, pending receipt of soil and groundwater analytical results. A total of 10 drums of water and 12 drums of sediments/soil cuttings, including the water and sediments removed from the dry well, were transported off-site for disposal. Copies of the waste manifests are included in Appendix F.

## 4.0 Findings

This section presents the results of the RI activities, including physical (i.e., hydrogeological) Site conditions as well as Site-related contaminant results for soil, soil vapor, and groundwater. For the purpose of providing context to the data obtained during this investigation, analytical results are compared to the NYSDEC cleanup standards/objectives or federal EPA screening guidelines, as appropriate. Additionally, although comparisons to the most-stringent cleanup standard/objective are included for reference purposes, the data are compared to cleanup standards that are applicable for the current Site use and related potential human risk scenario. For this reason, comparisons are made to the NYSDEC commercial direct-contact soil cleanup objectives (SCOs), the NYSDEC groundwater quality standards (GWQS), and EPA commercial vapor intrusion screening levels (VISLs), which are applicable to this Site.

### 4.1 Geological and Hydrogeological Conditions

According to a report<sup>2</sup> prepared by Saccardi & Schiff, Inc., the barrier island on which Long Beach is located lies within the Atlantic Coastal Plain Province, which extends beneath the Atlantic Ocean about 100 miles offshore to the edge of the continental shelf. The southern portion of Long Island is a glacial outwash plain, which slopes southward towards the ocean. The area is underlain by several unconsolidated deposits of sand, gravel, and clay that were laid down in parallel beds on the surface of hard, crystalline bedrock.

Surficial soils in Long Beach are generally classified as Udipsamments-Beaches-Urban Land. This classification, which consists of more than one type of soil, is nearly level or gently sloping, excessively drained to moderately well drained, contains coarse textured soils, beaches, and urban land on barrier beaches.<sup>2,2</sup> The Udipsamments include isolated clay lenses within the sandy soils of Long Beach that create a perch for groundwater. The thickness of the Udipsamments fill reportedly ranges from four to 10 feet thick, and overly organic tidal marsh sediments. Groundwater in the shallow, unconsolidated sediments is generally encountered at depths greater than four ft-bgs, and generally flows south towards the Atlantic Ocean.

The Raritan clay is a member of the Raritan formation and is composed mostly of silty clays and non-continuous layers of sand beneath Long Beach. It is about 300 feet thick and 900 feet below sea level. The impervious nature of the Raritan clay makes it unusable for water supply, but serves as an effective barrier from intrusion of overlying water-bearing units. The Raritan

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<sup>2</sup> Saccardi & Schiff, Inc., "Environmental Resources, Draft-November 2007", <http://www.longbeachny.gov/vertical/sites/%7BC3C1054A-3D3A-41B3-8896-814D00B86D2A%7D/uploads/%7BA071434D-4F1A-435E-B7BD-434FD5DEDC9B%7D.PDF>, accessed April 8, 2015.

<sup>3</sup> U.S. Department of Agriculture Soil Conservation Service, Soil Survey of Nassau County, New York, Cornell University Agricultural Experimentation Station, General Soil Map, Nassau County, New York 1987

clay is overlain by the Magothy formation, which is salted beneath Long Beach, therefore, unusable as public water supply.

The subsurface soils encountered during this investigation were generally consistent with the conditions described above. Soils up to 30 feet consisted of grey medium to fine sand with occasional silty clay lenses, and some organic material. The geologic cross-section presented as Figure 3 shows that there are two continuous low permeability layers of grey silty clay with organic material present below the Site at depth intervals of approximately 22 to 23 ft-bgs and at 30 to 32 ft-bgs. Two additional layers may also be continuous at depths of approximately 37 to 39 ft-bgs and at 44 to 45 ft-bgs. Two discontinuous layers are also shown at depths of approximately 10 to 11 ft-bgs and 24 to 26 ft-bgs. Detailed geologic descriptions for each permanent and temporary monitoring well borehole are included in Appendix C.

The anticipated relatively shallow groundwater depth was confirmed, as the depth to groundwater was observed between 5.40 ft-bgs and 6.23 ft-bgs in the temporary and permanent monitoring wells. The direction of groundwater flow appeared to be towards the east/northeast during the July 2015 groundwater sampling event. However, it is likely that the gradient and direction of groundwater flow is influenced by tidal conditions typical of a barrier island setting like Long Beach.

## **4.3 Membrane Interface Probe Results**

### **4.3.1 In-Situ Soil Hydraulic Conductivity Results**

AEI completed in-situ hydraulic conductivity testing during subsurface profiling using the HPT, described in Section 3.3. The HPT provides continuous, real-time profiles of soil hydraulic properties. The HPT uses a sensitive down-hole transducer to measure the pressure response of the soil to the injection of water. The results of this testing is provided in the following table.

Approximate Depth Interval (ft-bgs)	In-Situ Hydraulic Conductivities (feet/day)				
	Boring ID				
	E1	E4	E3	SE2	S1
8 to 23	50	55	50 to 65	25 to 65	40 to 65
23 to 24	15	30	15	50	0
24 to 26	50	60	85	50	35
26 to 28	50	30	125 to 150	20	35
28 to 30	75	65		50	35 to 5
30 to 32	0	5		5	5
32 to 34	25	20		15	40
34 to 35	25	20		40	65
35 to 37	50	70			65
37 to 38	0	5			65
38 to 39	15	5			65
39 to 42	50 to 40	40			10
42 to 44		0			
44 to 45		25			
45 to 50		50 to 75			

The boring locations are shown on Figure 2. The complete HPT logs for all of the borings are presented in Appendix B.

AEI also completed a test to determine the hydraulic conductivity (K) of the aquifer materials below the site using an in-situ method called a slug test. A slug test is a controlled field experiment to estimate the hydraulic properties of aquifers in which the water level in a control well is caused to change suddenly (rise or fall) and the subsequent water-level response (displacement or change from static) is measured through time in the control well and one or more surrounding observation wells. Slug tests are frequently designated as rising-head or falling-head tests to describe water-level recovery in the control well following test initiation. Pressure transducers combined with data loggers were deployed in the wells tested in order to obtain rapid and accurate measurements of the change in water table elevations. The tests were performed on monitoring wells MW-1 and MW-3 on December 1, 2015. Three tests were conducted on both wells. Hydraulic conductivities were calculated using the Bouwer and Rice Method.

The average hydraulic conductivity calculated for MW-1 was  $6.3 \times 10^{-6}$  cm/sec (0.018 ft/day). The average hydraulic conductivity calculated for MW-3 was  $1.35 \times 10^{-5}$  cm/sec (0.038 ft/day).

#### 4.3.2 Volatile Organic Compound Results

The MIP logs for all of the borings are presented in Appendix B. The boring locations are shown on Figure 2. A table summarizing the results the ECD (electron capture detector) is presented below. The ECD responds to the presence of chlorinated VOCs, mainly PCE and TCE.



This table highlights the depth intervals that exhibited the greatest response, indicating the presence of these VOCs.

Approximate Depth Interval (ft-bgs)	Electron Capture Detector Readings ( $\mu\text{V} \times 10^5$ )					
	Boring ID					
	E1	E4	E3	E2	SE2	S1
0-2			1.4	0.1	1.3	3
2-4			1.0	0.1	1.0	2
4-6			1.6	0.1	0.7	2
6-8					0 to 0.8	
8-10	140	30			0.8 to 0	
10-12	140	30				
12-14	140 to 70					
14-16	70 to 120					
16-18	120					
18-20	50 to 90					
20-22	90					
22-24	70	20				
24-25	30					

#### 4.4 Monitoring Well Survey, Gauging and Groundwater Flow Direction

All of the Site monitoring wells were surveyed for location and elevation relative to an on-site arbitrary benchmark on January 7, 2016. The monitoring wells were also gauged for depth to water and NAPL on January 7, 2016. The well elevation and gauging data are presented in Appendix G. Using this data, AEI prepared a groundwater contour map (Figure 4). This map shows that the local direction of groundwater flow is towards the west. However, it is expected that if additional data was available to the south, there would probably be a component of flow in a southerly direction. Due to the location of the Site on a barrier island, there may be some influence of tidal variations on the direction of groundwater flow. The results of a tidal study using pressure transducers deployed in MW-1, MW-2 and MW-3 from December 1 to December 3, 2015 indicated that there is evidence of a small diurnal variation in groundwater elevations. The results of the study are presented in Appendix H.

#### 4.5 Soil Sample Analytical Results

The following information is a summary of the soil sample analytical test results (Appendix E). This information has also been included in Table 1 for shallow soil, and in Table 2 for deep soil.

##### **Shallow Soil Results:**

Soil samples were collected from SB-6 through SB-10, above the water table, approximately 5-6 ft-bgs. The following information is a summary of Table 1.

- All Volatile Organics were detected at concentrations less than their respective NYSDEC Unrestricted SCO, the most stringent NYSDEC soil criteria.

### **Deep Soil Results:**

Soil samples were collected from SB-6 through SB-12, in the saturated zone, biased toward highest PID readings or terminus of boring. The following information is a summary of Table 2.

- PCE was detected at 7,400 mg/kg in AEI SB-7 at 15 ft-bgs, which is well above the NYSDEC Restricted Commercial SCO of 150 mg/kg for PCE. PCE was detected below the NYSDEC SCO Unrestricted of 1.3 mg/kg at all other locations.
- Other Volatile Organics were detected under their respective NYSDEC Unrestricted SCO.

### **4.6 Soil Vapor Sample Analytical Results**

The following information is a summary of the soil vapor sample analytical test results (Appendix E). This information has also been included in Table 3.

- PCE was detected at 58,300 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), which exceeds the corresponding EPA commercial Vapor Intrusion Screening Level (VISL) of 1,600  $\mu\text{g}/\text{m}^3$ .
- TCE was detected at 183  $\mu\text{g}/\text{m}^3$ , which exceeded the corresponding EPA commercial VISL of 100  $\mu\text{g}/\text{m}^3$ .
- No other VOCs exceeded their respective EPA VISL for residential use.

### **4.7 Temporary Well Sample Results**

The following information is a summary of the groundwater sample analytical test results (Appendix E) collected from temporary wells. This information has also been included in Table 4.

The following compounds were detected at concentrations greater than their respective NYSDEC GWQS at TWP-7:

- PCE at 33,000  $\mu\text{g}/\text{l}$ ; TCE at 1,400  $\mu\text{g}/\text{l}$ ; 1,2 Dichloroethene (1,2 DCE) at 1,200  $\mu\text{g}/\text{l}$ ; and, cis-1,2 Dichloroethene (cis-1,2 DCE) at 2,100  $\mu\text{g}/\text{l}$ .
- The laboratory method detection limits (MDLs) and reportable limits (RLs) for Vinyl Chloride were greater than the applicable default NYSDEC GWQS in sample TWP-7.

The following compounds were detected at concentrations greater than their respective NYSDEC GWQS at TWP-9:

- PCE at 1,100  $\mu\text{g}/\text{l}$ ; Vinyl Chloride at 1,500  $\mu\text{g}/\text{l}$ ; TCE at 1,100  $\mu\text{g}/\text{l}$ ; 1,2 Dichloroethene (1,2 DCE) at 10,000  $\mu\text{g}/\text{l}$ ; and, cis-1,2 Dichloroethene (cis-1,2 DCE) at 10,000  $\mu\text{g}/\text{l}$ .

#### **4.8 Monitoring Well Groundwater Sample Results**

The following information is a summary of the permanent monitoring wells sampled one week after installation. Groundwater sample analytical test results are included as Appendix E. This information has also been included in Table 5.

##### **AEI-MW-1 - North of Dry Cleaner**

The following compounds exceed their respective NYSDEC GWQS in MW-1:

- Benzene at 4.2 µg/l
- Ethylbenzene at 44 µg/l
- Xylenes at 18 µg/l
- Isopropylbenzene at 8.4 µg/l
- Naphthalene at 90 µg/l
- n-Propylbenzene at 12 µg/l
- 1,2,4,5-Tetramethylbenzene at 13 µg/l

##### **AEI-MW-2-Southwest of Dry Cleaner-In Municipal Lot**

The following compounds exceed their respective NYSDEC GWQS in MW-2:

- cis-1,2-Dichloroethene at 83 µg/l

##### **AEI-MW-3-Southeast of Dry Cleaner-In Municipal Lot**

No VOCs exceeded their respective NYSDEC GWQS.

##### **AEI-MW-4D-East of Dry Cleaner**

The following compounds exceed their respective NYSDEC GWQS in MW-4D:

- Tetrachloroethene at 13 µg/l
- cis-1,2-Dichloroethene at 13 µg/l

##### **AEI-MW-5-East of Dry Cleaner**

The following compounds exceed their respective NYSDEC GWQS in MW-5:

- cis-1,2-Dichloroethene at 8.6 µg/l

##### **AEI-MW-6-East of Dry Cleaner-In Long Beach Boulevard**

No VOCs were detected at concentrations greater than their respective NYSDEC GWQS; however, the analytical detection limit for sample MW-6 was elevated due to the presence of naturally-occurring compound (sulfur dioxide) that interfered with the precision of chemical analysis.

##### **AEI-MW-7-Southeast of Dry Cleaner-In Sidewalk**

No VOCs exceeded their respective NYSDEC GWQS.

**AEI-MW-8-South of Dry Cleaner-near East Walnut Street**

The following compounds exceed their respective NYSDEC GWQS in MW-8:

- cis-1,2-Dichloroethene at 9.1 µg/l

## 5.0 Summary and Conclusions

This RI was conducted to further investigate soil, soil vapor and groundwater impacts related to a source of PCE identified near the southeast corner of the Site building during sampling conducted in January 2015 and July 2015. The RI field work was conducted at the Site between December 7 and December 15, 2015. The work included using a Membrane Interface Probe (MIP) /direct-push rig to conduct real-time screening of total VOCs and CVOCs (including PCE and related compounds) at seven (7) locations both on-site and off-site. The MIP/direct-push technology provided data to characterize the magnitude of CVOC impacts along with the soil permeability and conductivity values at various depths. The work also included seven (7) additional soil borings to twenty feet beneath ground surface (bgs) in the southeast portion of the Site, and the municipal lot south of the Site. Five (5) additional permanent monitoring wells were also installed to the south and east of the Site.

The results of the subsurface investigation indicate that there are two continuous low permeability layers of grey silty clay with organic material present below the Site at depth intervals of approximately 22 to 23 ft-bgs and at 30 to 32 ft-bgs. Two additional layers may also be continuous at depths of approximately 37 to 39 feet and at 44 to 45 ft-bgs. Two discontinuous layers were also observed at depths of approximately 10 to 11 ft-bgs and 24 to 26 ft-bgs.

### Soil:

Soil samples were collected east and south of the subject building at various depths to investigate soil contamination:

- The five (5) samples collected in the vadose zone showed no impacts of chlorinated VOCs, in fact no compound exceeded the most stringent NYSDEC soil objective, NYSDEC Unrestricted SCO.
- Six (6) of the Seven (7) soil samples collected in the saturated zone showed no impacts of VOCs above the most stringent NYSDEC soil objective.
- However PCE was found at a concentration of 7,400 mg/kg, well above any NYSDEC SCO at SB-7, which was located adjacent to a dry well. AEI believes the dry well in the municipal lot could contain source material due to the dry cleaning operations. AEI removed and disposed of the contents of the drywell as part of this investigation.

One (1) soil vapor sample was collected as part of this investigation, southwest of the subject property, near the residential property. PCE and TCE were both detected well above the EPA Commercial VISL in the sample collected. Due to the elevated concentrations in close proximity to a residential property, soil vapor and air sampling should be completed on the residential property. At this point soil vapor samples have been collected from locations north, east, south, and west of the suspected source area, all of which have exceeded the EPA commercial VISL

for TCE and/or PCE. Further delineation of the soil vapor pathway, including sampling at nearby properties should be included in the next phase of work.

Groundwater:

- North of subject building - The two sampling events north of the subject building (MW-1) show no chlorinated compounds exceeding their respective NYSDEC GWQS. However several petroleum-related VOCs exceeding NYSDEC GWQS were detected at concentrations greater than their respective NYSDEC GWQS, suggesting an off-site source.
- East of subject building - Groundwater sample results at MW-6 and MW-7 delineate the extent of the PCE plume to the east and southeast of the subject building as no PCE or daughter products were detected in either well.
- South of subject building – Groundwater sample results at MW-8 show PCE daughter products just above the respective NYSDEC GWQS, based on the results we expect MW-8 to be the outer extent of the PCE plume south of the subject property.
- West of subject building – AEI was unable to collect groundwater west of the subject property due to the presence of commercial and residential buildings.
- Vertically – MW-4D was screened from 40-45 ft-bgs, below four thin silty clay layers of 1 to 2.5 ft in thickness encountered between 22 to 39 ft-bgs, to search for non-impacted groundwater at depth. Based on the results, contamination extends to 45 ft-bgs, but based on the low concentrations detected, is not expected to extend deeper.

In summary, the results of the RI indicate that PCE is present at elevated concentrations in soil and groundwater located on the Site as well as the municipal lot to the south of the Site. The highest concentrations are generally located near the southeastern portion of the Site building. The presence of low-permeability soil lenses beneath the site at depths less than approximately 45 ft-bgs appears to have prevented vertical migration of PCE to greater depths. The presence of TCE, 1,2-DCE, and vinyl chloride indicate that the source material, or “parent” compound PCE, is degrading naturally. However, some of the concentrations of PCE degradation products detected to the south of the Site building are greater than their respective GWQS. Elevated concentrations of PCE and related degradation products were detected across the Site, as well as the municipal lot. The extent and concentration of PCE and related compounds in soil, soil vapor, and groundwater to the east of the Site could not be evaluated due to access constraints.

Based on the results of this RI, additional investigation appears warranted to complete delineation of Site-related contaminants and design an approach for remediating contaminants to the applicable NYSDEC cleanup criteria. Specific data that are needed include:

- Horizontal delineation of Site-related VOCs in groundwater to the south and southeast of the Site; and,
- Vapor intrusion (VI) evaluation of properties to the east and southeast of the Site for Site-related VOCs.

Pilot testing of potential remediation technologies, such as soil vapor extraction (SVE) and in-situ chemical oxidation (ISCO), is also recommended to provide site-specific data to properly evaluate the best remedy with respect to cost, effectiveness, implementability, and permanence. Details regarding the scope of work for pilot testing and supplemental investigation activities can be presented in a Supplemental Remedial Investigation/Feasibility Study (SRI/FS) Work Plan for submission to the NYSDEC.

## 6.0 Project Schedule

The following is the anticipated schedule for implementing supplemental investigation at the Site:

- SRI/FS Work Plan Submission and NYSDEC Approval: Feb 19
- Supplemental Field Investigation/Pilot Study: Feb 26 – Mar 25
- Laboratory Analysis: Mar 25 – Apr 29
- Supplemental Remedial Investigation Report & Remedial Action Work Plan Submission: May 27

## 7.0 Report Limitations and Reliance

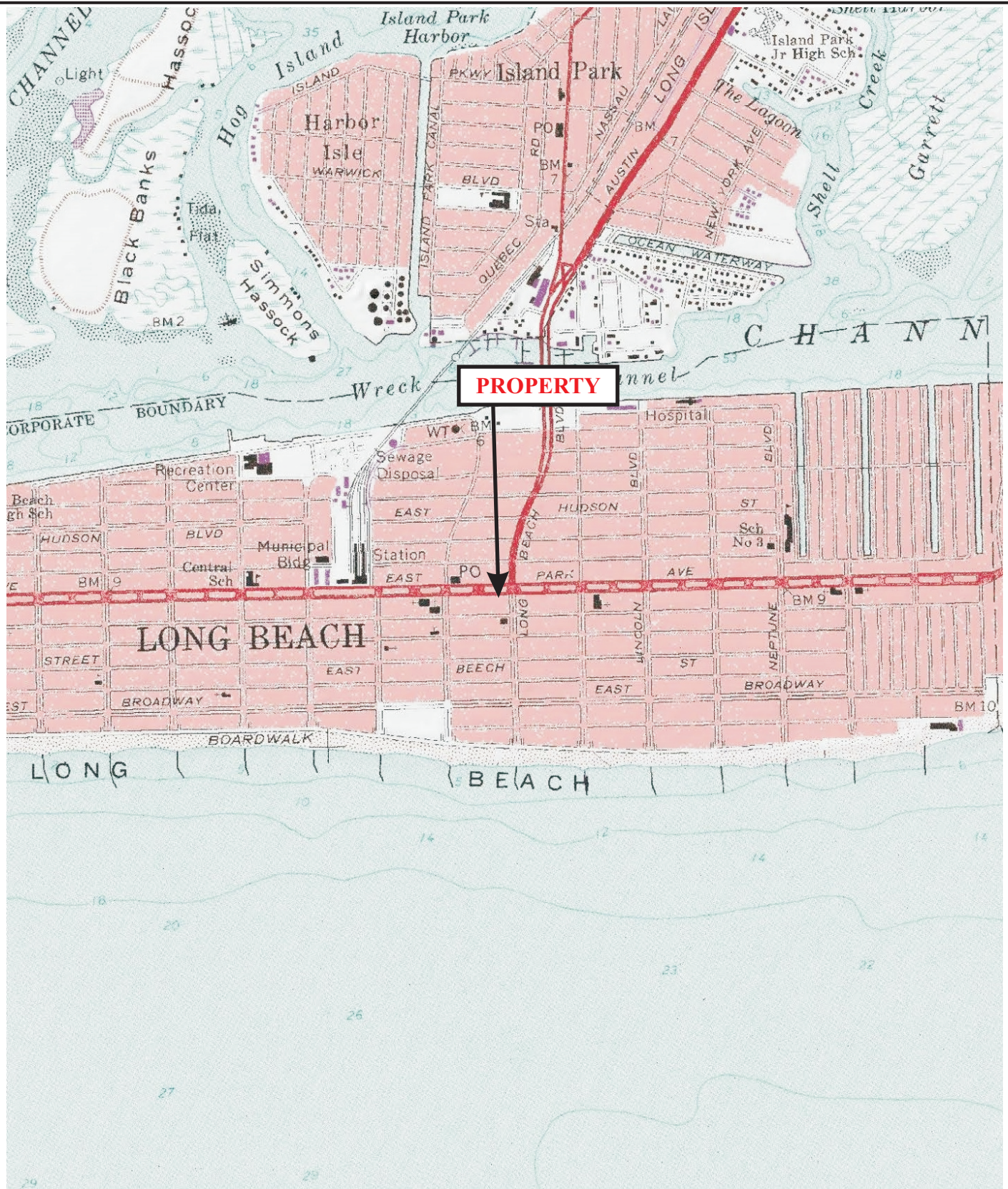
This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of Nu-Clear Cleaners. All reports, both verbal and written, whether in draft or final, are for the benefit of Nu-Clear Cleaners. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal executed by Nu-Clear Cleaners on May 1, 2015. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.



# FIGURES



**LEGEND**

Date: August 17, 2015  
 Source: USGS



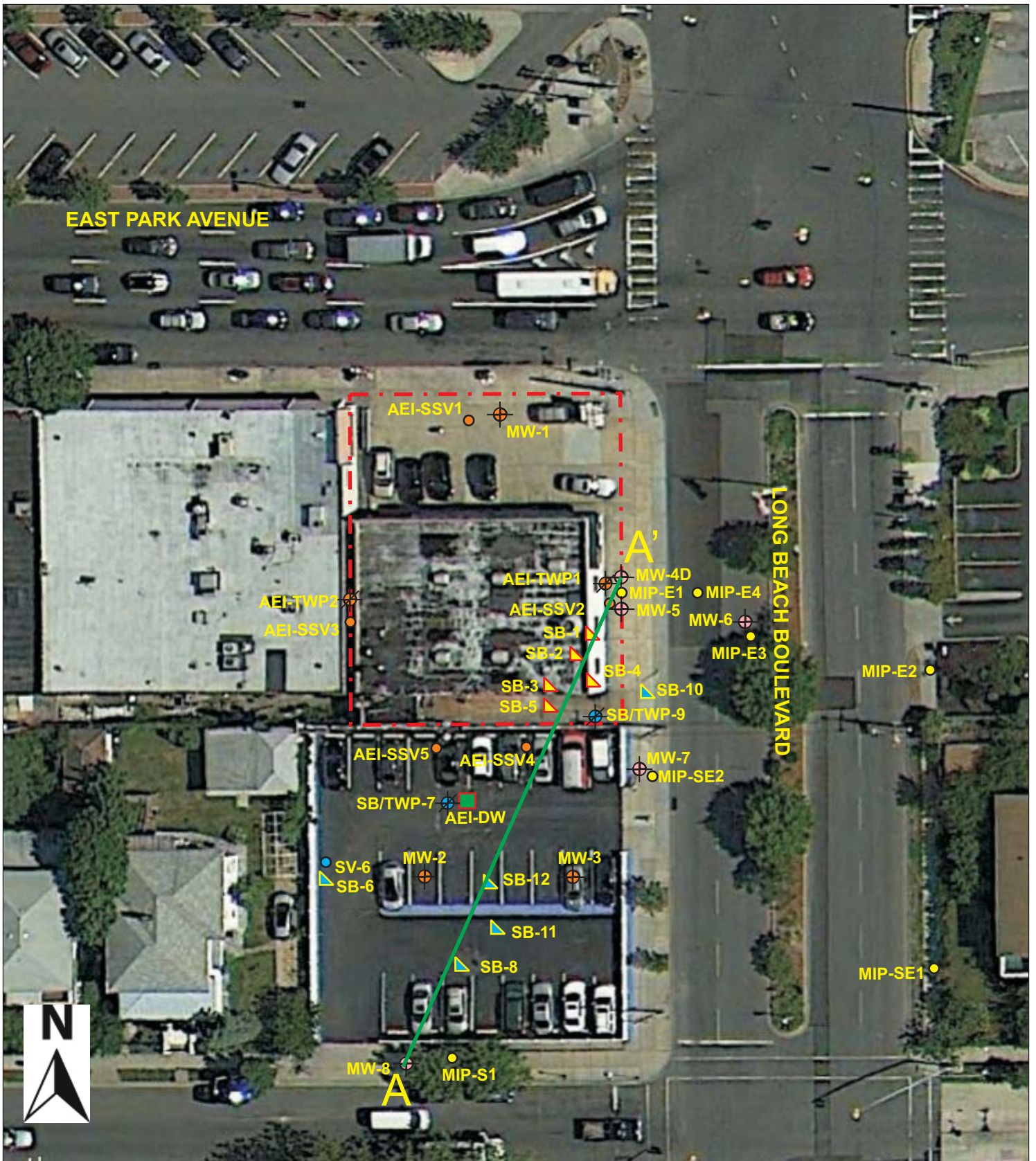
**AEI CONSULTANTS**

20 GIBSON PLACE FREEHOLD, NEW JERSEY 07728

**SITE LOCATION MAP**

180 East Park Avenue  
 Long Beach, New York 11561

**FIGURE 1**  
 Project No. 341998



**LEGEND**

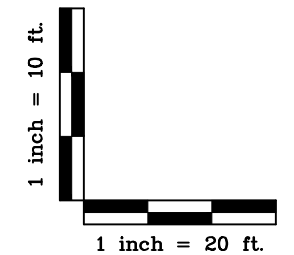
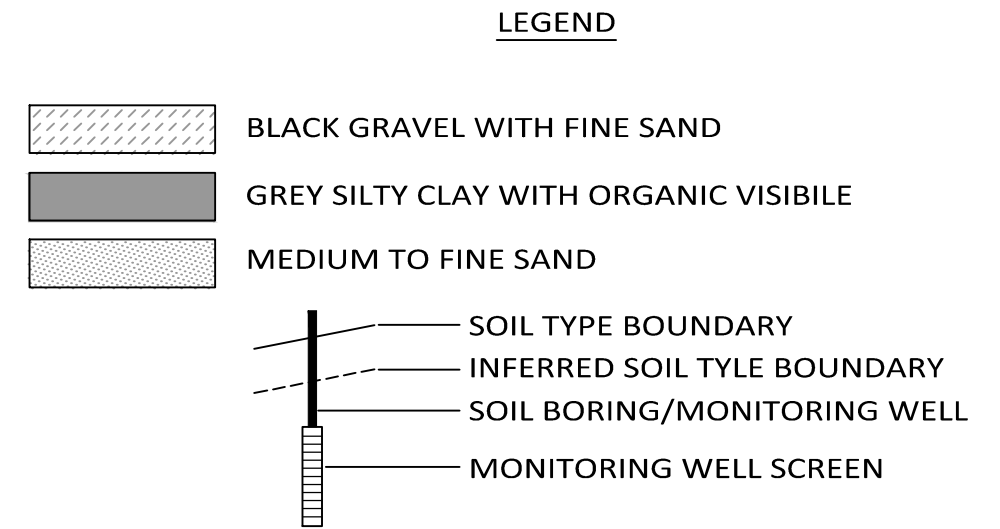
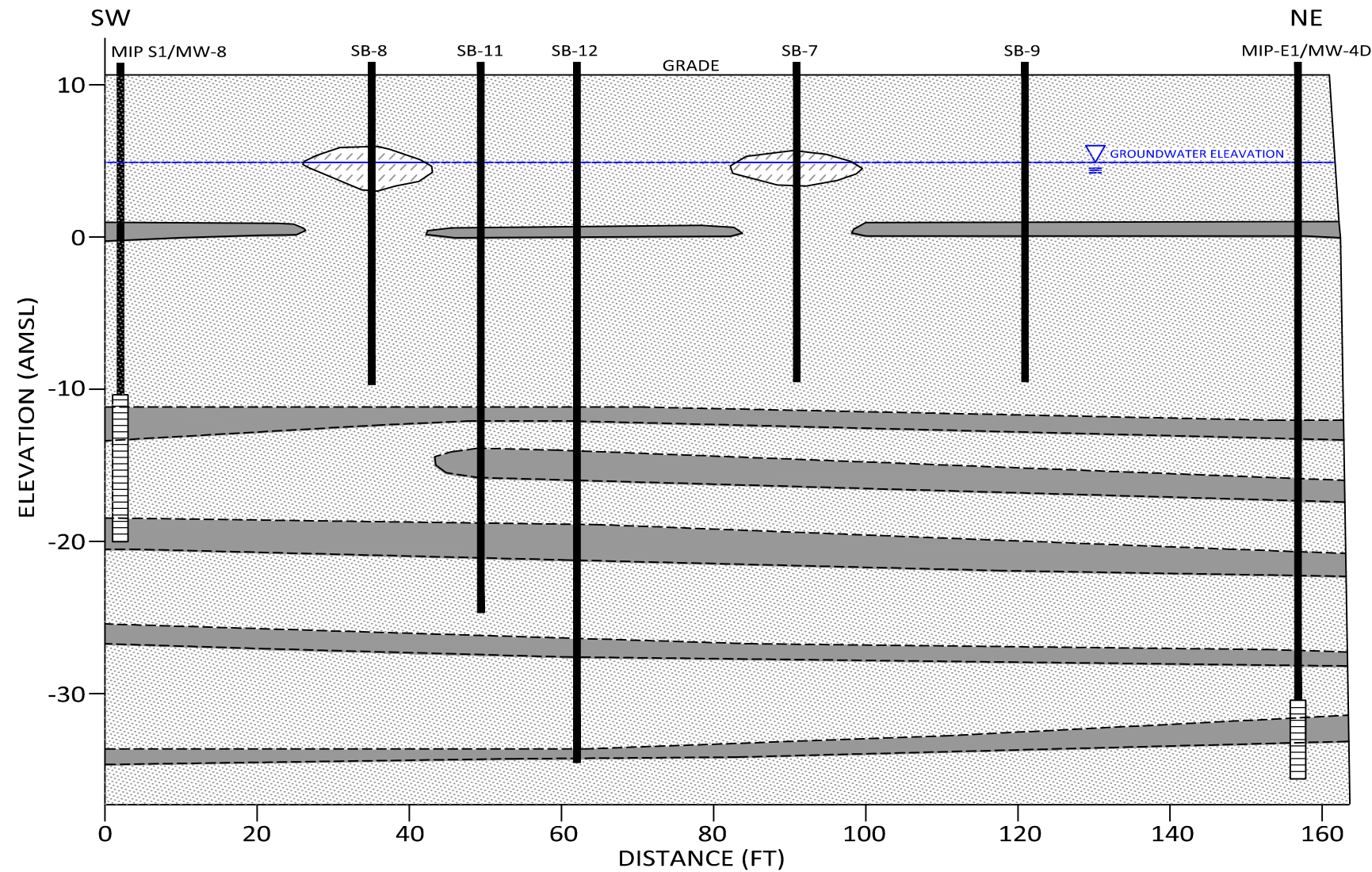
1/15/15 Soil Boring		Approximately Site Boundary	
7/15/15 Soil Vapor Point		12/10/15 Temporary Well	
7/15/15 Monitoring Well		12/10/15 Soil Vapor Point	
7/15/15 Temporary Well		12/10/15 Monitoring Well	
Drywell Location (approx.)		12/10/15 MIP boring location	

**AEI CONSULTANTS**

**SAMPLE LOCATION MAP**

180 East Park Avenue  
Long Beach, New York 11561

**FIGURE 2**  
Project No. 341998



**DRAFT**



DRAWN BY: AG	REVIEWED BY: XX
APPROVED BY XX	Date: 1/12/16

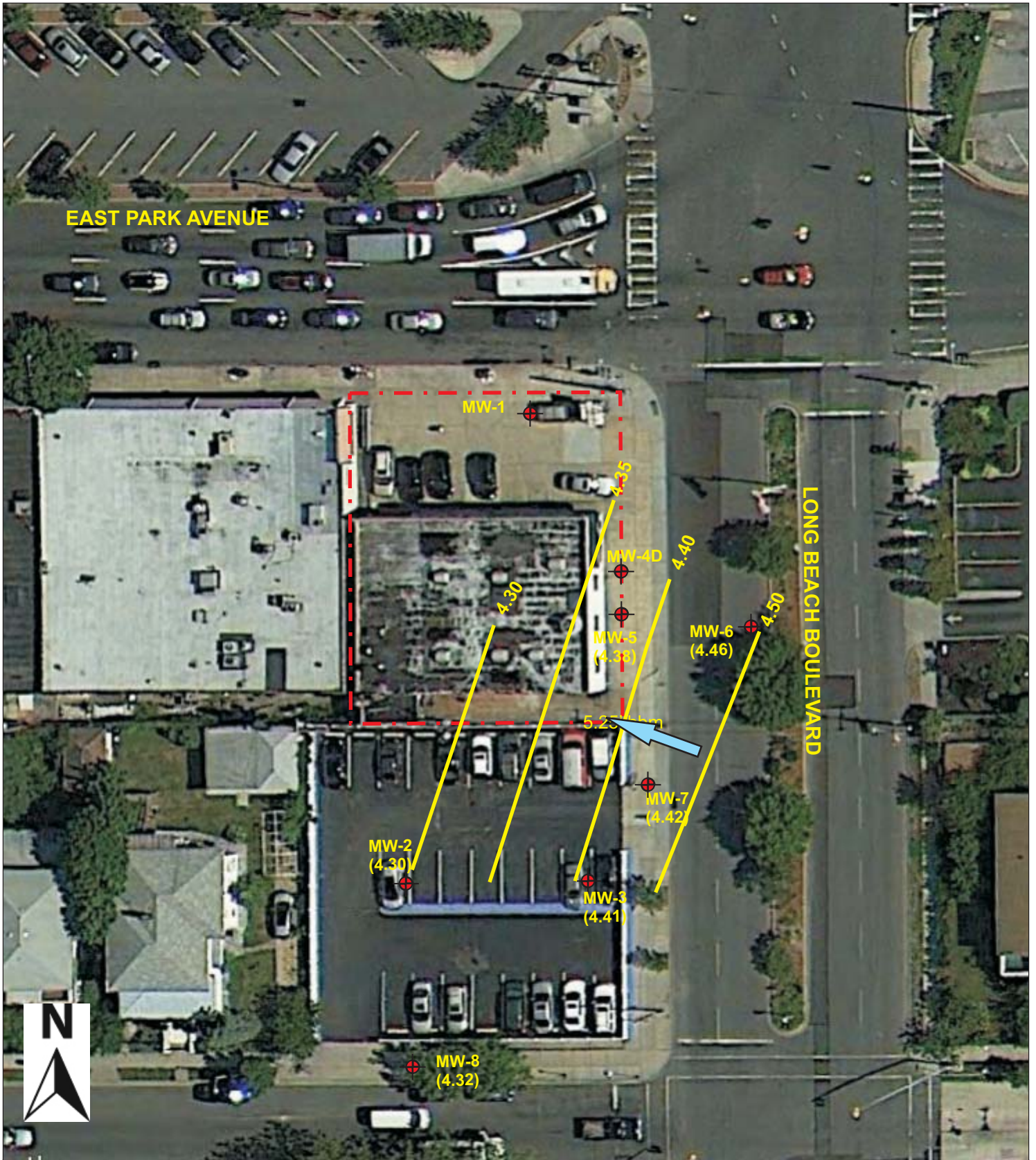
SAMPLE LOCATION MAP

180 EAST PARK AVENUE  
LONG BEACH, NEW YORK

CROSS-SECTION A-A'

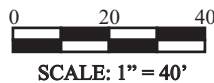
FIGURE  
3

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## LEGEND

- Approximately Site Boundary - - -
- Monitoring Well
- Groundwater Surface Elevation Contour — 4.40
- Groundwater Flow Direction



## AEI CONSULTANTS

### GROUNDWATER CONTOUR MAP (Jan. 7, 2016)

180 East Park Avenue  
Long Beach, New York 11561

**FIGURE 4**  
Project No. 341998

# TABLES

TABLE 1: SOIL SAMPLE DATA SUMMARY-SHALLOW

Nu-Clear Cleaners  
180 East Park Avenue Long Beach, NY

ANALYSIS	UNITS	<b>NYSDEC SCO Restrictd Commercial</b>	<b>NYSDEC SCO Restrictd Residential</b>	<b>NYSDEC SCO Unrestricted</b>	AEI SB6(5-5.5) 12/7/2015 5-5.5 (feet bgs)	AEI SB7(4.5-5) 12/7/2015 4.5-5 (feet bgs)	AEI SB8(4.5-5) 12/7/2015 4.5-5 (feet bgs)	AEI SB9(4-4.5) 12/7/2015 4-4.5 (feet bgs)	AEI SB10(4.5-5) 12/7/2015 4.5-5 (feet bgs)
General Chemistry									
Solids, Total	%	NS	NS	NS	89.3	94.7	94.5	92.6	95.6
Volatile Organics									
Tetrachloroethene	mg/kg	150	5.5	1.3	0.012	0.24	0.012	0.012	ND
Ethylbenzene	mg/kg	390	30	1	0.0028	ND	ND	ND	ND
Trichloroethene	mg/kg	200	10	0.47	ND	0.0027	ND	ND	ND
p/m-Xylene	mg/kg	NS	NS	NS	0.012	ND	ND	ND	ND
o-Xylene	mg/kg	NS	NS	NS	0.0028	ND	ND	ND	ND
Xylenes, Total	mg/kg	500	100	0.26	0.015	ND	ND	ND	ND
cis-1,2-Dichloroethene	mg/kg	500	59	0.25	ND	0.014	ND	0.0013	ND
1,2-Dichloroethene, Total	mg/kg	NS	NS	NS	ND	0.014	ND	0.0013	ND
Acetone	mg/kg	500	100	0.05	0.0053	J ND	ND	ND	0.004 J

Notes:

mg/kg milligrams per kilogram  
 J estimated concentration  
 bgs below ground surface  
 ND non detect  
 - not analyzed  
 NS No Standard/Objective  
**BOLD** Exceeds respective NYSDEC SCO Restrictd Commercial

Comparison Values:

NYSDEC SCO Restrictd Residential: New York State Department of Environmental Conservation Soil Cleanup Objectives for Restricted Residential use  
 NYSDEC SCO Restrictd Commercial: New York State Department of Environmental Conservation Soil Cleanup Objectives for Restricted Commercial use  
 NYSDEC SCO Unrestricted: New York State Department of Environmental Conservation Soil Cleanup Objectives for Unrestricted use

TABLE 2: SOIL SAMPLE DATA SUMMARY-DEEP  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

ANALYSIS	UNITS	NYSDEC SCO Restricted Commercial	NYSDEC SCO Restricted Residential	NYSDEC SCO Unrestricted	AEI SB 7(15-15.5) 12/7/2015 15-15.5 (feet bgs)	AEI SB 8(14.5-15) 12/7/2015 14.5-15 (feet bgs)	AEI SB 9(19.5-20) 12/7/2015 19.5-20 (feet bgs)	AEI SB 10(19.5-20) 12/7/2015 19.5-20 (feet bgs)	AEI SB 11 (34.5-35) 12/10/2015 34.5-35 (feet bgs)	AEI SB 12 (33-33.5) 12/15/2015 33-33.5 (feet bgs)	AEI SB 12 (44.5-45) 12/15/2015 44.5-45 (feet bgs)						
General Chemistry																	
Solids, Total	%				82.1	80.3	80.3	81	81	84.3	72.6						
Volatile Organics																	
Tetrachloroethene	mg/kg	150	19	1.3	<b>7400</b>	0.001	J	ND	ND	ND	ND						
Toluene	mg/kg	500	100	0.7	ND	ND		0.00044	J	ND	0.00032	J	0.00079	J	ND		
Trichloroethene	mg/kg	200	21	0.47	5.1	ND		ND		ND	ND		ND		ND		
cis-1,2-Dichloroethene	mg/kg	500	100	0.25	1.8	ND		ND		ND	ND		ND		ND		
1,2-Dichloroethene, Total	mg/kg	NS	NS	NS	1.8	ND		ND		ND	ND		ND		ND		
Acetone	mg/kg	500	100	0.05	ND	0.017		0.0076	J	0.011	J	0.007	J	0.0078	J	0.0036	J
Carbon disulfide	mg/kg	NS	NS	NS	ND	0.0045	J	0.0032	J	0.0056	J	0.003	J	0.0033	J	0.0034	J

Notes:

mg/kg milligrams per kilogram  
 J estimated concentration  
 bgs below ground surface  
 ND non detect  
 - not analyzed  
 NS No Standard/Objective  
**BOLD** Exceeds respective NYSDEC SCO Restrictd Commercial

Comparison Values:

NYSDEC SCO Restrictd Residential: New York State Department of Environmental Conservation Soil Cleanup Objectives for Restricted Residential use  
 NYSDEC SCO Restrictd Commercial: New York State Department of Environmental Conservation Soil Cleanup Objectives for Restricted Commercial use  
 NYSDEC SCO Unrestrictd: New York State Department of Environmental Conservation Soil Cleanup Objectives for Unrestrictd use



TABLE 3: Soil Vapor Analytical Results  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

ANALYSIS	UNITS	EPA VISL-SS Residential	EPA VISL-SS Commercial	AEI SV-6 12/10/2015 4.5 (feet bgs)
Volatile Organics in Air - Mansfield Lab				
Trichloroethene	ug/m3	16	100	<b>183</b>
Tetrachloroethene	ug/m3	360	1600	<b>58300</b>

Notes:

ug/m3	micrograms per cubic meter
bgs	below ground surface
ND	not detected
<b>Bold</b>	Result exceeds EPA VISL-SS Commercial
EPA	Environmental Protection Agency

Comparison Values:

EPA VISL-SS Residential: EPA Vapor Intrusion Screening Levels-Target Sub-Slab Soil Gas Concentrations-RESIDENTIAL  
 EPA VISL-SS Commercial: EPA Vapor Intrusion Screening Levels-Target Sub-Slab Soil Gas Concentrations-COMMERCIAL

Table 4: Temporary Well Point Results  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

ANALYSIS	UNITS	NYSDEC GWQS	AEI TWP7 12/7/2015 19.5 (feet bgs)	AEI TWP9 12/7/2015 19.5 (feet bgs)
Volatile Organics				
Tetrachloroethene	ug/l	5	<b>33000</b>	<b>1100</b>
Vinyl chloride	ug/l	2	ND	<b>1500</b>
Trichloroethene	ug/l	5	<b>1400</b>	<b>1100</b>
cis-1,2-Dichloroethene	ug/l	5	<b>2100</b>	<b>10000</b>
1,2-Dichloroethene, Total	ug/l	5	<b>2100</b>	<b>10000</b>

Notes:

ug/l	microgram per liter
bgs	below ground surface
ND	non detect
<b>BOLD</b>	Exceeds respective standard
NS	No Standard/Objective
-	Not Analyzed
NYSDEC	New York State Department of Environmental Conservation

Comparison Values:

NYSDEC GWQS: NYSDEC Groundwater Quality Standards

Table 5: Groundwater Results  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

Analysis	Units	NYSDEC GWQS	MW-1 12/18/2015 10-20 (feet bgs)	MW-2 12/18/2015 20-30 (feet bgs)	MW-3 12/18/2015 20-30 (feet bgs)	MW-4D 12/18/2015 40-45 (feet bgs)	MW-5 12/18/2015 20-30 (feet bgs)	MW-6 12/18/2015 20-30 (feet bgs)	MW-7 12/18/2015 20-30 (feet bgs)	MW-8 12/18/2015 20-30 (feet bgs)	FB 12/18/2015	TB 12/18/2015
<b>Volatile Organics</b>												
Tetrachloroethene	ug/l	5	ND	1.3	ND	<b>13</b>	1.2	10	ND	ND	ND	ND
Benzene	ug/l	1	<b>4.2</b>	ND	ND	ND	0.36	J 10	ND	ND	ND	ND
Toluene	ug/l	5	2.3	J ND	ND	ND	ND	50	ND	ND	ND	ND
Ethylbenzene	ug/l	5	<b>44</b>	ND	ND	ND	ND	50	ND	ND	ND	ND
Trichloroethene	ug/l	5	ND	0.7	ND	1.3	0.81	10	ND	ND	ND	ND
p/m-Xylene	ug/l	5	<b>14</b>	ND	ND	ND	ND	50	ND	ND	ND	ND
o-Xylene	ug/l	5	4.3	ND	ND	ND	ND	50	ND	ND	ND	ND
Xylenes, Total	ug/l	5	<b>18</b>	ND	ND	ND	ND	50	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/l	5	ND	<b>83</b>	ND	<b>13</b>	<b>8.6</b>	50	ND	<b>9.1</b>	ND	ND
trans-1,2-Dichloroethene	ug/l	5	3.2	ND	ND	ND	ND	50	ND	ND	ND	ND
Acetone	ug/l	50	2.5	J 2.2	J 1.9	J 3.5	J 3.1	J 100	3.9	J 3.1	J 3.1	J 2.7
n-Butylbenzene	ug/l	5	2.4	J ND	ND	ND	ND	50	ND	ND	ND	ND
sec-Butylbenzene	ug/l	5	2.8	ND	ND	ND	ND	50	ND	ND	ND	ND
tert-Butylbenzene	ug/l	5	0.74	J ND	ND	ND	ND	50	ND	ND	ND	ND
Isopropylbenzene	ug/l	5	<b>8.4</b>	ND	ND	ND	ND	50	ND	ND	ND	ND
p-Isopropyltoluene	ug/l	5	1.7	J ND	ND	ND	ND	50	ND	ND	ND	ND
Naphthalene	ug/l	10	<b>90</b>	2.6	0.78	J ND	ND	50	ND	ND	ND	ND
n-Propylbenzene	ug/l	5	<b>12</b>	ND	ND	ND	ND	50	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ug/l	5	3.1	ND	ND	ND	ND	50	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ug/l	5	4.2	ND	ND	ND	ND	50	ND	ND	ND	ND
p-Diethylbenzene	ug/l	NS	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Ethyltoluene	ug/l	NS	4.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	ug/l	5	<b>13</b>	ND	ND	ND	ND	40	ND	ND	ND	ND

Notes:

- ug/l microgram per liter
- bgs below ground surface
- ND non detect
- BOLD** Exceeds respective standard
- 50 Laboratory Method Detection Limit elevated due to analytical interference.
- NS No Standard/Objective
- NYSDEC New York State Department of Environmental Conservation

Comparison Values:

NYSDEC GWQS: NYSDEC Groundwater Quality Standards

# **APPENDIX A**

## **City of Long Beach Permit**



# City of Long Beach

DEPARTMENT OF PUBLIC WORKS  
ONE WEST CHESTER STREET  
LONG BEACH, NEW YORK 11561

Tel: (516) 431-1011  
Fax: (516) 431-5008

Street Opening Permit No. 526/15

Approval: 11/23/15 Date

Work Order: INSTALL TEMPORARY MONITORING WELLS

\*Minimum 10' Separation required between sewer and water\*

Location: LONG BEACH BLDG WALNUT ST (Phase 2)

Issued To: AEI CONSULTANTS

Number of Penetrations/Wells 3 X \$250 Each: \$ 750 Check No. 096102

Escrow: \$ 1,000 -Check No. 096099

THIS PERMIT NOT VALID UNLESS IT BEARS THE SIGNATURE OF THE  
COMMISSIONER OF PUBLIC WORKS

This permit subject to observance of all laws, ordinances and regulations of the City so far  
As they may apply and covers only the work covered by specifications filed at time of issuance.

Approved: [Signature]  
James LaCarrubba, Commisioner

**\*\* PERMIT VALID FOR 60 DAYS \*\***

**\*\*\*The Contractor is required to provide advance notification, prior to construction and prior to permanent restoration.\*\*\***



# City of Long Beach

DEPARTMENT OF PUBLIC WORKS  
ONE WEST CHESTER STREET  
LONG BEACH, NEW YORK 11561

Tel: (516) 431-1011

Fax: (516) 431-5008

Street Opening Permit No. 538/15

Work Order: INSTALL MONITORING WELLS

\*Minimum 10' Separation required between sewer and water\*

Approval: 12/4/15 Date

Location: 180 E PARK AVE

Issued To: ZEBRA TECHNICAL SERVICES LLC

Number of Penetrations/Wells 8 X \$250 Each: \$2000 Check No. 021173

Escrow: \$ 1,000 -Check No. 021174

THIS PERMIT NOT VALID UNLESS IT BEARS THE SIGNATURE OF THE  
COMMISSIONER OF PUBLIC WORKS

This permit subject to observance of all laws, ordinances and regulations of the City so far  
As they may apply and covers only the work covered by specifications filed at time of issuance.

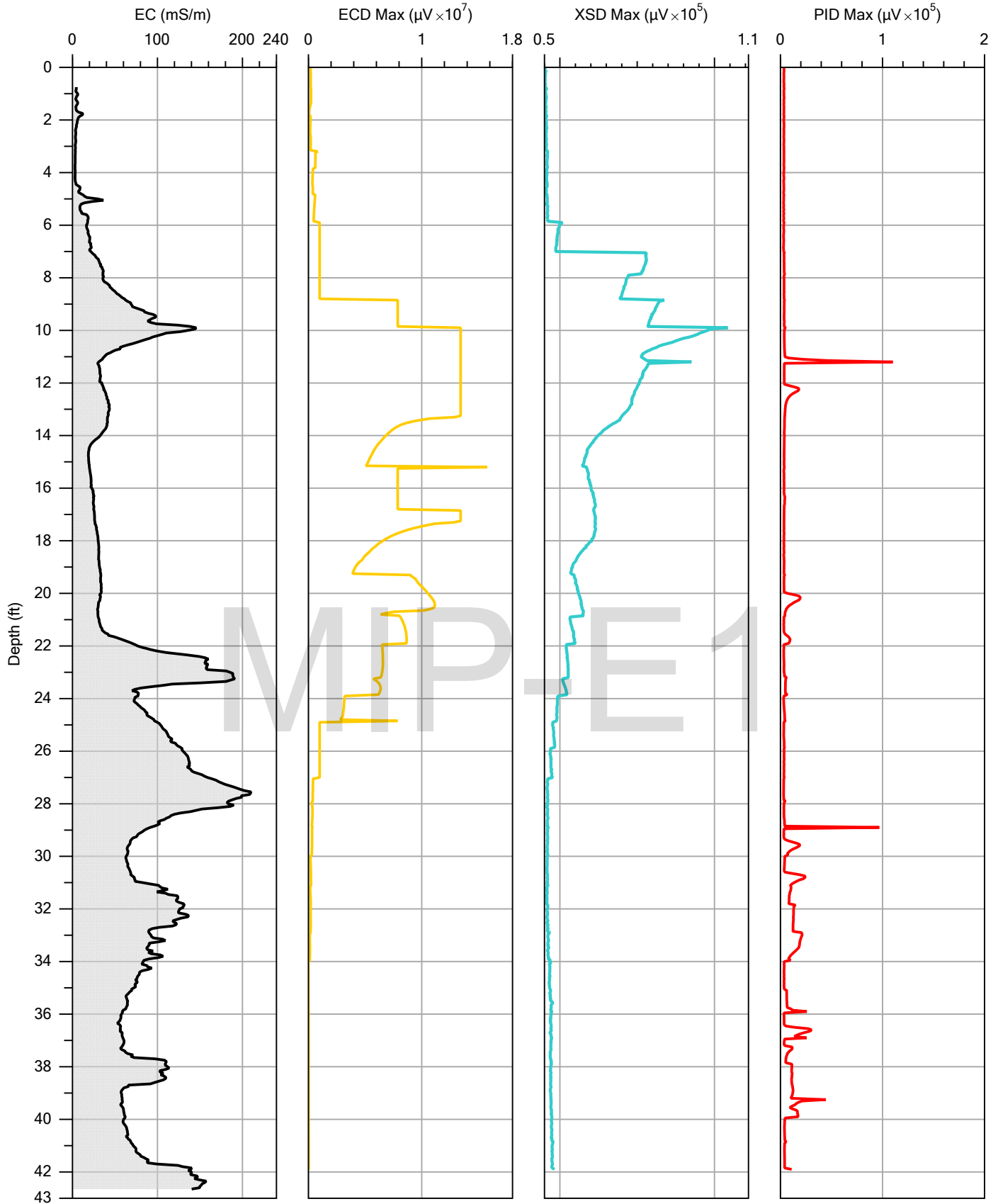
Approved: [Signature]  
James LaCarrubba, Commissioner

**\*\* PERMIT VALID FOR 60 DAYS \*\***

**\*\*\*The Contractor is required to provide advance notification, prior to construction and prior to permanent restoration.\*\*\***

# **APPENDIX B**

## **Membrane Interface Probe Results**

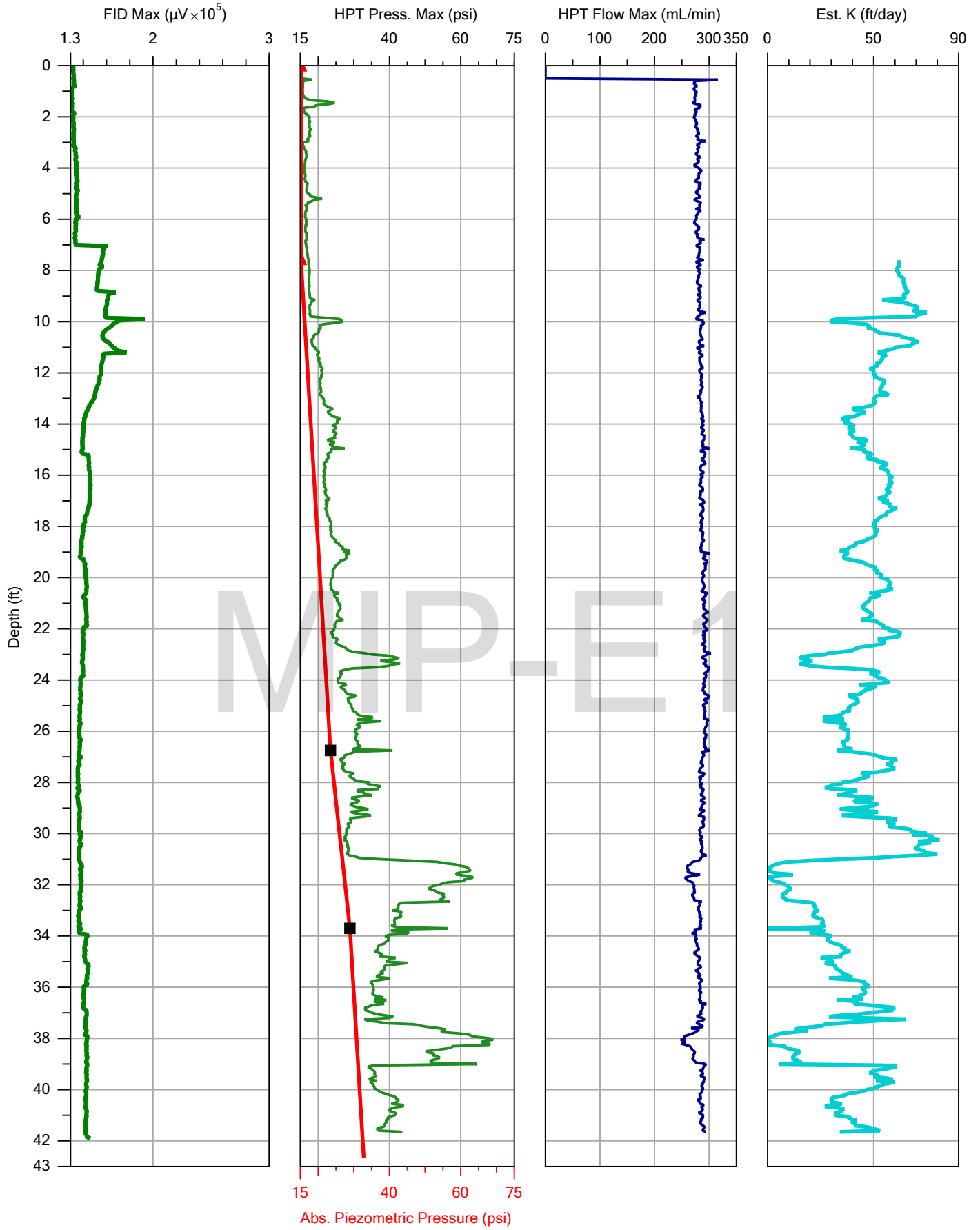


Company: AEI  
Project ID: 201-156325

Operator: Diamond  
Client: Joe

File:	MIP-E1.MHP
Date:	12/8/2015
Location:	

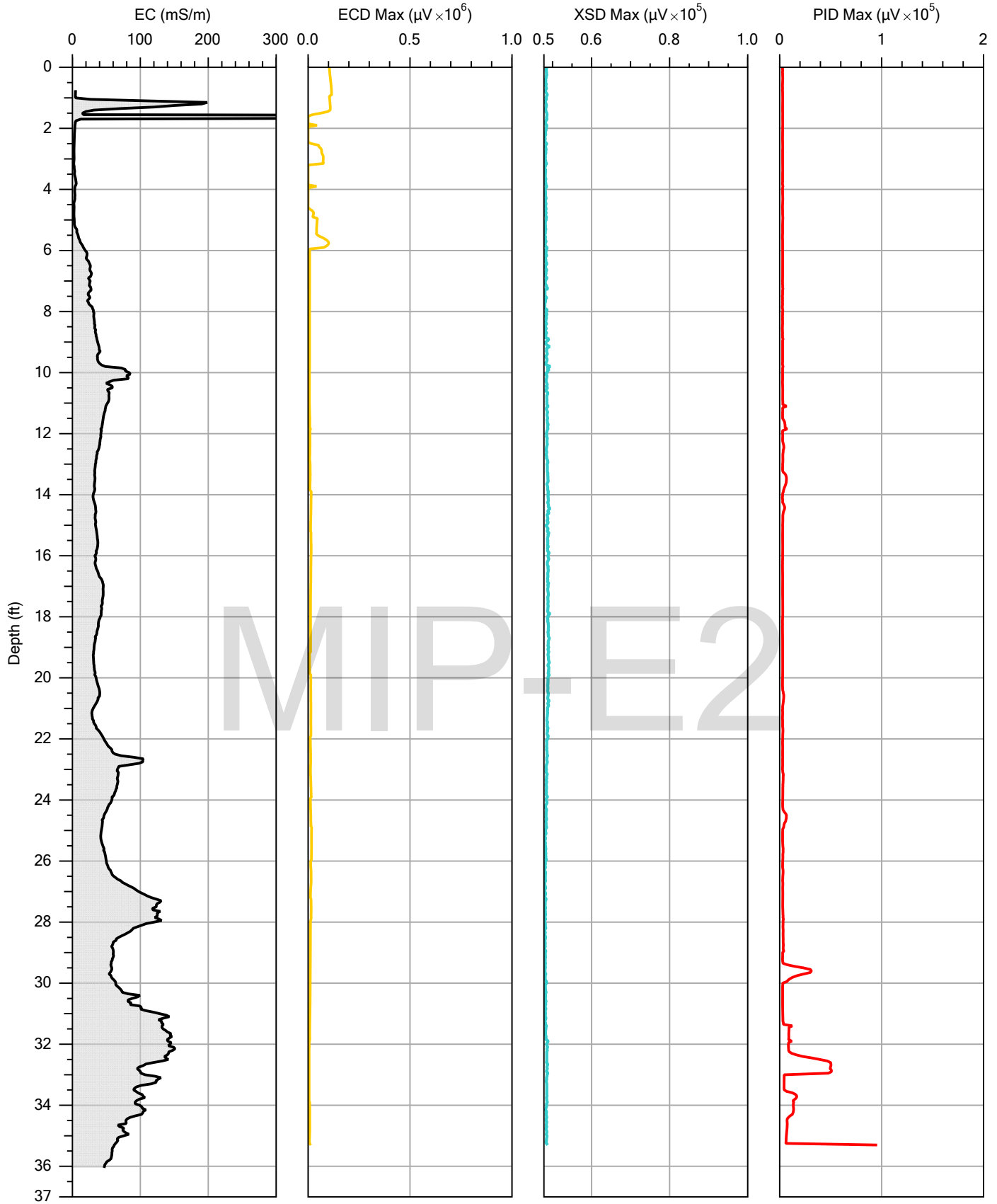




Company:	AEI
Project ID:	201-156325

Operator:	Diamond
Client:	Joe

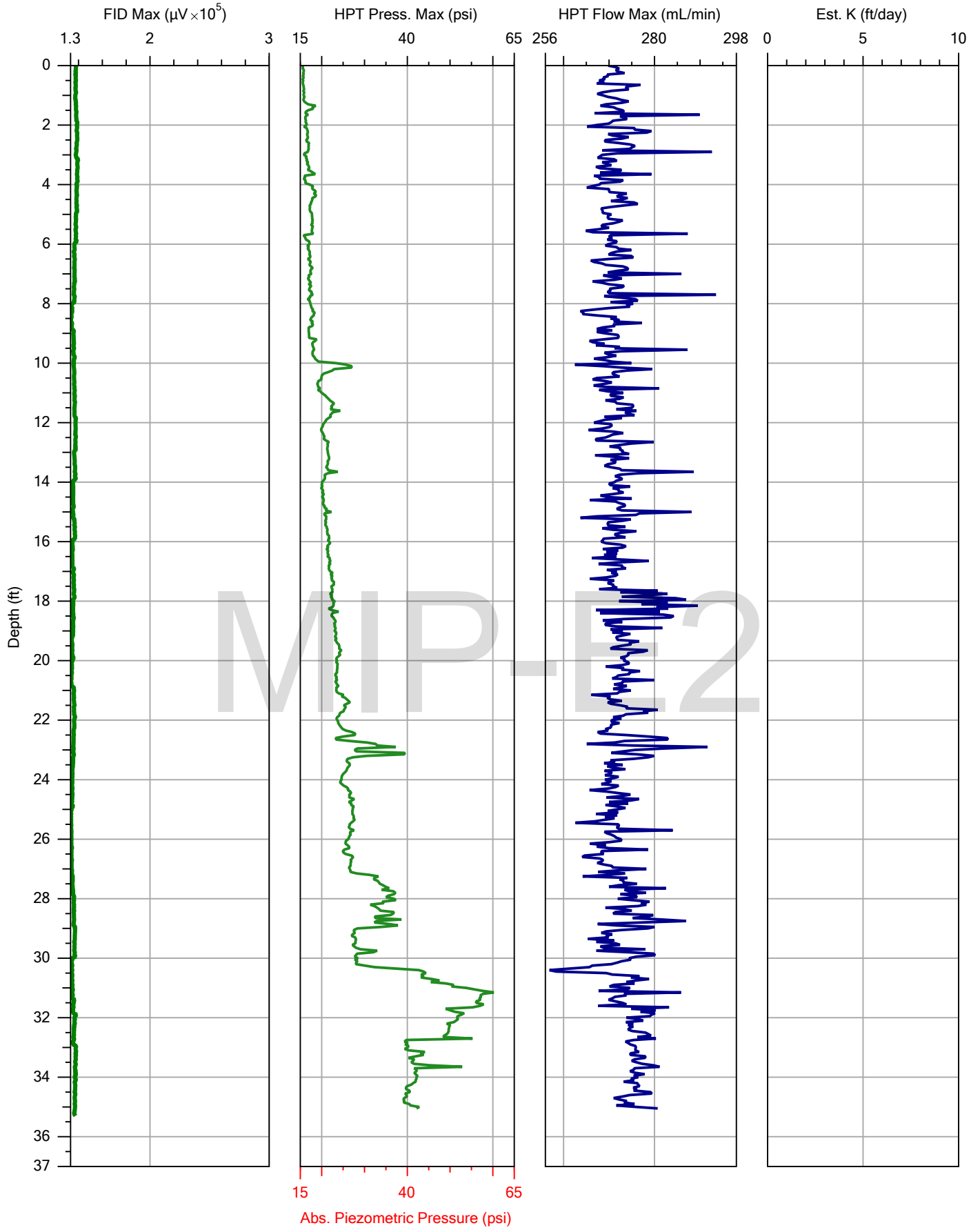
File:	MIP-E1.MHP
Date:	12/8/2015
Location:	



MIP-E2



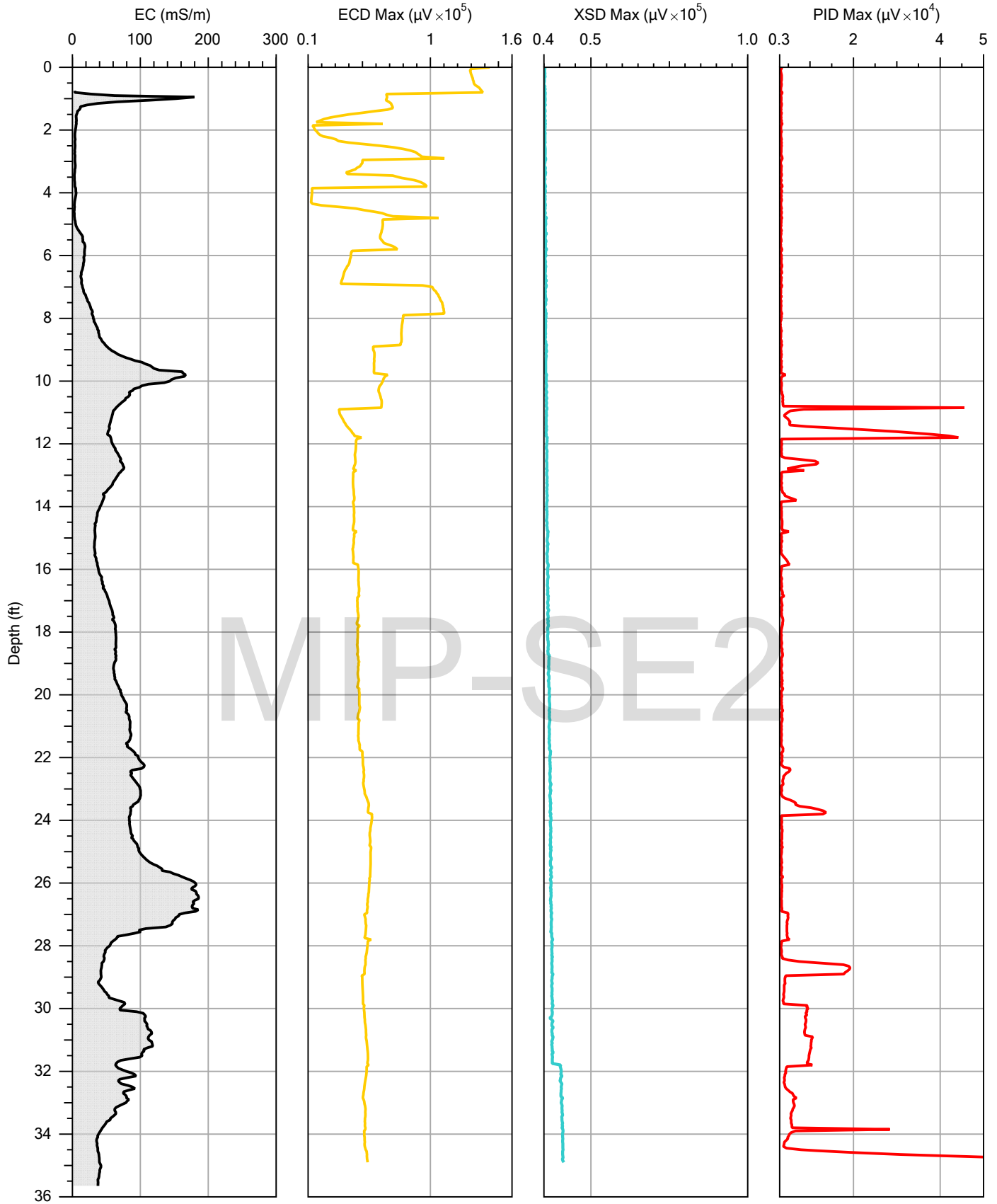
Company:	AEI	Operator:	Diamond	File:	MIP-E2.MHP
Project ID:	201-156325	Client:	Joe	Date:	12/8/2015
				Location:	



Abs. Piezometric Pressure (psi)



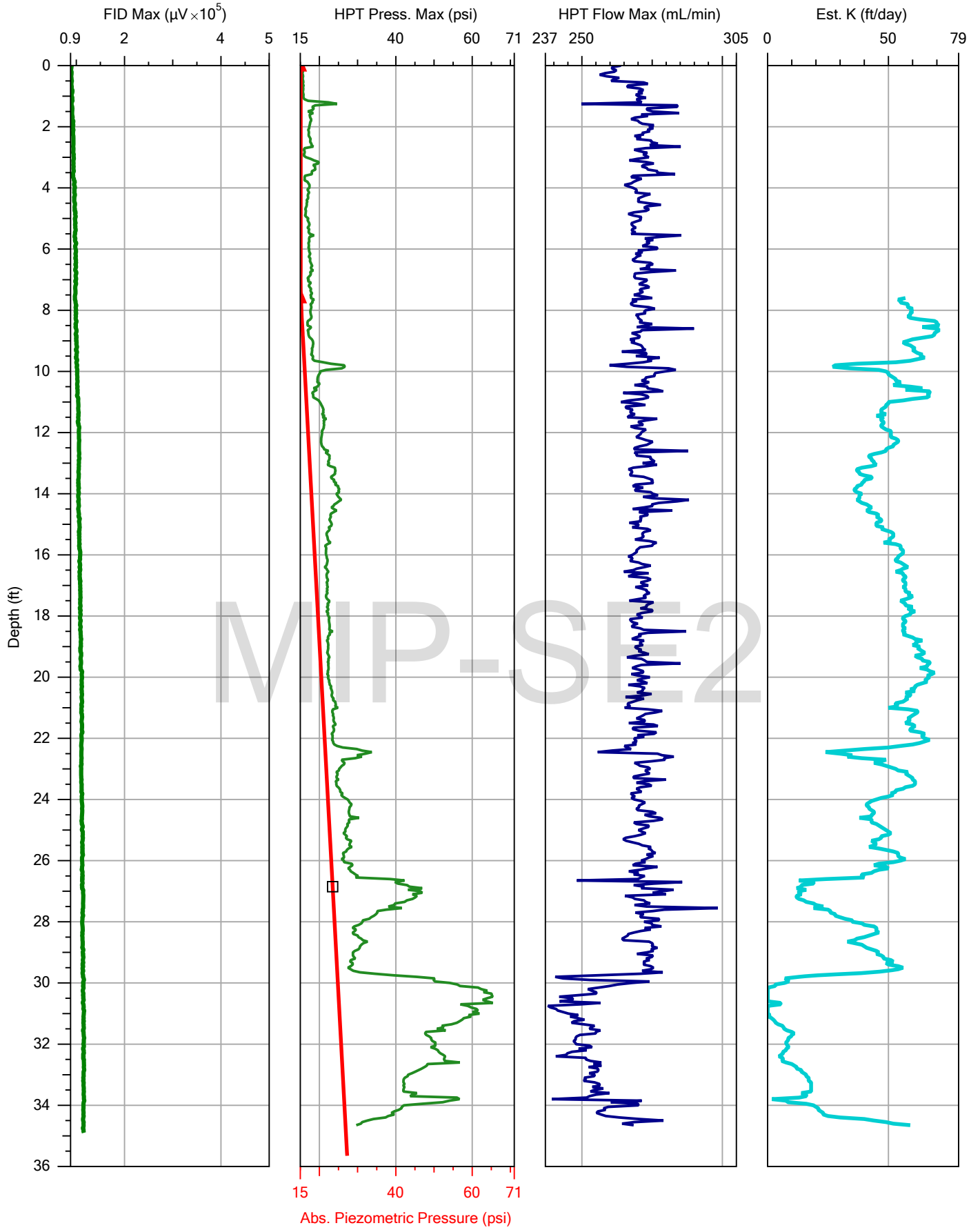
Company:	AEI	Operator:	Diamond	File:	MIP-E2.MHP
Project ID:	201-156325	Client:	Joe	Date:	12/8/2015
				Location:	



MIP-SE2



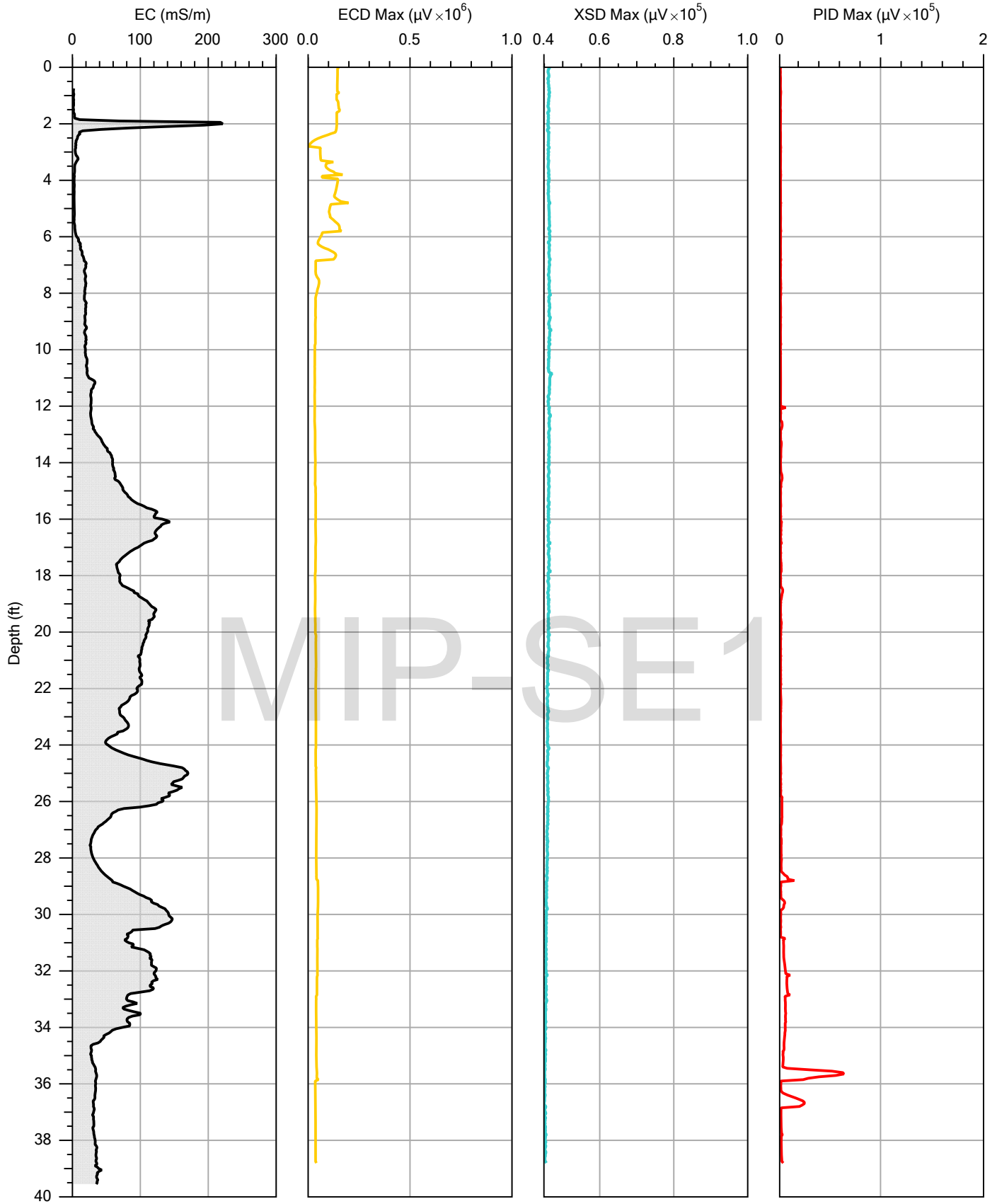
Company:	Zebra	Operator:	Diamond	File:	MIP-SE2.MHP
Project ID:	201-156325	Client:	AEI	Date:	12/9/2015
				Location:	



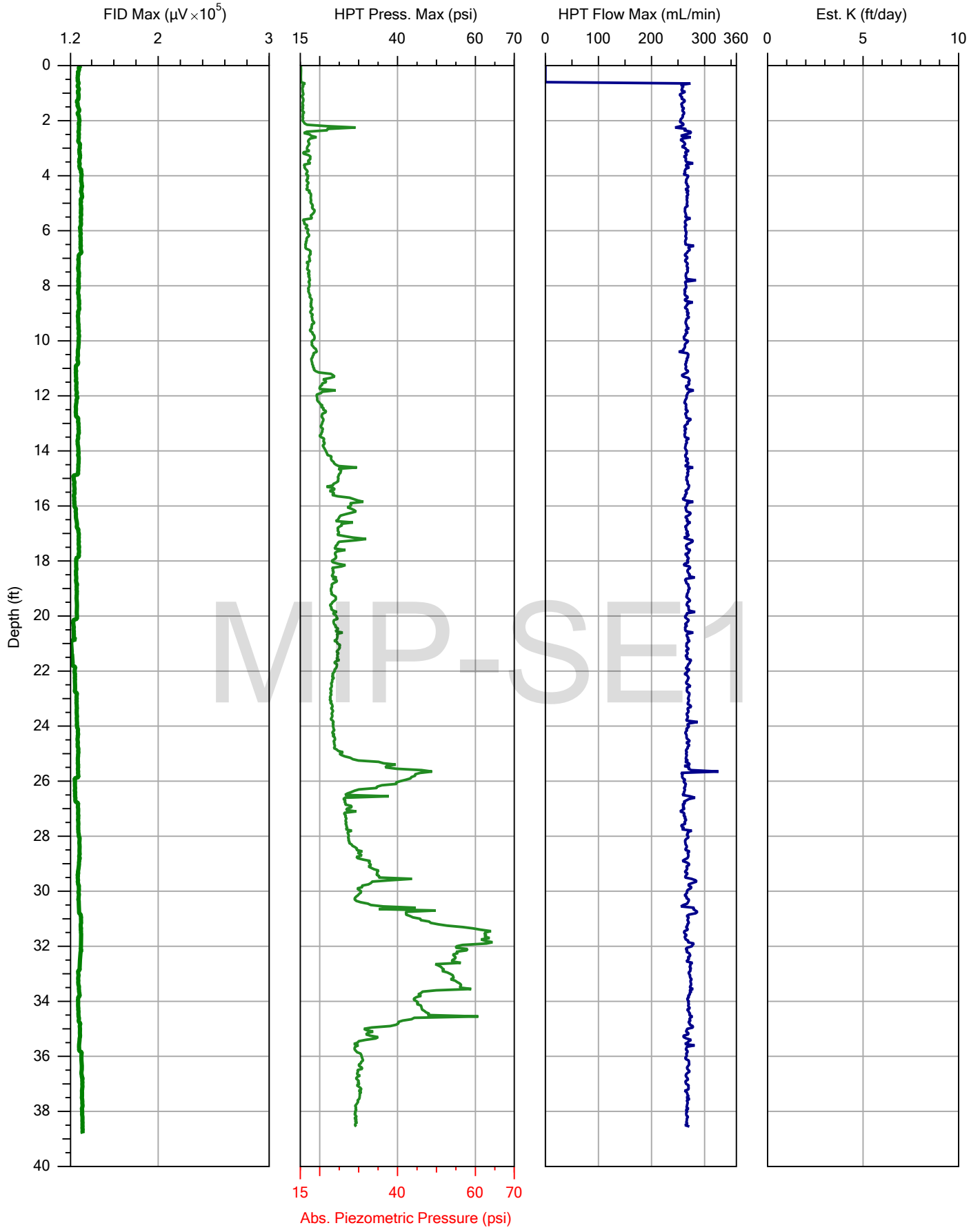
Company:	Zebra
Project ID:	201-156325

Operator:	Diamond
Client:	AEI

File:	MIP-SE2.MHP
Date:	12/9/2015
Location:	



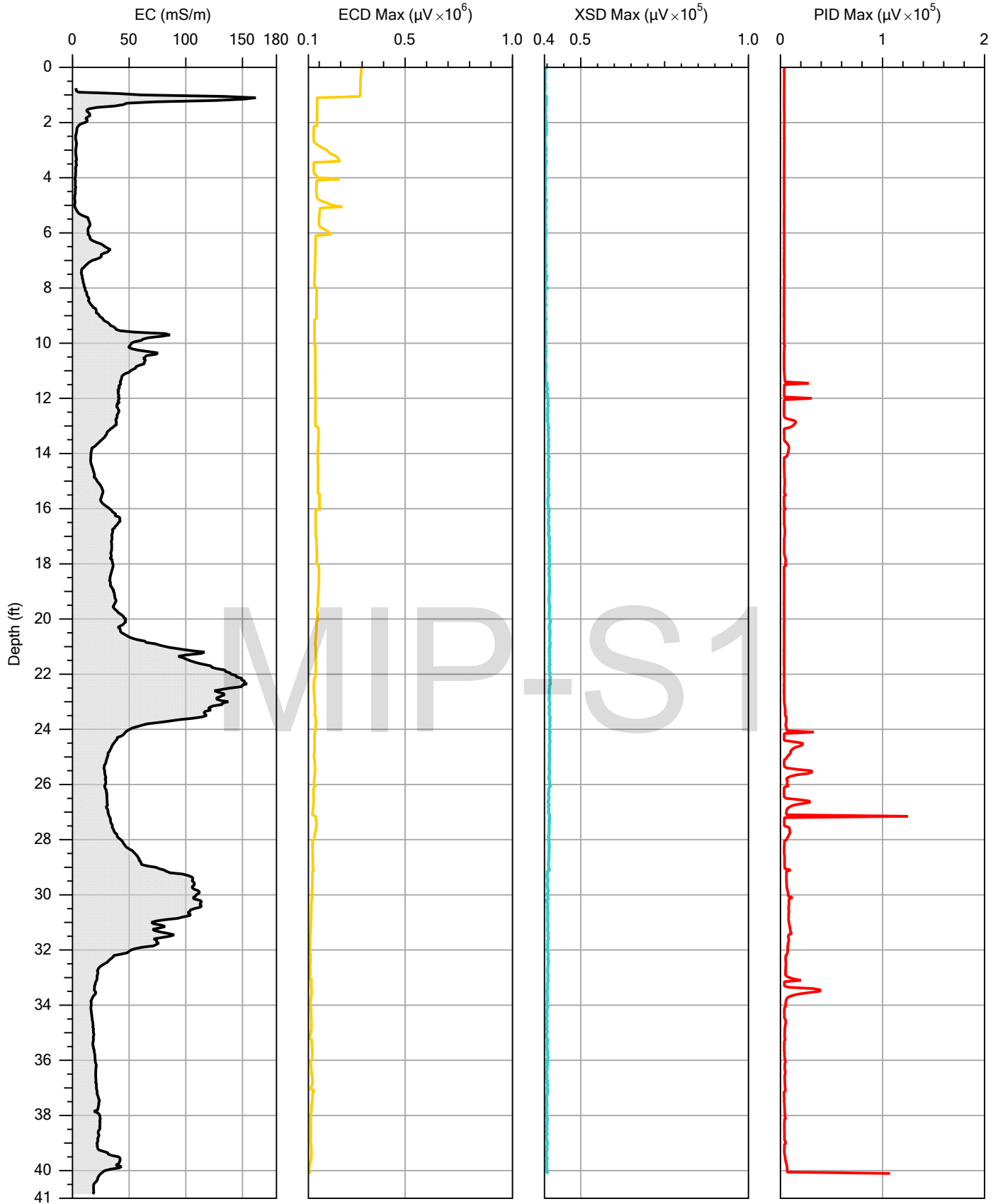
Company: AEI		Operator: Diamond	File: MIP-SE1.MHP
Project ID: 201-156325		Client: Joe	Date: 12/8/2015
			Location:



Company:	AEI
Project ID:	201-156325

Operator:	Diamond
Client:	Joe

File:	MIP-SE1.MHP
Date:	12/8/2015
Location:	

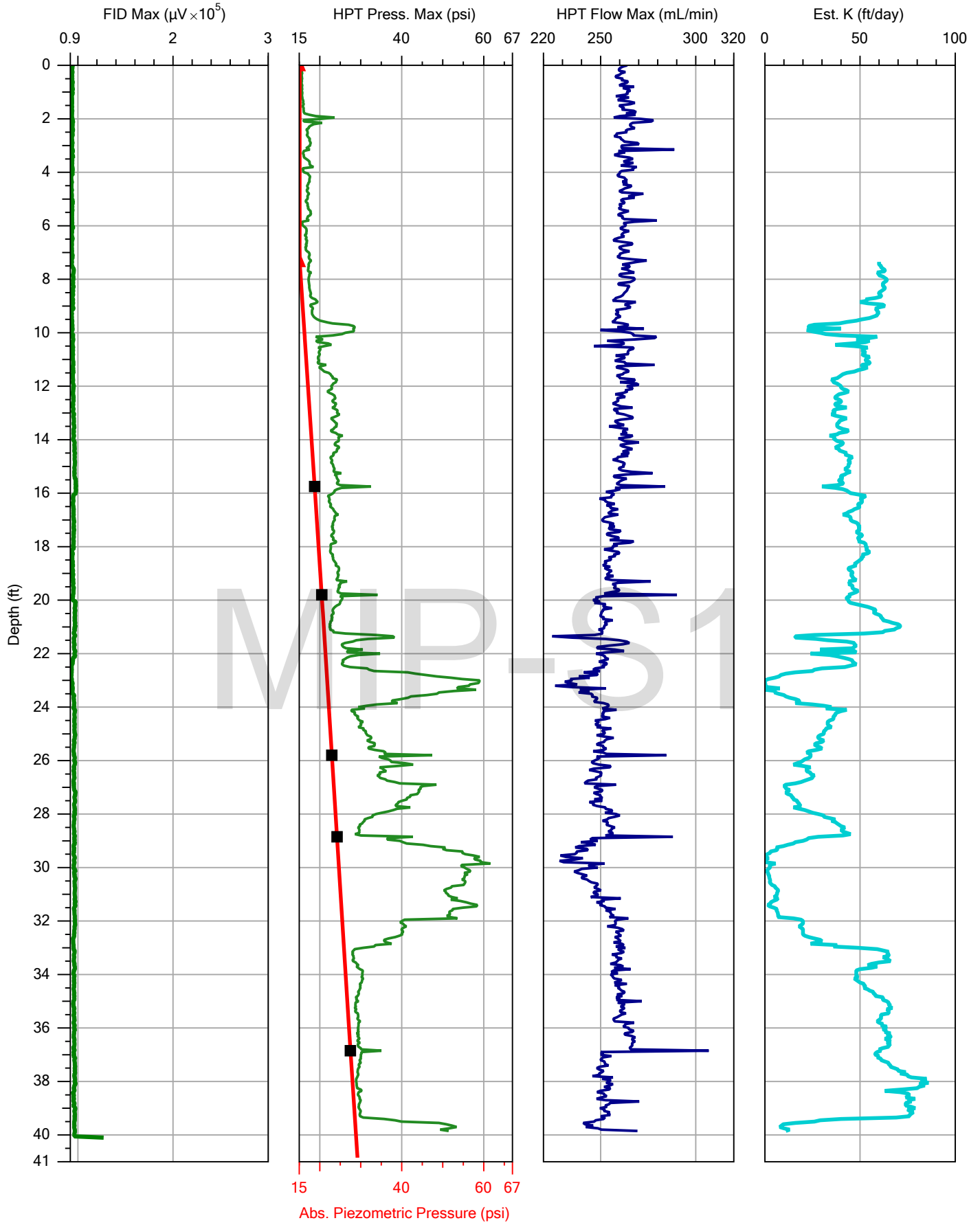


Company: AEI  
Project ID: 201-156325

Operator: Diamond  
Client: Joe

File:	MIP-S1.MHP
Date:	12/8/2015
Location:	

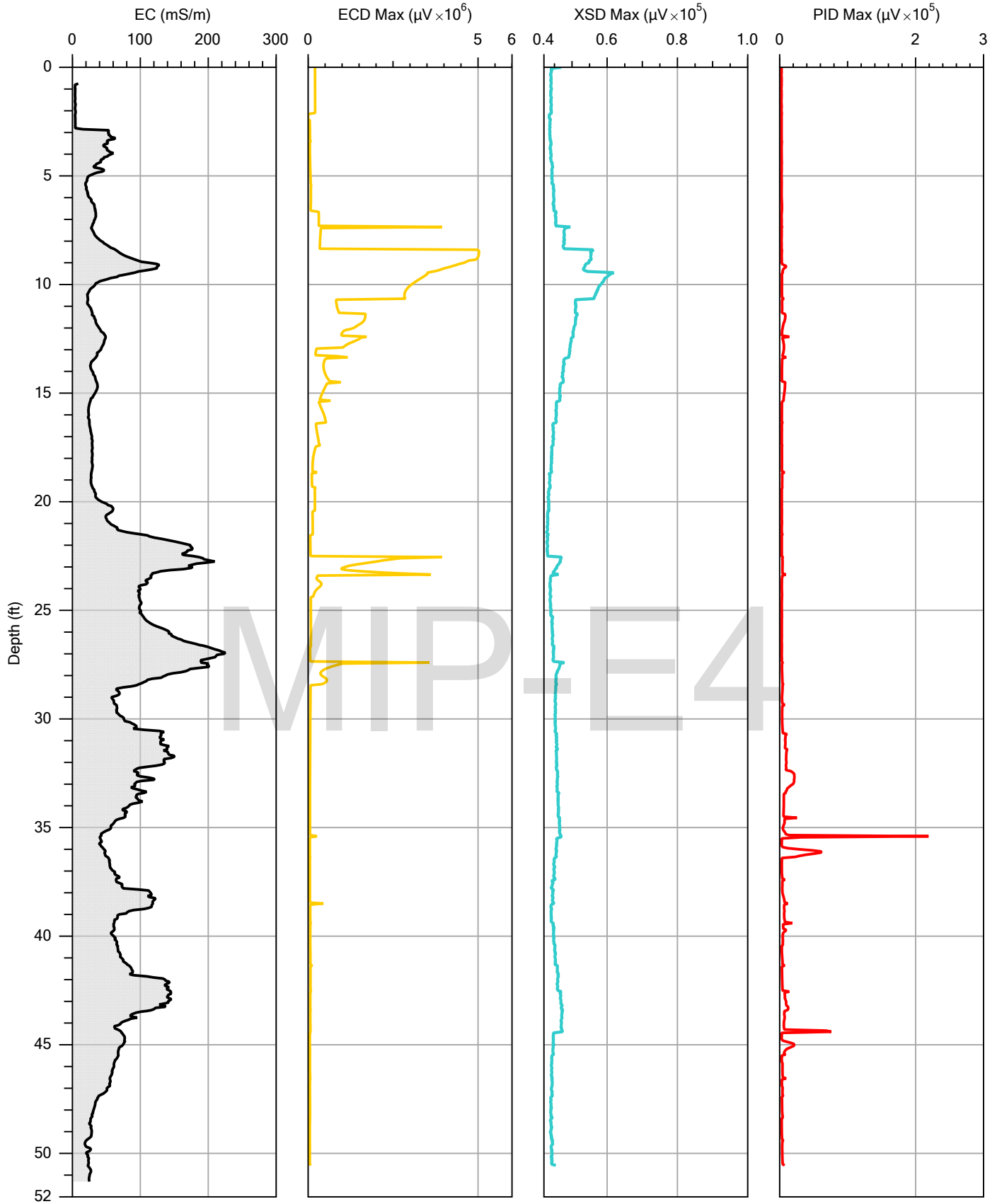




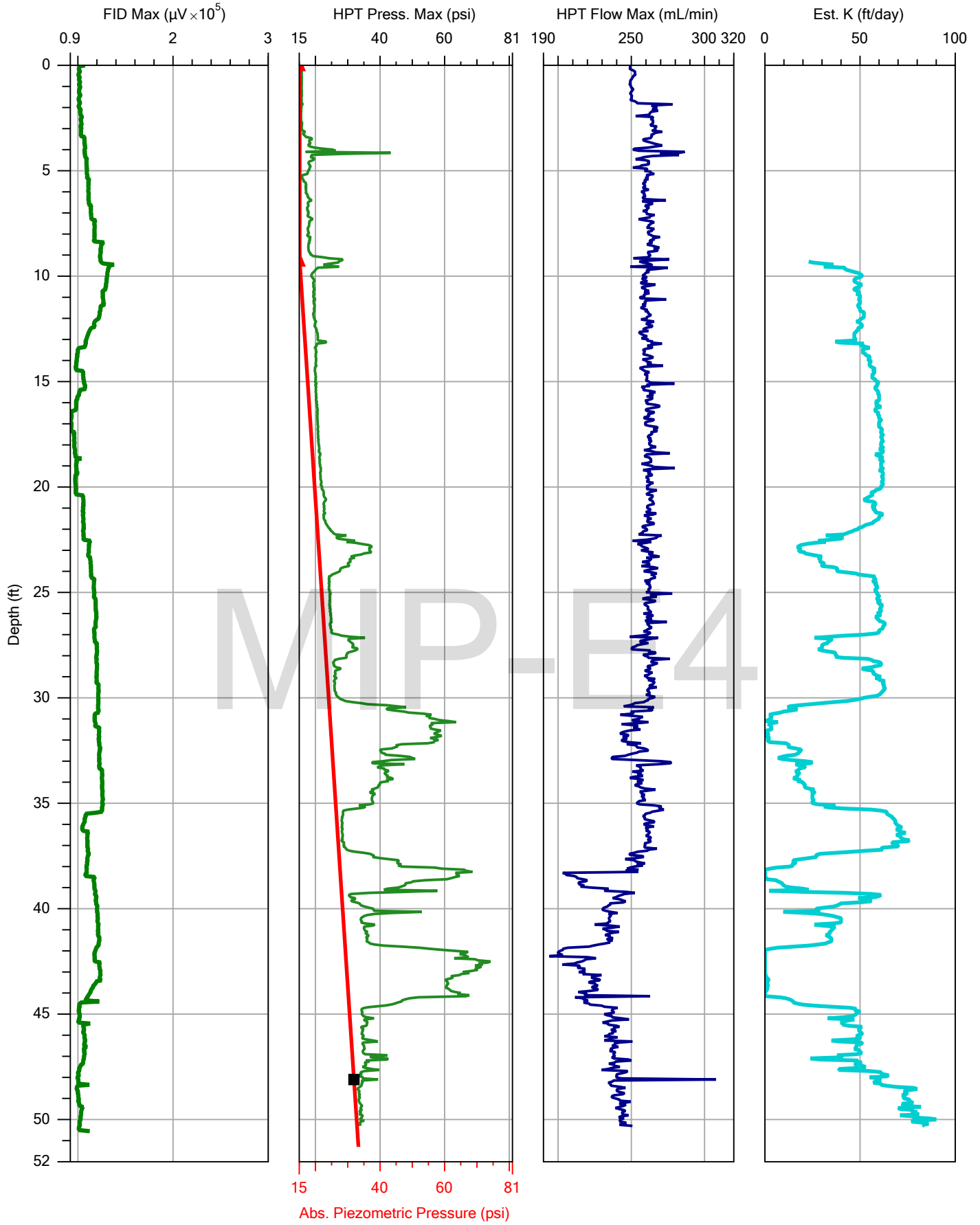
Company:	AEI
Project ID:	201-156325

Operator:	Diamond
Client:	Joe

File:	MIP-S1.MHP
Date:	12/8/2015
Location:	



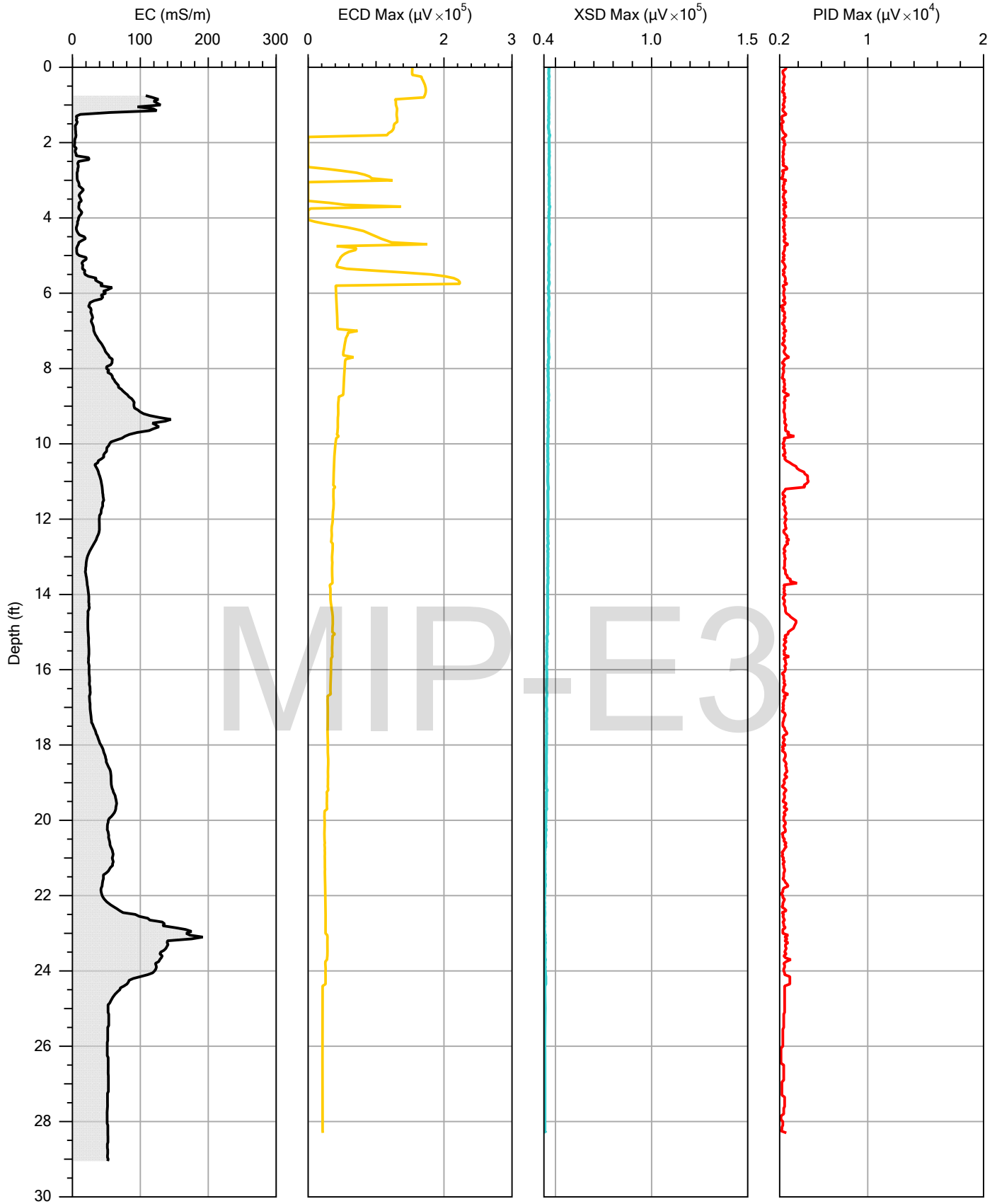
Company:	Zebra	Operator:	Diamond	File:	MIP-E4.MHP
Project ID:	156325	Client:	AEI	Date:	12/9/2015
				Location:	



Company: Zebra  
Project ID: 156325

Operator: Diamond  
Client: AEI

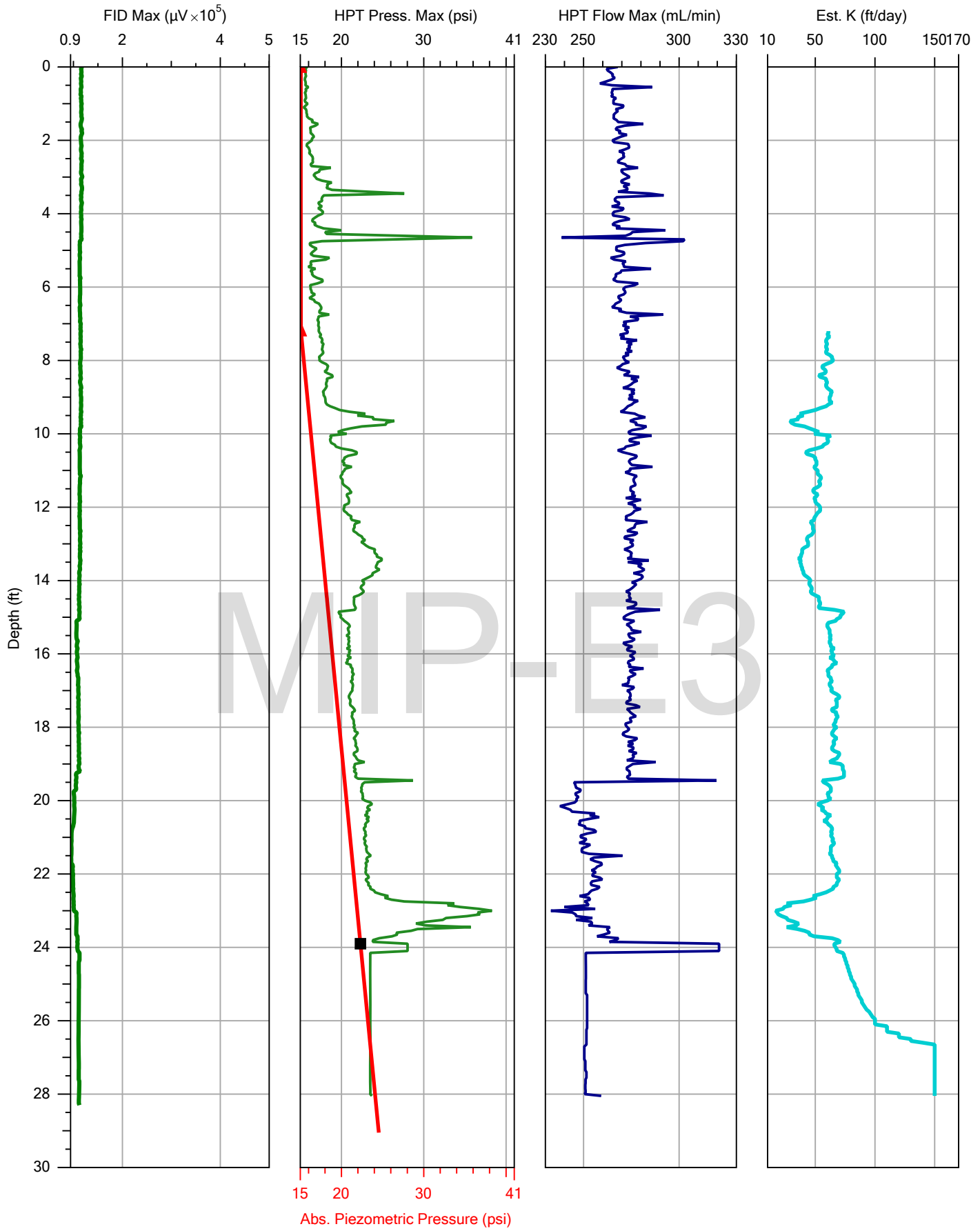
File:	MIP-E4.MHP
Date:	12/9/2015
Location:	



MIP-E3



Company:	Zebra	Operator:	Diamond	File:	MIP-E3.MHP
Project ID:	156325	Client:	AEI	Date:	12/9/2015
				Location:	



Company: Zebra  
Project ID: 156325

Operator: Diamond  
Client: AEI

File:	MIP-E3.MHP
Date:	12/9/2015
Location:	

# **APPENDIX C**

## **Boring Logs**



AEI Consultants

# BORING NUMBER MW-4D

PAGE 1 OF 1

CLIENT Nu-Clear Cleaner

PROJECT NUMBER 341998

DATE STARTED 12/15/15 COMPLETED 12/15/15

DRILLING CONTRACTOR Cascade Drilling, Inc.

DRILLING METHOD Direct Push

LOGGED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

NOTES 8 feet east of the site building, on the sidewalk

PROJECT NAME Nu-Clear Cleaners

PROJECT LOCATION 180 East Park Avenue Long Beach, NY

GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 5 inches

GROUND WATER LEVELS:

AT TIME OF DRILLING ---

AT END OF DRILLING ---

▼ AFTER DRILLING 5.56 ft

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\UCC\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					light yellow to brown medium to fine sand	
5					▼	
9.0					Dark grey silty clay with organic material visible	
10.5					dark grey medium to fine sand	
22.0					Dark grey silty clay with organic material visible	
23.0					dark grey medium to fine sand	
26.0					Dark grey silty clay with organic material visible	
28.5					dark grey medium to fine sand	
31.0					Dark grey silty clay with organic material visible	
33.0					dark grey medium to fine sand	
37.5					Dark grey silty clay with organic material visible	
39.0					dark grey medium to fine sand	
40-45					Strong Organic Smell 40-45 ft bgs	
44.0					Dark grey silty clay with organic material visible	
45.0					Dark grey silty clay with organic material visible	

2" PVC Riser

2" PVC screen (0.010" slotted)

Bottom of borehole at 45.0 feet.



**CLIENT** Nu-Clear Cleaner  
**PROJECT NUMBER** 341998  
**DATE STARTED** 12/14/15 **COMPLETED** 12/14/15  
**DRILLING CONTRACTOR** Cascade Drilling, Inc.  
**DRILLING METHOD** Direct Push  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_  
**NOTES** 8 feet east of the site building, on the sidewalk

**PROJECT NAME** Nu-Clear Cleaners  
**PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 5 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**▼ AFTER DRILLING** 5.50 ft

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\UCC\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					light yellow to brown medium to fine sand	
5					▼	
9.0					Dark grey silty clay with organic material visible	2" PVC Riser
10.5					dark grey medium to fine sand	
22.0					Dark grey silty clay with organic material visible	2" PVC screen (0.010" slotted)
23.0					dark grey medium to fine sand	
26.0					Dark grey silty clay with organic material visible	
28.5					dark grey medium to fine sand	
30.0					Bottom of borehole at 30.0 feet.	





**CLIENT** Nu-Clear Cleaner

**PROJECT NUMBER** 341998

**DATE STARTED** 12/14/15 **COMPLETED** 12/14/15

**DRILLING CONTRACTOR** Cascade Drilling, Inc.

**DRILLING METHOD** Direct Push

**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_

**NOTES** 45 feet east of the site building, on Long Beach Boulevard

**PROJECT NAME** Nu-Clear Cleaners

**PROJECT LOCATION** 180 East Park Avenue Long Beach, NY

**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 5 inches

**GROUND WATER LEVELS:**

**AT TIME OF DRILLING** ---

**AT END OF DRILLING** ---

**▼ AFTER DRILLING** 5.03 ft

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					light yellow to brown medium to fine sand	
5					▼	
9.0					Dark grey silty clay with organic material visible	2" PVC Riser
10.0					dark grey medium to fine sand	
22.5					Dark grey silty clay with organic material visible	2" PVC screen (0.010" slotted)
24.0					dark grey medium to fine sand	
30.0					Bottom of borehole at 30.0 feet.	



AEI Consultants

**BORING NUMBER MW-7**

PAGE 1 OF 1

**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/14/15 **COMPLETED** 12/14/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 5 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 30 feet southeast of the site building southeast corner, on the sidewalk **AFTER DRILLING** 5.24 ft

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					light yellow to brown medium to fine sand	
5						
9.5					Dark grey silty clay with organic material visible	2" PVC Riser
10.5					dark grey medium to fine sand	
25.5					Dark grey silty clay with organic material visible	2" PVC screen (0.010" slotted)
27.5					dark grey medium to fine sand	
30.0					Bottom of borehole at 30.0 feet.	



**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/14/15 **COMPLETED** 12/14/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 5 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 120 feet south of the Site building, on the sidewalk near East Walnut **STARTER DRILLING** 5.41 ft

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\UCC\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0					light yellow to brown medium to fine sand	
5						
9.5					Dark grey silty clay with organic material visible	2" PVC Riser
11.0					dark grey medium to fine sand	
22.0					Dark grey silty clay with organic material visible	2" PVC screen (0.010" slotted)
23.5					dark grey medium to fine sand	
29.0					Dark grey silty clay with organic material visible	
30.0					Bottom of borehole at 30.0 feet.	



**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/7/15 **COMPLETED** 12/7/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 60 feet southwest of the site building, in the municipal lot, near a residential **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5			4.5		Asphalt	
1.3			1.3		light yellow to dark grey fine sand	
0.2			0.2		WET @ 5.5 feet bgs	
0			0			
0			0			
0.1			0.1			
0.2			0.2			
0			0			
0			0			
5	AEI-SB6(5-5.5)		0			
			2.5			
			1.7			
			1.1			
			0.7			
			0			
			0.7			
			0			
			0			
10			0		Dark grey silty clay with organic material visible	
			1		grey medium to fine sand with Organic smell	
			0.1			
			0.7			
			4.0			
			5.6			
			7.4			
			11			
			16.1			
			10.7			
15			16.6			
			1.5			
			0.4			
			0.8			
			0.7			
			1.4			
			1.6			
			0.9			
			0.7			
			0.7			
20			0.5			

Bottom of borehole at 20.0 feet.



AEI Consultants

**BORING NUMBER SB-7/TWP-7**

PAGE 1 OF 1

**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/7/15 **COMPLETED** 12/7/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 35 feet south of the site building, in the municipal lot, near a dry well **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt	Asphalt	
42.7				light yellow to grey medium to fine sand	light yellow to grey medium to fine sand	
30.5						
29.6						
50.1						
55.4						
116.1						
110.5						
104.3						
5	AEI-SB7(4.5-5)		100.1	5.0	black gravel with fine sand Sheen visible on water-Strong Odor	1" PVC Riser
105.6						
1871						
2014						
3620						
7				7.0	grey medium to fine sand  Odor between 8 and 16 feet bgs	
3064						
2836						
2545						
1086						
641.2						
10						
175.6						
175.9						
1240						
1010						
712						
561						
271						
251						
224						
187						
15						
19.7						
15	AEI-SB7(15-15.5)		2716	1" PVC screen (0.010" slotted)		1" PVC screen (0.010" slotted)
2615						
2500						
1450						
788.1						
542.1						
194						
120						
114						
20						
201						
20.0						

Bottom of borehole at 20.0 feet.



AEI Consultants

**BORING NUMBER SB-8**

PAGE 1 OF 1

**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/7/15 **COMPLETED** 12/7/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 85 feet south of the site building, in the municipal lot, near a dry well **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt	Asphalt	
0.3				light yellow to grey fine sand	light yellow to grey fine sand	
0.3						
0.2						
0.3						
0.7						
0.7						
0.8						
0.9						
5.0	AEI-SB8(4.5-5)		0.5	black fine sand with sub-angular gravel throughout-Potential Staining	black fine sand with sub-angular gravel throughout-Potential Staining	
0.3						
0.3						
0.8						
0.3						
0.7						
1.1				grey medium to fine sand	grey medium to fine sand	
0.7						
0.3						
0.7						
4.8						
3.7						
0.2						
0.7						
0.5						
0.7						
0.7						
0.2						
0.2						
0.2						
15.0	AEI-SB8(14.5-15)		0.2			
0.5						
0.5						
0.8						
0.7						
1.1						
1.4						
1.0						
0.5						
0.7						
0.8						
20.0						

Bottom of borehole at 20.0 feet.



AEI Consultants

# BORING NUMBER SB-9/TWP-9

**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/7/15 **COMPLETED** 12/7/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 8 feet south of the site buildings southeast corner, on the sidewalk **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5					Concrete	
0.3					light yellow to grey medium to fine sand with sub-rounded gravel	
0.3					WET @ 5.5 feet bgs	
0.2						
0						
0						
0.1						
0.2						
5	AEI-SB9(4-4.5)					1" PVC Riser
0						
0						
2.5						
1.6						
4.4						
47.9						
50.1						
73.1						
68.5						
22.2						
10						
25.4						
10.0					dark grey silty clay with organics visible	
11.7					dark grey medium to fine sand	
3						
10.6						
43						
18						
17						
14						
25						
12						
15						
4.8						
1.5						1" PVC screen (0.010" slotted)
6						
2						
2						
2						
5						
5						
8						
8						
20	AEI-SB9(19.5-20)					
20.0						

Bottom of borehole at 20.0 feet.



AEI Consultants

**BORING NUMBER SB-10**

PAGE 1 OF 1

**CLIENT** Nu-Clear Cleaner **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 12/7/15 **COMPLETED** 12/7/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** ---  
**NOTES** 15 feet east of the site buildings southeast corner, on the sidewalk **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5					Concrete and gravel	
0.2					light yellow to grey medium to fine sand	
0.3						
0.2					Color changes to dark grey at 7.5 feet bgs	
0						
0.7						
0.1						
0.2						
0.3						
5	AEI-SB10(4.5-5)		0			
			0.3			
			2.5			
			7			
			6.5			
			9			
			10.4			
			15.6			
			33			
			27			
10			27		Dark grey silty clay with organic material visible	
			10			
			5			
			6			
			6			
			7			
			7			
			2			
			0.7			
			6			
15			3			
			2			
			2			
			1			
			1			
			2			
			2			
			2			
			1.3			
			1.6			
20	AEI-SB10(19.5-20)		0.5			

Bottom of borehole at 20.0 feet.





AEI Consultants

**BORING NUMBER SB-11**

PAGE 1 OF 1

CLIENT Nu-Clear Cleaner  
 PROJECT NUMBER 341998  
 DATE STARTED 12/10/15 COMPLETED 12/10/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 NOTES 70 feet south of the site building, in the municipal lot

PROJECT NAME Nu-Clear Cleaners  
 PROJECT LOCATION 180 East Park Avenue Long Beach, NY  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 3 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.2					light yellow to brown medium to fine sand	
0.3					Color turns to grey at about 7 feet bgs	
0.2						
0.3						
0					WET @ 5.5 feet bgs	
0.1						
0.2						
0.1						
0.3						
0.5						
0.3						
0.5						
10.0						
0.1						
0.5						
3.6					10.0 10.5 --- Dark grey silty clay with organic material visible	
3.6					dark grey medium to fine sand	
4.1						
4.5						
4.8						
3.1						
3.1						
3.6						
15						
3.2						
0.7						
1.9						
0.7						
0.2						
0.2						
0.7						
0.4						
0.1						
20						
0.4						
0.7						
0.4						
0.5						
0.5						
0.2						
22.0					22.0 22.5 --- Dark grey silty clay with organic material visible	
1					dark grey medium to fine sand	
1.7						
3.1						
0.3						
25						
1.8					24.5 --- Dark grey silty clay with organic material visible	
3.0						
1.8						
13.7					26.5 --- dark grey medium to fine sand	
0.4						
1.1						
2.8						
0.6						
0.5						
30						
0.2						
29.5					29.5 30.5 --- Dark grey silty clay with organic material visible	
0.2						
0.1						
31.5					31.5 --- dark grey medium to fine sand	
0.4						
0.2						
34.0					34.0 --- Dark grey silty clay with organic material visible	
0.2						
35						
0.2						
0.3					35.0 --- dark grey medium to fine sand	

Bottom of borehole at 35.0 feet.



AEI Consultants

**BORING NUMBER SB-12**

PAGE 1 OF 1

CLIENT Nu-Clear Cleaner  
 PROJECT NUMBER 341998  
 DATE STARTED 12/15/15 COMPLETED 12/15/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 NOTES 60 feet south of the site building, in the municipal lot

PROJECT NAME Nu-Clear Cleaners  
 PROJECT LOCATION 180 East Park Avenue Long Beach, NY  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 3 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING ---

AEI BORING - GINT STD US LAB.GDT - 1/6/16 10:29 - C:\USERS\JBERNARD\DESKTOP\PROJECTS\341998-NU-CLEAR\RI\341998-BORING LOGS RI.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.2					light yellow to brown medium to fine sand	
0.3					Color turns to grey at about 7 feet bgs	
0.2					WET @ 5.5 feet bgs	
0.3						
0						
0.1						
0.2						
0.3						
0.1						
0.2						
0.1						
0.3						
0.5						
10.0						
10.3					Dark grey silty clay with organic material visible	
10.5					dark grey medium to fine sand	
0.1						
0.5						
3.6						
3.6						
4.5						
3.1						
3.6						
0.7						
0.7						
0.2						
0.4						
20						
0.4						
0.4						
0.5						
1						
22.0						
3.1					Dark grey silty clay with organic material visible	
22.5					dark grey medium to fine sand	
1.8						
24.5					Dark grey silty clay with organic material visible	
0.4						
26.5					dark grey medium to fine sand	
2.8						
0.5						
0.2						
29.5					Dark grey silty clay with organic material visible	
0.1						
0.1						
32.0					dark grey medium to fine sand	
0						
0.1						
35	AEI-SB12(33-33.5)					
0.2						
0						
0						
37.0						
0.1					Dark grey silty clay with organic material visible	
38.0					dark grey medium to fine sand	
0.2						
1						
1.5					Strong Organic Smell 40-45 ft bgs	
.1						
.6						
1.1						
1.4						
44.5						
45	AEI-SB12(44.5-45)				Dark grey silty clay with organic material visible	
0.8						
45.0						

Bottom of borehole at 45.0 feet.

# **APPENDIX D**

## **Groundwater Purging & Sampling Logs**

## LOW FLOW SAMPLING DATA SHEET

SHEET \_\_\_\_ OF \_\_\_\_

SITE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

CONSULTING FIRM: AEI  
 FIELD PERSONNEL: JB-PP

MONITOR WELL #: MW-1 WELL DEPTH: 20  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: \_\_\_\_\_ inches  
 SCREENED/OPEN INTERVAL: 10-20

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1225			6.85	NA	2.68	NA	1	NA	2.88	NA	0	NA	18.27	NA		5.72
1230			6.83	0.02	2.68	0	2	1	2.51	0.37	9.7	9.7	17.71	0.56		5.72
1235			6.82	0.01	2.69	0.01	2	0	2.25	0.26	7.3	2.4	17.65	0.06		5.72
1240			6.81	0.01	2.71	0.02	3	1	1.67	0.58	4.3	2	17.55	0.10		5.72

COMMENTS: Purged 2.5 gallons, sampled at 12:50

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET \_\_\_\_ OF \_\_\_\_

SITE: Nu-Clear CONSULTING FIRM: AET  
 DATE: 12/18/15 FIELD PERSONNEL: JB EBF  
 WEATHER: \_\_\_\_\_

MONITOR WELL #: MW-2 WELL DEPTH: 30 SCREENED/OPEN INTERVAL: 20-30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 25 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.42 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0935				NA		NA		NA		NA		NA		NA		5.50
0937			7.38		1.60		6		2.81		155		19.98			5.56
0942			7.73		1.82		-9		1.31		83.9		20.12			5.56
0947			7.85		1.88		-14		0.68		34.5		20.17			5.56
0952			7.92		1.94		-17		0.02		9.4		20.17			5.57
0957			7.95		1.94		-19		0		6.1		20.20			5.57
1002			7.98		1.90		-20		0		4.5		20.12			5.57
1007			7.99		1.91		-20		0		3.9		20.14			5.57

COMMENTS:  
Sampled @ 1010  
Purged 6 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET \_\_\_\_ OF \_\_\_\_

SITE: Nu-Clear CONSULTING FIRM: AEI Consultants  
 DATE: 12/18/15 FIELD PERSONNEL: JD-BF  
 WEATHER: \_\_\_\_\_

MONITOR WELL #: 118 MW-3 WELL DEPTH: 30 SCREENED/OPEN INTERVAL: 20-30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 25 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.59 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1005				NA		NA		NA		NA		NA		NA		
1010			7.32		3.63		-23		0.50		0		19.59			5.7
1015			7.29	0.03	3.62	0.01	-21	2	0	0.5	0	0	19.57	0.02		5.7
1020			7.29	0	3.61	0.01	-21	0	0	0	0	0	19.57	0		5.7
1025			7.30	0.01	3.61	0	-22	1	0	0	0	0	19.59	0.02		5.7

COMMENTS: Sampled @ 1030  
Purged 5 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET \_\_\_\_ OF \_\_\_\_

SITE: Nu-Clear CONSULTING FIRM: AEI  
 DATE: \_\_\_\_\_ FIELD PERSONNEL: JB FBF  
 WEATHER: \_\_\_\_\_

MONITOR WELL #: MW-4D WELL DEPTH: 45 SCREENED/OPEN INTERVAL: 40-45  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 42 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.72 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1208				NA		NA		NA		NA		NA		NA		
1213			8.35		2.88		-36		5.95		208		18.26			5.82
1214			8.39		2.93		-37		4.54		189		18.01			5.79
1223			8.39		2.97		-37		3.71		168		17.56			5.85
1228			8.38		2.95		-37		2.76		182		18.78			5.87
1233			8.38		2.97		-37		1.03		201		17.70			6.51
1238			8.35		3.01		-35		0		148		18.12			6.47
1243			8.41		3.07		-38		0		119		17.63			6.44
1248			8.37		3.03		-36		0		63.3		17.99			6.51
1253			8.36		3.10		-36		0		63		17.73			6.50

COMMENTS: Sampled @ 1300  
Purged 7.5 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

## LOW FLOW SAMPLING DATA SHEET

SHEET \_\_\_\_ OF \_\_\_\_

SITE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

CONSULTING FIRM: AOT  
 FIELD PERSONNEL: JH-8F

MONITOR WELL #: MW-5 WELL DEPTH: 3 SCREENED/OPEN INTERVAL: 20-30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: \_\_\_\_\_ inches

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1135			7.71	NA	2.13	NA	-42	NA	2.39	NA	0	NA	18.69	NA		5.4
1140			7.73	0.02	2.15	0.02	43	1	2.12	0.27	0	0	18.83	0.14		5.5
1145			7.71	0.02	2.19	0.04	-42	1	1.80	0.32	0	0	18.89	0.06		5.5
1150			7.69	0.02	2.24	0.05	-41	1	1.71	0.09	0	0	18.87	0.02		5.6

COMMENTS: purged 5 gallons, sampled at 12:00

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.



## LOW FLOW SAMPLING DATA SHEET

SHEET \_\_\_\_ OF \_\_\_\_

SITE: Nu-Clear  
 DATE: 12/18/15  
 WEATHER: \_\_\_\_\_

CONSULTING FIRM: AEI Consultants  
 FIELD PERSONNEL: JB BF

MONITOR WELL #: MW-6 WELL DEPTH: 30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

SCREENED/OPEN INTERVAL: 20-30

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 25 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.03 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
<del>1055</del>			<del>7.63</del>	NA	<del>1.1</del>	NA	<del>-38</del>	NA	<del>2.0</del>	NA		NA		NA		
1055			7.69		1.21		-41		0		0		18.48	0.02		5.15
1100			7.66	0.03	1.19	0.02	-40	1	0	0	0	0	18.46	0.03		5.15
1105			7.69	0.03	1.20	0.01	-40	0	0.24	0.24	0	0	18.48	0.02		5.15
1110			7.69	0	1.20	0	-41	1	0.43	0.19	0	0	18.51	0.03		5.15

COMMENTS: Sampled @ 1115  
Purged 5 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

## LOW FLOW SAMPLING DATA SHEET

SHEET \_\_\_\_ OF \_\_\_\_

SITE: <u>Nu Clear</u> DATE: <u>12/18/15</u> WEATHER: _____	CONSULTING FIRM: <u>AEI</u> FIELD PERSONNEL: <u>JB &amp; BE</u>
--	--

MONITOR WELL #: <u>MW-7</u>	WELL DEPTH: <u>30</u>	SCREENED/OPEN INTERVAL: <u>20-30</u>
WELL PERMIT #: _____	WELL DIAMETER: <u>2</u> inches	

PID/FID READINGS (ppm): BACKGROUND: _____ BENEATH OUTER CAP: _____ BENEATH INNER CAP: _____	PUMP INTAKE DEPTH: <u>25</u> ft below TOC DEPTH TO WATER BEFORE PUMP INSTALLATION: <u>5.24</u> ft below TOC MAKE/MODEL OF PUMP: _____
--	---

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1028				NA		NA		NA		NA		NA		NA		5.34
1030			7.89		3.12		-17		0.06		17.9		19.66			5.35
1035			7.85		3.07		-14		0		5.2		19.69			5.37
1040			7.90		3.11		-16		0		2.6		19.67			5.36
1045			7.93		3.17		-18		0		1.3		19.73			5.35
1050			7.95		3.19		-19		0		0.8		19.65			5.36
1055			7.97		3.23		-20		0		0.5		19.60			5.37

COMMENTS: Purged 6 gallons      Sampled @ 1100

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET \_\_\_\_ OF \_\_\_\_

SITE: Nu-Clear Cleaners CONSULTING FIRM: AET  
 DATE: 12/18/15 FIELD PERSONNEL: JBEBF  
 WEATHER: \_\_\_\_\_

MONITOR WELL #: MW-5 WELL DEPTH: 30 SCREENED/OPEN INTERVAL: 20-30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches

PID/FID READINGS (ppm): BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 25 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.41 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0855				NA		NA		NA		NA		NA		NA		5.58
0900			7.45		3.48		-36		1.12		11.6		18.57			5.60
0905			7.60	0.15	3.80	0.08	-37	1	0.28	0.84	8.3		18.66	0.09		5.60
0910			7.65	0.05	3.76	0.04	-39	2	0.13	0.15	1.2		18.71	0.05		5.61
0915			7.70	0.05	3.75	0.01	-42	3	0.06	0.07	0		18.65	0.06		5.61
0920			7.71	0.01	3.75	0	-42	0	0.10	0.04	0		18.64	0.01		5.62
0925			7.72	0.01	3.74	0.01	-43	1	0.35	0.25	0		18.67	0.03		5.62

COMMENTS:  
Sampled @ 0930  
Purged 5 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET \_\_\_ OF \_\_\_

SITE: Nx Clear  
 DATE: 1/7/16  
 WEATHER: Clear Mid 30s  
 CONSULTING FIRM: AFF  
 FIELD PERSONNEL: JB & AC

MONITOR WELL #: MW-4D WELL DEPTH: 45  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches SCREENED/OPEN INTERVAL: 40-45

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 42.5 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.59 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1125			7.21	NA	2.57	NA	-211	NA	0.31	NA	253	NA	16.95	NA		6.73
1130			7.13		2.48		-226		0		52.5		16.90			6.37
1135			7.06		2.70		-253		0		67.5		16.88			6.40
1140			7.04		2.72		-268		0		81.3		16.88			6.46
1145			7.02		2.76		-285		0		282		16.88			6.34

COMMENTS:  
Sampled @ 1150  
Purged 3.5 gallons - Clear with foam

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

# AEI-SP4

## LOW FLOW SAMPLING DATA SHEET

SHEET \_\_\_ OF \_\_\_

SITE: Nx Clear CONSULTING FIRM: AEI  
 DATE: 1/7/16 FIELD PERSONNEL: JB/AC  
 WEATHER: Clear - Mid 30s

MONITOR WELL #: ~~FWP~~ WELL DEPTH: \_\_\_\_\_ SCREENED/OPEN INTERVAL: \_\_\_\_\_  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: \_\_\_\_\_ inches

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: \_\_\_\_\_ ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: \_\_\_\_\_ ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1010			7.15	NA	2.82	NA	-213	NA	0	NA	1000	NA	13.19	NA		
1015			7.18		2.77		-244		0		1000		13.40			
1020			7.20		2.79		-256		0		1000		13.16			
1025			7.17		2.82		-261		0		1000		12.89			
1030			7.18		2.80		-263		0		1000		12.87			
1035			7.14		2.80		-263		0		1000		12.99			

COMMENTS: Turbidity was bouncing between 0, 884, 971, 1000 the entire sampling  
Sampled @ 1040 Water is dark grey - Purged about 1.5 gallons

\*INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

**LOW FLOW SAMPLING  
DATA SHEET**

SHEET      OF     

SITE: Nu-Clear  
 DATE: 1/7/16  
 WEATHER: Clear Mid 30s  
 CONSULTING FIRM: AEI  
 FIELD PERSONNEL: JB & AC

MONITOR WELL #: MW-6 WELL DEPTH: 30  
 WELL PERMIT #: \_\_\_\_\_ WELL DIAMETER: 2 inches  
 SCREENED/OPEN INTERVAL: 20-30

PID/FID READINGS (ppm):  
 BACKGROUND: \_\_\_\_\_ PUMP INTAKE DEPTH: 25 ft below TOC  
 BENEATH OUTER CAP: \_\_\_\_\_ DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.96 ft below TOC  
 BENEATH INNER CAP: \_\_\_\_\_ MAKE/MODEL OF PUMP: \_\_\_\_\_

TIME	PURGING	SAMPLING	pH (pH units)		SPECIFIC CONDUCTIVITY (mS/cm)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l)		TURBIDITY (NTU)		TEMPERATURE (degrees C)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1300			7.10	NA	0.814	NA	-257	NA	0	NA	62	NA	16.5	NA		5.02
1305			7.00		0.542		-298		0		1.4		16.65			5.03
1310			6.99		0.838		-297		0		10		16.78			5.03
1315			6.99		0.840		-301		0		6.9		16.77			5.05

COMMENTS:  
Sampled @ 1320  
Purged gallons - Clear water

\* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ±0.1 for pH; ±3% for Specific Conductivity and Temperature; ±10 mv for Redox Potential; and ±10% for Dissolved Oxygen and Turbidity.

# **APPENDIX 9**

## **Sample Analytical Documentation**



## ANALYTICAL REPORT

Lab Number:	L1532147
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU CLEAR
Project Number:	341998
Report Date:	12/16/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1532147-01	AEI SB6(5-5.5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 11:55	12/07/15
L1532147-02	AEI SB7(4.5-5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 12:35	12/07/15
L1532147-03	AEI SB8(4.5-5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 13:25	12/07/15
L1532147-04	AEI SB9(4-4.5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 13:50	12/07/15
L1532147-05	AEI SB10(4.5-5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 14:40	12/07/15
L1532147-06	AEI TWP7	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 12:50	12/07/15
L1532147-07	AEI TWP9	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 14:10	12/07/15

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

### 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.

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**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

### Case Narrative (continued)

#### Report Submission

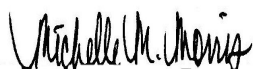
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Volatile Organics

The WG850154-3 Method Blank, associated with L1532147-01 through -05, has a concentration above the reporting limit for toluene. Since the samples were non-detect for this target analyte, no further actions were taken. The results of the original analysis are reported.

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:



Michelle M. Morris

Title: Technical Director/Representative

Date: 12/16/15

# ORGANICS

# VOLATILES

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-01  
 Client ID: AEI SB6(5-5.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 01:12  
 Analyst: MS  
 Percent Solids: 89%

Date Collected: 12/07/15 11:55  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	12	1.4	1
1,1-Dichloroethane	ND		ug/kg	1.9	0.11	1
Chloroform	ND		ug/kg	1.9	0.46	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
1,2-Dichloropropane	ND		ug/kg	4.4	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.19	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	0.38	1
Tetrachloroethene	12		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.43	1
Trichlorofluoromethane	ND		ug/kg	6.2	0.48	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.14	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.14	1
Bromodichloromethane	ND		ug/kg	1.2	0.22	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.2	0.18	1
Bromoform	ND		ug/kg	5.0	0.29	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.12	1
Benzene	ND		ug/kg	1.2	0.15	1
Toluene	ND		ug/kg	1.9	0.24	1
Ethylbenzene	2.8		ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	6.2	0.36	1
Bromomethane	ND		ug/kg	2.5	0.42	1
Vinyl chloride	ND		ug/kg	2.5	0.15	1
Chloroethane	ND		ug/kg	2.5	0.39	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.32	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.26	1
Trichloroethene	ND		ug/kg	1.2	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	6.2	0.19	1

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-01

Date Collected: 12/07/15 11:55

Client ID: AEI SB6(5-5.5)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	6.2	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	6.2	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.10	1
p/m-Xylene	12		ug/kg	2.5	0.25	1
o-Xylene	2.8		ug/kg	2.5	0.21	1
Xylenes, Total	15		ug/kg	2.5	0.21	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.5	0.50	1
Dichlorodifluoromethane	ND		ug/kg	12	0.24	1
Acetone	5.3	J	ug/kg	12	1.3	1
Carbon disulfide	ND		ug/kg	12	1.4	1
2-Butanone	ND		ug/kg	12	0.34	1
Vinyl acetate	ND		ug/kg	12	0.16	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.20	1
2-Hexanone	ND		ug/kg	12	0.83	1
Bromochloromethane	ND		ug/kg	6.2	0.34	1
2,2-Dichloropropane	ND		ug/kg	6.2	0.28	1
1,2-Dibromoethane	ND		ug/kg	5.0	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.2	0.18	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.40	1
Bromobenzene	ND		ug/kg	6.2	0.26	1
n-Butylbenzene	ND		ug/kg	1.2	0.14	1
sec-Butylbenzene	ND		ug/kg	1.2	0.15	1
tert-Butylbenzene	ND		ug/kg	6.2	0.17	1
o-Chlorotoluene	ND		ug/kg	6.2	0.20	1
p-Chlorotoluene	ND		ug/kg	6.2	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.2	0.49	1
Hexachlorobutadiene	ND		ug/kg	6.2	0.28	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.16	1
Naphthalene	ND		ug/kg	6.2	0.17	1
Acrylonitrile	ND		ug/kg	12	0.64	1
n-Propylbenzene	ND		ug/kg	1.2	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.2	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.2	0.23	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.2	0.18	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-01  
 Client ID: AEI SB6(5-5.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 11:55  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	6.2	0.18	1
1,4-Dioxane	ND		ug/kg	120	18.	1
p-Diethylbenzene	ND		ug/kg	5.0	0.20	1
p-Ethyltoluene	ND		ug/kg	5.0	0.15	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.0	0.16	1
Ethyl ether	ND		ug/kg	6.2	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-02  
 Client ID: AEI SB7(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 01:39  
 Analyst: MS  
 Percent Solids: 95%

Date Collected: 12/07/15 12:35  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.41	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.25	1
Dibromochloromethane	ND		ug/kg	1.1	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	240		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.38	1
Trichlorofluoromethane	ND		ug/kg	5.5	0.43	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.19	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.13	1
1,1-Dichloropropene	ND		ug/kg	5.5	0.16	1
Bromoform	ND		ug/kg	4.4	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.5	0.32	1
Bromomethane	ND		ug/kg	2.2	0.37	1
Vinyl chloride	ND		ug/kg	2.2	0.13	1
Chloroethane	ND		ug/kg	2.2	0.35	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	2.7		ug/kg	1.1	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	5.5	0.17	1

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-02

Date Collected: 12/07/15 12:35

Client ID: AEI SB7(4.5-5)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.5	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	5.5	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.09	1
p/m-Xylene	ND		ug/kg	2.2	0.22	1
o-Xylene	ND		ug/kg	2.2	0.19	1
Xylenes, Total	ND		ug/kg	2.2	0.19	1
cis-1,2-Dichloroethene	14		ug/kg	1.1	0.16	1
1,2-Dichloroethene, Total	14		ug/kg	1.1	0.16	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.2	0.44	1
Dichlorodifluoromethane	ND		ug/kg	11	0.21	1
Acetone	ND		ug/kg	11	1.1	1
Carbon disulfide	ND		ug/kg	11	1.2	1
2-Butanone	ND		ug/kg	11	0.30	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.27	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.18	1
2-Hexanone	ND		ug/kg	11	0.73	1
Bromochloromethane	ND		ug/kg	5.5	0.30	1
2,2-Dichloropropane	ND		ug/kg	5.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	4.4	0.19	1
1,3-Dichloropropane	ND		ug/kg	5.5	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.35	1
Bromobenzene	ND		ug/kg	5.5	0.23	1
n-Butylbenzene	ND		ug/kg	1.1	0.13	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.5	0.15	1
o-Chlorotoluene	ND		ug/kg	5.5	0.18	1
p-Chlorotoluene	ND		ug/kg	5.5	0.15	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.5	0.44	1
Hexachlorobutadiene	ND		ug/kg	5.5	0.25	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.14	1
Naphthalene	ND		ug/kg	5.5	0.15	1
Acrylonitrile	ND		ug/kg	11	0.56	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.5	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.5	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.5	0.16	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-02  
 Client ID: AEI SB7(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 12:35  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/kg	5.5	0.16	1
1,4-Dioxane	ND		ug/kg	110	16.	1
p-Diethylbenzene	ND		ug/kg	4.4	0.18	1
p-Ethyltoluene	ND		ug/kg	4.4	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.4	0.14	1
Ethyl ether	ND		ug/kg	5.5	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.5	0.43	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-03  
 Client ID: AEI SB8(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 02:07  
 Analyst: MS  
 Percent Solids: 95%

Date Collected: 12/07/15 13:25  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09	1
Chloroform	ND		ug/kg	1.5	0.37	1
Carbon tetrachloride	ND		ug/kg	1.0	0.21	1
1,2-Dichloropropane	ND		ug/kg	3.5	0.23	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30	1
Tetrachloroethene	12		ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.35	1
Trichlorofluoromethane	ND		ug/kg	5.0	0.39	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11	1
Bromodichloromethane	ND		ug/kg	1.0	0.17	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.0	0.14	1
Bromoform	ND		ug/kg	4.0	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.5	0.19	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.0	0.29	1
Bromomethane	ND		ug/kg	2.0	0.34	1
Vinyl chloride	ND		ug/kg	2.0	0.12	1
Chloroethane	ND		ug/kg	2.0	0.32	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21	1
Trichloroethene	ND		ug/kg	1.0	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15	1

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-03

Date Collected: 12/07/15 13:25

Client ID: AEI SB8(4.5-5)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.08	1
p/m-Xylene	ND		ug/kg	2.0	0.20	1
o-Xylene	ND		ug/kg	2.0	0.17	1
Xylenes, Total	ND		ug/kg	2.0	0.17	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	10	0.16	1
Styrene	ND		ug/kg	2.0	0.40	1
Dichlorodifluoromethane	ND		ug/kg	10	0.19	1
Acetone	ND		ug/kg	10	1.0	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.27	1
Vinyl acetate	ND		ug/kg	10	0.13	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.24	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.16	1
2-Hexanone	ND		ug/kg	10	0.66	1
Bromochloromethane	ND		ug/kg	5.0	0.28	1
2,2-Dichloropropane	ND		ug/kg	5.0	0.22	1
1,2-Dibromoethane	ND		ug/kg	4.0	0.17	1
1,3-Dichloropropane	ND		ug/kg	5.0	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32	1
Bromobenzene	ND		ug/kg	5.0	0.21	1
n-Butylbenzene	ND		ug/kg	1.0	0.11	1
sec-Butylbenzene	ND		ug/kg	1.0	0.12	1
tert-Butylbenzene	ND		ug/kg	5.0	0.14	1
o-Chlorotoluene	ND		ug/kg	5.0	0.16	1
p-Chlorotoluene	ND		ug/kg	5.0	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40	1
Hexachlorobutadiene	ND		ug/kg	5.0	0.23	1
Isopropylbenzene	ND		ug/kg	1.0	0.10	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.12	1
Naphthalene	ND		ug/kg	5.0	0.14	1
Acrylonitrile	ND		ug/kg	10	0.51	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-03  
 Client ID: AEI SB8(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 13:25  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14	1
1,4-Dioxane	ND		ug/kg	100	14.	1
p-Diethylbenzene	ND		ug/kg	4.0	0.16	1
p-Ethyltoluene	ND		ug/kg	4.0	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13	1
Ethyl ether	ND		ug/kg	5.0	0.26	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-04  
 Client ID: AEI SB9(4-4.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 02:34  
 Analyst: MS  
 Percent Solids: 93%

Date Collected: 12/07/15 13:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.38	1
Carbon tetrachloride	ND		ug/kg	1.0	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.24	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.32	1
Tetrachloroethene	12		ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.36	1
Trichlorofluoromethane	ND		ug/kg	5.2	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.12	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.2	0.15	1
Bromoform	ND		ug/kg	4.2	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.6	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.2	0.30	1
Bromomethane	ND		ug/kg	2.1	0.35	1
Vinyl chloride	ND		ug/kg	2.1	0.12	1
Chloroethane	ND		ug/kg	2.1	0.33	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.2	0.16	1

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-04

Date Collected: 12/07/15 13:50

Client ID: AEI SB9(4-4.5)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.20	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylenes, Total	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	1.3		ug/kg	1.0	0.15	1
1,2-Dichloroethene, Total	1.3		ug/kg	1.0	0.15	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.1	0.42	1
Dichlorodifluoromethane	ND		ug/kg	10	0.20	1
Acetone	ND		ug/kg	10	1.1	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.17	1
2-Hexanone	ND		ug/kg	10	0.69	1
Bromochloromethane	ND		ug/kg	5.2	0.29	1
2,2-Dichloropropane	ND		ug/kg	5.2	0.23	1
1,2-Dibromoethane	ND		ug/kg	4.2	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.2	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.33	1
Bromobenzene	ND		ug/kg	5.2	0.22	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.13	1
tert-Butylbenzene	ND		ug/kg	5.2	0.14	1
o-Chlorotoluene	ND		ug/kg	5.2	0.16	1
p-Chlorotoluene	ND		ug/kg	5.2	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.2	0.41	1
Hexachlorobutadiene	ND		ug/kg	5.2	0.24	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.2	0.14	1
Acrylonitrile	ND		ug/kg	10	0.53	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.2	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.2	0.19	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.2	0.15	1



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-04  
 Client ID: AEI SB9(4-4.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 13:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.2	0.15	1
1,4-Dioxane	ND		ug/kg	100	15.	1
p-Diethylbenzene	ND		ug/kg	4.2	0.16	1
p-Ethyltoluene	ND		ug/kg	4.2	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.2	0.14	1
Ethyl ether	ND		ug/kg	5.2	0.27	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.2	0.41	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-05  
 Client ID: AEI SB10(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 03:02  
 Analyst: MS  
 Percent Solids: 96%

Date Collected: 12/07/15 14:40  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.40	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.25	1
Dibromochloromethane	ND		ug/kg	1.1	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.38	1
Trichlorofluoromethane	ND		ug/kg	5.4	0.42	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.19	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.13	1
1,1-Dichloropropene	ND		ug/kg	5.4	0.15	1
Bromoform	ND		ug/kg	4.4	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.4	0.32	1
Bromomethane	ND		ug/kg	2.2	0.37	1
Vinyl chloride	ND		ug/kg	2.2	0.13	1
Chloroethane	ND		ug/kg	2.2	0.34	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	5.4	0.17	1

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-05  
 Client ID: AEI SB10(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 14:40  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.4	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	5.4	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.09	1
p/m-Xylene	ND		ug/kg	2.2	0.22	1
o-Xylene	ND		ug/kg	2.2	0.19	1
Xylenes, Total	ND		ug/kg	2.2	0.19	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.16	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.16	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.2	0.44	1
Dichlorodifluoromethane	ND		ug/kg	11	0.21	1
Acetone	4.0	J	ug/kg	11	1.1	1
Carbon disulfide	ND		ug/kg	11	1.2	1
2-Butanone	ND		ug/kg	11	0.30	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.26	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.18	1
2-Hexanone	ND		ug/kg	11	0.72	1
Bromochloromethane	ND		ug/kg	5.4	0.30	1
2,2-Dichloropropane	ND		ug/kg	5.4	0.25	1
1,2-Dibromoethane	ND		ug/kg	4.4	0.19	1
1,3-Dichloropropane	ND		ug/kg	5.4	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.35	1
Bromobenzene	ND		ug/kg	5.4	0.23	1
n-Butylbenzene	ND		ug/kg	1.1	0.12	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.4	0.15	1
o-Chlorotoluene	ND		ug/kg	5.4	0.17	1
p-Chlorotoluene	ND		ug/kg	5.4	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.4	0.43	1
Hexachlorobutadiene	ND		ug/kg	5.4	0.25	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.14	1
Naphthalene	ND		ug/kg	5.4	0.15	1
Acrylonitrile	ND		ug/kg	11	0.56	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.4	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.4	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.4	0.16	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-05  
 Client ID: AEI SB10(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 14:40  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.4	0.15	1
1,4-Dioxane	ND		ug/kg	110	16.	1
p-Diethylbenzene	ND		ug/kg	4.4	0.17	1
p-Ethyltoluene	ND		ug/kg	4.4	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.4	0.14	1
Ethyl ether	ND		ug/kg	5.4	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.4	0.43	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	102		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-06 D  
 Client ID: AEI TWP7  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/10/15 18:50  
 Analyst: MS

Date Collected: 12/07/15 12:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

Methylene chloride	ND		ug/l	1200	350	500
1,1-Dichloroethane	ND		ug/l	1200	350	500
Chloroform	ND		ug/l	1200	350	500
Carbon tetrachloride	ND		ug/l	250	67.	500
1,2-Dichloropropane	ND		ug/l	500	66.	500
Dibromochloromethane	ND		ug/l	250	74.	500
1,1,2-Trichloroethane	ND		ug/l	750	250	500
Tetrachloroethene	33000		ug/l	250	90.	500
Chlorobenzene	ND		ug/l	1200	350	500
Trichlorofluoromethane	ND		ug/l	1200	350	500
1,2-Dichloroethane	ND		ug/l	250	66.	500
1,1,1-Trichloroethane	ND		ug/l	1200	350	500
Bromodichloromethane	ND		ug/l	250	96.	500
trans-1,3-Dichloropropene	ND		ug/l	250	82.	500
cis-1,3-Dichloropropene	ND		ug/l	250	72.	500
1,3-Dichloropropene, Total	ND		ug/l	250	72.	500
1,1-Dichloropropene	ND		ug/l	1200	350	500
Bromoform	ND		ug/l	1000	320	500
1,1,2,2-Tetrachloroethane	ND		ug/l	250	72.	500
Benzene	ND		ug/l	250	80.	500
Toluene	ND		ug/l	1200	350	500
Ethylbenzene	ND		ug/l	1200	350	500
Chloromethane	ND		ug/l	1200	350	500
Bromomethane	ND		ug/l	1200	350	500
Vinyl chloride	ND		ug/l	500	35.	500
Chloroethane	ND		ug/l	1200	350	500
1,1-Dichloroethene	ND		ug/l	250	71.	500
trans-1,2-Dichloroethene	ND		ug/l	1200	350	500
Trichloroethene	1400		ug/l	250	88.	500
1,2-Dichlorobenzene	ND		ug/l	1200	350	500

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-06 D

Date Collected: 12/07/15 12:50

Client ID: AEI TWP7

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1200	350	500
1,4-Dichlorobenzene	ND		ug/l	1200	350	500
Methyl tert butyl ether	ND		ug/l	1200	350	500
p/m-Xylene	ND		ug/l	1200	350	500
o-Xylene	ND		ug/l	1200	350	500
Xylenes, Total	ND		ug/l	1200	350	500
cis-1,2-Dichloroethene	2100		ug/l	1200	350	500
1,2-Dichloroethene, Total	2100		ug/l	1200	350	500
Dibromomethane	ND		ug/l	2500	500	500
1,2,3-Trichloropropane	ND		ug/l	1200	350	500
Acrylonitrile	ND		ug/l	2500	750	500
Styrene	ND		ug/l	1200	350	500
Dichlorodifluoromethane	ND		ug/l	2500	500	500
Acetone	ND		ug/l	2500	730	500
Carbon disulfide	ND		ug/l	2500	500	500
2-Butanone	ND		ug/l	2500	970	500
Vinyl acetate	ND		ug/l	2500	500	500
4-Methyl-2-pentanone	ND		ug/l	2500	500	500
2-Hexanone	ND		ug/l	2500	500	500
Bromochloromethane	ND		ug/l	1200	350	500
2,2-Dichloropropane	ND		ug/l	1200	350	500
1,2-Dibromoethane	ND		ug/l	1000	320	500
1,3-Dichloropropane	ND		ug/l	1200	350	500
1,1,1,2-Tetrachloroethane	ND		ug/l	1200	350	500
Bromobenzene	ND		ug/l	1200	350	500
n-Butylbenzene	ND		ug/l	1200	350	500
sec-Butylbenzene	ND		ug/l	1200	350	500
tert-Butylbenzene	ND		ug/l	1200	350	500
o-Chlorotoluene	ND		ug/l	1200	350	500
p-Chlorotoluene	ND		ug/l	1200	350	500
1,2-Dibromo-3-chloropropane	ND		ug/l	1200	350	500
Hexachlorobutadiene	ND		ug/l	1200	350	500
Isopropylbenzene	ND		ug/l	1200	350	500
p-Isopropyltoluene	ND		ug/l	1200	350	500
Naphthalene	ND		ug/l	1200	350	500
n-Propylbenzene	ND		ug/l	1200	350	500
1,2,3-Trichlorobenzene	ND		ug/l	1200	350	500
1,2,4-Trichlorobenzene	ND		ug/l	1200	350	500
1,3,5-Trimethylbenzene	ND		ug/l	1200	350	500

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-06 D  
 Client ID: AEI TWP7  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 12:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	1200	350	500
1,4-Dioxane	ND		ug/l	120000	20000	500
p-Diethylbenzene	ND		ug/l	1000	350	500
p-Ethyltoluene	ND		ug/l	1000	350	500
1,2,4,5-Tetramethylbenzene	ND		ug/l	1000	320	500
Ethyl ether	ND		ug/l	1200	350	500
trans-1,4-Dichloro-2-butene	ND		ug/l	1200	350	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-07 D  
 Client ID: AEI TWP9  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/10/15 19:23  
 Analyst: MS

Date Collected: 12/07/15 14:10  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	500	140	200
1,1-Dichloroethane	ND		ug/l	500	140	200
Chloroform	ND		ug/l	500	140	200
Carbon tetrachloride	ND		ug/l	100	27.	200
1,2-Dichloropropane	ND		ug/l	200	27.	200
Dibromochloromethane	ND		ug/l	100	30.	200
1,1,2-Trichloroethane	ND		ug/l	300	100	200
Tetrachloroethene	1100		ug/l	100	36.	200
Chlorobenzene	ND		ug/l	500	140	200
Trichlorofluoromethane	ND		ug/l	500	140	200
1,2-Dichloroethane	ND		ug/l	100	26.	200
1,1,1-Trichloroethane	ND		ug/l	500	140	200
Bromodichloromethane	ND		ug/l	100	38.	200
trans-1,3-Dichloropropene	ND		ug/l	100	33.	200
cis-1,3-Dichloropropene	ND		ug/l	100	29.	200
1,3-Dichloropropene, Total	ND		ug/l	100	29.	200
1,1-Dichloropropene	ND		ug/l	500	140	200
Bromoform	ND		ug/l	400	130	200
1,1,2,2-Tetrachloroethane	ND		ug/l	100	29.	200
Benzene	ND		ug/l	100	32.	200
Toluene	ND		ug/l	500	140	200
Ethylbenzene	ND		ug/l	500	140	200
Chloromethane	ND		ug/l	500	140	200
Bromomethane	ND		ug/l	500	140	200
Vinyl chloride	1500		ug/l	200	14.	200
Chloroethane	ND		ug/l	500	140	200
1,1-Dichloroethene	ND		ug/l	100	28.	200
trans-1,2-Dichloroethene	ND		ug/l	500	140	200
Trichloroethene	1100		ug/l	100	35.	200
1,2-Dichlorobenzene	ND		ug/l	500	140	200



Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-07 D

Date Collected: 12/07/15 14:10

Client ID: AEI TWP9

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	500	140	200
1,4-Dichlorobenzene	ND		ug/l	500	140	200
Methyl tert butyl ether	ND		ug/l	500	140	200
p/m-Xylene	ND		ug/l	500	140	200
o-Xylene	ND		ug/l	500	140	200
Xylenes, Total	ND		ug/l	500	140	200
cis-1,2-Dichloroethene	10000		ug/l	500	140	200
1,2-Dichloroethene, Total	10000		ug/l	500	140	200
Dibromomethane	ND		ug/l	1000	200	200
1,2,3-Trichloropropane	ND		ug/l	500	140	200
Acrylonitrile	ND		ug/l	1000	300	200
Styrene	ND		ug/l	500	140	200
Dichlorodifluoromethane	ND		ug/l	1000	200	200
Acetone	ND		ug/l	1000	290	200
Carbon disulfide	ND		ug/l	1000	200	200
2-Butanone	ND		ug/l	1000	390	200
Vinyl acetate	ND		ug/l	1000	200	200
4-Methyl-2-pentanone	ND		ug/l	1000	200	200
2-Hexanone	ND		ug/l	1000	200	200
Bromochloromethane	ND		ug/l	500	140	200
2,2-Dichloropropane	ND		ug/l	500	140	200
1,2-Dibromoethane	ND		ug/l	400	130	200
1,3-Dichloropropane	ND		ug/l	500	140	200
1,1,1,2-Tetrachloroethane	ND		ug/l	500	140	200
Bromobenzene	ND		ug/l	500	140	200
n-Butylbenzene	ND		ug/l	500	140	200
sec-Butylbenzene	ND		ug/l	500	140	200
tert-Butylbenzene	ND		ug/l	500	140	200
o-Chlorotoluene	ND		ug/l	500	140	200
p-Chlorotoluene	ND		ug/l	500	140	200
1,2-Dibromo-3-chloropropane	ND		ug/l	500	140	200
Hexachlorobutadiene	ND		ug/l	500	140	200
Isopropylbenzene	ND		ug/l	500	140	200
p-Isopropyltoluene	ND		ug/l	500	140	200
Naphthalene	ND		ug/l	500	140	200
n-Propylbenzene	ND		ug/l	500	140	200
1,2,3-Trichlorobenzene	ND		ug/l	500	140	200
1,2,4-Trichlorobenzene	ND		ug/l	500	140	200
1,3,5-Trimethylbenzene	ND		ug/l	500	140	200

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-07 D  
 Client ID: AEI TWP9  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 14:10  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	500	140	200
1,4-Dioxane	ND		ug/l	50000	8200	200
p-Diethylbenzene	ND		ug/l	400	140	200
p-Ethyltoluene	ND		ug/l	400	140	200
1,2,4,5-Tetramethylbenzene	ND		ug/l	400	130	200
Ethyl ether	ND		ug/l	500	140	200
trans-1,4-Dichloro-2-butene	ND		ug/l	500	140	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	95		70-130

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/10/15 10:59  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06-07 Batch: WG848732-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/10/15 10:59  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06-07 Batch: WG848732-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 12/10/15 10:59  
**Analyst:** MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06-07 Batch: WG848732-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	94		70-130

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 22:25  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-05 Batch: WG850154-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	2.0		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 22:25  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-05 Batch: WG850154-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 22:25  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-05 Batch: WG850154-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06-07 Batch: WG848732-1 WG848732-2								
Methylene chloride	105		82		70-130	25	Q	20
1,1-Dichloroethane	110		87		70-130	23	Q	20
Chloroform	109		89		70-130	20		20
Carbon tetrachloride	106		84		63-132	23	Q	20
1,2-Dichloropropane	107		86		70-130	22	Q	20
Dibromochloromethane	108		85		63-130	24	Q	20
1,1,2-Trichloroethane	105		87		70-130	19		20
Tetrachloroethene	105		86		70-130	20		20
Chlorobenzene	102		84		75-130	19		20
Trichlorofluoromethane	114		92		62-150	21	Q	20
1,2-Dichloroethane	113		88		70-130	25	Q	20
1,1,1-Trichloroethane	106		86		67-130	21	Q	20
Bromodichloromethane	108		84		67-130	25	Q	20
trans-1,3-Dichloropropene	98		79		70-130	21	Q	20
cis-1,3-Dichloropropene	100		81		70-130	21	Q	20
1,1-Dichloropropene	105		84		70-130	22	Q	20
Bromoform	98		79		54-136	21	Q	20
1,1,2,2-Tetrachloroethane	104		85		67-130	20		20
Benzene	106		87		70-130	20		20
Toluene	103		87		70-130	17		20
Ethylbenzene	110		89		70-130	21	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532147

Report Date: 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06-07 Batch: WG848732-1 WG848732-2								
Chloromethane	84		59	Q	64-130	35	Q	20
Bromomethane	74		58		39-139	24	Q	20
Vinyl chloride	123		96		55-140	25	Q	20
Chloroethane	119		93		55-138	25	Q	20
1,1-Dichloroethene	111		91		61-145	20		20
trans-1,2-Dichloroethene	104		82		70-130	24	Q	20
Trichloroethene	105		84		70-130	22	Q	20
1,2-Dichlorobenzene	102		85		70-130	18		20
1,3-Dichlorobenzene	102		84		70-130	19		20
1,4-Dichlorobenzene	100		83		70-130	19		20
Methyl tert butyl ether	106		85		63-130	22	Q	20
p/m-Xylene	108		88		70-130	20		20
o-Xylene	110		90		70-130	20		20
cis-1,2-Dichloroethene	104		78		70-130	29	Q	20
Dibromomethane	99		74		70-130	29	Q	20
1,2,3-Trichloropropane	102		84		64-130	19		20
Acrylonitrile	91		76		70-130	18		20
Styrene	112		91		70-130	21	Q	20
Dichlorodifluoromethane	129		103		36-147	22	Q	20
Acetone	98		76		58-148	25	Q	20
Carbon disulfide	118		85		51-130	33	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06-07 Batch: WG848732-1 WG848732-2								
2-Butanone	100		83		63-138	19		20
Vinyl acetate	93		72		70-130	25	Q	20
4-Methyl-2-pentanone	108		82		59-130	27	Q	20
2-Hexanone	103		86		57-130	18		20
Bromochloromethane	112		87		70-130	25	Q	20
2,2-Dichloropropane	108		89		63-133	19		20
1,2-Dibromoethane	103		84		70-130	20		20
1,3-Dichloropropane	106		87		70-130	20		20
1,1,1,2-Tetrachloroethane	109		88		64-130	21	Q	20
Bromobenzene	102		84		70-130	19		20
n-Butylbenzene	112		89		53-136	23	Q	20
sec-Butylbenzene	110		88		70-130	22	Q	20
tert-Butylbenzene	107		85		70-130	23	Q	20
o-Chlorotoluene	104		86		70-130	19		20
p-Chlorotoluene	105		85		70-130	21	Q	20
1,2-Dibromo-3-chloropropane	103		86		41-144	18		20
Hexachlorobutadiene	103		83		63-130	22	Q	20
Isopropylbenzene	108		88		70-130	20		20
p-Isopropyltoluene	112		88		70-130	24	Q	20
Naphthalene	101		93		70-130	8		20
n-Propylbenzene	109		89		69-130	20		20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06-07 Batch: WG848732-1 WG848732-2								
1,2,3-Trichlorobenzene	100		90		70-130	11		20
1,2,4-Trichlorobenzene	100		88		70-130	13		20
1,3,5-Trimethylbenzene	109		88		64-130	21	Q	20
1,2,4-Trimethylbenzene	110		90		70-130	20		20
1,4-Dioxane	111		83		56-162	29	Q	20
p-Diethylbenzene	112		88		70-130	24	Q	20
p-Ethyltoluene	106		86		70-130	21	Q	20
1,2,4,5-Tetramethylbenzene	105		84		70-130	22	Q	20
Ethyl ether	114		93		59-134	20		20
trans-1,4-Dichloro-2-butene	94		76		70-130	21	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		100		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	99		98		70-130
Dibromofluoromethane	100		99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-05 Batch: WG850154-1 WG850154-2								
Methylene chloride	103		95		70-130	8		30
1,1-Dichloroethane	100		91		70-130	9		30
Chloroform	101		96		70-130	5		30
Carbon tetrachloride	116		105		70-130	10		30
1,2-Dichloropropane	98		93		70-130	5		30
Dibromochloromethane	96		92		70-130	4		30
2-Chloroethylvinyl ether	92		90		70-130	2		30
1,1,2-Trichloroethane	99		95		70-130	4		30
Tetrachloroethene	105		97		70-130	8		30
Chlorobenzene	99		93		70-130	6		30
Trichlorofluoromethane	156	Q	144	Q	70-139	8		30
1,2-Dichloroethane	94		90		70-130	4		30
1,1,1-Trichloroethane	110		100		70-130	10		30
Bromodichloromethane	99		93		70-130	6		30
trans-1,3-Dichloropropene	91		88		70-130	3		30
cis-1,3-Dichloropropene	96		92		70-130	4		30
1,1-Dichloropropene	111		101		70-130	9		30
Bromoform	90		86		70-130	5		30
1,1,2,2-Tetrachloroethane	95		90		70-130	5		30
Benzene	105		97		70-130	8		30
Toluene	98		91		70-130	7		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS		LCSD		%Recovery		RPD	RPD	
	%Recovery	Qual	%Recovery	Qual	Limits	Qual		Limits	
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-05 Batch: WG850154-1 WG850154-2									
Ethylbenzene	101		93		70-130		8		30
Chloromethane	100		90		52-130		11		30
Bromomethane	140		129		57-147		8		30
Vinyl chloride	117		104		67-130		12		30
Chloroethane	151		139		50-151		8		30
1,1-Dichloroethene	115		105		65-135		9		30
trans-1,2-Dichloroethene	105		96		70-130		9		30
Trichloroethene	107		99		70-130		8		30
1,2-Dichlorobenzene	99		93		70-130		6		30
1,3-Dichlorobenzene	100		93		70-130		7		30
1,4-Dichlorobenzene	99		92		70-130		7		30
Methyl tert butyl ether	88		85		66-130		3		30
p/m-Xylene	103		96		70-130		7		30
o-Xylene	100		94		70-130		6		30
cis-1,2-Dichloroethene	103		96		70-130		7		30
Dibromomethane	101		98		70-130		3		30
Styrene	100		94		70-130		6		30
Dichlorodifluoromethane	120		108		30-146		11		30
Acetone	85		81		54-140		5		30
Carbon disulfide	104		94		59-130		10		30
2-Butanone	84		81		70-130		4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-05 Batch: WG850154-1 WG850154-2								
Vinyl acetate	83		81		70-130	2		30
4-Methyl-2-pentanone	86		82		70-130	5		30
1,2,3-Trichloropropane	94		91		68-130	3		30
2-Hexanone	65	Q	63	Q	70-130	3		30
Bromochloromethane	105		99		70-130	6		30
2,2-Dichloropropane	98		89		70-130	10		30
1,2-Dibromoethane	98		92		70-130	6		30
1,3-Dichloropropane	95		92		69-130	3		30
1,1,1,2-Tetrachloroethane	97		91		70-130	6		30
Bromobenzene	95		90		70-130	5		30
n-Butylbenzene	106		97		70-130	9		30
sec-Butylbenzene	108		98		70-130	10		30
tert-Butylbenzene	103		94		70-130	9		30
o-Chlorotoluene	97		92		70-130	5		30
p-Chlorotoluene	97		90		70-130	7		30
1,2-Dibromo-3-chloropropane	96		90		68-130	6		30
Hexachlorobutadiene	95		84		67-130	12		30
Isopropylbenzene	102		94		70-130	8		30
p-Isopropyltoluene	104		95		70-130	9		30
Naphthalene	91		88		70-130	3		30
Acrylonitrile	95		91		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-05 Batch: WG850154-1 WG850154-2								
Isopropyl Ether	85		82		66-130	4		30
tert-Butyl Alcohol	74		71		70-130	4		30
n-Propylbenzene	104		95		70-130	9		30
1,2,3-Trichlorobenzene	90		85		70-130	6		30
1,2,4-Trichlorobenzene	91		85		70-130	7		30
1,3,5-Trimethylbenzene	101		93		70-130	8		30
1,2,4-Trimethylbenzene	98		91		70-130	7		30
Methyl Acetate	87		82		51-146	6		30
Ethyl Acetate	80		76		70-130	5		30
Acrolein	84		83		70-130	1		30
Cyclohexane	117		107		59-142	9		30
1,4-Dioxane	91		90		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	141	Q	130		50-139	8		30
p-Diethylbenzene	101		93		70-130	8		30
p-Ethyltoluene	102		94		70-130	8		30
1,2,4,5-Tetramethylbenzene	95		88		70-130	8		30
Tetrahydrofuran	79		75		66-130	5		30
Ethyl ether	113		111		67-130	2		30
trans-1,4-Dichloro-2-butene	86		82		70-130	5		30
Methyl cyclohexane	135	Q	125		70-130	8		30
Ethyl-Tert-Butyl-Ether	85		83		70-130	2		30



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-05 Batch: WG850154-1 WG850154-2								
Tertiary-Amyl Methyl Ether	85		83		70-130	2		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	92		92		70-130
Toluene-d8	97		97		70-130
4-Bromofluorobenzene	94		93		70-130
Dibromofluoromethane	101		100		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

**Lab ID:** L1532147-01  
**Client ID:** AEI SB6(5-5.5)  
**Sample Location:** 180 EAST PARK AVE., LONG BEACH  
**Matrix:** Soil

**Date Collected:** 12/07/15 11:55  
**Date Received:** 12/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.3		%	0.100	NA	1	-	12/08/15 14:29	30,2540G	RI



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

**SAMPLE RESULTS**

**Lab ID:** L1532147-02  
**Client ID:** AEI SB7(4.5-5)  
**Sample Location:** 180 EAST PARK AVE., LONG BEACH  
**Matrix:** Soil

**Date Collected:** 12/07/15 12:35  
**Date Received:** 12/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.7		%	0.100	NA	1	-	12/08/15 14:29	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-03  
 Client ID: AEI SB8(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 13:25  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.5		%	0.100	NA	1	-	12/08/15 14:29	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## SAMPLE RESULTS

Lab ID: L1532147-04  
 Client ID: AEI SB9(4-4.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 13:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.6		%	0.100	NA	1	-	12/08/15 14:29	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

**SAMPLE RESULTS**

Lab ID: L1532147-05  
 Client ID: AEI SB10(4.5-5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 14:40  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.6		%	0.100	NA	1	-	12/08/15 14:29	30,2540G	RI



**Lab Duplicate Analysis**  
Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532147

Report Date: 12/16/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG847816-1 QC Sample: L1532125-01 Client ID: DUP Sample						
Solids, Total	91.0	91.8	%	1		20



Project Name: NU CLEAR

Lab Number: L1532147

Project Number: 341998

Report Date: 12/16/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 08-DEC-15 04:15

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1532147-01A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-01B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-01C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-01D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532147-01X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-01Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-01Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-02A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-02B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-02C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-02D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532147-02X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-02Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-02Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-03A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-03B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-03C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-03D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532147-03X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-03Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-03Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-04A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-04B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-04C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-04D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532147-04X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-04Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)

\*Values in parentheses indicate holding time in days



Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532147

Report Date: 12/16/15

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1532147-04Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-05A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-05B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-05C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532147-05D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532147-05X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-05Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-05Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532147-06A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1532147-06B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1532147-06C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1532147-07A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1532147-07B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1532147-07C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532147  
**Report Date:** 12/16/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

**EPA 1010A:** NPW: Ignitability

**EPA 6010C:** NPW: Strontium; SCM: Strontium

**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

**EPA 9038:** NPW: Sulfate

**EPA 9050A:** NPW: Specific Conductance

**EPA 9056:** NPW: Chloride, Nitrate, Sulfate

**EPA 9065:** NPW: Phenols

**EPA 9251:** NPW: Chloride

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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.





## ANALYTICAL REPORT

Lab Number:	L1532144
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU CLEAR
Project Number:	341998
Report Date:	12/17/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1532144-01	AEI SB 7(15-15.5)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 12:45	12/07/15
L1532144-02	AEI SB 8(14.5-15)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 13:30	12/07/15
L1532144-03	AEI SB 9(19.5-20)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 14:00	12/07/15
L1532144-04	AEI SB 10(19.5-20)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/07/15 14:50	12/07/15

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

### 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.

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**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

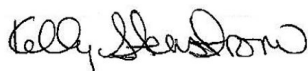
### Case Narrative (continued)

#### Report Submission

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

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: 12/17/15

# ORGANICS

# VOLATILES

**Project Name:** NU CLEAR**Lab Number:** L1532144**Project Number:** 341998**Report Date:** 12/17/15**SAMPLE RESULTS**

**Lab ID:** L1532144-01 D2  
**Client ID:** AEI SB 7(15-15.5)  
**Sample Location:** 180 EAST PARK AVE., LONG BEACH, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8260C  
**Analytical Date:** 12/17/15 12:05  
**Analyst:** BN  
**Percent Solids:** 82%

**Date Collected:** 12/07/15 12:45  
**Date Received:** 12/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab						
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Tetrachloroethene	7400000		ug/kg	130000	18000	200
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	96		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-01 D  
 Client ID: AEI SB 7(15-15.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 19:27  
 Analyst: BN  
 Percent Solids: 82%

Date Collected: 12/07/15 12:45  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	13000	1400	20
1,1-Dichloroethane	ND		ug/kg	2000	110	20
Chloroform	ND		ug/kg	2000	480	20
Carbon tetrachloride	ND		ug/kg	1300	270	20
1,2-Dichloropropane	ND		ug/kg	4600	300	20
Dibromochloromethane	ND		ug/kg	1300	200	20
1,1,2-Trichloroethane	ND		ug/kg	2000	400	20
Tetrachloroethene	610000	E	ug/kg	1300	180	20
Chlorobenzene	ND		ug/kg	1300	450	20
Trichlorofluoromethane	ND		ug/kg	6500	510	20
1,2-Dichloroethane	ND		ug/kg	1300	150	20
1,1,1-Trichloroethane	ND		ug/kg	1300	140	20
Bromodichloromethane	ND		ug/kg	1300	230	20
trans-1,3-Dichloropropene	ND		ug/kg	1300	160	20
cis-1,3-Dichloropropene	ND		ug/kg	1300	150	20
1,3-Dichloropropene, Total	ND		ug/kg	1300	150	20
1,1-Dichloropropene	ND		ug/kg	6500	180	20
Bromoform	ND		ug/kg	5200	310	20
1,1,2,2-Tetrachloroethane	ND		ug/kg	1300	130	20
Benzene	ND		ug/kg	1300	150	20
Toluene	ND		ug/kg	2000	250	20
Ethylbenzene	ND		ug/kg	1300	170	20
Chloromethane	ND		ug/kg	6500	380	20
Bromomethane	ND		ug/kg	2600	440	20
Vinyl chloride	ND		ug/kg	2600	150	20
Chloroethane	ND		ug/kg	2600	410	20
1,1-Dichloroethene	ND		ug/kg	1300	340	20
trans-1,2-Dichloroethene	ND		ug/kg	2000	280	20
Trichloroethene	5100		ug/kg	1300	160	20
1,2-Dichlorobenzene	ND		ug/kg	6500	200	20

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-01 D

Date Collected: 12/07/15 12:45

Client ID: AEI SB 7(15-15.5)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	6500	180	20
1,4-Dichlorobenzene	ND		ug/kg	6500	180	20
Methyl tert butyl ether	ND		ug/kg	2600	110	20
p/m-Xylene	ND		ug/kg	2600	260	20
o-Xylene	ND		ug/kg	2600	220	20
Xylenes, Total	ND		ug/kg	2600	220	20
cis-1,2-Dichloroethene	1800		ug/kg	1300	190	20
1,2-Dichloroethene, Total	1800		ug/kg	1300	190	20
Dibromomethane	ND		ug/kg	13000	210	20
Styrene	ND		ug/kg	2600	520	20
Dichlorodifluoromethane	ND		ug/kg	13000	250	20
Acetone	ND		ug/kg	13000	1400	20
Carbon disulfide	ND		ug/kg	13000	1400	20
2-Butanone	ND		ug/kg	13000	360	20
Vinyl acetate	ND		ug/kg	13000	170	20
4-Methyl-2-pentanone	ND		ug/kg	13000	320	20
1,2,3-Trichloropropane	ND		ug/kg	13000	210	20
2-Hexanone	ND		ug/kg	13000	870	20
Bromochloromethane	ND		ug/kg	6500	360	20
2,2-Dichloropropane	ND		ug/kg	6500	300	20
1,2-Dibromoethane	ND		ug/kg	5200	230	20
1,3-Dichloropropane	ND		ug/kg	6500	190	20
1,1,1,2-Tetrachloroethane	ND		ug/kg	1300	420	20
Bromobenzene	ND		ug/kg	6500	270	20
n-Butylbenzene	ND		ug/kg	1300	150	20
sec-Butylbenzene	ND		ug/kg	1300	160	20
tert-Butylbenzene	ND		ug/kg	6500	180	20
o-Chlorotoluene	ND		ug/kg	6500	210	20
p-Chlorotoluene	ND		ug/kg	6500	170	20
1,2-Dibromo-3-chloropropane	ND		ug/kg	6500	520	20
Hexachlorobutadiene	ND		ug/kg	6500	300	20
Isopropylbenzene	ND		ug/kg	1300	140	20
p-Isopropyltoluene	ND		ug/kg	1300	160	20
Naphthalene	ND		ug/kg	6500	180	20
Acrylonitrile	ND		ug/kg	13000	670	20
n-Propylbenzene	ND		ug/kg	1300	140	20
1,2,3-Trichlorobenzene	ND		ug/kg	6500	190	20
1,2,4-Trichlorobenzene	ND		ug/kg	6500	240	20
1,3,5-Trimethylbenzene	ND		ug/kg	6500	190	20



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-01 D  
 Client ID: AEI SB 7(15-15.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 12:45  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/kg	6500	180	20
1,4-Dioxane	ND		ug/kg	130000	19000	20
p-Diethylbenzene	ND		ug/kg	5200	210	20
p-Ethyltoluene	ND		ug/kg	5200	160	20
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5200	170	20
Ethyl ether	ND		ug/kg	6500	340	20
trans-1,4-Dichloro-2-butene	ND		ug/kg	6500	510	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-02  
 Client ID: AEI SB 8(14.5-15)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 10:16  
 Analyst: BN  
 Percent Solids: 80%

Date Collected: 12/07/15 13:30  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.40	1
Carbon tetrachloride	ND		ug/kg	1.1	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.24	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	1.0	J	ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.37	1
Trichlorofluoromethane	ND		ug/kg	5.4	0.42	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.13	1
1,1-Dichloropropene	ND		ug/kg	5.4	0.15	1
Bromoform	ND		ug/kg	4.3	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.4	0.32	1
Bromomethane	ND		ug/kg	2.1	0.36	1
Vinyl chloride	ND		ug/kg	2.1	0.13	1
Chloroethane	ND		ug/kg	2.1	0.34	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.4	0.16	1

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-02

Date Collected: 12/07/15 13:30

Client ID: AEI SB 8(14.5-15)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.4	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.4	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.21	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylenes, Total	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.15	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.1	0.43	1
Dichlorodifluoromethane	ND		ug/kg	11	0.20	1
Acetone	17		ug/kg	11	1.1	1
Carbon disulfide	4.5	J	ug/kg	11	1.2	1
2-Butanone	ND		ug/kg	11	0.29	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.26	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.17	1
2-Hexanone	ND		ug/kg	11	0.71	1
Bromochloromethane	ND		ug/kg	5.4	0.30	1
2,2-Dichloropropane	ND		ug/kg	5.4	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.3	0.19	1
1,3-Dichloropropane	ND		ug/kg	5.4	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.34	1
Bromobenzene	ND		ug/kg	5.4	0.22	1
n-Butylbenzene	ND		ug/kg	1.1	0.12	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.4	0.14	1
o-Chlorotoluene	ND		ug/kg	5.4	0.17	1
p-Chlorotoluene	ND		ug/kg	5.4	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.4	0.42	1
Hexachlorobutadiene	ND		ug/kg	5.4	0.24	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.13	1
Naphthalene	ND		ug/kg	5.4	0.15	1
Acrylonitrile	ND		ug/kg	11	0.55	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.4	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.4	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.4	0.15	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-02  
 Client ID: AEI SB 8(14.5-15)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 13:30  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.4	0.15	1
1,4-Dioxane	ND		ug/kg	110	15.	1
p-Diethylbenzene	ND		ug/kg	4.3	0.17	1
p-Ethyltoluene	ND		ug/kg	4.3	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.3	0.14	1
Ethyl ether	ND		ug/kg	5.4	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.4	0.42	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	96		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-03  
 Client ID: AEI SB 9(19.5-20)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 17:16  
 Analyst: BN  
 Percent Solids: 80%

Date Collected: 12/07/15 14:00  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	12	1.3	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.10	1
Chloroform	ND		ug/kg	1.7	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
1,2-Dichloropropane	ND		ug/kg	4.0	0.26	1
Dibromochloromethane	ND		ug/kg	1.2	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.35	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.40	1
Trichlorofluoromethane	ND		ug/kg	5.8	0.45	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.13	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.20	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
1,3-Dichloropropene, Total	ND		ug/kg	1.2	0.14	1
1,1-Dichloropropene	ND		ug/kg	5.8	0.16	1
Bromoform	ND		ug/kg	4.6	0.27	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.12	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	0.44	J	ug/kg	1.7	0.22	1
Ethylbenzene	ND		ug/kg	1.2	0.15	1
Chloromethane	ND		ug/kg	5.8	0.34	1
Bromomethane	ND		ug/kg	2.3	0.39	1
Vinyl chloride	ND		ug/kg	2.3	0.14	1
Chloroethane	ND		ug/kg	2.3	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.2	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.18	1

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-03

Date Collected: 12/07/15 14:00

Client ID: AEI SB 9(19.5-20)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.16	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.10	1
p/m-Xylene	ND		ug/kg	2.3	0.23	1
o-Xylene	ND		ug/kg	2.3	0.20	1
Xylenes, Total	ND		ug/kg	2.3	0.20	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.16	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.3	0.46	1
Dichlorodifluoromethane	ND		ug/kg	12	0.22	1
Acetone	7.6	J	ug/kg	12	1.2	1
Carbon disulfide	3.2	J	ug/kg	12	1.3	1
2-Butanone	ND		ug/kg	12	0.31	1
Vinyl acetate	ND		ug/kg	12	0.15	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.28	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.19	1
2-Hexanone	ND		ug/kg	12	0.77	1
Bromochloromethane	ND		ug/kg	5.8	0.32	1
2,2-Dichloropropane	ND		ug/kg	5.8	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.6	0.20	1
1,3-Dichloropropane	ND		ug/kg	5.8	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.37	1
Bromobenzene	ND		ug/kg	5.8	0.24	1
n-Butylbenzene	ND		ug/kg	1.2	0.13	1
sec-Butylbenzene	ND		ug/kg	1.2	0.14	1
tert-Butylbenzene	ND		ug/kg	5.8	0.16	1
o-Chlorotoluene	ND		ug/kg	5.8	0.18	1
p-Chlorotoluene	ND		ug/kg	5.8	0.15	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.8	0.46	1
Hexachlorobutadiene	ND		ug/kg	5.8	0.26	1
Isopropylbenzene	ND		ug/kg	1.2	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.14	1
Naphthalene	ND		ug/kg	5.8	0.16	1
Acrylonitrile	ND		ug/kg	12	0.59	1
n-Propylbenzene	ND		ug/kg	1.2	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.8	0.17	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.16	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**SAMPLE RESULTS**

Lab ID: L1532144-03  
 Client ID: AEI SB 9(19.5-20)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/07/15 14:00  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.16	1
1,4-Dioxane	ND		ug/kg	120	17.	1
p-Diethylbenzene	ND		ug/kg	4.6	0.18	1
p-Ethyltoluene	ND		ug/kg	4.6	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.6	0.15	1
Ethyl ether	ND		ug/kg	5.8	0.30	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.8	0.45	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	102		70-130

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-04  
 Client ID: AEI SB 10(19.5-20)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 10:43  
 Analyst: BN  
 Percent Solids: 81%

Date Collected: 12/07/15 14:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	12	1.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.10	1
Chloroform	ND		ug/kg	1.8	0.46	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
1,2-Dichloropropane	ND		ug/kg	4.3	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.19	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.38	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.43	1
Trichlorofluoromethane	ND		ug/kg	6.2	0.48	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.14	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.14	1
Bromodichloromethane	ND		ug/kg	1.2	0.21	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
1,3-Dichloropropene, Total	ND		ug/kg	1.2	0.14	1
1,1-Dichloropropene	ND		ug/kg	6.2	0.17	1
Bromoform	ND		ug/kg	4.9	0.29	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.12	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.24	1
Ethylbenzene	ND		ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	6.2	0.36	1
Bromomethane	ND		ug/kg	2.5	0.42	1
Vinyl chloride	ND		ug/kg	2.5	0.14	1
Chloroethane	ND		ug/kg	2.5	0.39	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.32	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	ND		ug/kg	1.2	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	6.2	0.19	1



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-04

Date Collected: 12/07/15 14:50

Client ID: AEI SB 10(19.5-20)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	6.2	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	6.2	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.10	1
p/m-Xylene	ND		ug/kg	2.5	0.24	1
o-Xylene	ND		ug/kg	2.5	0.21	1
Xylenes, Total	ND		ug/kg	2.5	0.21	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.5	0.50	1
Dichlorodifluoromethane	ND		ug/kg	12	0.24	1
Acetone	11	J	ug/kg	12	1.3	1
Carbon disulfide	5.6	J	ug/kg	12	1.4	1
2-Butanone	ND		ug/kg	12	0.34	1
Vinyl acetate	ND		ug/kg	12	0.16	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.20	1
2-Hexanone	ND		ug/kg	12	0.82	1
Bromochloromethane	ND		ug/kg	6.2	0.34	1
2,2-Dichloropropane	ND		ug/kg	6.2	0.28	1
1,2-Dibromoethane	ND		ug/kg	4.9	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.2	0.18	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.39	1
Bromobenzene	ND		ug/kg	6.2	0.26	1
n-Butylbenzene	ND		ug/kg	1.2	0.14	1
sec-Butylbenzene	ND		ug/kg	1.2	0.15	1
tert-Butylbenzene	ND		ug/kg	6.2	0.17	1
o-Chlorotoluene	ND		ug/kg	6.2	0.20	1
p-Chlorotoluene	ND		ug/kg	6.2	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.2	0.49	1
Hexachlorobutadiene	ND		ug/kg	6.2	0.28	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.15	1
Naphthalene	ND		ug/kg	6.2	0.17	1
Acrylonitrile	ND		ug/kg	12	0.63	1
n-Propylbenzene	ND		ug/kg	1.2	0.13	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.2	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.2	0.22	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.2	0.18	1

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-04

Date Collected: 12/07/15 14:50

Client ID: AEI SB 10(19.5-20)

Date Received: 12/07/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	6.2	0.17	1
1,4-Dioxane	ND		ug/kg	120	18.	1
p-Diethylbenzene	ND		ug/kg	4.9	0.20	1
p-Ethyltoluene	ND		ug/kg	4.9	0.15	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.9	0.16	1
Ethyl ether	ND		ug/kg	6.2	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	0.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	97		70-130

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 09:30  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG849886-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 12/15/15 09:30  
**Analyst:** BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG849886-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/15/15 09:30  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG849886-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	94		70-130

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 08:57  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,04 Batch: WG850330-6					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	1.3	J	ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 08:57  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,04 Batch: WG850330-6					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	7.8	J	ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 08:57  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,04 Batch: WG850330-6					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	91		70-130



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 12:13  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	32	J	ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.
Trichloroethene	ND		ug/kg	50	6.2

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 12:13  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-3					
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylenes, Total	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene, Total	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8
o-Chlorotoluene	ND		ug/kg	250	8.0

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/16/15 12:13  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-3					
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
1,4-Dioxane	ND		ug/kg	5000	720
p-Diethylbenzene	ND		ug/kg	200	8.0
p-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	88		70-130

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 09:03  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-6					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	16	J	ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.
Trichloroethene	ND		ug/kg	50	6.2

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 09:03  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-6					
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylenes, Total	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene, Total	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8
o-Chlorotoluene	ND		ug/kg	250	8.0

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/17/15 09:03  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG850523-6					
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
1,4-Dioxane	ND		ug/kg	5000	720
p-Diethylbenzene	ND		ug/kg	200	8.0
p-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	103		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532144

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG849886-1 WG849886-2								
Methylene chloride	94		96		70-130	2		30
1,1-Dichloroethane	101		103		70-130	2		30
Chloroform	106		107		70-130	1		30
Carbon tetrachloride	128		133	Q	70-130	4		30
1,2-Dichloropropane	94		94		70-130	0		30
Dibromochloromethane	89		91		70-130	2		30
2-Chloroethylvinyl ether	91		94		70-130	3		30
1,1,2-Trichloroethane	94		92		70-130	2		30
Tetrachloroethene	118		117		70-130	1		30
Chlorobenzene	101		100		70-130	1		30
Trichlorofluoromethane	131		132		70-139	1		30
1,2-Dichloroethane	105		107		70-130	2		30
1,1,1-Trichloroethane	124		126		70-130	2		30
Bromodichloromethane	102		104		70-130	2		30
trans-1,3-Dichloropropene	100		100		70-130	0		30
cis-1,3-Dichloropropene	101		102		70-130	1		30
1,1-Dichloropropene	112		114		70-130	2		30
Bromoform	86		86		70-130	0		30
1,1,2,2-Tetrachloroethane	83		84		70-130	1		30
Benzene	100		101		70-130	1		30
Toluene	96		96		70-130	0		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG849886-1 WG849886-2								
Ethylbenzene	104		106		70-130	2		30
Chloromethane	88		92		52-130	4		30
Bromomethane	108		111		57-147	3		30
Vinyl chloride	101		100		67-130	1		30
Chloroethane	107		107		50-151	0		30
1,1-Dichloroethene	112		111		65-135	1		30
trans-1,2-Dichloroethene	106		107		70-130	1		30
Trichloroethene	110		113		70-130	3		30
1,2-Dichlorobenzene	98		100		70-130	2		30
1,3-Dichlorobenzene	103		102		70-130	1		30
1,4-Dichlorobenzene	100		101		70-130	1		30
Methyl tert butyl ether	100		103		66-130	3		30
p/m-Xylene	109		110		70-130	1		30
o-Xylene	106		108		70-130	2		30
cis-1,2-Dichloroethene	101		104		70-130	3		30
Dibromomethane	98		100		70-130	2		30
Styrene	109		110		70-130	1		30
Dichlorodifluoromethane	95		99		30-146	4		30
Acetone	83		80		54-140	4		30
Carbon disulfide	99		102		59-130	3		30
2-Butanone	85		82		70-130	4		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG849886-1 WG849886-2								
Vinyl acetate	97		99		70-130	2		30
4-Methyl-2-pentanone	90		89		70-130	1		30
1,2,3-Trichloropropane	90		92		68-130	2		30
2-Hexanone	79		80		70-130	1		30
Bromochloromethane	107		106		70-130	1		30
2,2-Dichloropropane	117		119		70-130	2		30
1,2-Dibromoethane	97		96		70-130	1		30
1,3-Dichloropropane	92		93		69-130	1		30
1,1,1,2-Tetrachloroethane	110		110		70-130	0		30
Bromobenzene	98		99		70-130	1		30
n-Butylbenzene	112		112		70-130	0		30
sec-Butylbenzene	107		109		70-130	2		30
tert-Butylbenzene	106		108		70-130	2		30
o-Chlorotoluene	100		100		70-130	0		30
p-Chlorotoluene	101		103		70-130	2		30
1,2-Dibromo-3-chloropropane	71		71		68-130	0		30
Hexachlorobutadiene	120		123		67-130	2		30
Isopropylbenzene	112		112		70-130	0		30
p-Isopropyltoluene	111		111		70-130	0		30
Naphthalene	92		93		70-130	1		30
Acrylonitrile	94		95		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG849886-1 WG849886-2								
Isopropyl Ether	97		99		66-130	2		30
tert-Butyl Alcohol	84		86		70-130	2		30
n-Propylbenzene	104		104		70-130	0		30
1,2,3-Trichlorobenzene	102		103		70-130	1		30
1,2,4-Trichlorobenzene	108		107		70-130	1		30
1,3,5-Trimethylbenzene	106		107		70-130	1		30
1,2,4-Trimethylbenzene	105		106		70-130	1		30
Methyl Acetate	87		90		51-146	3		30
Ethyl Acetate	90		91		70-130	1		30
Acrolein	88		93		70-130	6		30
Cyclohexane	113		114		59-142	1		30
1,4-Dioxane	91		96		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	116		116		50-139	0		30
p-Diethylbenzene	123		125		70-130	2		30
p-Ethyltoluene	119		121		70-130	2		30
1,2,4,5-Tetramethylbenzene	119		123		70-130	3		30
Tetrahydrofuran	90		93		66-130	3		30
Ethyl ether	97		99		67-130	2		30
trans-1,4-Dichloro-2-butene	84		86		70-130	2		30
Methyl cyclohexane	113		114		70-130	1		30
Ethyl-Tert-Butyl-Ether	101		104		70-130	3		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG849886-1 WG849886-2								
Tertiary-Amyl Methyl Ether	99		101		70-130	2		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	110		108		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	97		97		70-130
Dibromofluoromethane	110		110		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,04 Batch: WG850330-4 WG850330-5								
Methylene chloride	97		96		70-130	1		30
1,1-Dichloroethane	99		99		70-130	0		30
Chloroform	98		98		70-130	0		30
Carbon tetrachloride	89		96		70-130	8		30
1,2-Dichloropropane	100		100		70-130	0		30
Dibromochloromethane	88		94		70-130	7		30
2-Chloroethylvinyl ether	99		103		70-130	4		30
1,1,2-Trichloroethane	99		99		70-130	0		30
Tetrachloroethene	98		96		70-130	2		30
Chlorobenzene	98		98		70-130	0		30
Trichlorofluoromethane	116		114		70-139	2		30
1,2-Dichloroethane	98		100		70-130	2		30
1,1,1-Trichloroethane	96		97		70-130	1		30
Bromodichloromethane	95		98		70-130	3		30
trans-1,3-Dichloropropene	96		99		70-130	3		30
cis-1,3-Dichloropropene	97		99		70-130	2		30
1,1-Dichloropropene	99		99		70-130	0		30
Bromoform	70		78		70-130	11		30
1,1,2,2-Tetrachloroethane	97		99		70-130	2		30
Benzene	98		98		70-130	0		30
Toluene	67	Q	66	Q	70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532144

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,04 Batch: WG850330-4 WG850330-5								
Ethylbenzene	98		97		70-130	1		30
Chloromethane	104		100		52-130	4		30
Bromomethane	111		101		57-147	9		30
Vinyl chloride	102		100		67-130	2		30
Chloroethane	100		100		50-151	0		30
1,1-Dichloroethene	99		98		65-135	1		30
trans-1,2-Dichloroethene	97		94		70-130	3		30
Trichloroethene	98		97		70-130	1		30
1,2-Dichlorobenzene	98		98		70-130	0		30
1,3-Dichlorobenzene	98		98		70-130	0		30
1,4-Dichlorobenzene	98		99		70-130	1		30
Methyl tert butyl ether	99		100		66-130	1		30
p/m-Xylene	96		95		70-130	1		30
o-Xylene	96		95		70-130	1		30
cis-1,2-Dichloroethene	99		100		70-130	1		30
Dibromomethane	100		100		70-130	0		30
Styrene	96		95		70-130	1		30
Dichlorodifluoromethane	115		110		30-146	4		30
Acetone	105		106		54-140	1		30
Carbon disulfide	94		92		59-130	2		30
2-Butanone	85		84		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,04 Batch: WG850330-4 WG850330-5								
Vinyl acetate	96		99		70-130	3		30
4-Methyl-2-pentanone	93		96		70-130	3		30
1,2,3-Trichloropropane	95		97		68-130	2		30
2-Hexanone	101		103		70-130	2		30
Bromochloromethane	99		101		70-130	2		30
2,2-Dichloropropane	99		100		70-130	1		30
1,2-Dibromoethane	98		100		70-130	2		30
1,3-Dichloropropane	101		100		69-130	1		30
1,1,1,2-Tetrachloroethane	92		95		70-130	3		30
Bromobenzene	98		97		70-130	1		30
n-Butylbenzene	101		101		70-130	0		30
sec-Butylbenzene	99		99		70-130	0		30
tert-Butylbenzene	98		98		70-130	0		30
o-Chlorotoluene	100		99		70-130	1		30
p-Chlorotoluene	100		99		70-130	1		30
1,2-Dibromo-3-chloropropane	81		90		68-130	11		30
Hexachlorobutadiene	98		99		67-130	1		30
Isopropylbenzene	98		99		70-130	1		30
p-Isopropyltoluene	99		99		70-130	0		30
Naphthalene	96		98		70-130	2		30
Acrylonitrile	99		101		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532144

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,04 Batch: WG850330-4 WG850330-5								
Isopropyl Ether	101		102		66-130	1		30
tert-Butyl Alcohol	89		92		70-130	3		30
n-Propylbenzene	98		99		70-130	1		30
1,2,3-Trichlorobenzene	99		99		70-130	0		30
1,2,4-Trichlorobenzene	101		101		70-130	0		30
1,3,5-Trimethylbenzene	99		99		70-130	0		30
1,2,4-Trimethylbenzene	99		99		70-130	0		30
Methyl Acetate	102		109		51-146	7		30
Ethyl Acetate	106		106		70-130	0		30
Acrolein	95		100		70-130	5		30
Cyclohexane	107		107		59-142	0		30
1,4-Dioxane	103		104		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		106		50-139	0		30
p-Diethylbenzene	99		100		70-130	1		30
p-Ethyltoluene	99		98		70-130	1		30
1,2,4,5-Tetramethylbenzene	99		99		70-130	0		30
Tetrahydrofuran	104		109		66-130	5		30
Ethyl ether	105		108		67-130	3		30
trans-1,4-Dichloro-2-butene	98		103		70-130	5		30
Methyl cyclohexane	106		106		70-130	0		30
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532144

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,04 Batch: WG850330-4 WG850330-5								
Tertiary-Amyl Methyl Ether	99		100		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	102		103		70-130
Dibromofluoromethane	98		100		70-130



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-1 WG850523-2								
Methylene chloride	99		98		70-130	1		30
1,1-Dichloroethane	104		105		70-130	1		30
Chloroform	98		100		70-130	2		30
Carbon tetrachloride	93		98		70-130	5		30
1,2-Dichloropropane	103		102		70-130	1		30
Dibromochloromethane	70		75		70-130	7		30
2-Chloroethylvinyl ether	98		97		70-130	1		30
1,1,2-Trichloroethane	95		96		70-130	1		30
Tetrachloroethene	106		109		70-130	3		30
Chlorobenzene	98		98		70-130	0		30
Trichlorofluoromethane	101		106		70-139	5		30
1,2-Dichloroethane	97		98		70-130	1		30
1,1,1-Trichloroethane	98		102		70-130	4		30
Bromodichloromethane	88		91		70-130	3		30
trans-1,3-Dichloropropene	87		91		70-130	4		30
cis-1,3-Dichloropropene	97		101		70-130	4		30
1,1-Dichloropropene	109		108		70-130	1		30
Bromoform	61	Q	69	Q	70-130	12		30
1,1,2,2-Tetrachloroethane	89		88		70-130	1		30
Benzene	106		106		70-130	0		30
Toluene	96		96		70-130	0		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-1 WG850523-2								
Ethylbenzene	101		102		70-130	1		30
Chloromethane	114		100		52-130	13		30
Bromomethane	101		96		57-147	5		30
Vinyl chloride	122		99		67-130	21		30
Chloroethane	117		103		50-151	13		30
1,1-Dichloroethene	101		107		65-135	6		30
trans-1,2-Dichloroethene	102		105		70-130	3		30
Trichloroethene	106		107		70-130	1		30
1,2-Dichlorobenzene	96		95		70-130	1		30
1,3-Dichlorobenzene	96		99		70-130	3		30
1,4-Dichlorobenzene	95		96		70-130	1		30
Methyl tert butyl ether	92		94		66-130	2		30
p/m-Xylene	109		110		70-130	1		30
o-Xylene	106		107		70-130	1		30
cis-1,2-Dichloroethene	99		103		70-130	4		30
Dibromomethane	94		98		70-130	4		30
Styrene	108		108		70-130	0		30
Dichlorodifluoromethane	87		83		30-146	5		30
Acetone	104		89		54-140	16		30
Carbon disulfide	88		97		59-130	10		30
2-Butanone	94		91		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-1 WG850523-2								
Vinyl acetate	108		109		70-130	1		30
4-Methyl-2-pentanone	94		94		70-130	0		30
1,2,3-Trichloropropane	93		92		68-130	1		30
2-Hexanone	82		78		70-130	5		30
Bromochloromethane	100		103		70-130	3		30
2,2-Dichloropropane	96		99		70-130	3		30
1,2-Dibromoethane	90		93		70-130	3		30
1,3-Dichloropropane	95		94		69-130	1		30
1,1,1,2-Tetrachloroethane	89		94		70-130	5		30
Bromobenzene	89		92		70-130	3		30
n-Butylbenzene	111		110		70-130	1		30
sec-Butylbenzene	107		105		70-130	2		30
tert-Butylbenzene	99		100		70-130	1		30
o-Chlorotoluene	94		95		70-130	1		30
p-Chlorotoluene	95		95		70-130	0		30
1,2-Dibromo-3-chloropropane	56	Q	57	Q	68-130	2		30
Hexachlorobutadiene	104		100		67-130	4		30
Isopropylbenzene	105		105		70-130	0		30
p-Isopropyltoluene	104		106		70-130	2		30
Naphthalene	89		90		70-130	1		30
Acrylonitrile	100		100		70-130	0		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-1 WG850523-2								
Isopropyl Ether	107		107		66-130	0		30
tert-Butyl Alcohol	79		82		70-130	4		30
n-Propylbenzene	103		103		70-130	0		30
1,2,3-Trichlorobenzene	95		98		70-130	3		30
1,2,4-Trichlorobenzene	96		101		70-130	5		30
1,3,5-Trimethylbenzene	96		99		70-130	3		30
1,2,4-Trimethylbenzene	98		99		70-130	1		30
Methyl Acetate	100		99		51-146	1		30
Ethyl Acetate	97		92		70-130	5		30
Acrolein	87		92		70-130	6		30
Cyclohexane	117		114		59-142	3		30
1,4-Dioxane	88		88		65-136	0		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	103		104		50-139	1		30
p-Diethylbenzene	118		118		70-130	0		30
p-Ethyltoluene	114		115		70-130	1		30
1,2,4,5-Tetramethylbenzene	110		112		70-130	2		30
Tetrahydrofuran	107		102		66-130	5		30
Ethyl ether	96		98		67-130	2		30
trans-1,4-Dichloro-2-butene	83		87		70-130	5		30
Methyl cyclohexane	113		112		70-130	1		30
Ethyl-Tert-Butyl-Ether	99		100		70-130	1		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-1 WG850523-2								
Tertiary-Amyl Methyl Ether	95		98		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		96		70-130
Toluene-d8	95		95		70-130
4-Bromofluorobenzene	87		88		70-130
Dibromofluoromethane	97		100		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-4 WG850523-5								
Methylene chloride	86		83		70-130	4		30
1,1-Dichloroethane	93		89		70-130	4		30
Chloroform	95		88		70-130	8		30
Carbon tetrachloride	100		95		70-130	5		30
1,2-Dichloropropane	87		84		70-130	4		30
Dibromochloromethane	101		96		70-130	5		30
2-Chloroethylvinyl ether	66	Q	68	Q	70-130	3		30
1,1,2-Trichloroethane	104		99		70-130	5		30
Tetrachloroethene	108		104		70-130	4		30
Chlorobenzene	101		98		70-130	3		30
Trichlorofluoromethane	104		95		70-139	9		30
1,2-Dichloroethane	94		88		70-130	7		30
1,1,1-Trichloroethane	101		94		70-130	7		30
Bromodichloromethane	92		88		70-130	4		30
trans-1,3-Dichloropropene	103		98		70-130	5		30
cis-1,3-Dichloropropene	85		81		70-130	5		30
1,1-Dichloropropene	97		94		70-130	3		30
Bromoform	105		96		70-130	9		30
1,1,2,2-Tetrachloroethane	98		93		70-130	5		30
Benzene	92		88		70-130	4		30
Toluene	103		99		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-4 WG850523-5								
Ethylbenzene	111		105		70-130	6		30
Chloromethane	83		79		52-130	5		30
Bromomethane	81		75		57-147	8		30
Vinyl chloride	91		87		67-130	4		30
Chloroethane	91		81		50-151	12		30
1,1-Dichloroethene	93		88		65-135	6		30
trans-1,2-Dichloroethene	90		88		70-130	2		30
Trichloroethene	100		92		70-130	8		30
1,2-Dichlorobenzene	104		99		70-130	5		30
1,3-Dichlorobenzene	108		104		70-130	4		30
1,4-Dichlorobenzene	104		100		70-130	4		30
Methyl tert butyl ether	89		86		66-130	3		30
p/m-Xylene	110		105		70-130	5		30
o-Xylene	106		102		70-130	4		30
cis-1,2-Dichloroethene	90		86		70-130	5		30
Dibromomethane	91		87		70-130	4		30
Styrene	104		98		70-130	6		30
Dichlorodifluoromethane	88		82		30-146	7		30
Acetone	90		78		54-140	14		30
Carbon disulfide	90		83		59-130	8		30
2-Butanone	79		77		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-4 WG850523-5								
Vinyl acetate	84		79		70-130	6		30
4-Methyl-2-pentanone	77		75		70-130	3		30
1,2,3-Trichloropropane	112		104		68-130	7		30
2-Hexanone	77		76		70-130	1		30
Bromochloromethane	94		89		70-130	5		30
2,2-Dichloropropane	100		94		70-130	6		30
1,2-Dibromoethane	101		98		70-130	3		30
1,3-Dichloropropane	103		97		69-130	6		30
1,1,1,2-Tetrachloroethane	103		99		70-130	4		30
Bromobenzene	103		98		70-130	5		30
n-Butylbenzene	122		113		70-130	8		30
sec-Butylbenzene	107		100		70-130	7		30
tert-Butylbenzene	101		96		70-130	5		30
o-Chlorotoluene	117		112		70-130	4		30
p-Chlorotoluene	116		108		70-130	7		30
1,2-Dibromo-3-chloropropane	85		90		68-130	6		30
Hexachlorobutadiene	110		106		67-130	4		30
Isopropylbenzene	100		94		70-130	6		30
p-Isopropyltoluene	102		98		70-130	4		30
Naphthalene	82		80		70-130	2		30
Acrylonitrile	81		79		70-130	3		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-4 WG850523-5								
Isopropyl Ether	89		84		66-130	6		30
tert-Butyl Alcohol	83		76		70-130	9		30
n-Propylbenzene	114		107		70-130	6		30
1,2,3-Trichlorobenzene	105		101		70-130	4		30
1,2,4-Trichlorobenzene	100		98		70-130	2		30
1,3,5-Trimethylbenzene	120		110		70-130	9		30
1,2,4-Trimethylbenzene	108		100		70-130	8		30
Methyl Acetate	84		75		51-146	11		30
Ethyl Acetate	88		82		70-130	7		30
Acrolein	77		73		70-130	5		30
Cyclohexane	88		87		59-142	1		30
1,4-Dioxane	70		71		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	97		93		50-139	4		30
p-Diethylbenzene	99		95		70-130	4		30
p-Ethyltoluene	116		109		70-130	6		30
1,2,4,5-Tetramethylbenzene	91		86		70-130	6		30
Tetrahydrofuran	83		80		66-130	4		30
Ethyl ether	86		81		67-130	6		30
trans-1,4-Dichloro-2-butene	106		97		70-130	9		30
Methyl cyclohexane	91		86		70-130	6		30
Ethyl-Tert-Butyl-Ether	82		78		70-130	5		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG850523-4 WG850523-5								
Tertiary-Amyl Methyl Ether	78		76		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		98		70-130
Toluene-d8	108		108		70-130
4-Bromofluorobenzene	104		103		70-130
Dibromofluoromethane	98		96		70-130

# **INORGANICS & MISCELLANEOUS**

Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-01  
 Client ID: AEI SB 7(15-15.5)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 12:45  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.1		%	0.100	NA	1	-	12/08/15 13:21	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-02  
 Client ID: AEI SB 8(14.5-15)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 13:30  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.3		%	0.100	NA	1	-	12/08/15 13:21	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-03  
 Client ID: AEI SB 9(19.5-20)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 14:00  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.3		%	0.100	NA	1	-	12/08/15 13:21	30,2540G	RI



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## SAMPLE RESULTS

Lab ID: L1532144-04  
 Client ID: AEI SB 10(19.5-20)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil

Date Collected: 12/07/15 14:50  
 Date Received: 12/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.0		%	0.100	NA	1	-	12/08/15 13:21	30,2540G	RI



## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1532144

Report Date: 12/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG847787-1 QC Sample: L1532103-01 Client ID: DUP Sample						
Solids, Total	89.4	89.0	%	0		20



Project Name: NU CLEAR

Lab Number: L1532144

Project Number: 341998

Report Date: 12/17/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 08-DEC-15 04:15

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1532144-01A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-01B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-01C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-01D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532144-01X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-01Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-01Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-02A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-02B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-02C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-02D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532144-02X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-02Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-02Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-03A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-03B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-03C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-03D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532144-03X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-03Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-03Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-04A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-04B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-04C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1532144-04D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1532144-04X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1532144-04Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU CLEAR**Project Number:** 341998**Lab Number:** L1532144**Report Date:** 12/17/15**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1532144-04Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1532144  
**Report Date:** 12/17/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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.

 <b>ALPHA</b> <small>ANALYTICAL</small>	<b>NEW JERSEY CHAIN OF CUSTODY</b>	<b>Service Centers</b> 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 1	Date Rec'd in Lab 12/7/15	ALPHA Job # 11532144								
	Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288											
<b>Client Information</b>		<b>Project Information</b>		<b>Deliverables</b>		<b>Billing Information</b>							
Client: <u>AEI Consultants</u>		Project Name: <u>NuClear</u>		<input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<input type="checkbox"/> Same as Client Info PO # <u>99642</u>							
Address: _____ Phone: _____ Fax: _____ Email: _____		Project Location: <u>180 East Park Ave Long Beach NY</u> Project # <u>341998</u> (Use Project name as Project #) <input type="checkbox"/>		<b>Regulatory Requirement</b>		<b>Site Information</b>							
		Project Manager: <u>Joe Bernarducci</u> ALPHAQuote #: _____ Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input checked="" type="checkbox"/> Other <u>NYS DEC</u>		Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product: _____							
These samples have been previously analyzed by Alpha <input type="checkbox"/>				<b>ANALYSIS</b>				<b>Sample Filtration</b>					
For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		Other project specific requirements/comments: Please specify Metals or TAL.				<input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)					
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date      Time		Sample Matrix		Sampler's Initials		Sample Specific Comments		Total Bottles	
32144-01		AEI SB 7 (15-15.5)		12/7/15 1245		Soil		JW					4
-02		AEI SB 8 (14.5-15)		1 1330		1		1					4
-03		AEI SB 9 (19.5-20)		1 1400		1		1					4
-04		AEI SB 10 (19.5-20)		1 1450		1		1					4
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type E		Preservative A		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.)			
		Relinquished By: <u>[Signature]</u>		Date/Time: <u>12/7/15</u>		Received By: <u>[Signature]</u>		Date/Time: <u>12/7/15 16:00</u>					
		Relinquished By: <u>[Signature]</u>		Date/Time: <u>12/7/15 18:30</u>		Received By: <u>[Signature]</u>		Date/Time: <u>12-7-15 18:30</u>					
		Relinquished By: <u>[Signature]</u>		Date/Time: <u>12/7/15 23:15</u>		Received By: <u>[Signature]</u>		Date/Time: <u>12/7/15 23:15</u>					



## ANALYTICAL REPORT

Lab Number:	L1533710
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU CLEAR
Project Number:	341998
Report Date:	12/29/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1533710-01	MW-1	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 12:50	12/18/15
L1533710-02	MW-2	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 10:10	12/18/15
L1533710-03	MW-3	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 10:30	12/18/15
L1533710-04	MW-4D	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 13:00	12/18/15
L1533710-05	MW-5	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 12:00	12/18/15
L1533710-06	MW-6	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 11:15	12/18/15
L1533710-07	MW-7	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 11:00	12/18/15
L1533710-08	MW-8	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 09:30	12/18/15
L1533710-09	FB	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 13:20	12/18/15
L1533710-10	TB	WATER	180 EAST PARK AVE., LONG BEACH, NY	12/18/15 00:00	12/18/15

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

### 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.

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**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

### Case Narrative (continued)

#### Report Submission

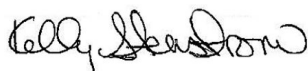
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Volatile Organics

L1533710-06: The sample has elevated detection limits due to the dilution required by the sample matrix.

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: 12/29/15

# ORGANICS

# VOLATILES

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-01  
 Client ID: MW-1  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 09:33  
 Analyst: PD

Date Collected: 12/18/15 12:50  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	4.2		ug/l	0.50	0.16	1
Toluene	2.3	J	ug/l	2.5	0.70	1
Ethylbenzene	44		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	3.2		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-01

Date Collected: 12/18/15 12:50

Client ID: MW-1

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	14		ug/l	2.5	0.70	1
o-Xylene	4.3		ug/l	2.5	0.70	1
Xylenes, Total	18		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.2		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	2.4	J	ug/l	2.5	0.70	1
sec-Butylbenzene	2.8		ug/l	2.5	0.70	1
tert-Butylbenzene	0.74	J	ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	8.4		ug/l	2.5	0.70	1
p-Isopropyltoluene	1.7	J	ug/l	2.5	0.70	1
Naphthalene	90		ug/l	2.5	0.70	1
n-Propylbenzene	12		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	3.1		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-01  
 Client ID: MW-1  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 12:50  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	4.2		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	3.0		ug/l	2.0	0.70	1
p-Ethyltoluene	4.5		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	13		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	98		70-130



Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-02  
 Client ID: MW-2  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 09:56  
 Analyst: PD

Date Collected: 12/18/15 10:10  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.3		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.70		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-02

Date Collected: 12/18/15 10:10

Client ID: MW-2

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	83		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	83		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	2.6		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-02  
 Client ID: MW-2  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 10:10  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	97		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-03  
 Client ID: MW-3  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 10:20  
 Analyst: PD

Date Collected: 12/18/15 10:30  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-03

Date Collected: 12/18/15 10:30

Client ID: MW-3

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.9	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	0.78	J	ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-03  
 Client ID: MW-3  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 10:30  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	97		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-04  
 Client ID: MW-4D  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 10:43  
 Analyst: PD

Date Collected: 12/18/15 13:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	13		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	1.3		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-04

Date Collected: 12/18/15 13:00

Client ID: MW-4D

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	13		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	13		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-04  
 Client ID: MW-4D  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 13:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-05  
 Client ID: MW-5  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 11:06  
 Analyst: PD

Date Collected: 12/18/15 12:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.2		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.36	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.81		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-05

Date Collected: 12/18/15 12:00

Client ID: MW-5

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	8.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	8.6		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.1	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-05  
 Client ID: MW-5  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 12:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-06 D  
 Client ID: MW-6  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 17:20  
 Analyst: PD

Date Collected: 12/18/15 11:15  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	50	14.	20
1,1-Dichloroethane	ND		ug/l	50	14.	20
Chloroform	ND		ug/l	50	14.	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
1,2-Dichloropropane	ND		ug/l	20	2.7	20
Dibromochloromethane	ND		ug/l	10	3.0	20
1,1,2-Trichloroethane	ND		ug/l	30	10.	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	ND		ug/l	50	14.	20
Trichlorofluoromethane	ND		ug/l	50	14.	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
1,1,1-Trichloroethane	ND		ug/l	50	14.	20
Bromodichloromethane	ND		ug/l	10	3.8	20
trans-1,3-Dichloropropene	ND		ug/l	10	3.3	20
cis-1,3-Dichloropropene	ND		ug/l	10	2.9	20
1,3-Dichloropropene, Total	ND		ug/l	10	2.9	20
1,1-Dichloropropene	ND		ug/l	50	14.	20
Bromoform	ND		ug/l	40	13.	20
1,1,2,2-Tetrachloroethane	ND		ug/l	10	2.9	20
Benzene	ND		ug/l	10	3.2	20
Toluene	ND		ug/l	50	14.	20
Ethylbenzene	ND		ug/l	50	14.	20
Chloromethane	ND		ug/l	50	14.	20
Bromomethane	ND		ug/l	50	14.	20
Vinyl chloride	ND		ug/l	20	1.4	20
Chloroethane	ND		ug/l	50	14.	20
1,1-Dichloroethene	ND		ug/l	10	2.8	20
trans-1,2-Dichloroethene	ND		ug/l	50	14.	20
Trichloroethene	ND		ug/l	10	3.5	20
1,2-Dichlorobenzene	ND		ug/l	50	14.	20

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-06 D

Date Collected: 12/18/15 11:15

Client ID: MW-6

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	50	14.	20
1,4-Dichlorobenzene	ND		ug/l	50	14.	20
Methyl tert butyl ether	ND		ug/l	50	14.	20
p/m-Xylene	ND		ug/l	50	14.	20
o-Xylene	ND		ug/l	50	14.	20
Xylenes, Total	ND		ug/l	50	14.	20
cis-1,2-Dichloroethene	ND		ug/l	50	14.	20
1,2-Dichloroethene, Total	ND		ug/l	50	14.	20
Dibromomethane	ND		ug/l	100	20.	20
1,2,3-Trichloropropane	ND		ug/l	50	14.	20
Acrylonitrile	ND		ug/l	100	30.	20
Styrene	ND		ug/l	50	14.	20
Dichlorodifluoromethane	ND		ug/l	100	20.	20
Acetone	ND		ug/l	100	29.	20
Carbon disulfide	ND		ug/l	100	20.	20
2-Butanone	ND		ug/l	100	39.	20
Vinyl acetate	ND		ug/l	100	20.	20
4-Methyl-2-pentanone	ND		ug/l	100	20.	20
2-Hexanone	ND		ug/l	100	20.	20
Bromochloromethane	ND		ug/l	50	14.	20
2,2-Dichloropropane	ND		ug/l	50	14.	20
1,2-Dibromoethane	ND		ug/l	40	13.	20
1,3-Dichloropropane	ND		ug/l	50	14.	20
1,1,1,2-Tetrachloroethane	ND		ug/l	50	14.	20
Bromobenzene	ND		ug/l	50	14.	20
n-Butylbenzene	ND		ug/l	50	14.	20
sec-Butylbenzene	ND		ug/l	50	14.	20
tert-Butylbenzene	ND		ug/l	50	14.	20
o-Chlorotoluene	ND		ug/l	50	14.	20
p-Chlorotoluene	ND		ug/l	50	14.	20
1,2-Dibromo-3-chloropropane	ND		ug/l	50	14.	20
Hexachlorobutadiene	ND		ug/l	50	14.	20
Isopropylbenzene	ND		ug/l	50	14.	20
p-Isopropyltoluene	ND		ug/l	50	14.	20
Naphthalene	ND		ug/l	50	14.	20
n-Propylbenzene	ND		ug/l	50	14.	20
1,2,3-Trichlorobenzene	ND		ug/l	50	14.	20
1,2,4-Trichlorobenzene	ND		ug/l	50	14.	20
1,3,5-Trimethylbenzene	ND		ug/l	50	14.	20

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-06 D

Date Collected: 12/18/15 11:15

Client ID: MW-6

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

1,2,4-Trimethylbenzene	ND		ug/l	50	14.	20
1,4-Dioxane	ND		ug/l	5000	820	20
p-Diethylbenzene	ND		ug/l	40	14.	20
p-Ethyltoluene	ND		ug/l	40	14.	20
1,2,4,5-Tetramethylbenzene	ND		ug/l	40	13.	20
Ethyl ether	ND		ug/l	50	14.	20
trans-1,4-Dichloro-2-butene	ND		ug/l	50	14.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-07  
 Client ID: MW-7  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 11:53  
 Analyst: PD

Date Collected: 12/18/15 11:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-07

Date Collected: 12/18/15 11:00

Client ID: MW-7

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.9	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-07  
 Client ID: MW-7  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 11:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	102		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-08  
 Client ID: MW-8  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 12:16  
 Analyst: PD

Date Collected: 12/18/15 09:30  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-08

Date Collected: 12/18/15 09:30

Client ID: MW-8

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	9.1		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	9.1		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.1	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-08  
 Client ID: MW-8  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 09:30  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	103		70-130

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-09  
 Client ID: FB  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 12:39  
 Analyst: PD

Date Collected: 12/18/15 13:20  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-09

Date Collected: 12/18/15 13:20

Client ID: FB

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.1	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-09  
 Client ID: FB  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 13:20  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	104		70-130



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

**Lab ID:** L1533710-10  
**Client ID:** TB  
**Sample Location:** 180 EAST PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 12/29/15 13:03  
**Analyst:** PD

**Date Collected:** 12/18/15 00:00  
**Date Received:** 12/18/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## SAMPLE RESULTS

Lab ID: L1533710-10

Date Collected: 12/18/15 00:00

Client ID: TB

Date Received: 12/18/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

**SAMPLE RESULTS**

Lab ID: L1533710-10  
 Client ID: TB  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Date Collected: 12/18/15 00:00  
 Date Received: 12/18/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	105		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 07:13  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,07-10 Batch: WG853695-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 07:13  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,07-10 Batch: WG853695-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 07:13  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,07-10 Batch: WG853695-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	95		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 09:09  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG853732-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 09:09  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG853732-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70



Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/29/15 09:09  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG853732-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	100		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07-10 Batch: WG853695-1 WG853695-2								
Methylene chloride	106		86		70-130	21	Q	20
1,1-Dichloroethane	105		83		70-130	23	Q	20
Chloroform	104		84		70-130	21	Q	20
2-Chloroethylvinyl ether	77		50	Q	70-130	43	Q	20
Carbon tetrachloride	105		82		63-132	25	Q	20
1,2-Dichloropropane	102		83		70-130	21	Q	20
Dibromochloromethane	105		85		63-130	21	Q	20
1,1,2-Trichloroethane	105		87		70-130	19		20
Tetrachloroethene	117		92		70-130	24	Q	20
Chlorobenzene	113		91		75-130	22	Q	20
Trichlorofluoromethane	100		79		62-150	23	Q	20
1,2-Dichloroethane	96		78		70-130	21	Q	20
1,1,1-Trichloroethane	106		83		67-130	24	Q	20
Bromodichloromethane	102		82		67-130	22	Q	20
trans-1,3-Dichloropropene	98		79		70-130	21	Q	20
cis-1,3-Dichloropropene	98		78		70-130	23	Q	20
1,1-Dichloropropene	108		85		70-130	24	Q	20
Bromoform	106		85		54-136	22	Q	20
1,1,2,2-Tetrachloroethane	100		82		67-130	20		20
Benzene	109		87		70-130	22	Q	20
Toluene	114		91		70-130	22	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07-10 Batch: WG853695-1 WG853695-2								
Ethylbenzene	116		92		70-130	23	Q	20
Chloromethane	103		76		64-130	30	Q	20
Bromomethane	124		92		39-139	30	Q	20
Vinyl chloride	106		82		55-140	26	Q	20
Chloroethane	116		88		55-138	27	Q	20
1,1-Dichloroethene	104		83		61-145	22	Q	20
trans-1,2-Dichloroethene	110		86		70-130	24	Q	20
Trichloroethene	107		85		70-130	23	Q	20
1,2-Dichlorobenzene	113		91		70-130	22	Q	20
1,3-Dichlorobenzene	117		93		70-130	23	Q	20
1,4-Dichlorobenzene	114		91		70-130	22	Q	20
Methyl tert butyl ether	98		79		63-130	21	Q	20
p/m-Xylene	123		98		70-130	23	Q	20
o-Xylene	122		97		70-130	23	Q	20
cis-1,2-Dichloroethene	109		87		70-130	22	Q	20
Dibromomethane	97		79		70-130	20		20
1,2,3-Trichloropropane	103		87		64-130	17		20
Acrylonitrile	96		77		70-130	22	Q	20
Isopropyl Ether	100		80		70-130	22	Q	20
tert-Butyl Alcohol	95		87		70-130	9		20
Styrene	121		97		70-130	22	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07-10 Batch: WG853695-1 WG853695-2								
Dichlorodifluoromethane	91		73		36-147	22	Q	20
Acetone	101		82		58-148	21	Q	20
Carbon disulfide	104		82		51-130	24	Q	20
2-Butanone	92		76		63-138	19		20
Vinyl acetate	97		77		70-130	23	Q	20
4-Methyl-2-pentanone	82		68		59-130	19		20
2-Hexanone	67		57		57-130	16		20
Acrolein	87		71		40-160	20		20
Bromochloromethane	106		85		70-130	22	Q	20
2,2-Dichloropropane	112		88		63-133	24	Q	20
1,2-Dibromoethane	104		86		70-130	19		20
1,3-Dichloropropane	104		85		70-130	20		20
1,1,1,2-Tetrachloroethane	112		90		64-130	22	Q	20
Bromobenzene	115		92		70-130	22	Q	20
n-Butylbenzene	122		93		53-136	27	Q	20
sec-Butylbenzene	116		90		70-130	25	Q	20
tert-Butylbenzene	116		90		70-130	25	Q	20
o-Chlorotoluene	122		94		70-130	26	Q	20
p-Chlorotoluene	119		94		70-130	23	Q	20
1,2-Dibromo-3-chloropropane	104		82		41-144	24	Q	20
Hexachlorobutadiene	130		96		63-130	30	Q	20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07-10 Batch: WG853695-1 WG853695-2								
Isopropylbenzene	115		90		70-130	24	Q	20
p-Isopropyltoluene	118		91		70-130	26	Q	20
Naphthalene	76		64	Q	70-130	17		20
n-Propylbenzene	121		93		69-130	26	Q	20
1,2,3-Trichlorobenzene	98		85		70-130	14		20
1,2,4-Trichlorobenzene	99		79		70-130	22	Q	20
1,3,5-Trimethylbenzene	124		97		64-130	24	Q	20
1,2,4-Trimethylbenzene	116		92		70-130	23	Q	20
Methyl Acetate	89		73		70-130	20		20
Ethyl Acetate	87		72		70-130	19		20
Cyclohexane	96		76		70-130	23	Q	20
Ethyl-Tert-Butyl-Ether	100		81		70-130	21	Q	20
Tertiary-Amyl Methyl Ether	89		73		66-130	20		20
1,4-Dioxane	146		106		56-162	32	Q	20
1,1,2-Trichloro-1,2,2-Trifluoroethane	98		79		70-130	21	Q	20
p-Diethylbenzene	117		88		70-130	28	Q	20
p-Ethyltoluene	124		97		70-130	24	Q	20
1,2,4,5-Tetramethylbenzene	106		82		70-130	26	Q	20
Ethyl ether	100		81		59-134	21	Q	20
trans-1,4-Dichloro-2-butene	91		70		70-130	26	Q	20
Iodomethane	34	Q	39	Q	70-130	14		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07-10 Batch: WG853695-1 WG853695-2								
Methyl cyclohexane	104		82		70-130	24	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		90		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	95		95		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG853732-1 WG853732-2								
Methylene chloride	102		91		70-130	11		20
1,1-Dichloroethane	105		100		70-130	5		20
Chloroform	108		102		70-130	6		20
Carbon tetrachloride	112		105		63-132	6		20
1,2-Dichloropropane	99		94		70-130	5		20
Dibromochloromethane	103		100		63-130	3		20
1,1,2-Trichloroethane	99		96		70-130	3		20
Tetrachloroethene	106		102		70-130	4		20
Chlorobenzene	102		98		75-130	4		20
Trichlorofluoromethane	116		110		62-150	5		20
1,2-Dichloroethane	115		108		70-130	6		20
1,1,1-Trichloroethane	109		105		67-130	4		20
Bromodichloromethane	106		102		67-130	4		20
trans-1,3-Dichloropropene	91		85		70-130	7		20
cis-1,3-Dichloropropene	94		85		70-130	10		20
1,1-Dichloropropene	105		97		70-130	8		20
Bromoform	97		93		54-136	4		20
1,1,2,2-Tetrachloroethane	94		93		67-130	1		20
Benzene	102		98		70-130	4		20
Toluene	101		97		70-130	4		20
Ethylbenzene	107		101		70-130	6		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG853732-1 WG853732-2								
Chloromethane	84		73		64-130	14		20
Bromomethane	95		89		39-139	7		20
Vinyl chloride	110		104		55-140	6		20
Chloroethane	111		101		55-138	9		20
1,1-Dichloroethene	106		103		61-145	3		20
trans-1,2-Dichloroethene	99		93		70-130	6		20
Trichloroethene	106		99		70-130	7		20
1,2-Dichlorobenzene	103		98		70-130	5		20
1,3-Dichlorobenzene	102		97		70-130	5		20
1,4-Dichlorobenzene	101		97		70-130	4		20
Methyl tert butyl ether	92		90		63-130	2		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	102		98		70-130	4		20
cis-1,2-Dichloroethene	103		94		70-130	9		20
Dibromomethane	98		94		70-130	4		20
1,2,3-Trichloropropane	91		90		64-130	1		20
Acrylonitrile	80		82		70-130	2		20
Styrene	104		101		70-130	3		20
Dichlorodifluoromethane	128		121		36-147	6		20
Acetone	82		77		58-148	6		20
Carbon disulfide	107		92		51-130	15		20



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533710

Report Date: 12/29/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG853732-1 WG853732-2								
2-Butanone	81		80		63-138	1		20
Vinyl acetate	78		77		70-130	1		20
4-Methyl-2-pentanone	84		84		59-130	0		20
2-Hexanone	82		79		57-130	4		20
Bromochloromethane	104		97		70-130	7		20
2,2-Dichloropropane	105		102		63-133	3		20
1,2-Dibromoethane	94		92		70-130	2		20
1,3-Dichloropropane	97		94		70-130	3		20
1,1,1,2-Tetrachloroethane	109		104		64-130	5		20
Bromobenzene	102		98		70-130	4		20
n-Butylbenzene	110		101		53-136	9		20
sec-Butylbenzene	108		98		70-130	10		20
tert-Butylbenzene	104		96		70-130	8		20
o-Chlorotoluene	106		99		70-130	7		20
p-Chlorotoluene	104		100		70-130	4		20
1,2-Dibromo-3-chloropropane	95		98		41-144	3		20
Hexachlorobutadiene	106		95		63-130	11		20
Isopropylbenzene	107		101		70-130	6		20
p-Isopropyltoluene	110		100		70-130	10		20
Naphthalene	92		98		70-130	6		20
n-Propylbenzene	107		99		69-130	8		20

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG853732-1 WG853732-2								
1,2,3-Trichlorobenzene	99		98		70-130	1		20
1,2,4-Trichlorobenzene	100		99		70-130	1		20
1,3,5-Trimethylbenzene	106		100		64-130	6		20
1,2,4-Trimethylbenzene	109		102		70-130	7		20
1,4-Dioxane	87		88		56-162	1		20
p-Diethylbenzene	103		93		70-130	10		20
p-Ethyltoluene	98		91		70-130	7		20
1,2,4,5-Tetramethylbenzene	100		90		70-130	11		20
Ethyl ether	98		93		59-134	5		20
trans-1,4-Dichloro-2-butene	82		80		70-130	2		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	107		107		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	96		96		70-130
Dibromofluoromethane	103		105		70-130

Project Name: NU CLEAR

Lab Number: L1533710

Project Number: 341998

Report Date: 12/29/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1533710-01A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-01B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-01C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-02A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-02B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-02C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-03A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-03B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-03C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-04A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-04B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-04C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-05A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-05B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-05C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-06A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-06B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-06C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-07A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-07B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-07C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-08A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-08B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-08C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-09A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-09B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-09C	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-10A	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)
L1533710-10B	Vial HCl preserved	A	N/A	4.2	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
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#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533710  
**Report Date:** 12/29/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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:


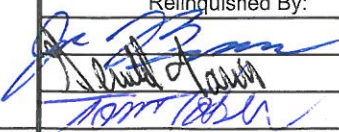
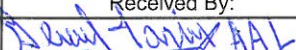

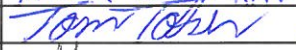


### Drinking Water

**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.

 <b>NEW JERSEY CHAIN OF CUSTODY</b>	<b>Service Centers</b> 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 1	Date Rec'd in Lab <span style="font-size: 1.2em;">12/18/15</span>	ALPHA Job # <span style="font-size: 1.5em;">L1533710</span>										
	Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	<b>Project Information</b>		<b>Deliverables</b> <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other	<b>Billing Information</b> <input type="checkbox"/> Same as Client Info PO# <span style="font-size: 1.2em;">99642</span>								
<b>Client Information</b> Client: <span style="font-size: 1.2em;">AEI Consultants</span> Address: Phone: Fax: Email:		Project Name: <span style="font-size: 1.2em;">NJ Clear</span> Project Location: <span style="font-size: 1.2em;">180 East Park Ave, Long Beach, NY</span> Project # <span style="font-size: 1.2em;">341998</span> (Use Project name as Project #) <input type="checkbox"/> Project Manager: <span style="font-size: 1.2em;">Joe Bernarducci</span> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<b>Regulatory Requirement</b> <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input checked="" type="checkbox"/> Other <span style="font-size: 1.2em;">NYSDEC</span>		<b>Site Information</b> Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:								
These samples have been previously analyzed by Alpha <input type="checkbox"/> For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2			For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011			Other project specific requirements/comments: Please specify Metals or TAL.			<b>ANALYSIS</b>			<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <b>Preservation</b> <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottles
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date    Time		Sample Matrix	Sampler's Initials	<span style="font-size: 2em; vertical-align: middle;">VOC</span>			Sample Specific Comments			
33710-01		MW-1		12/18/15 12:50		GW	BF	x			3			
-02		MW-2		10:10		GW	JB	x			3			
-03		MW-3		10:30		GW	BF	x			3			
-04		MW-4D		13:00		GW	JB	x			3			
-05		MW-5		12:00		GW	BF	x			3			
-06		MW-6		11:15		GW	BF	x			3			
-07		MW-7		11:00		GW	JB	x			3			
-08		MW-8		9:30		GW	JB	x			3			
-09		FB		13:20		water	JB	x			3			
-10		TB		water		water	JB	x			3			
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type Preservative		V B			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.)			
Relinquished By:		Date/Time		Received By:		Date/Time								
		12/18/15 17:15				12/18/15 17:15								
		12-18-15 18:40				12-18-15 18:40								
		12/18/15 22:45				12/18/15 22:45								





## ANALYTICAL REPORT

Lab Number:	L1533256
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU CLEAR
Project Number:	341998
Report Date:	12/24/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1533256-01	AEI SB12 (33-33.5)	SOIL	180 EAST PARK AVE, LONG BEACH, NY	12/15/15 12:00	12/16/15
L1533256-02	AEI SB12 (44.5-45)	SOIL	180 EAST PARK AVE, LONG BEACH, NY	12/15/15 12:15	12/16/15

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

### 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.

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**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

### Case Narrative (continued)

#### Report Submission

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

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:

 Cristin Walker

Title: Technical Director/Representative

Date: 12/24/15

# ORGANICS

# VOLATILES

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-01  
 Client ID: AEI SB12 (33-33.5)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/23/15 14:55  
 Analyst: BN  
 Percent Solids: 84%

Date Collected: 12/15/15 12:00  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.41	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.25	1
Dibromochloromethane	ND		ug/kg	1.1	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.38	1
Trichlorofluoromethane	ND		ug/kg	5.5	0.43	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.19	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.13	1
1,1-Dichloropropene	ND		ug/kg	5.5	0.16	1
Bromoform	ND		ug/kg	4.4	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	0.79	J	ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.5	0.32	1
Bromomethane	ND		ug/kg	2.2	0.37	1
Vinyl chloride	ND		ug/kg	2.2	0.13	1
Chloroethane	ND		ug/kg	2.2	0.35	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	5.5	0.17	1

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-01

Date Collected: 12/15/15 12:00

Client ID: AEI SB12 (33-33.5)

Date Received: 12/16/15

Sample Location: 180 EAST PARK AVE, LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.5	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	5.5	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.09	1
p/m-Xylene	ND		ug/kg	2.2	0.22	1
o-Xylene	ND		ug/kg	2.2	0.19	1
Xylenes, Total	ND		ug/kg	2.2	0.19	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.16	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.16	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.2	0.44	1
Dichlorodifluoromethane	ND		ug/kg	11	0.21	1
Acetone	7.8	J	ug/kg	11	1.1	1
Carbon disulfide	3.3	J	ug/kg	11	1.2	1
2-Butanone	1.3	J	ug/kg	11	0.30	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.27	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.18	1
2-Hexanone	ND		ug/kg	11	0.73	1
Bromochloromethane	ND		ug/kg	5.5	0.30	1
2,2-Dichloropropane	ND		ug/kg	5.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	4.4	0.19	1
1,3-Dichloropropane	ND		ug/kg	5.5	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.35	1
Bromobenzene	ND		ug/kg	5.5	0.23	1
n-Butylbenzene	ND		ug/kg	1.1	0.13	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.5	0.15	1
o-Chlorotoluene	ND		ug/kg	5.5	0.18	1
p-Chlorotoluene	ND		ug/kg	5.5	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.5	0.43	1
Hexachlorobutadiene	ND		ug/kg	5.5	0.25	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.14	1
Naphthalene	ND		ug/kg	5.5	0.15	1
Acrylonitrile	ND		ug/kg	11	0.56	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.5	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.5	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.5	0.16	1



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

**SAMPLE RESULTS**

Lab ID: L1533256-01  
 Client ID: AEI SB12 (33-33.5)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH, NY

Date Collected: 12/15/15 12:00  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.5	0.16	1
1,4-Dioxane	ND		ug/kg	110	16.	1
p-Diethylbenzene	ND		ug/kg	4.4	0.18	1
p-Ethyltoluene	ND		ug/kg	4.4	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.4	0.14	1
Ethyl ether	ND		ug/kg	5.5	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.5	0.43	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	98		70-130

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-02  
 Client ID: AEI SB12 (44.5-45)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/23/15 15:21  
 Analyst: BN  
 Percent Solids: 73%

Date Collected: 12/15/15 12:15  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	13	1.4	1
1,1-Dichloroethane	ND		ug/kg	1.9	0.11	1
Chloroform	ND		ug/kg	1.9	0.48	1
Carbon tetrachloride	ND		ug/kg	1.3	0.27	1
1,2-Dichloropropane	ND		ug/kg	4.5	0.30	1
Dibromochloromethane	ND		ug/kg	1.3	0.20	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	0.40	1
Tetrachloroethene	ND		ug/kg	1.3	0.18	1
Chlorobenzene	ND		ug/kg	1.3	0.45	1
Trichlorofluoromethane	ND		ug/kg	6.5	0.50	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.15	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.14	1
Bromodichloromethane	ND		ug/kg	1.3	0.22	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	1.3	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.5	0.18	1
Bromoform	ND		ug/kg	5.2	0.31	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	0.13	1
Benzene	ND		ug/kg	1.3	0.15	1
Toluene	ND		ug/kg	1.9	0.25	1
Ethylbenzene	ND		ug/kg	1.3	0.16	1
Chloromethane	ND		ug/kg	6.5	0.38	1
Bromomethane	ND		ug/kg	2.6	0.44	1
Vinyl chloride	ND		ug/kg	2.6	0.15	1
Chloroethane	ND		ug/kg	2.6	0.41	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.28	1
Trichloroethene	ND		ug/kg	1.3	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	6.5	0.20	1

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-02

Date Collected: 12/15/15 12:15

Client ID: AEI SB12 (44.5-45)

Date Received: 12/16/15

Sample Location: 180 EAST PARK AVE, LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	6.5	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	6.5	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.6	0.11	1
p/m-Xylene	ND		ug/kg	2.6	0.26	1
o-Xylene	ND		ug/kg	2.6	0.22	1
Xylenes, Total	ND		ug/kg	2.6	0.22	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	0.18	1
Dibromomethane	ND		ug/kg	13	0.21	1
Styrene	ND		ug/kg	2.6	0.52	1
Dichlorodifluoromethane	ND		ug/kg	13	0.25	1
Acetone	3.6	J	ug/kg	13	1.3	1
Carbon disulfide	3.4	J	ug/kg	13	1.4	1
2-Butanone	0.80	J	ug/kg	13	0.35	1
Vinyl acetate	ND		ug/kg	13	0.17	1
4-Methyl-2-pentanone	ND		ug/kg	13	0.32	1
1,2,3-Trichloropropane	ND		ug/kg	13	0.21	1
2-Hexanone	ND		ug/kg	13	0.86	1
Bromochloromethane	ND		ug/kg	6.5	0.36	1
2,2-Dichloropropane	ND		ug/kg	6.5	0.29	1
1,2-Dibromoethane	ND		ug/kg	5.2	0.23	1
1,3-Dichloropropane	ND		ug/kg	6.5	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	0.41	1
Bromobenzene	ND		ug/kg	6.5	0.27	1
n-Butylbenzene	ND		ug/kg	1.3	0.15	1
sec-Butylbenzene	ND		ug/kg	1.3	0.16	1
tert-Butylbenzene	ND		ug/kg	6.5	0.18	1
o-Chlorotoluene	ND		ug/kg	6.5	0.21	1
p-Chlorotoluene	ND		ug/kg	6.5	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.5	0.51	1
Hexachlorobutadiene	ND		ug/kg	6.5	0.30	1
Isopropylbenzene	ND		ug/kg	1.3	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.16	1
Naphthalene	ND		ug/kg	6.5	0.18	1
Acrylonitrile	ND		ug/kg	13	0.67	1
n-Propylbenzene	ND		ug/kg	1.3	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.5	0.19	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.5	0.24	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.5	0.19	1

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

**SAMPLE RESULTS**

Lab ID: L1533256-02  
 Client ID: AEI SB12 (44.5-45)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH, NY

Date Collected: 12/15/15 12:15  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	6.5	0.18	1
1,4-Dioxane	ND		ug/kg	130	19.	1
p-Diethylbenzene	ND		ug/kg	5.2	0.21	1
p-Ethyltoluene	ND		ug/kg	5.2	0.16	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.2	0.17	1
Ethyl ether	ND		ug/kg	6.5	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.5	0.51	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	83		70-130
Dibromofluoromethane	98		70-130

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/23/15 10:39  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG852574-3					
Methylene chloride	3.2	J	ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 12/23/15 10:39  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG852574-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	0.72	J	ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 12/23/15 10:39  
**Analyst:** BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-02 Batch: WG852574-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	87		70-130
Dibromofluoromethane	88		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533256

Report Date: 12/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG852574-1 WG852574-2								
Methylene chloride	101		99		70-130	2		30
1,1-Dichloroethane	95		97		70-130	2		30
Chloroform	87		91		70-130	4		30
Carbon tetrachloride	87		92		70-130	6		30
1,2-Dichloropropane	94		94		70-130	0		30
Dibromochloromethane	75		80		70-130	6		30
2-Chloroethylvinyl ether	82		88		70-130	7		30
1,1,2-Trichloroethane	97		101		70-130	4		30
Tetrachloroethene	109		112		70-130	3		30
Chlorobenzene	100		102		70-130	2		30
Trichlorofluoromethane	88		95		70-139	8		30
1,2-Dichloroethane	87		89		70-130	2		30
1,1,1-Trichloroethane	90		94		70-130	4		30
Bromodichloromethane	81		87		70-130	7		30
trans-1,3-Dichloropropene	93		97		70-130	4		30
cis-1,3-Dichloropropene	88		94		70-130	7		30
1,1-Dichloropropene	100		99		70-130	1		30
Bromoform	70		82		70-130	16		30
1,1,2,2-Tetrachloroethane	93		95		70-130	2		30
Benzene	96		97		70-130	1		30
Toluene	99		100		70-130	1		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533256

Report Date: 12/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG852574-1 WG852574-2								
Ethylbenzene	105		106		70-130	1		30
Chloromethane	86		78		52-130	10		30
Bromomethane	93		89		57-147	4		30
Vinyl chloride	109		88		67-130	21		30
Chloroethane	108		94		50-151	14		30
1,1-Dichloroethene	88		91		65-135	3		30
trans-1,2-Dichloroethene	88		93		70-130	6		30
Trichloroethene	96		97		70-130	1		30
1,2-Dichlorobenzene	102		106		70-130	4		30
1,3-Dichlorobenzene	105		107		70-130	2		30
1,4-Dichlorobenzene	104		108		70-130	4		30
Methyl tert butyl ether	80		84		66-130	5		30
p/m-Xylene	114		115		70-130	1		30
o-Xylene	109		111		70-130	2		30
cis-1,2-Dichloroethene	90		91		70-130	1		30
Dibromomethane	82		88		70-130	7		30
Styrene	109		114		70-130	4		30
Dichlorodifluoromethane	54		51		30-146	6		30
Acetone	86		79		54-140	8		30
Carbon disulfide	81		88		59-130	8		30
2-Butanone	85		90		70-130	6		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533256

Report Date: 12/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG852574-1 WG852574-2								
Vinyl acetate	96		102		70-130	6		30
4-Methyl-2-pentanone	82		83		70-130	1		30
1,2,3-Trichloropropane	96		100		68-130	4		30
2-Hexanone	81		87		70-130	7		30
Bromochloromethane	87		91		70-130	4		30
2,2-Dichloropropane	92		94		70-130	2		30
1,2-Dibromoethane	91		95		70-130	4		30
1,3-Dichloropropane	96		98		69-130	2		30
1,1,1,2-Tetrachloroethane	95		104		70-130	9		30
Bromobenzene	97		101		70-130	4		30
n-Butylbenzene	123		123		70-130	0		30
sec-Butylbenzene	116		118		70-130	2		30
tert-Butylbenzene	108		109		70-130	1		30
o-Chlorotoluene	102		102		70-130	0		30
p-Chlorotoluene	100		103		70-130	3		30
1,2-Dibromo-3-chloropropane	68		73		68-130	7		30
Hexachlorobutadiene	116		121		67-130	4		30
Isopropylbenzene	110		111		70-130	1		30
p-Isopropyltoluene	112		116		70-130	4		30
Naphthalene	93		96		70-130	3		30
Acrylonitrile	88		90		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533256

Report Date: 12/24/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG852574-1 WG852574-2								
Isopropyl Ether	96		99		66-130	3		30
tert-Butyl Alcohol	71		77		70-130	8		30
n-Propylbenzene	112		113		70-130	1		30
1,2,3-Trichlorobenzene	103		108		70-130	5		30
1,2,4-Trichlorobenzene	106		109		70-130	3		30
1,3,5-Trimethylbenzene	104		108		70-130	4		30
1,2,4-Trimethylbenzene	104		107		70-130	3		30
Methyl Acetate	86		91		51-146	6		30
Ethyl Acetate	86		91		70-130	6		30
Acrolein	72		78		70-130	8		30
Cyclohexane	110		109		59-142	1		30
1,4-Dioxane	75		83		65-136	10		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	92		94		50-139	2		30
p-Diethylbenzene	110		110		70-130	0		30
p-Ethyltoluene	105		107		70-130	2		30
1,2,4,5-Tetramethylbenzene	101		102		70-130	1		30
Tetrahydrofuran	92		92		66-130	0		30
Ethyl ether	79		84		67-130	6		30
trans-1,4-Dichloro-2-butene	87		97		70-130	11		30
Methyl cyclohexane	108		107		70-130	1		30
Ethyl-Tert-Butyl-Ether	87		90		70-130	3		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-02 Batch: WG852574-1 WG852574-2								
Tertiary-Amyl Methyl Ether	85		88		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		101		70-130
Toluene-d8	105		104		70-130
4-Bromofluorobenzene	87		87		70-130
Dibromofluoromethane	96		100		70-130

# **INORGANICS & MISCELLANEOUS**

Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-01  
 Client ID: AEI SB12 (33-33.5)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH,  
 Matrix: Soil

Date Collected: 12/15/15 12:00  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.3		%	0.100	NA	1	-	12/17/15 03:40	30,2540G	RT



Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## SAMPLE RESULTS

Lab ID: L1533256-02  
 Client ID: AEI SB12 (44.5-45)  
 Sample Location: 180 EAST PARK AVE, LONG BEACH,  
 Matrix: Soil

Date Collected: 12/15/15 12:15  
 Date Received: 12/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.6		%	0.100	NA	1	-	12/17/15 03:40	30,2540G	RT



## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU CLEAR

Project Number: 341998

Lab Number: L1533256

Report Date: 12/24/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG850490-1 QC Sample: L1533252-01 Client ID: DUP Sample						
Solids, Total	85.9	86.3	%	0		20



Project Name: NU CLEAR

Lab Number: L1533256

Project Number: 341998

Report Date: 12/24/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 17-DEC-15 11:34

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1533256-01A	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-01B	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-01C	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-01D	Plastic 2oz unpreserved for TS	A	N/A	2.9	Y	Absent	TS(7)
L1533256-01X	Vial MeOH preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)
L1533256-01Y	Vial Water preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)
L1533256-01Z	Vial Water preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)
L1533256-02A	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-02B	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-02C	5 gram Encore Sampler	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(2)
L1533256-02D	Plastic 2oz unpreserved for TS	A	N/A	2.9	Y	Absent	TS(7)
L1533256-02X	Vial MeOH preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)
L1533256-02Y	Vial Water preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)
L1533256-02Z	Vial Water preserved split	A	N/A	2.9	Y	Absent	NYTCL-8260HLW(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

## 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.
LCS D	- 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.
MS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR  
**Project Number:** 341998

**Lab Number:** L1533256  
**Report Date:** 12/24/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** NU CLEAR

**Lab Number:** L1533256

**Project Number:** 341998

**Report Date:** 12/24/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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.

 Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	<b>NEW JERSEY CHAIN OF CUSTODY</b> Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	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 1	Date Rec'd in Lab <i>12/16/15</i>	ALPHA Job # <i>L1533256</i>					
		<b>Project Information</b> Project Name: <i>Nu Clear</i> Project Location: <i>180 East Park Ave Long Beach NY</i> Project # <i>341998</i> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<b>Billing Information</b> <input type="checkbox"/> Same as Client Info PO # <i>99642</i>				
<b>Client Information</b> Client: <i>AET Consultants</i> Address: Phone: Fax: Email:		Project Manager: <i>Joe Bernarducci</i> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<b>Regulatory Requirement</b> <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input checked="" type="checkbox"/> Other <i>NYSDEC</i>		<b>Site Information</b> Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:				
These samples have been previously analyzed by Alpha <input type="checkbox"/>				<b>ANALYSIS</b>		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <b>Preservation</b> <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottles		
<b>For EPH, selection is REQUIRED:</b> <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		<b>For VOC, selection is REQUIRED:</b> <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		Other project specific requirements/comments: Please specify Metals or TAL.					Sample Specific Comments	
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials					
		Date	Time							
<i>33256-01</i>	<i>AET SB 12 (33-33.5)</i>	<i>12/15/15</i>	<i>1200</i>	<i>Soil</i>	<i>JTB</i>	<input checked="" type="checkbox"/>			<i>4</i>	
<i>02</i>	<i>AET SB 12 (44.5-45)</i>	<i>12/15/15</i>	<i>1215</i>	<i>Soil</i>	<i>JTB</i>	<input checked="" type="checkbox"/>			<i>4</i>	
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type <i>E</i> Preservative <i>A</i>		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.)		
		Relinquished By:		Date/Time		Received By:		Date/Time		
		<i>JTB</i>		<i>12/16/15 10:14</i>		<i>Tom Tobin - AAL-12/16/15</i>		<i>10:14</i>		
		<i>Tom Tobin</i>		<i>12/16/15 1850</i>		<i>Tom Tobin</i>		<i>12-16-15 1850</i>		
		<i>Tom Tobin</i>		<i>12/16/15 23:30</i>		<i>JTB</i>		<i>12/16/15 23:30</i>		



## ANALYTICAL REPORT

Lab Number:	L1532642
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU-CLEAR
Project Number:	341998
Report Date:	12/17/15

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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.

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



**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1532642-01	AEI SV-6	SOIL_VAPOR	180 EAST PARK AVE., LONG BEACH, NY	12/10/15 11:55	12/10/15



**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

### 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.

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**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

### Case Narrative (continued)

#### Volatile Organics in Air

Canisters were released from the laboratory on December 7, 2015. The canister certification results are provided as an addendum.

Sample L1532642-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

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: 12/17/15

**AIR**

**Project Name:** NU-CLEAR**Lab Number:** L1532642**Project Number:** 341998**Report Date:** 12/17/15**SAMPLE RESULTS**

Lab ID: L1532642-01 D  
 Client ID: AEI SV-6  
 Sample Location: 180 EAST PARK AVE., LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/12/15 04:32  
 Analyst: RY

Date Collected: 12/10/15 11:55  
 Date Received: 12/10/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	ND	21.5	--	ND	106	--		107.7
Chloromethane	ND	21.5	--	ND	44.4	--		107.7
Freon-114	ND	21.5	--	ND	150	--		107.7
Vinyl chloride	ND	21.5	--	ND	55.0	--		107.7
1,3-Butadiene	ND	21.5	--	ND	47.6	--		107.7
Bromomethane	ND	21.5	--	ND	83.5	--		107.7
Chloroethane	ND	21.5	--	ND	56.7	--		107.7
Ethanol	ND	538	--	ND	1010	--		107.7
Vinyl bromide	ND	21.5	--	ND	94.0	--		107.7
Acetone	ND	108	--	ND	257	--		107.7
Trichlorofluoromethane	ND	21.5	--	ND	121	--		107.7
Isopropanol	ND	53.8	--	ND	132	--		107.7
1,1-Dichloroethene	ND	21.5	--	ND	85.2	--		107.7
Tertiary butyl Alcohol	ND	53.8	--	ND	163	--		107.7
Methylene chloride	ND	53.8	--	ND	187	--		107.7
3-Chloropropene	ND	21.5	--	ND	67.3	--		107.7
Carbon disulfide	ND	21.5	--	ND	67.0	--		107.7
Freon-113	ND	21.5	--	ND	165	--		107.7
trans-1,2-Dichloroethene	ND	21.5	--	ND	85.2	--		107.7
1,1-Dichloroethane	ND	21.5	--	ND	87.0	--		107.7
Methyl tert butyl ether	ND	21.5	--	ND	77.5	--		107.7
2-Butanone	ND	53.8	--	ND	159	--		107.7
cis-1,2-Dichloroethene	ND	21.5	--	ND	85.2	--		107.7
Ethyl Acetate	ND	53.8	--	ND	194	--		107.7



**Project Name:** NU-CLEAR**Lab Number:** L1532642**Project Number:** 341998**Report Date:** 12/17/15**SAMPLE RESULTS**

Lab ID: L1532642-01 D

Date Collected: 12/10/15 11:55

Client ID: AEI SV-6

Date Received: 12/10/15

Sample Location: 180 EAST PARK AVE., LONG BEACH

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	21.5	--	ND	105	--		107.7
Tetrahydrofuran	ND	53.8	--	ND	159	--		107.7
1,2-Dichloroethane	ND	21.5	--	ND	87.0	--		107.7
n-Hexane	ND	21.5	--	ND	75.8	--		107.7
1,1,1-Trichloroethane	ND	21.5	--	ND	117	--		107.7
Benzene	ND	21.5	--	ND	68.7	--		107.7
Carbon tetrachloride	ND	21.5	--	ND	135	--		107.7
Cyclohexane	ND	21.5	--	ND	74.0	--		107.7
1,2-Dichloropropane	ND	21.5	--	ND	99.4	--		107.7
Bromodichloromethane	ND	21.5	--	ND	144	--		107.7
1,4-Dioxane	ND	21.5	--	ND	77.5	--		107.7
Trichloroethene	34.0	21.5	--	183	116	--		107.7
2,2,4-Trimethylpentane	ND	21.5	--	ND	100	--		107.7
Heptane	ND	21.5	--	ND	88.1	--		107.7
cis-1,3-Dichloropropene	ND	21.5	--	ND	97.6	--		107.7
4-Methyl-2-pentanone	ND	53.8	--	ND	220	--		107.7
trans-1,3-Dichloropropene	ND	21.5	--	ND	97.6	--		107.7
1,1,2-Trichloroethane	ND	21.5	--	ND	117	--		107.7
Toluene	ND	21.5	--	ND	81.0	--		107.7
2-Hexanone	ND	21.5	--	ND	88.1	--		107.7
Dibromochloromethane	ND	21.5	--	ND	183	--		107.7
1,2-Dibromoethane	ND	21.5	--	ND	165	--		107.7
Tetrachloroethene	8590	21.5	--	58300	146	--		107.7
Chlorobenzene	ND	21.5	--	ND	99.0	--		107.7
Ethylbenzene	ND	21.5	--	ND	93.4	--		107.7
p/m-Xylene	ND	43.1	--	ND	187	--		107.7
Bromoform	ND	21.5	--	ND	222	--		107.7
Styrene	ND	21.5	--	ND	91.5	--		107.7



**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

### SAMPLE RESULTS

Lab ID: L1532642-01 D Date Collected: 12/10/15 11:55  
 Client ID: AEI SV-6 Date Received: 12/10/15  
 Sample Location: 180 EAST PARK AVE., LONG BEACH Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	21.5	--	ND	148	--		107.7
o-Xylene	ND	21.5	--	ND	93.4	--		107.7
4-Ethyltoluene	ND	21.5	--	ND	106	--		107.7
1,3,5-Trimethylbenzene	ND	21.5	--	ND	106	--		107.7
1,2,4-Trimethylbenzene	ND	21.5	--	ND	106	--		107.7
Benzyl chloride	ND	21.5	--	ND	111	--		107.7
1,3-Dichlorobenzene	ND	21.5	--	ND	129	--		107.7
1,4-Dichlorobenzene	ND	21.5	--	ND	129	--		107.7
1,2-Dichlorobenzene	ND	21.5	--	ND	129	--		107.7
1,2,4-Trichlorobenzene	ND	21.5	--	ND	160	--		107.7
Hexachlorobutadiene	ND	21.5	--	ND	229	--		107.7

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	102		60-140



Project Name: NU-CLEAR

Lab Number: L1532642

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/11/15 15:55

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG849069-4								
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	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		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
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
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: NU-CLEAR

Lab Number: L1532642

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/11/15 15:55

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG849069-4								
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
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		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
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
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
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
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1



Project Name: NU-CLEAR

Lab Number: L1532642

Project Number: 341998

Report Date: 12/17/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/11/15 15:55

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01 Batch: WG849069-4								
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
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		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
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-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



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG849069-3								
Chlorodifluoromethane	83		-		70-130	-		
Propylene	86		-		70-130	-		
Propane	72		-		70-130	-		
Dichlorodifluoromethane	72		-		70-130	-		
Chloromethane	105		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	98		-		70-130	-		
Methanol	94		-		70-130	-		
Vinyl chloride	102		-		70-130	-		
1,3-Butadiene	108		-		70-130	-		
Butane	95		-		70-130	-		
Bromomethane	102		-		70-130	-		
Chloroethane	101		-		70-130	-		
Ethyl Alcohol	82		-		70-130	-		
Dichlorofluoromethane	92		-		70-130	-		
Vinyl bromide	102		-		70-130	-		
Acrolein	101		-		70-130	-		
Acetone	108		-		70-130	-		
Acetonitrile	102		-		70-130	-		
Trichlorofluoromethane	102		-		70-130	-		
iso-Propyl Alcohol	107		-		70-130	-		
Acrylonitrile	98		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG849069-3								
Pentane	97		-		70-130	-		
Ethyl ether	92		-		70-130	-		
1,1-Dichloroethene	86		-		70-130	-		
tert-Butyl Alcohol	80		-		70-130	-		
Methylene chloride	92		-		70-130	-		
3-Chloropropene	90		-		70-130	-		
Carbon disulfide	88		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	90		-		70-130	-		
trans-1,2-Dichloroethene	79		-		70-130	-		
1,1-Dichloroethane	87		-		70-130	-		
Methyl tert butyl ether	83		-		70-130	-		
Vinyl acetate	83		-		70-130	-		
2-Butanone	90		-		70-130	-		
cis-1,2-Dichloroethene	97		-		70-130	-		
Ethyl Acetate	90		-		70-130	-		
Chloroform	90		-		70-130	-		
Tetrahydrofuran	80		-		70-130	-		
2,2-Dichloropropane	77		-		70-130	-		
1,2-Dichloroethane	87		-		70-130	-		
n-Hexane	95		-		70-130	-		
Isopropyl Ether	88		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG849069-3								
Ethyl-Tert-Butyl-Ether	88		-		70-130	-		
1,1,1-Trichloroethane	96		-		70-130	-		
1,1-Dichloropropene	91		-		70-130	-		
Benzene	93		-		70-130	-		
Carbon tetrachloride	99		-		70-130	-		
Cyclohexane	94		-		70-130	-		
Tertiary-Amyl Methyl Ether	84		-		70-130	-		
Dibromomethane	94		-		70-130	-		
1,2-Dichloropropane	100		-		70-130	-		
Bromodichloromethane	102		-		70-130	-		
1,4-Dioxane	97		-		70-130	-		
Trichloroethene	101		-		70-130	-		
2,2,4-Trimethylpentane	99		-		70-130	-		
Methyl Methacrylate	88		-		70-130	-		
Heptane	98		-		70-130	-		
cis-1,3-Dichloropropene	104		-		70-130	-		
4-Methyl-2-pentanone	99		-		70-130	-		
trans-1,3-Dichloropropene	88		-		70-130	-		
1,1,2-Trichloroethane	105		-		70-130	-		
Toluene	105		-		70-130	-		
1,3-Dichloropropane	101		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG849069-3								
2-Hexanone	115		-		70-130	-		
Dibromochloromethane	117		-		70-130	-		
1,2-Dibromoethane	112		-		70-130	-		
Butyl Acetate	94		-		70-130	-		
Octane	96		-		70-130	-		
Tetrachloroethene	108		-		70-130	-		
1,1,1,2-Tetrachloroethane	102		-		70-130	-		
Chlorobenzene	107		-		70-130	-		
Ethylbenzene	107		-		70-130	-		
p/m-Xylene	108		-		70-130	-		
Bromoform	118		-		70-130	-		
Styrene	106		-		70-130	-		
1,1,2,2-Tetrachloroethane	121		-		70-130	-		
o-Xylene	114		-		70-130	-		
1,2,3-Trichloropropane	99		-		70-130	-		
Nonane (C9)	102		-		70-130	-		
Isopropylbenzene	104		-		70-130	-		
Bromobenzene	99		-		70-130	-		
o-Chlorotoluene	103		-		70-130	-		
n-Propylbenzene	104		-		70-130	-		
p-Chlorotoluene	101		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 Batch: WG849069-3								
4-Ethyltoluene	108		-		70-130	-		
1,3,5-Trimethylbenzene	109		-		70-130	-		
tert-Butylbenzene	109		-		70-130	-		
1,2,4-Trimethylbenzene	122		-		70-130	-		
Decane (C10)	105		-		70-130	-		
Benzyl chloride	108		-		70-130	-		
1,3-Dichlorobenzene	120		-		70-130	-		
1,4-Dichlorobenzene	117		-		70-130	-		
sec-Butylbenzene	109		-		70-130	-		
p-Isopropyltoluene	101		-		70-130	-		
1,2-Dichlorobenzene	117		-		70-130	-		
n-Butylbenzene	109		-		70-130	-		
1,2-Dibromo-3-chloropropane	99		-		70-130	-		
Undecane	106		-		70-130	-		
Dodecane (C12)	108		-		70-130	-		
1,2,4-Trichlorobenzene	125		-		70-130	-		
Naphthalene	106		-		70-130	-		
1,2,3-Trichlorobenzene	100		-		70-130	-		
Hexachlorobutadiene	110		-		70-130	-		

## Lab Duplicate Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG849069-5 QC Sample: L1532639-02 Client ID: DUP Sample						
Propylene	ND	ND	ppbV	NC		25
Dichlorodifluoromethane	0.426	0.436	ppbV	2		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	7.31	7.09	ppbV	3		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	5.58	5.51	ppbV	1		25
Trichlorofluoromethane	0.337	0.343	ppbV	2		25
iso-Propyl Alcohol	0.598	0.580	ppbV	3		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	0.468	0.485	ppbV	4		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG849069-5 QC Sample: L1532639-02 Client ID: DUP Sample					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
Vinyl acetate	ND	ND	ppbV	NC	25
2-Butanone	0.893	0.838	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	0.205	ND	ppbV	NC	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	0.264	0.266	ppbV	1	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	3.14	3.27	ppbV	4	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



## Lab Duplicate Analysis

### Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG849069-5 QC Sample: L1532639-02 Client ID: DUP Sample					
Heptane	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
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	1.68	1.64	ppbV	2	25
2-Hexanone	ND	ND	ppbV	NC	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	0.307	0.337	ppbV	9	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.237	0.249	ppbV	5	25
p/m-Xylene	0.970	0.962	ppbV	1	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.341	0.331	ppbV	3	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR

Project Number: 341998

Lab Number: L1532642

Report Date: 12/17/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG849069-5 QC Sample: L1532639-02 Client ID: DUP Sample					
1,2,4-Trimethylbenzene	0.286	0.294	ppbV	3	25
Benzyl chloride	ND	ND	ppbV	NC	25
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
Naphthalene	0.237	0.240	ppbV	1	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name: NU-CLEAR

Project Number: 341998

Serial\_No:12171510:20  
Lab Number: L1532642

Report Date: 12/17/15

### 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
L1532642-01	AEI SV-6	0506	SV200	12/07/15	213993		-	-	-	Pass	210	209	0
L1532642-01	AEI SV-6	341	2.7L Can	12/07/15	213993	L1527282-01	Pass	-29.3	-4.0	-	-	-	-

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

**Lab Number:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 10/26/15 15:32  
 Analyst: MB

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 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
Propane	ND	0.500	--	ND	0.902	--		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	5.00	--	ND	9.42	--		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

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

**Lab Number:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
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	0.200	--	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
Vinyl acetate	ND	1.00	--	ND	3.52	--		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



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

**Lab Number:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
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



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

**Lab Number:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
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



**Project Name:** BATCH CANISTER CERTIFICATION**Lab Number:** L1527282**Project Number:** CANISTER QC BAT**Report Date:** 12/17/15**Air Canister Certification Results**

Lab ID: L1527282-01

Date Collected: 10/24/15 10:00

Client ID: CAN 214 SHELF 3

Date Received: 10/26/15

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								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	92		60-140



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

**Lab Number:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 10/26/15 15:32  
 Analyst: MB

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 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	0.200	--	ND	0.721	--		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:** L1527282  
**Report Date:** 12/17/15

### Air Canister Certification Results

Lab ID: L1527282-01  
 Client ID: CAN 214 SHELF 3  
 Sample Location:

Date Collected: 10/24/15 10:00  
 Date Received: 10/26/15  
 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**Lab Number:** L1527282**Project Number:** CANISTER QC BAT**Report Date:** 12/17/15**Air Canister Certification Results**

Lab ID: L1527282-01

Date Collected: 10/24/15 10:00

Client ID: CAN 214 SHELF 3

Date Received: 10/26/15

Sample Location:

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	95		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	93		60-140



**Project Name:** NU-CLEAR**Lab Number:** L1532642**Project Number:** 341998**Report Date:** 12/17/15**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

N/A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1532642-01A	Canister - 2.7 Liter	N/A	N/A	N/A	Y	Absent	TO15-LL(30)

\*Values in parentheses indicate holding time in days

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** Data Usability Report



**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

#### **Data Qualifiers**

- 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.
- 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:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532642  
**Report Date:** 12/17/15

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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

Date Rec'd in Lab: 12/11/15

ALPHA Job #: L15321042

**Client Information**

Client: AEI Consultants

Address:

Phone:

Fax:

Email:

These samples have been previously analyzed by Alpha

**Project Information**

Project Name: Nu-Clear

Project Location: 180 East Park Ave Long Beach NY

Project #: 341998

Project Manager: Joe Bernarducci

ALPHA Quote #:

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

**Report Information - Data Deliverables**

FAX  
 ADEX

Criteria Checker: \_\_\_\_\_

Other Formats: \_\_\_\_\_

EMAIL (standard pdf report)  
 Additional Deliverables:

Report to: (if different than Project Manager)

**Billing Information**

Same as Client info PO #: 99642

**Regulatory Requirements/Report Limits**

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List:

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION					Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS					Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum						TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs	Fixed Gases	Sulfides & Mercaptans by TO-15	
<u>32642.01</u>	<u>AEI SV-6</u>	<u>12/10/15</u>	<u>11:44</u>	<u>11:55</u>	<u>-29.3</u>	<u>-3.77</u>	<u>SV</u>	<u>JB</u>	<u>2.7</u>	<u>341</u>	<u>0506X</u>	<input checked="" type="checkbox"/>					

**\*SAMPLE MATRIX CODES**

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

Container Type

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:

Joe Bernarducci  
Albert Williams

12/10/15 1426  
12/10/15 2310  
12/11/15 0355

Danielle Hill  
Albert Williams  
M. Walsh

12/10/15 1426  
12/10/15 2310  
12/11/15 0355



## ANALYTICAL REPORT

Lab Number:	L1532568
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU-CLEAR
Project Number:	341998
Report Date:	12/18/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

---

Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1532568-01	AEI SB 11 (34.5-35)	SOIL	180 EAST PARK AVE., LONG BEACH, NY	12/10/15 14:30	12/10/15

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

### 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:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

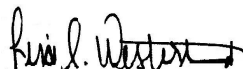
**Case Narrative (continued)**

Report Submission

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

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:



Lisa Westerlind

Title: Technical Director/Representative

Date: 12/18/15

# ORGANICS

# VOLATILES

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

## SAMPLE RESULTS

Lab ID: L1532568-01  
 Client ID: AEI SB 11 (34.5-35)  
 Sample Location: 180 EAST PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/18/15 11:43  
 Analyst: BN  
 Percent Solids: 81%

Date Collected: 12/10/15 14:30  
 Date Received: 12/10/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	12	1.4	1
1,1-Dichloroethane	ND		ug/kg	1.9	0.11	1
Chloroform	ND		ug/kg	1.9	0.47	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
1,2-Dichloropropane	ND		ug/kg	4.4	0.29	1
Dibromochloromethane	ND		ug/kg	1.2	0.19	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	0.38	1
Tetrachloroethene	ND		ug/kg	1.2	0.18	1
Chlorobenzene	ND		ug/kg	1.2	0.44	1
Trichlorofluoromethane	ND		ug/kg	6.3	0.49	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.14	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.14	1
Bromodichloromethane	ND		ug/kg	1.2	0.22	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.3	0.18	1
Bromoform	ND		ug/kg	5.0	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.13	1
Benzene	ND		ug/kg	1.2	0.15	1
Toluene	0.32	J	ug/kg	1.9	0.24	1
Ethylbenzene	ND		ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	6.3	0.37	1
Bromomethane	ND		ug/kg	2.5	0.42	1
Vinyl chloride	ND		ug/kg	2.5	0.15	1
Chloroethane	ND		ug/kg	2.5	0.40	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.33	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.27	1
Trichloroethene	ND		ug/kg	1.2	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	6.3	0.19	1



Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

## SAMPLE RESULTS

Lab ID: L1532568-01

Date Collected: 12/10/15 14:30

Client ID: AEI SB 11 (34.5-35)

Date Received: 12/10/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	6.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	6.3	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.11	1
p/m-Xylene	ND		ug/kg	2.5	0.25	1
o-Xylene	ND		ug/kg	2.5	0.22	1
Xylenes, Total	ND		ug/kg	2.5	0.22	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.21	1
Styrene	ND		ug/kg	2.5	0.51	1
Dichlorodifluoromethane	ND		ug/kg	12	0.24	1
Acetone	7.0	J	ug/kg	12	1.3	1
Carbon disulfide	3.0	J	ug/kg	12	1.4	1
2-Butanone	ND		ug/kg	12	0.34	1
Vinyl acetate	ND		ug/kg	12	0.17	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.31	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.20	1
2-Hexanone	ND		ug/kg	12	0.84	1
Bromochloromethane	ND		ug/kg	6.3	0.35	1
2,2-Dichloropropane	ND		ug/kg	6.3	0.28	1
1,2-Dibromoethane	ND		ug/kg	5.0	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.3	0.18	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.40	1
Bromobenzene	ND		ug/kg	6.3	0.26	1
n-Butylbenzene	ND		ug/kg	1.2	0.14	1
sec-Butylbenzene	ND		ug/kg	1.2	0.15	1
tert-Butylbenzene	ND		ug/kg	6.3	0.17	1
o-Chlorotoluene	ND		ug/kg	6.3	0.20	1
p-Chlorotoluene	ND		ug/kg	6.3	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.3	0.50	1
Hexachlorobutadiene	ND		ug/kg	6.3	0.29	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.16	1
Naphthalene	ND		ug/kg	6.3	0.17	1
Acrylonitrile	ND		ug/kg	12	0.65	1
n-Propylbenzene	ND		ug/kg	1.2	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.3	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.3	0.23	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.3	0.18	1

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

## SAMPLE RESULTS

Lab ID: L1532568-01

Date Collected: 12/10/15 14:30

Client ID: AEI SB 11 (34.5-35)

Date Received: 12/10/15

Sample Location: 180 EAST PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	6.3	0.18	1
1,4-Dioxane	ND		ug/kg	120	18.	1
p-Diethylbenzene	ND		ug/kg	5.0	0.20	1
p-Ethyltoluene	ND		ug/kg	5.0	0.16	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.0	0.16	1
Ethyl ether	ND		ug/kg	6.3	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.3	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	108		70-130

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/18/15 09:35  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG851122-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/18/15 09:35  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG851122-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 12/18/15 09:35  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG851122-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	94		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG851122-1 WG851122-2								
Methylene chloride	98		96		70-130	2		30
1,1-Dichloroethane	107		104		70-130	3		30
Chloroform	113		110		70-130	3		30
Carbon tetrachloride	<b>140</b>	Q	<b>134</b>	Q	70-130	4		30
1,2-Dichloropropane	99		97		70-130	2		30
Dibromochloromethane	86		88		70-130	2		30
2-Chloroethylvinyl ether	100		102		70-130	2		30
1,1,2-Trichloroethane	89		89		70-130	0		30
Tetrachloroethene	117		110		70-130	6		30
Chlorobenzene	97		96		70-130	1		30
Trichlorofluoromethane	<b>140</b>	Q	134		70-139	4		30
1,2-Dichloroethane	111		113		70-130	2		30
1,1,1-Trichloroethane	<b>133</b>	Q	127		70-130	5		30
Bromodichloromethane	108		107		70-130	1		30
trans-1,3-Dichloropropene	97		98		70-130	1		30
cis-1,3-Dichloropropene	105		104		70-130	1		30
1,1-Dichloropropene	119		113		70-130	5		30
Bromoform	78		83		70-130	6		30
1,1,2,2-Tetrachloroethane	81		83		70-130	2		30
Benzene	105		101		70-130	4		30
Toluene	95		92		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG851122-1 WG851122-2								
Ethylbenzene	104		101		70-130	3		30
Chloromethane	98		93		52-130	5		30
Bromomethane	122		121		57-147	1		30
Vinyl chloride	111		105		67-130	6		30
Chloroethane	116		109		50-151	6		30
1,1-Dichloroethene	117		109		65-135	7		30
trans-1,2-Dichloroethene	111		106		70-130	5		30
Trichloroethene	117		112		70-130	4		30
1,2-Dichlorobenzene	95		95		70-130	0		30
1,3-Dichlorobenzene	98		98		70-130	0		30
1,4-Dichlorobenzene	97		97		70-130	0		30
Methyl tert butyl ether	105		106		66-130	1		30
p/m-Xylene	107		104		70-130	3		30
o-Xylene	104		101		70-130	3		30
cis-1,2-Dichloroethene	106		104		70-130	2		30
Dibromomethane	101		102		70-130	1		30
Styrene	106		105		70-130	1		30
Dichlorodifluoromethane	102		95		30-146	7		30
Acetone	88		97		54-140	10		30
Carbon disulfide	106		105		59-130	1		30
2-Butanone	87		87		70-130	0		30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG851122-1 WG851122-2								
Vinyl acetate	102		104		70-130	2		30
4-Methyl-2-pentanone	94		96		70-130	2		30
1,2,3-Trichloropropane	84		87		68-130	4		30
2-Hexanone	79		82		70-130	4		30
Bromochloromethane	107		105		70-130	2		30
2,2-Dichloropropane	128		124		70-130	3		30
1,2-Dibromoethane	92		94		70-130	2		30
1,3-Dichloropropane	91		90		69-130	1		30
1,1,1,2-Tetrachloroethane	108		105		70-130	3		30
Bromobenzene	92		92		70-130	0		30
n-Butylbenzene	110		109		70-130	1		30
sec-Butylbenzene	107		102		70-130	5		30
tert-Butylbenzene	105		103		70-130	2		30
o-Chlorotoluene	98		97		70-130	1		30
p-Chlorotoluene	99		97		70-130	2		30
1,2-Dibromo-3-chloropropane	<b>63</b>	Q	<b>67</b>	Q	68-130	6		30
Hexachlorobutadiene	117		115		67-130	2		30
Isopropylbenzene	111		107		70-130	4		30
p-Isopropyltoluene	110		107		70-130	3		30
Naphthalene	86		88		70-130	2		30
Acrylonitrile	93		95		70-130	2		30



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG851122-1 WG851122-2								
Isopropyl Ether	102		101		66-130	1		30
tert-Butyl Alcohol	88		90		70-130	2		30
n-Propylbenzene	102		100		70-130	2		30
1,2,3-Trichlorobenzene	98		98		70-130	0		30
1,2,4-Trichlorobenzene	104		104		70-130	0		30
1,3,5-Trimethylbenzene	104		101		70-130	3		30
1,2,4-Trimethylbenzene	102		101		70-130	1		30
Methyl Acetate	88		92		51-146	4		30
Ethyl Acetate	111		109		70-130	2		30
Acrolein	87		91		70-130	4		30
Cyclohexane	122		114		59-142	7		30
1,4-Dioxane	94		93		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	124		116		50-139	7		30
p-Diethylbenzene	130		128		70-130	2		30
p-Ethyltoluene	126		122		70-130	3		30
1,2,4,5-Tetramethylbenzene	124		123		70-130	1		30
Tetrahydrofuran	96		98		66-130	2		30
Ethyl ether	97		98		67-130	1		30
trans-1,4-Dichloro-2-butene	83		82		70-130	1		30
Methyl cyclohexane	121		114		70-130	6		30
Ethyl-Tert-Butyl-Ether	107		108		70-130	1		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG851122-1 WG851122-2								
Tertiary-Amyl Methyl Ether	105		105		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		111		70-130
Toluene-d8	95		93		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	110		111		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

**SAMPLE RESULTS**

**Lab ID:** L1532568-01  
**Client ID:** AEI SB 11 (34.5-35)  
**Sample Location:** 180 EAST PARK AVE., LONG BEACH  
**Matrix:** Soil

**Date Collected:** 12/10/15 14:30  
**Date Received:** 12/10/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.0		%	0.100	NA	1	-	12/11/15 16:06	30,2540G	RI



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG849051-1 QC Sample: L1532572-01 Client ID: DUP Sample						
Solids, Total	94.2	94.2	%	0		20

Project Name: NU-CLEAR

Lab Number: L1532568

Project Number: 341998

Report Date: 12/18/15

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 11-DEC-15 15:53

**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1532568-01A	5 gram Encore Sampler	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(2)
L1532568-01B	5 gram Encore Sampler	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(2)
L1532568-01C	5 gram Encore Sampler	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(2)
L1532568-01D	Plastic 2oz unpreserved for TS	A	N/A	2.7	Y	Absent	TS(7)
L1532568-01X	Vial MeOH preserved split	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(14)
L1532568-01Y	Vial Water preserved split	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(14)
L1532568-01Z	Vial Water preserved split	A	N/A	2.7	Y	Absent	NYTCL-8260HLW(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU-CLEAR  
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#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers





**Project Name:** NU-CLEAR  
**Project Number:** 341998

**Lab Number:** L1532568  
**Report Date:** 12/18/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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

### Westborough Facility

**EPA 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene  
**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene  
**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.  
**EPA 1010A:** NPW: Ignitability  
**EPA 6010C:** NPW: Strontium; SCM: Strontium  
**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP  
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.  
**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.  
**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation  
**EPA 9038:** NPW: Sulfate  
**EPA 9050A:** NPW: Specific Conductance  
**EPA 9056:** NPW: Chloride, Nitrate, Sulfate  
**EPA 9065:** NPW: Phenols  
**EPA 9251:** NPW: Chloride  
**SM3500:** NPW: Ferrous Iron  
**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.  
**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: 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.

 <b>NEW JERSEY CHAIN OF CUSTODY</b>	<b>Service Centers</b> 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 1	Date Rec'd in Lab 12/10/15	ALPHA Job # L1532568	
	Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	<b>Project Information</b> Project Name: <i>Nu-Clear</i> Project Location: <i>180 East Park Ave Long Beach NY</i> Project # <i>341998</i> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other	<b>Billing Information</b> <input type="checkbox"/> Same as Client Info PO # <i>99642</i>
	<b>Client Information</b> Client: <i>AET Consultants</i> Address: Phone: Fax: Email:		<b>Project Manager:</b> <i>Joe Bernarducci</i> <b>ALPHAQuote #:</b> <b>Turn-Around Time</b> Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<b>Regulatory Requirement</b> <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input type="checkbox"/> Other <i>NYSDEC</i>	<b>Site Information</b> Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:

These samples have been previously analyzed by Alpha <input type="checkbox"/>					<b>ANALYSIS</b>										<b>Sample Filtration</b>		Total Bottles																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other	Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle	Westboro: Certification No: MA935 Mansfield: Certification No: MA015	Container Type <i>E</i> Preservative <i>A</i>	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.)												
Relinquished By:		Date/Time	Received By:		Date/Time											
<i>Joe Bernarducci</i>		<i>12/10/15 1436</i>	<i>David Hubbel</i>		<i>12/10/15 1436</i>											
<i>Tommy Tappin</i>		<i>12/10/15 1840</i>	<i>Tommy Tappin</i>		<i>12-10-15 1840</i>											
<i>Tommy Tappin</i>		<i>12/10/15 2325</i>	<i>Andrea Phillips</i>		<i>12/10/15 2305</i>											

# **APPENDIX F**

## **Waste Manifests**

2050

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>NYD068030782</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>800 966 9282</b>	4. Manifest Tracking Number <b>006925285 FLE</b>	
5. Generator's Name and Mailing Address <b>MU-CLEAR CLEANERS 180 EAST PARK AVE, LONG BEACH NY 11561</b>				Generator's Site Address (if different than mailing address) <b>SAME</b>		
6. Transporter 1 Company Name <b>AARCO ENVIRONMENTAL</b>		U.S. EPA ID Number <b>NYR000107326</b>				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address <b>ROSS INCINERATION SERVICES INC. 36790 GILES ROAD, GRAFTON, OH 44044</b>				U.S. EPA ID Number <b>OHDO48415665</b>		
Facility's Phone: <b>440-748-5800</b>						
9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
X	1. <b>NA3077, HAZARDOUS WASTE, SOLID N.P.S. 9, III (PERCHLOROETHYLENE SOIL) (RQ: D039, F002)</b>	12	Dr	6000 <del>12000</del>	P	D039 F002  B
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information <b>1. (RQXSS) 100667 12</b>						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeror's Printed/Typed Name <b>[Signature]</b>				Signature <b>guy hart</b>		Month Day Year <b>01   7   16</b>
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name <b>Rashon Cooper</b>				Signature <b>[Signature]</b>		Month Day Year <b>01   7   16</b>
Transporter 2 Printed/Typed Name				Signature		Month Day Year
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
18b. Alternate Facility (or Generator)					U.S. EPA ID Number	
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)						Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.	2.	3.	4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name				Signature		Month Day Year

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>NYD068030782</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>800 966 9282</b>	4. Manifest Tracking Number <b>006925284 FLE</b>		
5. Generator's Name and Mailing Address <b>NU-CLEAR CLEANERS 150 EAST PARK AVE. LONG BEACH NY 11561</b>				Generator's Site Address (if different than mailing address) <b>SAME</b>			
6. Transporter 1 Company Name <b>ARCO ENVIRONMENTAL</b>		U.S. EPA ID Number <b>NYR000107326</b>					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address <b>TRIMVIRATE ENVIRONMENTAL (NYC) LLC 42-14 19TH AVE, ASTORIA, NY 11005</b>				U.S. EPA ID Number <b>NYD077444263</b>			
Facility's Phone: <b>718-234-3339</b>							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
X	1. NA3082, HAZ WASTE, LIQUID, NOS 9, III (PERCHLOROETHYLENE, WATER) (RQ: D039, F002)	10	DM	5,000	P	D039	F002
	2.						B
	3.						
	4.						
14. Special Handling Instructions and Additional Information <b>1. ( x 55 ) NYC.070915PW</b>							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name <b>[Signature]</b>				Signature <b>[Signature]</b>		Month Day Year <b>01 7 16</b>	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name <b>[Signature]</b>				Signature <b>[Signature]</b>		Month Day Year <b>01 07 16</b>	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)				U.S. EPA ID Number			
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name				Signature		Month Day Year	

# **APPENDIX G**

## **Well Elevation and Gauging Data**

**Monitoring Well Elevation Survey and Gauging Data**  
**180 East Park Ave, Long Beach, New York**

Date - 1/7/2016	Raw Survey Data	Relative Elevation	Depth to Water	GW Elevation
<b>Benchmark</b>	5.84	10		
<b>MW-1</b>	5.92	9.92	5.63	4.29
<b>MW-2</b>	6.17	9.67	5.37	4.3
<b>MW-3</b>	5.87	9.97	5.56	4.41
<b>MW-4D</b>	6.09	9.75	5.52	4.23
<b>MW-5</b>	6.02	9.82	5.44	4.38
<b>MW-6</b>	6.42	9.42	4.96	4.46
<b>MW-7</b>	6.24	9.6	5.18	4.42
<b>MW-8</b>	6.18	9.66	5.34	4.32

**Benchmark = gas cap located SE of building**

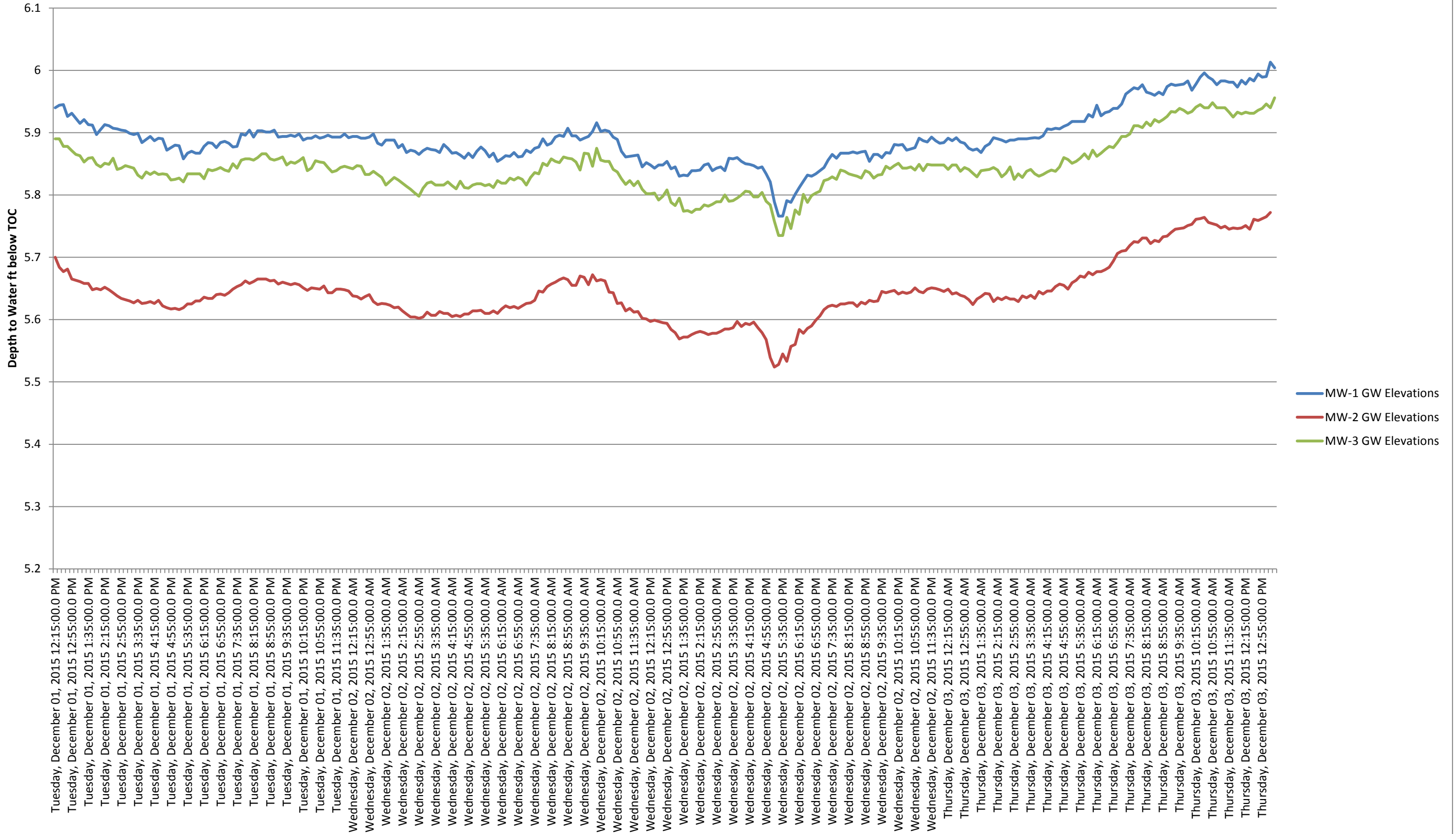
**All measurements are in feet**



# **APPENDIX H**

## **Monitoring Well Transducer Tidal Study Results**

# 341998-Nu-Clear Cleaners Transducer Study 12/1/15



# **ATTACHMENT 1**

**Site Investigation Report, August 20, 2015,  
Nu-Clear Cleaners, 180 East Park Avenue,  
Long Beach, New York.  
Prepared by AEI Consultants.**



# AEI Consultants

Environmental & Engineering Services

August 20, 2015

## SITE INVESTIGATION REPORT

### Property Identification:

Nu-Clear Cleaners  
180 East Park Avenue  
Long Beach, New York 11561

Nassau County Section 59, Block 110, Lots 32-35  
EPA ID No. NYD068030782

Project #341998

### Prepared for:

Nu-Clear Cleaners  
180 East Park Avenue  
Long Beach, New York 11561

### Prepared by:

AEI Consultants  
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Freehold, NJ 07728  
(732) 414-2720

San Francisco HQ

Atlanta

Chicago

Costa Mesa

Dallas

Denver

Los Angeles

Miami

New York

Phoenix

Portland

San Jose

National Presence

Regional Focus

Local Solutions

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Table 3	Temporary Well and Dry Well Sample Analytical Results
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### APPENDICES

Appendix A	City of Long Beach Permit
Appendix B	Boring Logs
Appendix C	Sample Analytical Documentation

**Qualified Environmental Professional:**

*I, David Bausmith, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for 180 East Park Avenue, Long Beach, NY. I am responsible for the content of this Site Investigation Report (SIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.*



*August 20, 2015*

---

David Bausmith, PE

Date

## 1.0 Introduction

Nu-Clear Drive-In Cleaners (Nu-Clear) operates a commercial dry cleaning facility located at 180 East Park Avenue, in Long Beach, New York (Site). The Site is defined on the Nassau County Tax Assessor records as Section 59, Block 110, Lots 32-35.

On November 19, 2014, the New York State Department of Environmental Conservation (NYSDEC) issued a Notice of Violation (NOV) to Nu-Clear regarding a release of tetrachloroethylene (PCE) at the Site. The NOV specified a requirement to perform sampling at the Site, which was subsequently performed by Nu-Clear and the NYSDEC on January 15, 2015. The samples were reportedly collected from soil beneath/around the southeast corner of the existing dry cleaning building on the Site. Although the specific analytical results for the January 2015 soil sampling have not been made available to AEI, the results reportedly indicated elevated levels of PCE indicative of a suspected release. Based on these results, the NYSDEC notified Nu-Clear via a letter dated March 3, 2015, that a Work Plan was required to conduct additional sampling of soil and groundwater at the Site.

The objective of the Site Investigation (SI) activities described herein was to characterize the nature and extent of impacts related to the suspected release of PCE identified as a result of the January 2015 soil sampling described above. The SI was conducted in general accordance with AEI Consultant's (AEI) Remedial Investigation Work Plan (RIWP), as approved by the NYSDEC on May 27, 2015<sup>1</sup>, and the NYSDEC's DER-10/Technical Guidance for Site Investigation and Remediation. The SI activities included the installation and sampling of two (2) temporary well points (TWPs), five (5) soil vapor ports, and three (3) permanent monitoring wells at the Site. The methods and findings of this investigation are described in the following sections.

### 1.1 Site Description

The Site is located in a highly urbanized area of the City of Long Beach, which is situated approximately in the center of a barrier island located on the southwest shore of Long Island, New York. The location of the Site is depicted on Figure 1. The Site is bordered to the north by East Park Avenue, to the east by Long Beach Boulevard, to the south by a municipally-owned paved parking area, and to the west by private commercial/retail property. The Site covers approximately 0.7 acres, and includes a one-story masonry building housing a commercial office and dry-cleaning operations. The remainder of the Site is covered with asphaltic or concrete pavement. Topography in the vicinity of the site is generally flat, with elevations generally less than 10 feet above mean sea level (ft-msl).<sup>2</sup>

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<sup>1</sup> New York State Department of Environmental Conservation, May 27, 2015. *Remedial Investigation Work Plan (Revised) for Nu-Clear Cleaners*.

<sup>2</sup> Saccardi & Schiff, Inc., "Environmental Resources, Draft-November 2007", <http://www.longbeachny.gov/vertical/sites/%7BC3C1054A-3D3A-41B3-8896-814D00B86D2A%7D/uploads/%7BA071434D-4F1A-435E-B7BD-434FD5DEDC9B%7D.PDF>, accessed April 8, 2015.

## 2.0 Report Organization

The remainder of this report is divided into the following sections:

**Section 3.0 Site Investigation Activities:** Summarizes field activities associated with the SI, including subsurface soil investigations, sediment sampling, soil vapor investigations, and groundwater investigations. Relevant technical correspondence documenting field activities are also summarized in this section.

**Section 4.0 Findings:** Presents the results of SI, both natural and chemical components and contaminants in subsurface soils, sediment, soil vapor, and groundwater. This section includes comparisons of the data with established and published standards, criteria and guidance values (SCG) including: New York State Standards as well as Federal requirements (as applicable).

**Section 5.0 Summary and Conclusions:** Provides an evaluation of data gathered during the SI, and potential migration pathways and contaminant persistence and/or migration. Recommendations regarding additional investigation warranted for the Site are also provided in this section.

**Section 6.0 Schedule:** Provides a tentative schedule for executing subsequent remedial activities for the Site.



## **3.0 Site Investigation Activities**

### **3.1 Permitting and Utility Clearance**

Drilling permits were obtained from the City of Long Beach for this investigation, attached as Appendix A. Zebra Drilling of Lynbrook, New York was contracted to notify dig alert and to identify public utilities in the work area at least 72 hours prior to field activities.

### **3.2 Geophysical Survey**

On July 15, 2015, a geophysical survey using Ground Penetrating Radar (GPR) was conducted by GPRS. The purpose of the survey was to locate subsurface anomalies and utilities near the proposed borings/monitoring wells, and provide boring safety clearance. The geophysical survey was conducted using a Radio-Detection RD 1000 cart-mounted GPR unit. GPRS conducted the survey in a grid pattern around the proposed borings/monitoring wells.

### **3.3 Monitoring Well & Temporary Well Installations**

On July 15, 2015 through July 17, 2015, three (3) permanent groundwater monitoring wells (MW-1 through MW-3) and two (2) temporary monitoring wells were installed by Zebra Drilling (Figure 2). The permanent monitoring well boreholes were advanced using an auger drilling equipment, while temporary well points were installed using direct-push equipment. Soils were continuously logged and field screened using a calibrated photoionization detector (PID) for evidence of impacts from ground surface to the final depth of each boring/monitoring well. Well cuttings from the borehole were containerized in a 55-gallon drum and temporarily staged onsite for future disposal pending receipt of the analytical results.

Temporary well points TWP-1 and TWP-2 were installed on the east and west sides, respectively, of the Site building. The wells were constructed of one-inch diameter schedule 40 polyvinyl chloride (PVC), including a minimum 15-foot long screen set at the base of each borehole. TWP-1 was installed to a depth of 20 feet bgs, and TWP-2 was installed to a depth of 12 feet bgs.

The permanent monitoring wells were constructed of threaded, flush mount schedule 40 PVC installed to a depth of 20-30 feet bgs. Monitoring well (MW-1) was installed north of the building on the Site to a depth of 20 feet bgs. Advancement of the boring at MW-1 was terminated at 20 feet bgs based on the significant decrease in PID readings at this depth, and the presence of a potential confining layer (i.e., clay lens) encountered at 24 feet bgs. Monitoring well MW-2 was installed southwest of the Site in the municipal parking and monitoring well MW-3 was installed southeast of the Site in the municipal parking. In accordance with the NYSDEC-approved RIWP, these wells were set at a depth of 30 feet bgs. Additionally, as described below in Section 3.5, discrete groundwater samples were collected between 14 feet bgs and 30 feet bgs at the boreholes for monitoring wells MW-2 and MW-3 to evaluate vertical distribution of PCE in groundwater at these locations.

Upon completion of the well boreholes, 10 feet of 2-inch diameter PVC, 0.010-slotted well screen was installed through the hollow stem auger. The well was extended to ground surface using 2-inch diameter solid PVC riser pipe. A silica sand filter pack was placed to approximately two (2) feet above the top of the screened interval. A two-foot thick layer of bentonite chips was placed above the sand pack to prevent downward infiltration of surface water. Approximately six inches of sand was placed on top of the bentonite seal, and the remainder of the borehole annulus was filled with sand to within approximately one foot of ground surface. A flush-mount casing/lid and concrete pad was installed to complete the well at ground surface, and the PVC well casing was secured with a lockable cap. The top of the PVC casing for each well was surveyed to a common Site datum to facilitate evaluation of groundwater surface elevations and flow direction.

Following their completion, the permanent monitoring wells were developed by surging the screened interval with surge block of the same diameter as the well casing for approximately 10 minutes. Well purging was then performed using a pump until at least 10 casing volumes are removed and the water was free of silt and apparent turbidity. The development water was containerized in a 55-gallon drum and temporarily staged onsite for future disposal pending receipt of the analytical results.

### **3.4 Groundwater Sample Collection**

On July 15, 2015, groundwater samples were collected from AEI-TWP1 and AEI-TWP2. The well points were initially purged using a peristaltic pump until the water was relatively clear and sediment free. Groundwater samples were collected using disposable polyethylene bailers, placed in laboratory-supplied containers, and submitted under chain-of-custody in an ice-filled cooler to a NY-certified analytical laboratory. After sample collection, the temporary well casing and screen was removed from the borehole, the borehole sealed using bentonite pellets, and finished at ground surface to match surrounding conditions.

On July 16, 2015 and July 17, 2015, eight (8) discrete groundwater samples were collected from MW-2 and MW-3 using a Geoprobe SP-16 Groundwater Sampler. Samples were collected at four (4) discrete four (4) foot sections during each monitoring well install to evaluate the vertical distribution of Site-related VOCs.

On July 22, 2015 and July 23, 2015, three (3) groundwater samples were collected from MW-1 through MW-3. Prior to collecting groundwater samples, the monitoring wells were gauged for groundwater depth and non-aqueous phase liquid (NAPL) using a decontaminated oil-water interface probe. Groundwater samples were collected from each well using low flow sampling techniques by dedicated polyethylene tubing and a peristaltic pump. During purging, groundwater field parameters including pH, specific conductivity, temperature, turbidity, and dissolved oxygen were measured using a calibrated water quality meter equipped with a flow-

through cell. Analytical samples were collected when water quality parameter measurements had stabilized.

Appropriate QA/QC samples were collected for the groundwater sampling event including one trip blank, one field duplicate sample, one matrix spike sample, and one matrix spike duplicate sample. Subsequent to sample collection, the groundwater samples were placed in an ice-filled shipping cooler, and transported under chain-of-custody to a NY-certified analytical laboratory.

### **3.5 Sampling of Dry Well**

Long Beach officials were contacted to obtain access to the dry well located on the paved lot to the south of the Site. The well was gauged using a decontaminated oil-water interface probe for standing water. Since water was present, a water sample was collected using polyethylene tubing and a peristaltic pump. A decontaminated hand auger was used to collect a sample of sediment from the bottom of the dry well. The sediment and water samples collected from the dry well were collected for laboratory analysis.

### **3.6 Soil Vapor Sample Collection**

On July 15, 2015 and July 16, 2015, five (5) soil vapor samples were conducted on the subject property (Figure 2). The sampling was conducted in accordance with the guidelines outlined in Guidance for Evaluating Soil Vapor Intrusion in the State of New York by the New York State Department of Health. The location of each sample port is listed below:

- Probe AEI-SV-1 was advanced north of the subject building.
- Probe AEI-SV-2 was advanced east of the subject building.
- Probe AEI-SV-3 was advanced west of the subject building.
- Probe AEI-SV-4 was advanced southeast of the subject building.
- Probe AEI-SV-5 was advanced southwest of the subject building.

At each soil vapor sampling location, a ¼ inch by 6-inch stainless steel slotted probe was inserted into the direct-push boring, the subsurface annular space was filled with #00 washed silica up to three (3) inches below ground surface, an annular seal of powdered bentonite completed the seal to ground surface, 0.25-inch Teflon tubing was inserted into the Teflon slotted probe. At least three (3) tubing and sample probe volumes were purged from the temporary sample points prior to the collection of each sample.

After soil vapor point installation and prior to sample collection, an enclosure was placed over the sealed borehole. The enclosure was purged with helium gas and a helium detector was used to verify the integrity of the ground surface-tubing seal. After the seal integrity was verified by the absence of helium tracer gas, the tubing was connected to a laboratory-supplied vacuum canister and a sample collected. The flow rate was calibrated at the laboratory to a

rate of approximately 200 ml/min. Each soil vapor sample was collected over a period of approximately ten (10) minutes. After sample collection, the vapor point will be removed and the ground surface repaired to match surrounding conditions.

The soil gas samples were collected in 2.7-liter summa canisters. Each canister was individually checked, tested, and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a vacuum gauge attached to each regulator was used to measure and record the initial summa canister negative vacuum pressure. Once sampling was complete, each summa canister valve was shut tightly while maintaining a slight negative vacuum prior to sealing.

### **3.7 Laboratory Analyses**

The samples were labeled and placed in a cooler with ice following sampling. The samples were transferred under appropriate chain-of-custody documentation to Alpha Laboratories of Westborough MA, certified by the New York State Department of Health to perform Contract Laboratory Program (CLP) analysis on all media sampled during this investigation. The laboratory performed the sample analysis in accordance with the most recent NYSDEC Analytical Services Protocol (ASP). Laboratory analytical documentation is provided in Appendix D. Laboratory analysis of the samples consisted of the following:

#### **Soil Sample AEI-DW:**

- Volatile Organic Compounds (VOCs) via EPA Method 8260.

#### **Soil Vapor Samples AEI-SV 1 through AEI-SV 5**

- Volatile Organic Compounds (VOCs) via TO-15.

#### **Groundwater Samples AEI TWP-1, AEI TWP-2, AEI-MW-1 through AEI-MW-3:**

- Volatile Organic Compounds (VOCs) via EPA Method 8260.

### **3.8 Investigation Derived Waste/Boring Abandonment**

Following completion of sample collection, the temporary well points and soil vapor ports were backfilled with sand and hydrated bentonite chips. The boring was completed at the surface to match existing condition. Soil boring cuttings and purge water from the monitoring wells were placed in 55 gallon drums for future disposal, pending receipt of soil and groundwater analytical results.

## 5.0 Findings

This section presents the results of the SI activities, including physical (i.e., hydrogeological) Site conditions as well as Site-related contaminant results for soil, soil vapor, and groundwater. For the purpose of providing context to the data obtained during this investigation, analytical results are compared to the NYSDEC cleanup standards/objectives or federal EPA screening guidelines, as appropriate. Additionally, although comparisons to the most-stringent cleanup standard/objective are included for reference purposes, the data are compared to cleanup standards that are applicable for the current Site use and related potential human risk scenario. For this reason, comparisons are made to the NYSDEC commercial direct-contact soil cleanup objectives (SCOs), the NYSDEC groundwater quality standards (GWQS), and EPA vapor intrusion screening levels (VISLs), which are applicable to this Site.

### 5.1 Geological and Hydrogeological Conditions

According to a report<sup>2</sup> prepared by Saccardi & Schiff, Inc., the barrier island on which Long Beach is located lies within the Atlantic Coastal Plain Province, which extends beneath the Atlantic Ocean about 100 miles offshore to the edge of the continental shelf. The southern portion of Long Island is a glacial outwash plain, which slopes southward towards the ocean. The area is underlain by several unconsolidated deposits of sand, gravel, and clay that were laid down in parallel beds on the surface of hard, crystalline bedrock.

Surficial soils in Long Beach are generally classified as Udipsamments-Beaches-Urban Land. This classification, which consists of more than one type of soil, is nearly level or gently sloping, excessively drained to moderately well drained, contains coarse textured soils, beaches, and urban land on barrier beaches.<sup>2,3</sup> The Udipsamments include isolated clay lenses within the sandy soils of Long Beach that create a perch for groundwater. The thickness of the Udipsamments fill reportedly ranges from four to 10 feet thick, and overly organic tidal marsh sediments. Groundwater in the shallow, unconsolidated sediments is generally encountered at depths greater than four feet bgs, and generally flows south towards the Atlantic Ocean.

The Raritan clay is a member of the Raritan formation and is composed mostly of silty clays and non-continuous layers of sand beneath Long Beach. It is about 300 feet thick and 900 feet below sea level. The impervious nature of the Raritan clay makes it unusable for water supply, but serves as an effective barrier from intrusion of overlying water-bearing units. The Raritan

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<sup>2</sup> Saccardi & Schiff, Inc., "Environmental Resources, Draft-November 2007", <http://www.longbeachny.gov/vertical/sites/%7BC3C1054A-3D3A-41B3-8896-814D00B86D2A%7D/uploads/%7BA071434D-4F1A-435E-B7BD-434FD5DEDC9B%7D.PDF>, accessed April 8, 2015.

<sup>3</sup> U.S. Department of Agriculture Soil Conservation Service, Soil Survey of Nassau County, New York, Cornell University Agricultural Experimentation Station, General Soil Map, Nassau County, New York 1987

clay is overlain by the Magothy formation, which is salted beneath Long Beach, therefore, unusable as public water supply.

The subsurface soils encountered during this investigation were generally consistent with the conditions described above. Soils up to 30 feet consisted of grey medium to fine sand with occasional silty clay lenses, and some organic material. Detailed geologic descriptions for each permanent and temporary monitoring well borehole are included in Appendix B.

The anticipated relatively shallow groundwater depth was confirmed, as the depth to groundwater was observed between 5.40 feet bgs and 6.23 feet bgs in the temporary and permanent monitoring wells. As illustrated on Figure 3, the direction of groundwater flow appeared to be towards the east/northeast during the July 2015 groundwater sampling event. However, it is likely that the gradient and direction of groundwater flow is influenced by tidal conditions typical of a barrier island setting like Long Beach. Additional groundwater measurements taken at the Site during different tidal stages would be necessary to evaluate the prevailing direction of groundwater flow.

## **5.2 Dry Well Sample Analytical Results**

The following information is a summary of the drywell soil sample analytical test results (Appendix C). This information has also been included in Table 1 for soil, and in Table 3 for water.

- PCE was detected in the dry well soil sample at 2,600 mg/kg, which exceeds the corresponding NYSDEC SCO for commercial use of 150 milligrams per kilogram (mg/kg). No other VOC exceeded the NYSDEC SCO for commercial use.
- PCE and other related chlorinated VOCs were also detected in the sample of standing water collected from the dry well. The concentration of PCE in the water sample was 1,600 ug/l.

## **5.3 Soil Vapor Sample Analytical Results**

The following information is a summary of the soil vapor sample analytical test results (Appendix C). This information has also been included in Table 2.

- PCE was detected in all soil vapor sample locations at concentrations between 1,110 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ) and 4,030,000  $\text{ug}/\text{m}^3$ , which exceed the corresponding EPA VISL of 470  $\text{ug}/\text{m}^3$ .
- Trichloroethene (TCE) was detected at all soil vapor sample locations between 272  $\text{ug}/\text{m}^3$  and 331,000  $\text{ug}/\text{m}^3$ , which exceed the corresponding EPA VISL of 30  $\text{ug}/\text{m}^3$ .
- Vinyl Chloride was detected at SV-4 and SV-5 at concentrations of 417  $\text{ug}/\text{m}^3$  and 3,480  $\text{ug}/\text{m}^3$ , which exceed the corresponding EPA VISL of 28  $\text{ug}/\text{m}^3$ .

- Chloroform was detected at SV-3 at 4,330 ug/m<sup>3</sup>, which exceeds the corresponding EPA VISL of 5.3 mg/kg.
- 1,2,4-Trimethylbenzene was detected in AEI-SV-3 at 718 ug/m<sup>3</sup>, which exceeds the corresponding EPA VISL of 310 mg/kg.
- No other VOC exceeded their respective EPA VISL for commercial use.

#### **5.4 Temporary Well & Discrete Groundwater Sample Results**

The following information is a summary of the groundwater sample analytical test results (Appendix C) collected from temporary wells and the Geoprobe SP-16 Groundwater Sampler. This information has also been included in Table 3.

##### **Temporary Well Points**

The following compounds were detected at concentrations greater than their respective NYSDEC GWQS at TWP-1: PCE at 4,700 micrograms per liter (µg/l); Vinyl Chloride at 830 µg/l; TCE at 1,100 µg/l; and, cis-1,2 Dichloroethene (cis-1,2 DCE) at 29,000 µg/l. At TWP-2, only 1,2,4-Trimethylbenzene was detected at a concentration greater than its respective NYSDEC GWQS.

##### **Discrete Groundwater Samples**

At monitoring well location MW-2, only cis-1,2 DCE and vinyl chloride were detected at concentrations greater than their respective NYSDEC GWQS. Cis-1,2 DCE was detected between 8 feet bgs and 26 feet bgs at concentrations ranging from 56 ug/l to 14 ug/l, with concentrations decreasing with depth. Vinyl chloride was detected at a concentration of 16 ug/l between 16-20 feet bgs, but non-detectable in the upper and lower intervals sampled at this location.

At monitoring well location MW-3, PCE was detected at concentrations ranging from 30 ug/L to non-detectable between 8 feet bgs and 20 feet bgs, with concentrations decreasing with depth. Benzene was detected at 7.4 ug/l at a depth between 26-30 feet bgs, but non-detectable or at estimated concentrations up to 0.28 ug/l in shallower samples collected at this location.

#### **5.5 Monitoring Well Groundwater Sample Results**

The following information is a summary of the permanent monitoring wells sampled one week after installation. Groundwater sample analytical test results are included as Appendix C. This information has also been included in Table 4.

##### **AEI-MW-1-North of Dry Cleaner**

- The following compounds exceed their respective NYSDEC GWQS in MW-1:
  - Benzene at 2.7 µg/l
  - Vinyl Chloride at 56 µg/l
  - Ethylbenzene at 39 µg/l

- Xylenes at 19 µg/l
- Naphthalene at 74 µg/l
- n-Propylbenzene at 8.3 µg/l
- 1,2,4-Trimethylbenzene at 9.1 µg/l

**AEI-MW-2-Southwest of Dry Cleaner**

- The following compounds exceed their respective NYSDEC GWQS in MW-1:
  - cis-1,2-Dichloroethene at 29 µg/l
  - Vinyl Chloride at 56 µg/l

**AEI-MW-3-Southeast of Dry Cleaner**

- No VOCs were detected at concentrations greater than their respective NYSDEC GWQS.



## 6.0 Summary and Conclusions

This SI was conducted to evaluate soil, groundwater and soil vapor impacts related to a suspected source of PCE identified near the southeast corner of the Site building during sampling conducted in January 2015. In general, the results are consistent with the January 2015 sampling results, which suggested a potential source area for PCE in soil near the southeastern portion of the existing Site building. The results also indicate that additional investigation is necessary to delineate groundwater to points that meet the NYSDEC GWQS, and to evaluate potential migration of Site-related chlorinated VOCs in soil vapor.

The concentrations of PCE in soil vapor at SV-2, SV-4, and SV-5 ( $800,000 \text{ ug/m}^3 - 4.75 \times 10^6 \text{ ug/m}^3$ ), and groundwater at temporary well TWP-1 ( $4,700 \text{ ug/l}$ ), which are located closest to the southeast corner of the building, were significantly higher than the PCE levels detected elsewhere on the Site. These results suggest that vadose zone soils (i.e., above the water table at 5-6 feet bgs) are impacted with elevated levels of PCE near the southeast corner of the building, which appear consistent with the January 2015 sampling results. Although the data indicate a potential source area for PCE in this area, the concentration of PCE detected in the groundwater sample at the temporary well point TWP-1 was less than the solubility limit for PCE ( $150,000 \text{ ug/l}$ ), and NAPL was not detected in any wells gauged during investigation activities.

In the northern portion of the Site, PCE was only detected in soil gas. Petroleum hydrocarbons, rather than chlorinated VOCs like PCE, were detected at concentrations greater than their respective NYSDEC GWQS at monitoring well MW-1. Based on the results for monitoring well MW-1, groundwater in the northern portion of the Site appears impacted with petroleum-related VOCs only, including benzene, toluene, ethylbenzene, and xylene. This appears to be related to an off-Site source, since there is no evidence of petroleum-related VOC sources at the Site.

The groundwater results also indicate several chlorinated VOC compounds related to PCE, including TCE, cis-1,2 DCE, and vinyl chloride. It is well known that PCE, under the right conditions in the subsurface, can biologically-degrade in sequence to TCE, DCE, vinyl chloride, ethene, and ultimately carbon dioxide. Therefore, the observation of chlorinated "daughter products" indicates that natural attenuation mechanisms are actively dechlorinating the "parent" PCE compound. Additionally, the presence of vinyl chloride is an encouraging sign that degradation is not stalling at cis-1,2 DCE.

Discrete groundwater sampling conducted during installation of monitoring well MW-3 indicates that the levels of PCE generally decrease with depth. Because PCE and other chlorinated VOCs are heavier than water, these findings provide further evidence that the suspected source of PCE likely resides in the vadose zone soils and/or water table surface.

The investigation results for samples collected in the alley between the western side of the Site building and the adjacent off-Site building indicate that chlorinated VOCs, including PCE, were present in soil gas at SV-3 at concentrations greater than their respective EPA commercial VISLs. However, chlorinated VOCs were generally non-detectable in the groundwater sample collected at this location (TWP-2), as only 1,2,4-trimethylbenzene and other petroleum-related hydrocarbons were detected. 1,2,4-trimethylbenzene and other petroleum-related hydrocarbons were also detected in the soil gas at SV-3. This suggests that an off-Site petroleum source, possibly related to the petroleum compounds detected in groundwater at the north end of the Site, has impacted groundwater and soil vapor at this location. The findings also suggest that a source of chlorinated VOCs does not exist near SV-3/TWP-2. Because the majority of the Site and surrounding properties are developed with impervious cover (i.e., pavement/building foundations), it is possible that the chlorinated VOCs detected in the soil gas at SV-3 represents soil gas that has migrated beneath the impervious cover from the suspected source area near the southeast corner of the Site building.

The sampling results for the dry well located in the municipal parking lot located immediately south of the Site indicate that elevated concentrations of PCE were detected in the standing water present in the well (1,600 ug/l), in addition to the sediments (2,600 ug/l). Because the dry well appears to collect surface stormwater runoff from the surrounding parking area, and there does not appear to be a drain or other hydraulic connection to the Site, the source of the PCE and other chlorinated compounds is unknown at this time. It is possible that the dry well may be subject to subsurface infiltration of groundwater; however, further evaluation of the dry well construction details is needed to verify this.

Based on the results of this SI, AEI recommends the following supplemental investigation work:

- Vertical delineation of Site-related chlorinated VOCs in groundwater in the vicinity of the southeast corner of the Site building;
- Horizontal delineation of Site-related chlorinated VOCs to the east and south of the Site;
- Sub-slab soil vapor and contingent indoor air sampling at the building immediately west of the Site;
- Temporal measurement of groundwater elevations to evaluate groundwater flow direction and potential tidal effects; and,
- Evaluation of the construction and drainage features for the dry well in the municipal parking lot.

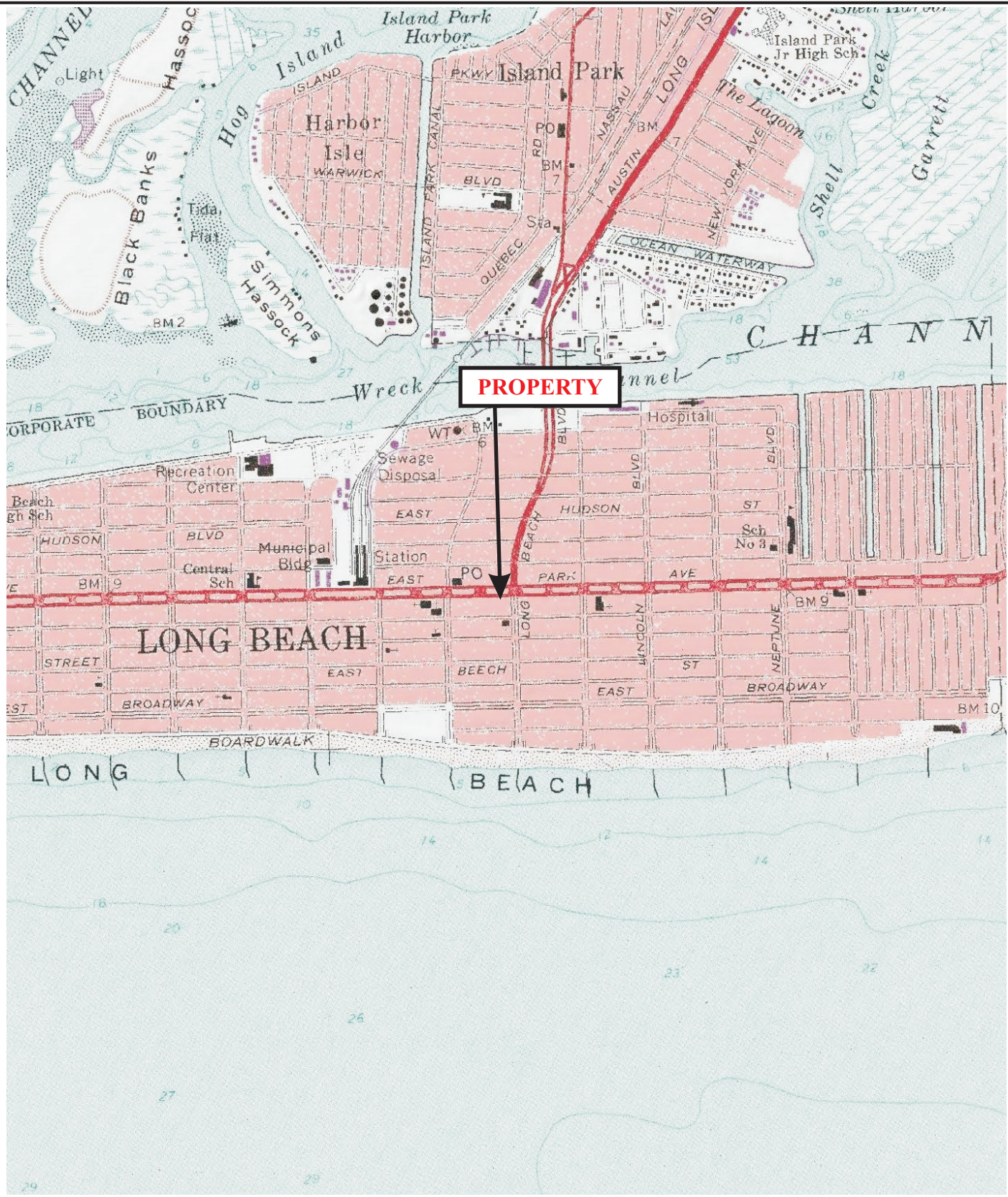
Details regarding the proposed investigation will be submitted to the NYSDEC for approval as a Supplemental Remedial Investigation Work Plan (SRIWP). The objective of supplemental investigation work will be to complete delineation of Site-related chlorinated VOCs, and collect pre-design data necessary to prepare a Remedial Action Plan and related cost estimates.

## 7.0 Project Schedule

The following is the anticipated schedule for implementing supplemental investigation at the Site:

- SRIWP Submission and NYSDEC Approval: September 10
- Supplemental Field Investigation: September 17 – October 1
- Laboratory Analysis: October 1 – October 15
- Remedial Investigation Report & Remedial Action Plan Submission: October 30

# FIGURES



**LEGEND**

Date: August 17, 2015  
 Source: USGS



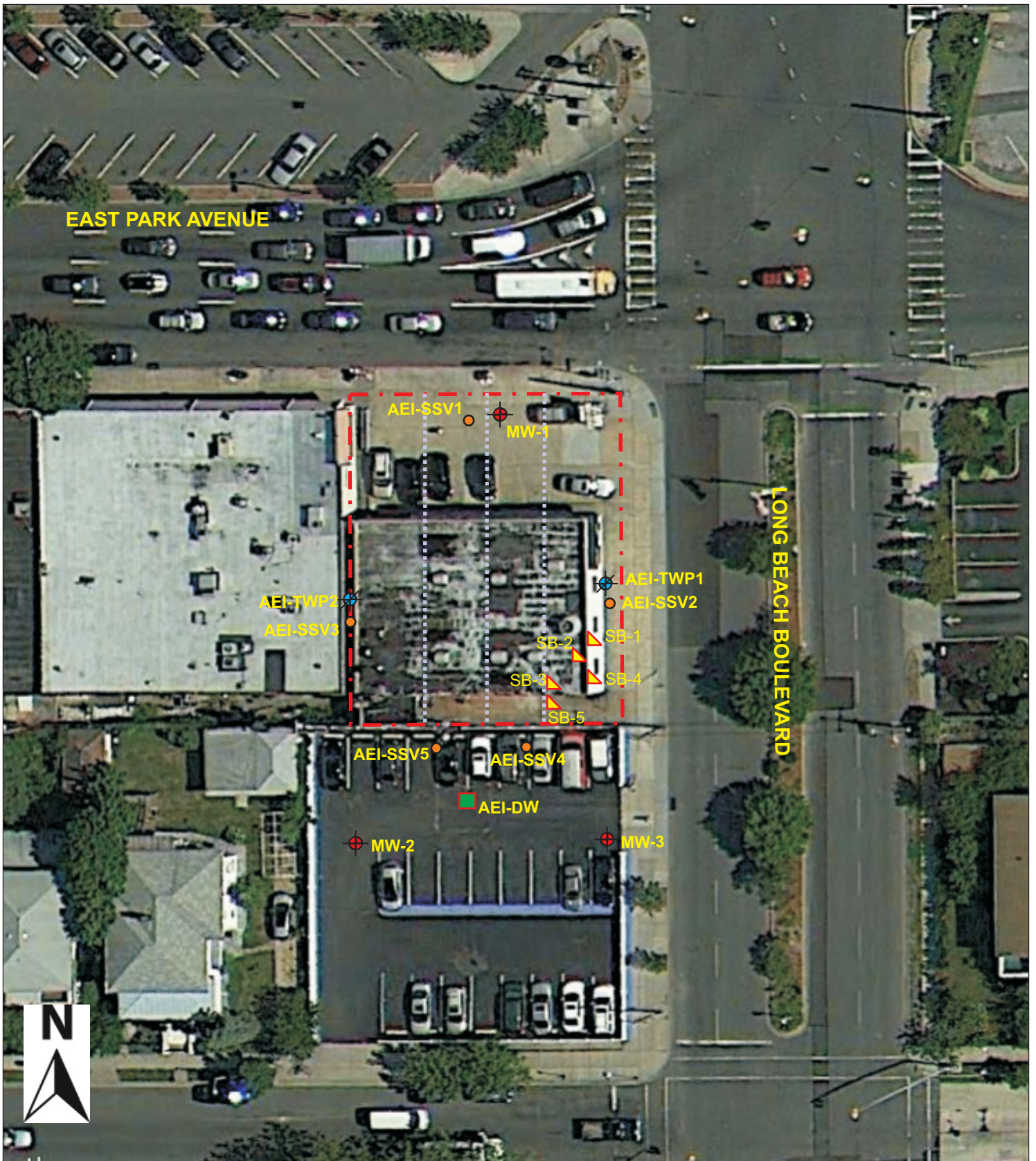
**AEI CONSULTANTS**

20 GIBSON PLACE FREEHOLD, NEW JERSEY 07728







**SITE LOCATION MAP**

180 East Park Avenue  
 Long Beach, New York 11561

**FIGURE 1**  
 Project No. 341998



**LEGEND**

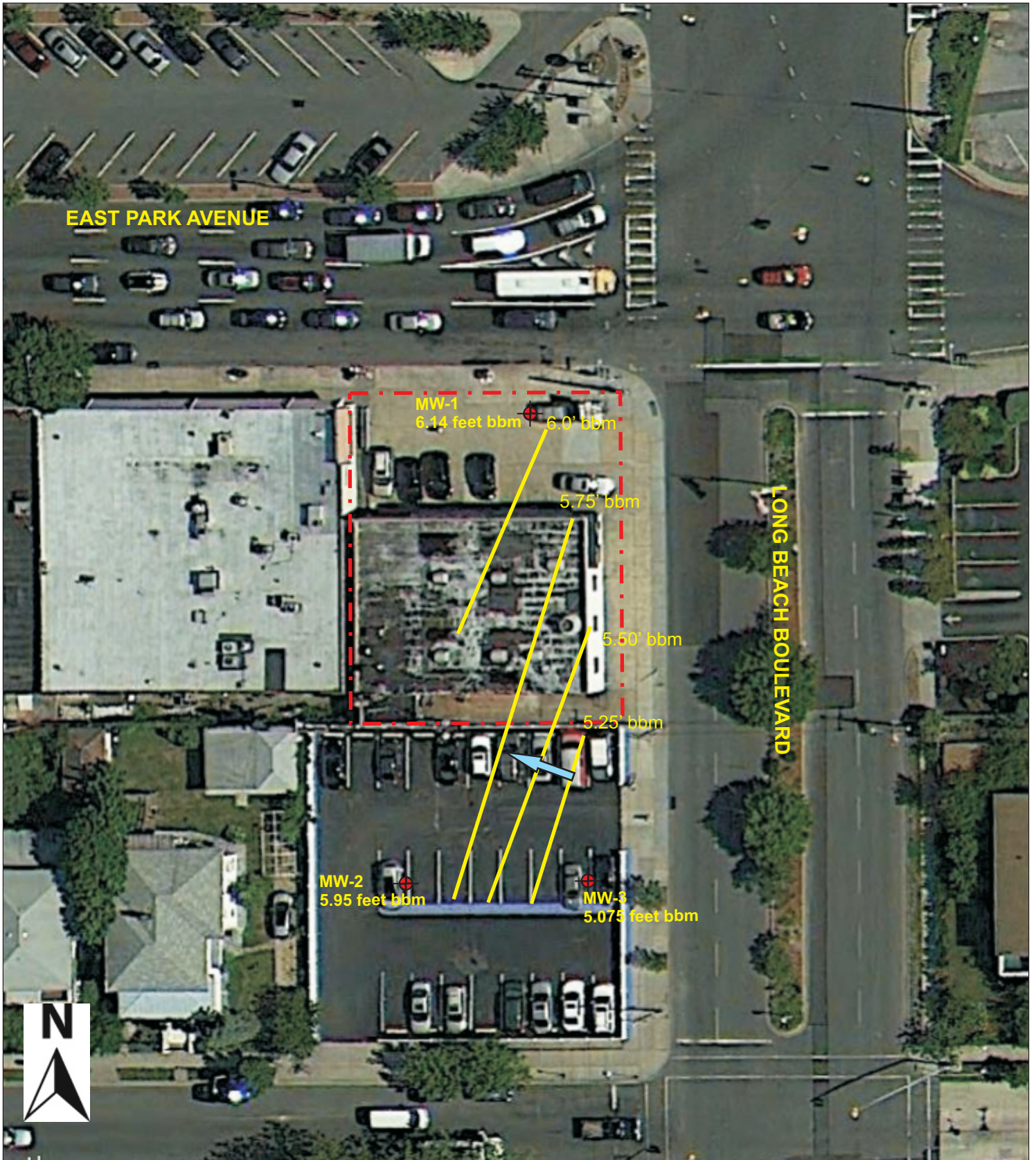
- |                             |   |  |   |
|-----------------------------|---|--|---|
| Approximately Site Boundary |  | 1/15/15 Soil Boring Location (approx.) |  |
| Soil Vapor Point            |  |  |   |
| Monitoring Well             |  |  |   |
| Temporary Well              |  |  |   |
| Drywell Location (approx.)  |  |  |   |

**AEI CONSULTANTS**

**SAMPLE LOCATION MAP**

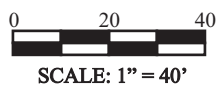
180 East Park Avenue  
Long Beach, New York 11561

**FIGURE 2**  
Project No. 341998



**LEGEND**

- Approximately Site Boundary - - -
  - Monitoring Well
  - Temporary Well
  - Groundwater Flow Direction
- feet bbm=feet below benchmark  
This is not a survey



**AEI CONSULTANTS**

**GROUNDWATER CONTOUR MAP**

180 East Park Avenue  
Long Beach, New York 11561

**FIGURE 3**  
Project No. 341998

# TABLES



TABLE 1: SOIL SAMPLE DATA SUMMARY  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

Analysis	Units	NYSDEC	NYSDEC	NYSDEC	AEI DW (5.5-6)	DUP 1
		SCO Restrictd Commercial	SCO Residential	SCO Unrestricted	7/23/2015 5.5 (feet bgs)	7/23/2015 5.5 (feet bgs)
General Chemistry						
Solids, Total	%	NS	NS	NS	77.9	72.2
Volatile Organics						
Tetrachloroethene	mg/kg	150	5.5	1.3	<b>2600</b>	<b>260</b>
Vinyl chloride	mg/kg	13	0.21	0.02	0.8	3
1,1-Dichloroethene	mg/kg	500	100	0.33	0.026	J ND
trans-1,2-Dichloroethene	mg/kg	500	100	0.19	0.1	J 0.29
Trichloroethene	mg/kg	200	10	0.47	16	11
cis-1,2-Dichloroethene	mg/kg	500	59	0.25	21	27
1,2-Dichloroethene, Total	mg/kg	NS	NS	NS	21	J 27
p-Isopropyltoluene	mg/kg	NS	NS	NS	0.034	J ND
Naphthalene	mg/kg	500	100	12	0.059	J ND
n-Propylbenzene	mg/kg	500	100	3.9	0.037	J ND
1,3,5-Trimethylbenzene	mg/kg	190	47	8.4	0.042	J ND
1,2,4-Trimethylbenzene	mg/kg	190	47	3.6	0.08	J ND
p-Diethylbenzene	mg/kg	NS	NS	NS	0.021	J ND
p-Ethyltoluene	mg/kg	NS	NS	NS	0.13	J ND
1,2,4,5-Tetramethylbenzene	mg/kg	NS	NS	NS	0.017	J ND

Notes:

mg/kg milligrams per kilogram  
 J estimated concentration  
 bgs below ground surface  
 ND non detect  
 NA not analyzed  
 NS No Standard/Objective  
 NYSDEC New York State Department of Environmental Conservation  
**BOLD** Exceeds respective NYSDEC SCO Restrictd Commercial

Comparison Values:

NYSDEC SCO Residential: NYSDEC Soil Cleanup Objectives for Residential use  
 NYSDEC SCO Restrictd Commercial: NYSDEC Soil Cleanup Objectives for Restricted Commercial use  
 NYSDEC SCO Unrestricted: NYSDEC Soil Cleanup Objectives for Unrestricted use

TABLE 2: Soil Vapor Analytical Results  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

Analysis	Units	EPA VISL RESID	EPA VISL COMM	AEI SV1 7/15/2015 4 (feet bgs)	AEI SV2 7/15/2015 4 (feet bgs)	AEI SV3 7/15/2015 4 (feet bgs)	AEI SV4 7/16/2015 4 (feet bgs)	AEI SV5 7/16/2015 4 (feet bgs)
Volatile Organics								
Vinyl chloride	ug/m3	1.7	28	ND	ND	14.2	<b>417</b>	<b>3480</b>
1,3-Butadiene	ug/m3	0.94	4.1	19.5	ND	ND	ND	ND
Ethanol	ug/m3	NS	NS	1730	ND	59.5	ND	ND
Acetone	ug/m3	320,000	1,400,000	178	ND	ND	ND	ND
Trichlorofluoromethane	ug/m3	7,300	31,000	ND	ND	52.5	ND	ND
Isopropanol	ug/m3	NS	NS	182	ND	ND	ND	ND
Tertiary butyl Alcohol	ug/m3	NS	NS	55.8	ND	30	ND	ND
Carbon disulfide	ug/m3	7,300	31,000	9.65	ND	7.79	ND	ND
trans-1,2-Dichloroethene	ug/m3	NS	NS	ND	ND	ND	1090	6980
2-Butanone	ug/m3	NS	NS	31	ND	ND	ND	ND
cis-1,2-Dichloroethene	ug/m3	NS	NS	4.08	103000	354	120000	932000
Chloroform	ug/m3	1.2	5.3	ND	ND	<b>4330</b>	ND	ND
n-Hexane	ug/m3	7,300	31,000	10.4	ND	314	ND	ND
Benzene	ug/m3	3.6	16	5.14	ND	ND	ND	ND
Cyclohexane	ug/m3	63,000	260,000	5.78	ND	242	ND	ND
Trichloroethene	ug/m3	4.8	30	25	<b>156000</b>	<b>272</b>	<b>37800</b>	<b>331000</b>
Heptane	ug/m3	NS	NS	6.31	ND	332	ND	ND
4-Methyl-2-pentanone	ug/m3	31,000	130,000	10.3	ND	ND	ND	ND
Toluene	ug/m3	52,000	220,000	6.9	ND	ND	ND	ND
2-Hexanone	ug/m3	310	1,300	3.22	ND	ND	ND	ND
Tetrachloroethene	ug/m3	110	470	<b>1110</b>	<b>4030000</b>	<b>8680</b>	<b>800000</b>	<b>4750000</b>
Ethylbenzene	ug/m3	11	49	ND	ND	13.4	ND	ND
p/m-Xylene	ug/m3	1,000	4,400	7.25	ND	72.5	ND	ND
Styrene	ug/m3	10,000	44,000	3.99	ND	ND	ND	ND
o-Xylene	ug/m3	1,000	4,400	3.5	ND	30.6	ND	ND
4-Ethyltoluene	ug/m3	NS	NS	ND	ND	133	ND	ND
1,3,5-Trimethylbenzene	ug/m3	NS	NS	ND	ND	236	ND	ND
1,2,4-Trimethylbenzene	ug/m3	73	310	ND	ND	<b>718</b>	ND	ND

Notes:

- ug/m3            microgram per cubic meter
- bgs              below ground surface
- ND               non detect
- BOLD**           Exceeds EPA VISL COMM
- NS                No Standard/Objective
- EPA              United States Environmental Protection Agency

Comparison Values:

EPA VISL RESID: EPA Vapor Intrusion Screening Levels-Residential  
 EPA VISL COMM: EPA Vapor Intrusion Screening Levels-Commercial

Table 3: Groundwater Results  
 Nu-Clear Cleaners  
 180 East Park Avenue Long Beach, NY

Analysis	Units	NYSDEC GWQS	TWP 1	TWP 2	AEI-DW 1	AEI-MW 2 (8-12)	AEI-MW 2 (12-16)	AEI-MW 2 (16-20)	AEI-MW 2 (26-30)	AEI MW3 (8-12)	AEI MW3 (12-16)	AEI MW3 (16-20)	AEI MW3 (26-30)		
			7/15/2015 10-20 (feet bgs)	7/15/2015 5-15 (feet bgs)	7/15/2015 2 (feet bgs)	7/16/2015 8-12 (feet bgs)	7/16/2015 12-16 (feet bgs)	7/16/2015 16-20 (feet bgs)	7/16/2015 26-30 (feet bgs)	7/17/2015 8-12 (feet bgs)	7/17/2015 12-16 (feet bgs)	7/17/2015 16-20 (feet bgs)	7/17/2015 26-30 (feet bgs)		
<b>Volatile Organics</b>															
Dibromochloromethane	ug/l	5	ND	0.77	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Tetrachloroethene	ug/l	5	<b>4700</b>	ND	<b>1600</b>	2.1	0.49	J	ND	0.3	J	<b>30</b>	<b>7.4</b>	ND	ND
Bromodichloromethane	ug/l	NS	ND	0.32	J	ND	ND	ND	ND	ND	ND	ND	ND		
Benzene	ug/l	1	ND	0.7	ND	ND	ND	ND	ND	ND	0.28	J	0.19	J	<b>7.4</b>
Toluene	ug/l	5	ND	1.6	J	ND	ND	ND	ND	ND	ND	ND	ND		
Vinyl chloride	ug/l	2	<b>830</b>	ND	ND	ND	ND	<b>16</b>	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	ug/l	5	ND	ND	ND	0.71	J	ND	ND	ND	ND	ND	ND		
Trichloroethene	ug/l	5	<b>1100</b>	ND	<b>8.9</b>	1.5	2.2	ND	ND	4.5	2.3	ND	ND		
Methyl tert butyl ether	ug/l	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	J	
p/m-Xylene	ug/l	2	ND	0.78	J	ND	ND	ND	ND	ND	ND	ND	ND		
Xylenes, Total	ug/l	5	ND	0.78	J	ND	ND	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	ug/l	5	<b>29000</b>	ND	<b>11</b>	<b>55</b>	<b>51</b>	<b>30</b>	<b>14</b>	ND	0.76	J	ND	0.95	J
1,2-Dichloroethene, Total	ug/l	5	<b>29000</b>	ND	<b>11</b>	<b>56</b>	J	<b>51</b>	<b>30</b>	<b>14</b>	ND	J	ND	0.95	J
Acetone	ug/l	NS	ND	1.6	J	30	ND	ND	ND	1.7	J	ND	ND		
Carbon disulfide	ug/l	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	J	2.1	J
4-Methyl-2-pentanone	ug/l	NS	ND	ND	ND	1.5	J	ND	ND	ND	ND	ND	ND		
n-Butylbenzene	ug/l	5	ND	1.3	J	ND	ND	ND	ND	ND	ND	ND	ND		
sec-Butylbenzene	ug/l	5	ND	0.89	J	ND	ND	ND	ND	ND	ND	ND	ND		
Isopropylbenzene	ug/l	5	ND	0.93	J	ND	ND	ND	ND	ND	ND	ND	ND		
p-Isopropyltoluene	ug/l	NS	ND	1	J	ND	ND	ND	ND	ND	ND	ND	ND		
Naphthalene	ug/l	10	ND	9.1	ND	ND	ND	ND	ND	ND	ND	ND	ND		
n-Propylbenzene	ug/l	5	ND	1.6	J	ND	ND	ND	ND	ND	ND	ND	ND		
1,3,5-Trimethylbenzene	ug/l	5	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2,4-Trimethylbenzene	ug/l	5	ND	<b>10</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND		
p-Ethyltoluene	ug/l	NS	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2,4,5-Tetramethylbenzene	ug/l	NS	ND	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND		

Notes:  
 ug/l microgram per liter  
 bgs below ground surface  
 ND non detect  
**BOLD** Exceeds respective standard  
 NS No Standard/Objective  
 NYSDEC New York State Department of Environmental Conservation

Comparison Values:  
 NYSDEC GWQS: NYSDEC Groundwater Quality Standards

Table 4: Monitoring Well Sampling Results  
 Nu Clear Cleaners  
 180 East Park Avenue Long Beach NY

Analysis	Units	NYSDEC GWQS	MW-1							
			AEI MW 2 7/22/2015	AEI MW 3 7/22/2015	AEI MW 1 7/23/2015	Duplicate (DUP 1) 7/23/2015	TRIP BLANK 7/22/2015			
<b>Volatile Organics</b>										
Tetrachloroethene	ug/l	5	1.5	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	0.16	J	0.17	J	<b>2.7</b>	J	<b>2.5</b>	J
Ethylbenzene	ug/l	5	ND		ND		<b>39</b>		<b>42</b>	
Vinyl chloride	ug/l	2	<b>8.3</b>		ND		<b>56</b>		<b>57</b>	
Trichloroethene	ug/l	5	3.4		ND		ND		ND	
p/m-Xylene	ug/l	NS	ND		ND		19	J	21	J
Xylenes, Total	ug/l	5	ND		ND		<b>19</b>	J	<b>21</b>	J
cis-1,2-Dichloroethene	ug/l	5	<b>29</b>		ND		ND		ND	
1,2-Dichloroethene, Total	ug/l	NS	29		ND		ND		ND	
Acetone	ug/l	NS	ND		ND		20	J	17	J
Naphthalene	ug/l	10	ND		ND		<b>74</b>		<b>71</b>	
n-Propylbenzene	ug/l	5	ND		ND		<b>8.3</b>	J	<b>9.7</b>	J
1,2,4-Trimethylbenzene	ug/l	5	ND		ND		<b>9.1</b>	J	<b>11</b>	J
1,2,4,5-Tetramethylbenzene	ug/l	NS	ND		ND		7.6	J	9.2	J

Notes:

ug/l	microgram per liter
ND	non detect
<b>BOLD</b>	Exceeds respective standard
NS	No Standard/Objective
NYSDEC	New York State Department of Environmental Conservation

Comparison Values:

NYSDEC GWQS: NYSDEC Groundwater Quality Standards

# **APPENDIX 5**

## **City of Long Beach Permit**



# City of Long Beach

DEPARTMENT OF PUBLIC WORKS  
ONE WEST CHESTER STREET  
LONG BEACH, NEW YORK 11561

Tel: (516) 431-1011

Fax: (516) 431-5008

Street Opening Permit No. 217/15

Work Order: Install 2 permanent monitoring wells + 2 temporary soil gas sample points

\*Minimum 10' Separation required between sewer and water\*

<u>J. Febrizio</u>	
Sewer Approval: _____	Date
<u>7/10/15</u>	
Water Approval: _____	
Date	

Location: Long Beach Blvd + Walnut St

Issued To: AEI Environmental Inc

Number of Conduit/Pipe Trenches

Sewer Fee: \$ 1000 -Check No. 093346

Water Service Fee: \$ \_\_\_\_\_ -Check No. \_\_\_\_\_

Escrow: \$ 1000 -Check No. 093129

THIS PERMIT NOT VALID UNLESS IT BEARS THE SIGNATURE OF THE  
COMMISSIONER OF PUBLIC WORKS

This permit subject to observance of all laws, ordinances and regulations of the City so far  
As they may apply and covers only the work covered by specifications filed at time of issuance.

Approved: \_\_\_\_\_  
James LaCarrubba, Commissioner

*[Handwritten signature of James LaCarrubba]*  
7/15/15

**\*The Contractor is required to provide  
advance notification, prior to construction  
and prior to permanent restoration.\***

# **APPENDIX 6**

## **Boring Logs**



AEI Consultants

**BORING NUMBER AEI-MW-1**

**CLIENT** Nu-Clear Cleaners **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 7/15/15 **COMPLETED** 7/15/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** 5.82 ft  
**NOTES** installed north of the subject dry cleaner near the sign **AFTER DRILLING** 5.74 ft

AEI BORING - GINT STD US LAB.GDT - 8/18/15 09:48 - C:\USERS\JBERNARD\UCC\IDESTK\TOP\PROJECTS\341998-NU-CLEAR\341998-BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5					Concrete	
0					light grey medium to fine sand	
0						
0.1						
0						
0						
0						
5						2 inch PVC riser
0						
0						
21.7						
115.3						
9.0					Dark grey medium sand with some subangular gravel	
152.3					POTENTIAL STAINING at 7' bgs	
152.8					SATURATED @ 9'bgs	
89.1					Sheen visible from 11-11.5' bgs	
93.4						
98.6						
15						2 inch slotted PVC (0.010)
55.5						
26.6						
34.9						
19.5						
10.9						
20						
8.0						
6.8						
2.2						
11.4						
16.2						
24.0					dark grey fine sandy clay	
32.6						
25					Grey medium to fine sand	
1.9						
2.3						
3.1						
26.8						
30						
54						
30.0						

Bottom of borehole at 30.0 feet.





AEI Consultants

**BORING NUMBER AEI-MW-2**

PAGE 1 OF 1

**CLIENT** Nu-Clear Cleaners **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 7/16/15 **COMPLETED** 7/16/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** 5.45 ft  
**NOTES** installed southwest of the subject property in the municipal parking area **AFTER DRILLING** 5.40 ft

AEI BORING - GINT STD US LAB.GDT - 8/18/15 09:48 - C:\USERS\JBERNARD\UCC\IDESTOP\PROJECTS\341998-NU-CLEAR\341998-BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5					Asphalt and gravel	
8.7					light grey to orange yellow medium to fine sand	
0.9						
1.2						
0.2						
5						
12.2						
7.1						
16.5						
8.6						
9.0					dark grey to black medium to fine sand with slight odor	
10						
10.0					light grey to orange yellow coarse to fine sand-SATURATED	2 inch PVC riser
8.9						
15.6						
9.2						
11						
0.9						
15						
2						
15.5					grey silty clay lens with organics visible	
16.0					dark grey medium to fine sand	
11						
4						
2						
20						
6						
5						
0.7						
0.7						
25						
0.2						
24.5					grey silty clay lens with organics visible	
25.0					dark grey medium to fine sand	2 inch slotted PVC (0.010)
0						
0.7						
2.7						
28.0					grey silty clay lens with organics visible	
1.2					dark grey medium to fine sand	
28.5						
0.8						
30						
30.0						

Bottom of borehole at 30.0 feet.



AEI Consultants

**BORING NUMBER AEI-MW-3**

**CLIENT** Nu-Clear Cleaners **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 7/17/15 **COMPLETED** 7/17/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** 5.70 ft  
**NOTES** installed southeast of the subject property in the municipal parking area **AFTER DRILLING** 5.65 ft

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt and gravel	Asphalt and gravel	
0				grey medium to fine sand	grey medium to fine sand	
0				SATURATED @ 10.5	SATURATED @ 10.5	
0.9						
1.2						
0.6						
0						
0						
0						
11.0						
6.6				grey silty clay lens with organics visible	grey silty clay lens with organics visible	
11.5				grey medium to fine sand	grey medium to fine sand	
23.6						
41.2						
21.6						
7.8						
2.5						
3.3						
5.2						
9.7						
20						2 inch PVC riser
0						
0						
1.9						
0						
1.2						
0.9						
1.8						
0.7						
0						
0.8						
30						2 inch slotted PVC (0.010)
Bottom of borehole at 30.0 feet.						

AEI BORING - GINT STD US LAB.GDT - 8/18/15 09:48 - C:\USERS\JBERNARD\UCC\IDESTOP\PROJECTS\341998-NU-CLEAR\341998-BORING LOGS.GPJ



AEI Consultants

**BORING NUMBER AEI-TWP-1**

CLIENT Nu-Clear Cleaners  
 PROJECT NUMBER 341998  
 DATE STARTED 7/15/15 COMPLETED 7/15/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 NOTES installed east of the subject dry cleaner

PROJECT NAME Nu-Clear Cleaners  
 PROJECT LOCATION 180 East Park Avenue Long Beach, NY  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 3 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 ▼ AT END OF DRILLING 5.90 ft  
 AFTER DRILLING ---

AEI BORING - GINT STD US LAB.GDT - 8/18/15 09:48 - C:\USERS\JBERNARD\UCC\IDESTOP\PROJECTS\341998-NU-CLEAR\341998-BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5					Concrete	
3.3					light grey fine to medium sand	
8.3						
18.7						
60.2						
40.1						1 inch PVC riser
38.6					▼	
149.6						
242						
9.0					dark grey fine to medium sand with strong petroleum odor SATURATED @ 10	
107						
70.6						
360						
12.0					Dark grey silty clay with organic material visible	
104.3					dark grey fine to medium sand Strong Petroleum Odor from 13'-15' bgs	
67						
50.2						
15						1 inch slotted PVC (0.010)
14.6						
18						
4						
3.2						
1.2						
20						

Bottom of borehole at 20.0 feet.



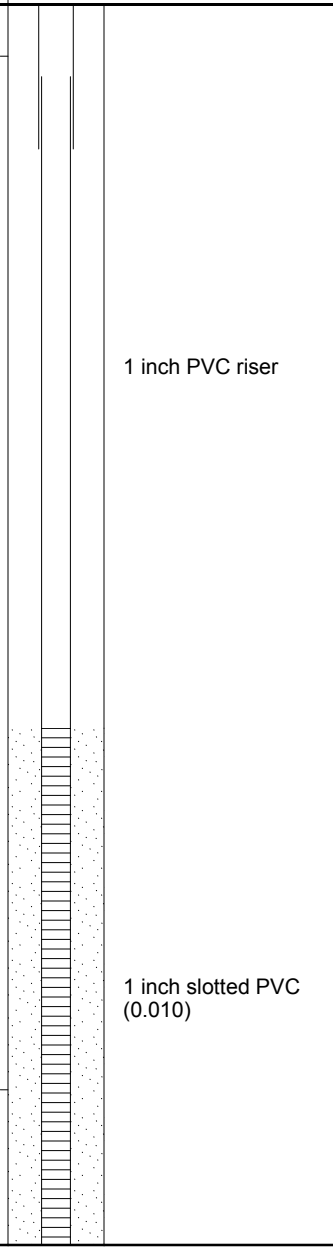
AEI Consultants

**BORING NUMBER AEI-TWP-2**

**CLIENT** Nu-Clear Cleaners **PROJECT NAME** Nu-Clear Cleaners  
**PROJECT NUMBER** 341998 **PROJECT LOCATION** 180 East Park Avenue Long Beach, NY  
**DATE STARTED** 7/15/15 **COMPLETED** 7/15/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 3 inches  
**DRILLING CONTRACTOR** Cascade Drilling, Inc. **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_ **AT END OF DRILLING** 5.98 ft  
**NOTES** installed in the alley, west of the subject dry cleaner **AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 8/18/15 09:48 - C:\USERS\JBERNARD\UCC\IDESTKTOP\PROJECTS\341998-NU-CLEAR\341998-BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0						
0.5					Concrete	
1.2					light grey to dark grey fine to medium sand with some subangular gravel Strong Odor from 6'-8' bgs SATURATED @ 9	
2.5						
3.0						
4.0						
5.0						
6.0						
7.0						
7.5						
8.0						
9.0						
10.0						
10.5					dark grey silty clay lens	
11.0						
12.0					REFUSAL @ 12	



150.6 Bottom of borehole at 12.0 feet.

# **APPENDIX 7**

## **Sample Analytical Documentation**



## ANALYTICAL REPORT

Lab Number:	L1516468
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU-CLEAR CLEANERS
Project Number:	341998
Report Date:	07/23/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** NU-CLEAR CLEANERS**Project Number:** 341998**Lab Number:** L1516468**Report Date:** 07/23/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1516468-01	TWP 1	WATER	180 E PARK AVE., LONG BEACH, NY	07/15/15 14:00	07/16/15
L1516468-02	TWP 2	WATER	180 E PARK AVE., LONG BEACH, NY	07/15/15 15:00	07/16/15
L1516468-03	AEI-DW 1	WATER	180 E PARK AVE., LONG BEACH, NY	07/15/15 16:04	07/16/15
L1516468-04	AEI-DW (4-4.5)	SOIL	180 E PARK AVE., LONG BEACH, NY	07/15/15 16:10	07/16/15
L1516468-05	AEI-MW 2 (8-12)	WATER	180 E PARK AVE., LONG BEACH, NY	07/16/15 10:40	07/16/15
L1516468-06	AEI-MW 2 (12-16)	WATER	180 E PARK AVE., LONG BEACH, NY	07/16/15 10:52	07/16/15
L1516468-07	AEI-MW 2 (16-20)	WATER	180 E PARK AVE., LONG BEACH, NY	07/16/15 11:22	07/16/15
L1516468-08	AEI-MW 2 (26-30)	WATER	180 E PARK AVE., LONG BEACH, NY	07/16/15 11:50	07/16/15
L1516468-09	TRIP BLANK	WATER	180 E PARK AVE., LONG BEACH, NY	07/14/15 00:00	07/16/15

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

### 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.

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**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

### Case Narrative (continued)

#### Report Submission

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

#### Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody.

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:

 Cristin Walker

Title: Technical Director/Representative

Date: 07/23/15

# ORGANICS

# VOLATILES

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-01 D  
 Client ID: TWP 1  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 17:15  
 Analyst: MS

Date Collected: 07/15/15 14:00  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	1200	350	500
1,1-Dichloroethane	ND		ug/l	1200	350	500
Chloroform	ND		ug/l	1200	350	500
Carbon tetrachloride	ND		ug/l	250	67.	500
1,2-Dichloropropane	ND		ug/l	500	66.	500
Dibromochloromethane	ND		ug/l	250	74.	500
1,1,2-Trichloroethane	ND		ug/l	750	250	500
Tetrachloroethene	4700		ug/l	250	90.	500
Chlorobenzene	ND		ug/l	1200	350	500
Trichlorofluoromethane	ND		ug/l	1200	350	500
1,2-Dichloroethane	ND		ug/l	250	66.	500
1,1,1-Trichloroethane	ND		ug/l	1200	350	500
Bromodichloromethane	ND		ug/l	250	96.	500
trans-1,3-Dichloropropene	ND		ug/l	250	82.	500
cis-1,3-Dichloropropene	ND		ug/l	250	72.	500
1,3-Dichloropropene, Total	ND		ug/l	250	72.	500
1,1-Dichloropropene	ND		ug/l	1200	350	500
Bromoform	ND		ug/l	1000	320	500
1,1,2,2-Tetrachloroethane	ND		ug/l	250	72.	500
Benzene	ND		ug/l	250	80.	500
Toluene	ND		ug/l	1200	350	500
Ethylbenzene	ND		ug/l	1200	350	500
Chloromethane	ND		ug/l	1200	350	500
Bromomethane	ND		ug/l	1200	350	500
Vinyl chloride	830		ug/l	500	35.	500
Chloroethane	ND		ug/l	1200	350	500
1,1-Dichloroethene	ND		ug/l	250	71.	500
trans-1,2-Dichloroethene	ND		ug/l	1200	350	500
Trichloroethene	1100		ug/l	250	88.	500
1,2-Dichlorobenzene	ND		ug/l	1200	350	500

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-01 D  
 Client ID: TWP 1  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/15/15 14:00  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1200	350	500
1,4-Dichlorobenzene	ND		ug/l	1200	350	500
Methyl tert butyl ether	ND		ug/l	1200	350	500
p/m-Xylene	ND		ug/l	1200	350	500
o-Xylene	ND		ug/l	1200	350	500
Xylenes, Total	ND		ug/l	1200	350	500
cis-1,2-Dichloroethene	29000		ug/l	1200	350	500
1,2-Dichloroethene, Total	29000		ug/l	1200	350	500
Dibromomethane	ND		ug/l	2500	500	500
1,2,3-Trichloropropane	ND		ug/l	1200	350	500
Acrylonitrile	ND		ug/l	2500	750	500
Styrene	ND		ug/l	1200	350	500
Dichlorodifluoromethane	ND		ug/l	2500	500	500
Acetone	ND		ug/l	2500	730	500
Carbon disulfide	ND		ug/l	2500	500	500
2-Butanone	ND		ug/l	2500	970	500
Vinyl acetate	ND		ug/l	2500	500	500
4-Methyl-2-pentanone	ND		ug/l	2500	500	500
2-Hexanone	ND		ug/l	2500	500	500
Bromochloromethane	ND		ug/l	1200	350	500
2,2-Dichloropropane	ND		ug/l	1200	350	500
1,2-Dibromoethane	ND		ug/l	1000	320	500
1,3-Dichloropropane	ND		ug/l	1200	350	500
1,1,1,2-Tetrachloroethane	ND		ug/l	1200	350	500
Bromobenzene	ND		ug/l	1200	350	500
n-Butylbenzene	ND		ug/l	1200	350	500
sec-Butylbenzene	ND		ug/l	1200	350	500
tert-Butylbenzene	ND		ug/l	1200	350	500
o-Chlorotoluene	ND		ug/l	1200	350	500
p-Chlorotoluene	ND		ug/l	1200	350	500
1,2-Dibromo-3-chloropropane	ND		ug/l	1200	350	500
Hexachlorobutadiene	ND		ug/l	1200	350	500
Isopropylbenzene	ND		ug/l	1200	350	500
p-Isopropyltoluene	ND		ug/l	1200	350	500
Naphthalene	ND		ug/l	1200	350	500
n-Propylbenzene	ND		ug/l	1200	350	500
1,2,3-Trichlorobenzene	ND		ug/l	1200	350	500
1,2,4-Trichlorobenzene	ND		ug/l	1200	350	500
1,3,5-Trimethylbenzene	ND		ug/l	1200	350	500

**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516468**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516468-01 D  
 Client ID: TWP 1  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/15/15 14:00  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	1200	350	500
1,4-Dioxane	ND		ug/l	120000	20000	500
p-Diethylbenzene	ND		ug/l	1000	350	500
p-Ethyltoluene	ND		ug/l	1000	350	500
1,2,4,5-Tetramethylbenzene	ND		ug/l	1000	320	500
Ethyl ether	ND		ug/l	1200	350	500
trans-1,4-Dichloro-2-butene	ND		ug/l	1200	350	500

**Tentatively Identified Compounds**

No Tentatively Identified Compounds ND ug/l 500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	120		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	111		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-02  
**Client ID:** TWP 2  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/21/15 17:43  
**Analyst:** MS

**Date Collected:** 07/15/15 15:00  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	0.77		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	0.32	J	ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.70		ug/l	0.50	0.16	1
Toluene	1.6	J	ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-02

Date Collected: 07/15/15 15:00

Client ID: TWP 2

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	0.78	J	ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	0.78	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.6	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	1.3	J	ug/l	2.5	0.70	1
sec-Butylbenzene	0.89	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	0.93	J	ug/l	2.5	0.70	1
p-Isopropyltoluene	1.0	J	ug/l	2.5	0.70	1
Naphthalene	9.1		ug/l	2.5	0.70	1
n-Propylbenzene	1.6	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	2.6		ug/l	2.5	0.70	1



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-02

Date Collected: 07/15/15 15:00

Client ID: TWP 2

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	10		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	4.0		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	3.9		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

## Tentatively Identified Compounds

Total TIC Compounds	56	J	ug/l			1
Unknown Benzene	5.0	J	ug/l			1
Unknown Benzene	5.3	J	ug/l			1
Unknown Benzene	4.6	J	ug/l			1
Unknown Benzene	3.6	J	ug/l			1
Unknown Aromatic	4.1	J	ug/l			1
Unknown Benzene	5.1	J	ug/l			1
Unknown Aldehyde	11	J	ug/l			1
Unknown Aromatic	9.2	J	ug/l			1
Unknown Aromatic	4.4	J	ug/l			1
Unknown Aromatic	3.6	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	118		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	110		70-130

**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516468**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

**Lab ID:** L1516468-03      D2  
**Client ID:** AEI-DW 1  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/23/15 12:24  
**Analyst:** MS

**Date Collected:** 07/15/15 16:04  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
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Tetrachloroethene	1600		ug/l	25	9.0	50
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	109		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

Lab ID: L1516468-03 D  
 Client ID: AEI-DW 1  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 07/22/15 17:42  
 Analyst: MS

Date Collected: 07/15/15 16:04  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.33	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	2400	E	ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.36	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.17	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.36	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Trichloroethene	8.9		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-03 D  
 Client ID: AEI-DW 1  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/15/15 16:04  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	11		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	11		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	30		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5
n-Propylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-03 D

Date Collected: 07/15/15 16:04

Client ID: AEI-DW 1

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	100	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.6	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	2.5
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	117		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	113		70-130

**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516468**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

**Lab ID:** L1516468-04      D2  
**Client ID:** AEI-DW (4-4.5)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/22/15 17:24  
**Analyst:** MV  
**Percent Solids:** 76%

**Date Collected:** 07/15/15 16:10  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab						
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Tetrachloroethene	58000000		ug/kg	720000	100000	10000
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	83		70-130
Dibromofluoromethane	104		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

Lab ID: L1516468-04 D  
 Client ID: AEI-DW (4-4.5)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 19:04  
 Analyst: MV  
 Percent Solids: 76%

Date Collected: 07/15/15 16:10  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	140000	16000	200
1,1-Dichloroethane	ND		ug/kg	22000	1200	200
Chloroform	ND		ug/kg	22000	5300	200
Carbon tetrachloride	ND		ug/kg	14000	3000	200
1,2-Dichloropropane	ND		ug/kg	50000	3300	200
Dibromochloromethane	ND		ug/kg	14000	2200	200
1,1,2-Trichloroethane	ND		ug/kg	22000	4400	200
Tetrachloroethene	64000000	E	ug/kg	14000	2000	200
Chlorobenzene	ND		ug/kg	14000	5000	200
Trichlorofluoromethane	ND		ug/kg	72000	5600	200
1,2-Dichloroethane	ND		ug/kg	14000	1600	200
1,1,1-Trichloroethane	ND		ug/kg	14000	1600	200
Bromodichloromethane	ND		ug/kg	14000	2500	200
trans-1,3-Dichloropropene	ND		ug/kg	14000	1700	200
cis-1,3-Dichloropropene	ND		ug/kg	14000	1700	200
1,3-Dichloropropene, Total	ND		ug/kg	14000	1700	200
1,1-Dichloropropene	ND		ug/kg	72000	2000	200
Bromoform	ND		ug/kg	58000	3400	200
1,1,2,2-Tetrachloroethane	ND		ug/kg	14000	1400	200
Benzene	ND		ug/kg	14000	1700	200
Toluene	ND		ug/kg	22000	2800	200
Ethylbenzene	ND		ug/kg	14000	1800	200
Chloromethane	ND		ug/kg	72000	4200	200
Bromomethane	ND		ug/kg	29000	4900	200
Vinyl chloride	ND		ug/kg	29000	1700	200
Chloroethane	ND		ug/kg	29000	4600	200
1,1-Dichloroethene	ND		ug/kg	14000	3800	200
trans-1,2-Dichloroethene	ND		ug/kg	22000	3100	200
Trichloroethene	130000		ug/kg	14000	1800	200
1,2-Dichlorobenzene	ND		ug/kg	72000	2200	200

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-04 D  
 Client ID: AEI-DW (4-4.5)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/15/15 16:10  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	72000	1900	200
1,4-Dichlorobenzene	ND		ug/kg	72000	2000	200
Methyl tert butyl ether	ND		ug/kg	29000	1200	200
p/m-Xylene	ND		ug/kg	29000	2800	200
o-Xylene	ND		ug/kg	29000	2500	200
Xylenes, Total	ND		ug/kg	29000	2500	200
cis-1,2-Dichloroethene	68000		ug/kg	14000	2100	200
1,2-Dichloroethene, Total	68000		ug/kg	14000	2100	200
Dibromomethane	ND		ug/kg	140000	2400	200
Styrene	ND		ug/kg	29000	5800	200
Dichlorodifluoromethane	ND		ug/kg	140000	2800	200
Acetone	ND		ug/kg	140000	15000	200
Carbon disulfide	ND		ug/kg	140000	16000	200
2-Butanone	ND		ug/kg	140000	3900	200
Vinyl acetate	ND		ug/kg	140000	1900	200
4-Methyl-2-pentanone	ND		ug/kg	140000	3500	200
1,2,3-Trichloropropane	ND		ug/kg	140000	2300	200
2-Hexanone	ND		ug/kg	140000	9600	200
Bromochloromethane	ND		ug/kg	72000	4000	200
2,2-Dichloropropane	ND		ug/kg	72000	3300	200
1,2-Dibromoethane	ND		ug/kg	58000	2500	200
1,3-Dichloropropane	ND		ug/kg	72000	2100	200
1,1,1,2-Tetrachloroethane	ND		ug/kg	14000	4600	200
Bromobenzene	ND		ug/kg	72000	3000	200
n-Butylbenzene	ND		ug/kg	14000	1600	200
sec-Butylbenzene	ND		ug/kg	14000	1800	200
tert-Butylbenzene	ND		ug/kg	72000	2000	200
o-Chlorotoluene	ND		ug/kg	72000	2300	200
p-Chlorotoluene	ND		ug/kg	72000	1900	200
1,2-Dibromo-3-chloropropane	ND		ug/kg	72000	5700	200
Hexachlorobutadiene	ND		ug/kg	72000	3300	200
Isopropylbenzene	ND		ug/kg	14000	1500	200
p-Isopropyltoluene	ND		ug/kg	14000	1800	200
Naphthalene	ND		ug/kg	72000	2000	200
Acrylonitrile	ND		ug/kg	140000	7400	200
n-Propylbenzene	ND		ug/kg	14000	1600	200
1,2,3-Trichlorobenzene	ND		ug/kg	72000	2100	200
1,2,4-Trichlorobenzene	ND		ug/kg	72000	2600	200
1,3,5-Trimethylbenzene	ND		ug/kg	72000	2100	200



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516468**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516468-04 D

Date Collected: 07/15/15 16:10

Client ID: AEI-DW (4-4.5)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/kg	72000	2000	200
1,4-Dioxane	ND		ug/kg	1400000	210000	200
p-Diethylbenzene	ND		ug/kg	58000	2300	200
p-Ethyltoluene	ND		ug/kg	58000	1800	200
1,2,4,5-Tetramethylbenzene	ND		ug/kg	58000	1900	200
Ethyl ether	ND		ug/kg	72000	3800	200
trans-1,4-Dichloro-2-butene	ND		ug/kg	72000	5600	200

**Tentatively Identified Compounds**

No Tentatively Identified Compounds ND ug/kg 200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	83		70-130
Dibromofluoromethane	109		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-05  
**Client ID:** AEI-MW 2 (8-12)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/21/15 18:39  
**Analyst:** MS

**Date Collected:** 07/16/15 10:40  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	2.1		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	0.71	J	ug/l	2.5	0.70	1
Trichloroethene	1.5		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-05

Date Collected: 07/16/15 10:40

Client ID: AEI-MW 2 (8-12)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	55		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	56	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	1.5	J	ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-05  
**Client ID:** AEI-MW 2 (8-12)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/16/15 10:40  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	43	J	ug/l			1
Unknown	43	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	121		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	112		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-06  
**Client ID:** AEI-MW 2 (12-16)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/21/15 19:06  
**Analyst:** MS

**Date Collected:** 07/16/15 10:52  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.49	J	ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	2.2		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-06

Date Collected: 07/16/15 10:52

Client ID: AEI-MW 2 (12-16)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	51		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	51		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-06

Date Collected: 07/16/15 10:52

Client ID: AEI-MW 2 (12-16)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

## Tentatively Identified Compounds

Total TIC Compounds	33	J	ug/l	1
Unknown	2.1	J	ug/l	1
Unknown	31	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	120		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	112		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

Lab ID: L1516468-07  
 Client ID: AEI-MW 2 (16-20)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 19:34  
 Analyst: MS

Date Collected: 07/16/15 11:22  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	16		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-07

Date Collected: 07/16/15 11:22

Client ID: AEI-MW 2 (16-20)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	30		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	30		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-07  
**Client ID:** AEI-MW 2 (16-20)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/16/15 11:22  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	2.9	J	ug/l			1
Sulfur Dioxide	1.8	NJ	ug/l			1
Unknown Alkene	1.1	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	121		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	112		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-08  
**Client ID:** AEI-MW 2 (26-30)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/21/15 20:02  
**Analyst:** MS

**Date Collected:** 07/16/15 11:50  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.30	J	ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-08

Date Collected: 07/16/15 11:50

Client ID: AEI-MW 2 (26-30)

Date Received: 07/16/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	14		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	14		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

**Lab ID:** L1516468-08  
**Client ID:** AEI-MW 2 (26-30)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/16/15 11:50  
**Date Received:** 07/16/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	33	J	ug/l			1
Sulfur Dioxide	2.0	NJ	ug/l			1
Unknown	31	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	121		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	111		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/21/15 15:23  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05-08 Batch: WG804788-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 15:23  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05-08 Batch: WG804788-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/21/15 15:23  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05-08 Batch: WG804788-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 15:23  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05-08 Batch: WG804788-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	120		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	110		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/21/15 10:07  
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 10:07  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-3					
Trichloroethene	ND		ug/kg	50	6.2
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylene (Total)	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene (total)	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/21/15 10:07  
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-3					
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	150
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
Methyl Acetate	ND		ug/kg	1000	14.
Ethyl Acetate	ND		ug/kg	1000	46.
Acrolein	ND		ug/kg	1200	400
Cyclohexane	ND		ug/kg	1000	7.3
1,4-Dioxane	ND		ug/kg	5000	720
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	50.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.
Methyl cyclohexane	ND		ug/kg	200	7.7
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	5.8

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/21/15 10:07  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-3					
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	4.8

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	80		70-130
Dibromofluoromethane	109		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:31  
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-6					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:31  
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-6					
Trichloroethene	ND		ug/kg	50	6.2
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylene (Total)	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene (total)	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:31  
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-6					
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	150
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
Methyl Acetate	ND		ug/kg	1000	14.
Ethyl Acetate	ND		ug/kg	1000	46.
Acrolein	ND		ug/kg	1200	400
Cyclohexane	ND		ug/kg	1000	7.3
1,4-Dioxane	ND		ug/kg	5000	720
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	50.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.
Methyl cyclohexane	ND		ug/kg	200	7.7
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	5.8



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/22/15 12:31  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG804956-6					
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	4.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	79		70-130
Dibromofluoromethane	107		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:36  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:36  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-3					
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Isopropyl Ether	ND		ug/l	2.0	0.65
tert-Butyl Alcohol	ND		ug/l	10	0.90
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Acrolein	ND		ug/l	5.0	0.63
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 12:36  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-3					
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Ethyl Acetate	ND		ug/l	10	0.70
Cyclohexane	ND		ug/l	10	0.27
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.5	0.70
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.70
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Tetrahydrofuran	ND		ug/l	5.0	1.5
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/22/15 12:36  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-3					
Iodomethane	ND		ug/l	5.0	5.0
Methyl cyclohexane	ND		ug/l	10	0.40

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	119		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	110		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 07/23/15 10:04  
**Analyst:** MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-6					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/23/15 10:04  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-6					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/23/15 10:04  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-6					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/23/15 10:04  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG805126-6					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	110		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-08 Batch: WG804788-1 WG804788-2								
Methylene chloride	96		96		70-130	0		20
1,1-Dichloroethane	118		116		70-130	2		20
Chloroform	117		115		70-130	2		20
Carbon tetrachloride	100		96		63-132	4		20
1,2-Dichloropropane	110		109		70-130	1		20
Dibromochloromethane	111		110		63-130	1		20
1,1,2-Trichloroethane	121		120		70-130	1		20
Tetrachloroethene	102		98		70-130	4		20
Chlorobenzene	105		103		75-130	2		20
Trichlorofluoromethane	138		133		62-150	4		20
1,2-Dichloroethane	109		107		70-130	2		20
1,1,1-Trichloroethane	105		103		67-130	2		20
Bromodichloromethane	102		100		67-130	2		20
trans-1,3-Dichloropropene	109		107		70-130	2		20
cis-1,3-Dichloropropene	91		90		70-130	1		20
1,1-Dichloropropene	101		99		70-130	2		20
Bromoform	108		108		54-136	0		20
1,1,2,2-Tetrachloroethane	113		114		67-130	1		20
Benzene	109		107		70-130	2		20
Toluene	117		115		70-130	2		20
Ethylbenzene	108		105		70-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-08 Batch: WG804788-1 WG804788-2								
Chloromethane	63	Q	55	Q	64-130	14		20
Bromomethane	76		73		39-139	4		20
Vinyl chloride	102		97		55-140	5		20
Chloroethane	98		92		55-138	6		20
1,1-Dichloroethene	113		109		61-145	4		20
trans-1,2-Dichloroethene	106		106		70-130	0		20
Trichloroethene	104		102		70-130	2		20
1,2-Dichlorobenzene	98		97		70-130	1		20
1,3-Dichlorobenzene	102		102		70-130	0		20
1,4-Dichlorobenzene	105		104		70-130	1		20
Methyl tert butyl ether	105		105		63-130	0		20
p/m-Xylene	107		104		70-130	3		20
o-Xylene	101		99		70-130	2		20
cis-1,2-Dichloroethene	107		106		70-130	1		20
Dibromomethane	101		101		70-130	0		20
1,2,3-Trichloropropane	127		129		64-130	2		20
Acrylonitrile	124		127		70-130	2		20
Styrene	105		103		70-130	2		20
Dichlorodifluoromethane	74		69		36-147	7		20
Acetone	120		125		58-148	4		20
Carbon disulfide	101		98		51-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-08 Batch: WG804788-1 WG804788-2								
2-Butanone	134		139	Q	63-138	4		20
Vinyl acetate	88		89		70-130	1		20
4-Methyl-2-pentanone	93		98		59-130	5		20
2-Hexanone	103		106		57-130	3		20
Bromochloromethane	107		107		70-130	0		20
2,2-Dichloropropane	86		81		63-133	6		20
1,2-Dibromoethane	106		105		70-130	1		20
1,3-Dichloropropane	118		117		70-130	1		20
1,1,1,2-Tetrachloroethane	113		110		64-130	3		20
Bromobenzene	94		92		70-130	2		20
n-Butylbenzene	123		122		53-136	1		20
sec-Butylbenzene	107		105		70-130	2		20
tert-Butylbenzene	95		94		70-130	1		20
o-Chlorotoluene	115		113		70-130	2		20
p-Chlorotoluene	104		103		70-130	1		20
1,2-Dibromo-3-chloropropane	107		108		41-144	1		20
Hexachlorobutadiene	108		108		63-130	0		20
Isopropylbenzene	98		96		70-130	2		20
p-Isopropyltoluene	107		106		70-130	1		20
Naphthalene	99		101		70-130	2		20
n-Propylbenzene	105		103		69-130	2		20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05-08 Batch: WG804788-1 WG804788-2								
1,2,3-Trichlorobenzene	114		117		70-130	3		20
1,2,4-Trichlorobenzene	116		118		70-130	2		20
1,3,5-Trimethylbenzene	114		112		64-130	2		20
1,2,4-Trimethylbenzene	106		104		70-130	2		20
1,4-Dioxane	120		112		56-162	7		20
p-Diethylbenzene	108		107		70-130	1		20
p-Ethyltoluene	105		103		70-130	2		20
1,2,4,5-Tetramethylbenzene	109		109		70-130	0		20
Ethyl ether	138	Q	137	Q	59-134	1		20
trans-1,4-Dichloro-2-butene	93		94		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		107		70-130
Toluene-d8	119		119		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	111		111		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-1 WG804956-2								
Methylene chloride	106		105		70-130	1		30
1,1-Dichloroethane	108		110		70-130	2		30
Chloroform	110		115		70-130	4		30
Carbon tetrachloride	119		123		70-130	3		30
1,2-Dichloropropane	95		97		70-130	2		30
Dibromochloromethane	107		108		70-130	1		30
2-Chloroethylvinyl ether	72		77		70-130	7		30
1,1,2-Trichloroethane	102		102		70-130	0		30
Tetrachloroethene	105		111		70-130	6		30
Chlorobenzene	100		102		70-130	2		30
Trichlorofluoromethane	120		123		70-139	2		30
1,2-Dichloroethane	116		116		70-130	0		30
1,1,1-Trichloroethane	113		115		70-130	2		30
Bromodichloromethane	104		107		70-130	3		30
trans-1,3-Dichloropropene	95		96		70-130	1		30
cis-1,3-Dichloropropene	93		95		70-130	2		30
1,1-Dichloropropene	93		98		70-130	5		30
Bromoform	100		103		70-130	3		30
1,1,2,2-Tetrachloroethane	91		94		70-130	3		30
Benzene	99		102		70-130	3		30
Toluene	98		101		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-1 WG804956-2								
Ethylbenzene	97		101		70-130	4		30
Chloromethane	94		97		52-130	3		30
Bromomethane	122		131		57-147	7		30
Vinyl chloride	84		90		67-130	7		30
Chloroethane	114		117		50-151	3		30
1,1-Dichloroethene	100		103		65-135	3		30
trans-1,2-Dichloroethene	96		102		70-130	6		30
Trichloroethene	107		112		70-130	5		30
1,2-Dichlorobenzene	101		104		70-130	3		30
1,3-Dichlorobenzene	104		107		70-130	3		30
1,4-Dichlorobenzene	101		104		70-130	3		30
Methyl tert butyl ether	87		89		66-130	2		30
p/m-Xylene	103		106		70-130	3		30
o-Xylene	98		102		70-130	4		30
cis-1,2-Dichloroethene	98		101		70-130	3		30
Dibromomethane	102		103		70-130	1		30
Styrene	104		105		70-130	1		30
Dichlorodifluoromethane	93		97		30-146	4		30
Acetone	112		111		54-140	1		30
Carbon disulfide	85		89		59-130	5		30
2-Butanone	94		96		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-1 WG804956-2								
Vinyl acetate	96		96		70-130	0		30
4-Methyl-2-pentanone	73		76		70-130	4		30
1,2,3-Trichloropropane	92		93		68-130	1		30
2-Hexanone	67	Q	66	Q	70-130	2		30
Bromochloromethane	113		113		70-130	0		30
2,2-Dichloropropane	107		111		70-130	4		30
1,2-Dibromoethane	99		99		70-130	0		30
1,3-Dichloropropane	96		96		69-130	0		30
1,1,1,2-Tetrachloroethane	107		109		70-130	2		30
Bromobenzene	95		99		70-130	4		30
n-Butylbenzene	101		106		70-130	5		30
sec-Butylbenzene	94		100		70-130	6		30
tert-Butylbenzene	89		93		70-130	4		30
o-Chlorotoluene	98		100		70-130	2		30
p-Chlorotoluene	92		95		70-130	3		30
1,2-Dibromo-3-chloropropane	81		83		68-130	2		30
Hexachlorobutadiene	98		103		67-130	5		30
Isopropylbenzene	86		91		70-130	6		30
p-Isopropyltoluene	96		101		70-130	5		30
Naphthalene	84		86		70-130	2		30
Acrylonitrile	98		99		70-130	1		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-1 WG804956-2								
Diisopropyl Ether	92		93		66-130	1		30
Tert-Butyl Alcohol	85		86		70-130	1		30
n-Propylbenzene	91		96		70-130	5		30
1,2,3-Trichlorobenzene	98		98		70-130	0		30
1,2,4-Trichlorobenzene	96		98		70-130	2		30
1,3,5-Trimethylbenzene	94		98		70-130	4		30
1,2,4-Trimethylbenzene	94		98		70-130	4		30
Methyl Acetate	97		98		51-146	1		30
Ethyl Acetate	91		90		70-130	1		30
Acrolein	66	Q	63	Q	70-130	5		30
Cyclohexane	94		102		59-142	8		30
1,4-Dioxane	89		97		65-136	9		30
Freon-113	114		118		50-139	3		30
p-Diethylbenzene	95		97		70-130	2		30
p-Ethyltoluene	95		100		70-130	5		30
1,2,4,5-Tetramethylbenzene	90		92		70-130	2		30
Tetrahydrofuran	102		88		66-130	15		30
Ethyl ether	94		92		67-130	2		30
trans-1,4-Dichloro-2-butene	95		96		70-130	1		30
Methyl cyclohexane	93		101		70-130	8		30
Ethyl-Tert-Butyl-Ether	91		93		70-130	2		30

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-1 WG804956-2								
Tertiary-Amyl Methyl Ether	84		87		70-130	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	119		116		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	82		82		70-130
Dibromofluoromethane	116		112		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-4 WG804956-5								
Methylene chloride	100		100		70-130	0		30
1,1-Dichloroethane	102		99		70-130	3		30
Chloroform	109		103		70-130	6		30
Carbon tetrachloride	114		109		70-130	4		30
1,2-Dichloropropane	94		92		70-130	2		30
Dibromochloromethane	109		107		70-130	2		30
2-Chloroethylvinyl ether	81		84		70-130	4		30
1,1,2-Trichloroethane	100		102		70-130	2		30
Tetrachloroethene	112		108		70-130	4		30
Chlorobenzene	104		102		70-130	2		30
Trichlorofluoromethane	135		128		70-139	5		30
1,2-Dichloroethane	105		105		70-130	0		30
1,1,1-Trichloroethane	108		103		70-130	5		30
Bromodichloromethane	103		101		70-130	2		30
trans-1,3-Dichloropropene	94		93		70-130	1		30
cis-1,3-Dichloropropene	95		94		70-130	1		30
1,1-Dichloropropene	96		91		70-130	5		30
Bromoform	103		104		70-130	1		30
1,1,2,2-Tetrachloroethane	93		93		70-130	0		30
Benzene	100		96		70-130	4		30
Toluene	100		96		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-4 WG804956-5								
Ethylbenzene	101		97		70-130	4		30
Chloromethane	93		89		52-130	4		30
Bromomethane	127		124		57-147	2		30
Vinyl chloride	90		86		67-130	5		30
Chloroethane	111		107		50-151	4		30
1,1-Dichloroethene	105		100		65-135	5		30
trans-1,2-Dichloroethene	102		98		70-130	4		30
Trichloroethene	107		103		70-130	4		30
1,2-Dichlorobenzene	105		102		70-130	3		30
1,3-Dichlorobenzene	107		104		70-130	3		30
1,4-Dichlorobenzene	106		103		70-130	3		30
Methyl tert butyl ether	90		92		66-130	2		30
p/m-Xylene	107		102		70-130	5		30
o-Xylene	103		101		70-130	2		30
cis-1,2-Dichloroethene	101		98		70-130	3		30
Dibromomethane	101		101		70-130	0		30
Styrene	108		104		70-130	4		30
Dichlorodifluoromethane	111		104		30-146	7		30
Acetone	100		108		54-140	8		30
Carbon disulfide	88		83		59-130	6		30
2-Butanone	92		93		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-4 WG804956-5								
Vinyl acetate	77		77		70-130	0		30
4-Methyl-2-pentanone	77		81		70-130	5		30
1,2,3-Trichloropropane	93		92		68-130	1		30
2-Hexanone	65	Q	67	Q	70-130	3		30
Bromochloromethane	110		112		70-130	2		30
2,2-Dichloropropane	103		97		70-130	6		30
1,2-Dibromoethane	100		101		70-130	1		30
1,3-Dichloropropane	96		95		69-130	1		30
1,1,1,2-Tetrachloroethane	109		106		70-130	3		30
Bromobenzene	102		98		70-130	4		30
n-Butylbenzene	103		97		70-130	6		30
sec-Butylbenzene	99		94		70-130	5		30
tert-Butylbenzene	93		89		70-130	4		30
o-Chlorotoluene	100		96		70-130	4		30
p-Chlorotoluene	95		91		70-130	4		30
1,2-Dibromo-3-chloropropane	84		85		68-130	1		30
Hexachlorobutadiene	102		98		67-130	4		30
Isopropylbenzene	92		87		70-130	6		30
p-Isopropyltoluene	101		96		70-130	5		30
Naphthalene	89		88		70-130	1		30
Acrylonitrile	96		95		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-4 WG804956-5								
Diisopropyl Ether	85		84		66-130	1		30
Tert-Butyl Alcohol	84		86		70-130	2		30
n-Propylbenzene	94		90		70-130	4		30
1,2,3-Trichlorobenzene	100		98		70-130	2		30
1,2,4-Trichlorobenzene	99		97		70-130	2		30
1,3,5-Trimethylbenzene	98		94		70-130	4		30
1,2,4-Trimethylbenzene	97		93		70-130	4		30
Methyl Acetate	90		92		51-146	2		30
Ethyl Acetate	86		86		70-130	0		30
Acrolein	60	Q	62	Q	70-130	3		30
Cyclohexane	98		91		59-142	7		30
1,4-Dioxane	97		96		65-136	1		30
Freon-113	117		112		50-139	4		30
p-Diethylbenzene	99		95		70-130	4		30
p-Ethyltoluene	100		95		70-130	5		30
1,2,4,5-Tetramethylbenzene	90		88		70-130	2		30
Tetrahydrofuran	87		89		66-130	2		30
Ethyl ether	98		98		67-130	0		30
trans-1,4-Dichloro-2-butene	92		88		70-130	4		30
Methyl cyclohexane	100		94		70-130	6		30
Ethyl-Tert-Butyl-Ether	88		88		70-130	0		30

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG804956-4 WG804956-5								
Tertiary-Amyl Methyl Ether	86		86		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		106		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	82		82		70-130
Dibromofluoromethane	110		109		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-1 WG805126-2								
Methylene chloride	97		98		70-130	1		20
1,1-Dichloroethane	120		119		70-130	1		20
Chloroform	116		117		70-130	1		20
2-Chloroethylvinyl ether	75		75		70-130	0		20
Carbon tetrachloride	99		97		63-132	2		20
1,2-Dichloropropane	112		111		70-130	1		20
Dibromochloromethane	102		104		63-130	2		20
1,1,2-Trichloroethane	117		118		70-130	1		20
Tetrachloroethene	98		98		70-130	0		20
Chlorobenzene	100		102		75-130	2		20
Trichlorofluoromethane	144		142		62-150	1		20
1,2-Dichloroethane	107		108		70-130	1		20
1,1,1-Trichloroethane	105		105		67-130	0		20
Bromodichloromethane	102		101		67-130	1		20
trans-1,3-Dichloropropene	103		104		70-130	1		20
cis-1,3-Dichloropropene	90		91		70-130	1		20
1,1-Dichloropropene	102		102		70-130	0		20
Bromoform	95		95		54-136	0		20
1,1,2,2-Tetrachloroethane	105		104		67-130	1		20
Benzene	109		110		70-130	1		20
Toluene	114		114		70-130	0		20



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-1 WG805126-2								
Ethylbenzene	106		106		70-130	0		20
Chloromethane	38	Q	60	Q	64-130	45	Q	20
Bromomethane	69		71		39-139	3		20
Vinyl chloride	92		97		55-140	5		20
Chloroethane	93		100		55-138	7		20
1,1-Dichloroethene	112		110		61-145	2		20
trans-1,2-Dichloroethene	107		107		70-130	0		20
Trichloroethene	105		104		70-130	1		20
1,2-Dichlorobenzene	92		93		70-130	1		20
1,3-Dichlorobenzene	98		97		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	99		100		63-130	1		20
p/m-Xylene	103		103		70-130	0		20
o-Xylene	98		98		70-130	0		20
cis-1,2-Dichloroethene	107		107		70-130	0		20
Dibromomethane	99		100		70-130	1		20
1,2,3-Trichloropropane	122		121		64-130	1		20
Acrylonitrile	121		122		70-130	1		20
Diisopropyl Ether	124		125		70-130	1		20
Tert-Butyl Alcohol	94		90		70-130	4		20
Styrene	100		102		70-130	2		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-1 WG805126-2								
Dichlorodifluoromethane	74		75		36-147	1		20
Acetone	115		113		58-148	2		20
Carbon disulfide	105		103		51-130	2		20
2-Butanone	128		127		63-138	1		20
Vinyl acetate	84		86		70-130	2		20
4-Methyl-2-pentanone	87		87		59-130	0		20
2-Hexanone	96		95		57-130	1		20
Acrolein	93		96		40-160	3		20
Bromochloromethane	106		104		70-130	2		20
2,2-Dichloropropane	90		89		63-133	1		20
1,2-Dibromoethane	98		98		70-130	0		20
1,3-Dichloropropane	112		114		70-130	2		20
1,1,1,2-Tetrachloroethane	108		108		64-130	0		20
Bromobenzene	88		89		70-130	1		20
n-Butylbenzene	113		114		53-136	1		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	90		90		70-130	0		20
o-Chlorotoluene	111		110		70-130	1		20
p-Chlorotoluene	101		101		70-130	0		20
1,2-Dibromo-3-chloropropane	103		101		41-144	2		20
Hexachlorobutadiene	95		98		63-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-1 WG805126-2								
Isopropylbenzene	94		93		70-130	1		20
p-Isopropyltoluene	99		100		70-130	1		20
Naphthalene	86		86		70-130	0		20
n-Propylbenzene	102		101		69-130	1		20
1,2,3-Trichlorobenzene	102		102		70-130	0		20
1,2,4-Trichlorobenzene	106		107		70-130	1		20
1,3,5-Trimethylbenzene	108		108		64-130	0		20
1,2,4-Trimethylbenzene	101		100		70-130	1		20
Methyl Acetate	126		127		70-130	1		20
Ethyl Acetate	119		120		70-130	1		20
Cyclohexane	114		113		70-130	1		20
Ethyl-Tert-Butyl-Ether	102		103		70-130	1		20
Tertiary-Amyl Methyl Ether	86		87		66-130	1		20
1,4-Dioxane	110		96		56-162	14		20
Freon-113	113		113		70-130	0		20
p-Diethylbenzene	99		100		70-130	1		20
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	102		104		70-130	2		20
Ethyl ether	133		132		59-134	1		20
trans-1,4-Dichloro-2-butene	71		71		70-130	0		20
Iodomethane	16	Q	17	Q	70-130	6		20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-1 WG805126-2								
Methyl cyclohexane	99		99		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		106		70-130
Toluene-d8	118		119		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	111		110		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-4 WG805126-5								
Methylene chloride	108		110		70-130	2		20
1,1-Dichloroethane	98		96		70-130	2		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	115		114		63-132	1		20
1,2-Dichloropropane	94		95		70-130	1		20
Dibromochloromethane	104		106		63-130	2		20
1,1,2-Trichloroethane	89		93		70-130	4		20
Tetrachloroethene	107		107		70-130	0		20
Chlorobenzene	98		98		75-130	0		20
Trichlorofluoromethane	71		71		62-150	0		20
1,2-Dichloroethane	85		87		70-130	2		20
1,1,1-Trichloroethane	103		104		67-130	1		20
Bromodichloromethane	97		98		67-130	1		20
trans-1,3-Dichloropropene	87		90		70-130	3		20
cis-1,3-Dichloropropene	99		102		70-130	3		20
1,1-Dichloropropene	95		95		70-130	0		20
Bromoform	93		96		54-136	3		20
1,1,2,2-Tetrachloroethane	80		84		67-130	5		20
Benzene	100		99		70-130	1		20
Toluene	92		92		70-130	0		20
Ethylbenzene	89		88		70-130	1		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-4 WG805126-5								
Chloromethane	72		72		64-130	0		20
Bromomethane	43		45		39-139	5		20
Vinyl chloride	69		66		55-140	4		20
Chloroethane	43	Q	41	Q	55-138	5		20
1,1-Dichloroethene	103		98		61-145	5		20
trans-1,2-Dichloroethene	109		109		70-130	0		20
Trichloroethene	105		106		70-130	1		20
1,2-Dichlorobenzene	88		90		70-130	2		20
1,3-Dichlorobenzene	87		91		70-130	4		20
1,4-Dichlorobenzene	88		88		70-130	0		20
Methyl tert butyl ether	102		106		63-130	4		20
p/m-Xylene	95		93		70-130	2		20
o-Xylene	92		93		70-130	1		20
cis-1,2-Dichloroethene	108		107		70-130	1		20
Dibromomethane	102		104		70-130	2		20
1,2,3-Trichloropropane	74		77		64-130	4		20
Acrylonitrile	94		97		70-130	3		20
Styrene	89		90		70-130	1		20
Dichlorodifluoromethane	96		94		36-147	2		20
Acetone	80		83		58-148	4		20
Carbon disulfide	105		99		51-130	6		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-4 WG805126-5								
2-Butanone	77		84		63-138	9		20
Vinyl acetate	64	Q	68	Q	70-130	6		20
4-Methyl-2-pentanone	83		88		59-130	6		20
2-Hexanone	61		66		57-130	8		20
Bromochloromethane	119		123		70-130	3		20
2,2-Dichloropropane	110		108		63-133	2		20
1,2-Dibromoethane	97		101		70-130	4		20
1,3-Dichloropropane	88		89		70-130	1		20
1,1,1,2-Tetrachloroethane	101		103		64-130	2		20
Bromobenzene	97		98		70-130	1		20
n-Butylbenzene	77		75		53-136	3		20
sec-Butylbenzene	83		81		70-130	2		20
tert-Butylbenzene	90		86		70-130	5		20
o-Chlorotoluene	83		81		70-130	2		20
p-Chlorotoluene	82		81		70-130	1		20
1,2-Dibromo-3-chloropropane	72		73		41-144	1		20
Hexachlorobutadiene	101		97		63-130	4		20
Isopropylbenzene	88		86		70-130	2		20
p-Isopropyltoluene	89		85		70-130	5		20
Naphthalene	88		95		70-130	8		20
n-Propylbenzene	82		79		69-130	4		20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG805126-4 WG805126-5								
1,2,3-Trichlorobenzene	91		95		70-130	4		20
1,2,4-Trichlorobenzene	88		91		70-130	3		20
1,3,5-Trimethylbenzene	86		84		64-130	2		20
1,2,4-Trimethylbenzene	85		84		70-130	1		20
1,4-Dioxane	104		99		56-162	5		20
p-Diethylbenzene	86		85		70-130	1		20
p-Ethyltoluene	87		85		70-130	2		20
1,2,4,5-Tetramethylbenzene	84		84		70-130	0		20
Ethyl ether	50	Q	51	Q	59-134	2		20
trans-1,4-Dichloro-2-butene	65	Q	66	Q	70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	83		83		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	96		95		70-130
Dibromofluoromethane	107		109		70-130



# **INORGANICS & MISCELLANEOUS**

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## SAMPLE RESULTS

Lab ID: L1516468-04  
 Client ID: AEI-DW (4-4.5)  
 Sample Location: 180 E PARK AVE., LONG BEACH, N  
 Matrix: Soil

Date Collected: 07/15/15 16:10  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.6		%	0.100	NA	1	-	07/17/15 21:53	30,2540G	RT



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS

**Project Number:** 341998

**Lab Number:** L1516468

**Report Date:** 07/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG803886-1 QC Sample: L1516335-01 Client ID: DUP Sample						
Solids, Total	95.8	96.1	%	0		20

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516468

Project Number: 341998

Report Date: 07/23/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 07/17/2015 03:36

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1516468-01A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-01B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-01C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-02A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-02B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-02C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-03A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-03B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-03C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-04A	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1516468-04B	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1516468-04C	5 gram Encore Sampler	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(2)
L1516468-04D	Plastic 2oz unpreserved for TS	A	N/A	3.1	Y	Absent	TS(7)
L1516468-04X	Vial MeOH preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1516468-04Y	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1516468-04Z	Vial Water preserved split	A	N/A	3.1	Y	Absent	NYTCL-8260HLW(14)
L1516468-05A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-05B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-05C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-06A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-06B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-06C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-07A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-07B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-07C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-08A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-08B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



**Project Name:** NU-CLEAR CLEANERS**Project Number:** 341998**Lab Number:** L1516468**Report Date:** 07/23/15**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1516468-08C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1516468-09A	Vial HCl preserved	A	N/A	3.1	Y	Absent	HOLD-8260(14)
L1516468-09B	Vial HCl preserved	A	N/A	3.1	Y	Absent	HOLD-8260(14)

**Container Comments**

L1516468-03C

\*Values in parentheses indicate holding time in days

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

## 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516468  
**Report Date:** 07/23/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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### 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, NO<sub>2</sub>, NO<sub>3</sub>.

**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.

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### 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.**

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

L1516408



**NEW JERSEY CHAIN OF CUSTODY**

**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 1

Date Rec'd in Lab  
 7/17/15

ALPHA Job #  
 L1516386 7/17/15

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

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

**Project Information**

Project Name: *Nu-Clear Cleaners*  
 Project Location: *140 E Park Ave Long Beach NY*  
 Project # *347998*

**Deliverables**

NJ Full / Reduced  
 EQUIS (1 File)  EQUIS (4 File)  
 Other

**Billing Information**

Same as Client Info  
 PO # *89245*

**Client Information**

Client: *AEI Consultants*  
 Address: *20 Gibson Place*  
*Freehold NJ 07728*  
 Phone: *732-414-2720*  
 Fax: *732-414-2721*  
 Email: *jbernarducci@aeiconsultants.com*

(Use Project name as Project #)

Project Manager: *Joe Bernarducci*

ALPHAQuote #:

**Turn-Around Time**

Standard  Due Date:  
 Rush (only if pre approved)  # of Days:

**Regulatory Requirement**

SRS Residential/Non Residential  
 SRS Impact to Groundwater  
 NJ Ground Water Quality Standards  
 NJ IGW SPLP Leachate Criteria  
 Other *NYSDEC*

**Site Information**

Is this site impacted by Petroleum? Yes   
 Petroleum Product:

These samples have been previously analyzed by Alpha

**For EPH, selection is REQUIRED:**  
 Category 1  
 Category 2

**For VOC, selection is REQUIRED:**  
 1,4-Dioxane  
 8011

**Other project specific requirements/comments:**  
*Include TICs*  
 Please specify Metals or TAL.

**ANALYSIS**

<i>VOCs 8260</i>	<i>VOCs 8260</i>	<i>T3</i>								
------------------	------------------	-----------	--	--	--	--	--	--	--	--

**Sample Filtration**

Done  
 Lab to do  
**Preservation**  
 Lab to do  
 (Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	Total Bottles	
		Date	Time															
<i>H2386-01</i>	<i>TWP1</i>	<i>7/15/15</i>	<i>1400</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>H2386-02</i>	<i>TWP2</i>	<i>7/15/15</i>	<i>1500</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>-03</i>	<i>AEI-DW1</i>	<i>7/15/15</i>	<i>1604</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>-04</i>	<i>AEI-DW(4-4.5)</i>	<i>7/15/15</i>	<i>1810</i>	<i>Soil</i>	<i>DB</i>		<i>X</i>	<i>X</i>										
<i>-05</i>	<i>AEI MW2(8-12)</i>	<i>7/16/15</i>	<i>1040</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>-06</i>	<i>AEI MW2(12-16)</i>	<i>7/16/15</i>	<i>1052</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>-07</i>	<i>AEI MW2(16-20)</i>	<i>7/16/15</i>	<i>1122</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												
<i>-08</i>	<i>AEI MW2(26-30)</i>	<i>7/16/15</i>	<i>1150</i>	<i>Water</i>	<i>DB</i>	<i>X</i>												

**Preservative Code:**  
 A = None  
 B = HCl  
 C = HNO<sub>3</sub>  
 D = H<sub>2</sub>SO<sub>4</sub>  
 E = NaOH  
 F = MeOH  
 G = NaHSO<sub>4</sub>  
 H = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 K/E = Zn Ac/NaOH  
 O = Other

**Container Code**  
 P = Plastic  
 A = Amber Glass  
 V = Vial  
 G = Glass  
 B = Bacteria Cup  
 C = Cube  
 O = Other  
 E = Encore  
 D = BOD Bottle

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

Container Type: *A E P*  
 Preservative: *B A A*

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.)

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Tom Bern...</i>	<i>7/16/15 17:30</i>	<i>Michael...</i>	<i>7/16/15 17:30</i>
<i>Michael...</i>	<i>7/16/15 2000</i>	<i>Tom Bern...</i>	<i>7/16/15 2000</i>
<i>Tom Bern...</i>	<i>7/17/15 01:15</i>	<i>...</i>	<i>7/17/15 01:15</i>



## ANALYTICAL REPORT

Lab Number:	L1516477
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU-CLEAR CLEANERS
Project Number:	341998
Report Date:	07/23/15

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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.

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



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1516477-01	AEI SV1	SOIL_VAPOR	180 E PARK AVE LONG BEACH	07/15/15 13:13	07/16/15
L1516477-02	AEI SV2	SOIL_VAPOR	180 E PARK AVE LONG BEACH	07/15/15 15:57	07/16/15
L1516477-03	AEI SV3	SOIL_VAPOR	180 E PARK AVE LONG BEACH	07/15/15 15:48	07/16/15
L1516477-04	AEI SV4	SOIL_VAPOR	180 E PARK AVE LONG BEACH	07/16/15 10:05	07/16/15
L1516477-05	AEI SV5	SOIL_VAPOR	180 E PARK AVE LONG BEACH	07/16/15 10:24	07/16/15

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### 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.

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**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### Case Narrative (continued)

#### Volatile Organics in Air

Canisters were released from the laboratory on July 14, 2015. The canister certification results are provided as an addendum.

Samples L1516477-01 through -05 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

Samples L1516477-02, -03, -04, and -05 were diluted and re-analyzed to quantify the samples within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compounds that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

Sample L1516477-03 The presence of Acetone could not be determined in this sample due to a non-target compound interfering with the identification and quantification of this compound.

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: 07/23/15

**AIR**

**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-01 D  
 Client ID: AEI SV1  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/22/15 22:48  
 Analyst: RY

Date Collected: 07/15/15 13:13  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	ND	0.667	--	ND	3.30	--		3.333
Chloromethane	ND	0.667	--	ND	1.38	--		3.333
Freon-114	ND	0.667	--	ND	4.66	--		3.333
Vinyl chloride	ND	0.667	--	ND	1.71	--		3.333
1,3-Butadiene	8.81	0.667	--	19.5	1.48	--		3.333
Bromomethane	ND	0.667	--	ND	2.59	--		3.333
Chloroethane	ND	0.667	--	ND	1.76	--		3.333
Ethanol	918	8.33	--	1730	15.7	--		3.333
Vinyl bromide	ND	0.667	--	ND	2.92	--		3.333
Acetone	74.9	3.33	--	178	7.91	--		3.333
Trichlorofluoromethane	ND	0.667	--	ND	3.75	--		3.333
Isopropanol	74.1	1.67	--	182	4.10	--		3.333
1,1-Dichloroethene	ND	0.667	--	ND	2.64	--		3.333
Tertiary butyl Alcohol	18.4	1.67	--	55.8	5.06	--		3.333
Methylene chloride	ND	1.67	--	ND	5.80	--		3.333
3-Chloropropene	ND	0.667	--	ND	2.09	--		3.333
Carbon disulfide	3.10	0.667	--	9.65	2.08	--		3.333
Freon-113	ND	0.667	--	ND	5.11	--		3.333
trans-1,2-Dichloroethene	ND	0.667	--	ND	2.64	--		3.333
1,1-Dichloroethane	ND	0.667	--	ND	2.70	--		3.333
Methyl tert butyl ether	ND	0.667	--	ND	2.40	--		3.333
2-Butanone	10.5	1.67	--	31.0	4.93	--		3.333
cis-1,2-Dichloroethene	1.03	0.667	--	4.08	2.64	--		3.333
Ethyl Acetate	ND	1.67	--	ND	6.02	--		3.333





**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

Lab ID: L1516477-01 D  
 Client ID: AEI SV1  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/15/15 13:13  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.667	--	ND	3.26	--		3.333
Tetrahydrofuran	ND	1.67	--	ND	4.93	--		3.333
1,2-Dichloroethane	ND	0.667	--	ND	2.70	--		3.333
n-Hexane	2.96	0.667	--	10.4	2.35	--		3.333
1,1,1-Trichloroethane	ND	0.667	--	ND	3.64	--		3.333
Benzene	1.61	0.667	--	5.14	2.13	--		3.333
Carbon tetrachloride	ND	0.667	--	ND	4.20	--		3.333
Cyclohexane	1.68	0.667	--	5.78	2.30	--		3.333
1,2-Dichloropropane	ND	0.667	--	ND	3.08	--		3.333
Bromodichloromethane	ND	0.667	--	ND	4.47	--		3.333
1,4-Dioxane	ND	0.667	--	ND	2.40	--		3.333
Trichloroethene	4.65	0.667	--	25.0	3.58	--		3.333
2,2,4-Trimethylpentane	ND	0.667	--	ND	3.12	--		3.333
Heptane	1.54	0.667	--	6.31	2.73	--		3.333
cis-1,3-Dichloropropene	ND	0.667	--	ND	3.03	--		3.333
4-Methyl-2-pentanone	2.51	1.67	--	10.3	6.84	--		3.333
trans-1,3-Dichloropropene	ND	0.667	--	ND	3.03	--		3.333
1,1,2-Trichloroethane	ND	0.667	--	ND	3.64	--		3.333
Toluene	1.83	0.667	--	6.90	2.51	--		3.333
2-Hexanone	0.786	0.667	--	3.22	2.73	--		3.333
Dibromochloromethane	ND	0.667	--	ND	5.68	--		3.333
1,2-Dibromoethane	ND	0.667	--	ND	5.13	--		3.333
Tetrachloroethene	164	0.667	--	1110	4.52	--		3.333
Chlorobenzene	ND	0.667	--	ND	3.07	--		3.333
Ethylbenzene	ND	0.667	--	ND	2.90	--		3.333
p/m-Xylene	1.67	1.33	--	7.25	5.78	--		3.333
Bromoform	ND	0.667	--	ND	6.90	--		3.333
Styrene	0.936	0.667	--	3.99	2.84	--		3.333



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-01 D  
 Client ID: AEI SV1  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/15/15 13:13  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.667	--	ND	4.58	--		3.333
o-Xylene	0.806	0.667	--	3.50	2.90	--		3.333
4-Ethyltoluene	ND	0.667	--	ND	3.28	--		3.333
1,3,5-Trimethylbenzene	ND	0.667	--	ND	3.28	--		3.333
1,2,4-Trimethylbenzene	ND	0.667	--	ND	3.28	--		3.333
Benzyl chloride	ND	0.667	--	ND	3.45	--		3.333
1,3-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,4-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,2-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,2,4-Trichlorobenzene	ND	0.667	--	ND	4.95	--		3.333
Hexachlorobutadiene	ND	0.667	--	ND	7.11	--		3.333

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	79		60-140
Bromochloromethane	73		60-140
chlorobenzene-d5	87		60-140



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### SAMPLE RESULTS

Lab ID: L1516477-02 D  
 Client ID: AEI SV2  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 00:54  
 Analyst: RY

Date Collected: 07/15/15 15:57  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	325.	--	ND	1610	--		1624
Chloromethane	ND	325.	--	ND	671	--		1624
Freon-114	ND	325.	--	ND	2270	--		1624
Vinyl chloride	ND	325	--	ND	831	--		1624
1,3-Butadiene	ND	325.	--	ND	719	--		1624
Bromomethane	ND	325.	--	ND	1260	--		1624
Chloroethane	ND	325.	--	ND	858	--		1624
Ethanol	ND	4060	--	ND	7650	--		1624
Vinyl bromide	ND	325.	--	ND	1420	--		1624
Acetone	ND	1620	--	ND	3850	--		1624
Trichlorofluoromethane	ND	325.	--	ND	1830	--		1624
Isopropanol	ND	812.	--	ND	2000	--		1624
1,1-Dichloroethene	ND	325.	--	ND	1290	--		1624
Tertiary butyl Alcohol	ND	812.	--	ND	2460	--		1624
Methylene chloride	ND	812	--	ND	2820	--		1624
3-Chloropropene	ND	325.	--	ND	1020	--		1624
Carbon disulfide	ND	325.	--	ND	1010	--		1624
Freon-113	ND	325.	--	ND	2490	--		1624
trans-1,2-Dichloroethene	ND	325.	--	ND	1290	--		1624
1,1-Dichloroethane	ND	325.	--	ND	1320	--		1624
Methyl tert butyl ether	ND	325.	--	ND	1170	--		1624
2-Butanone	ND	812.	--	ND	2390	--		1624
cis-1,2-Dichloroethene	25900	325	--	103000	1290	--		1624
Ethyl Acetate	ND	812.	--	ND	2930	--		1624



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

**SAMPLE RESULTS**

Lab ID: L1516477-02 D  
 Client ID: AEI SV2  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/15/15 15:57  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Chloroform	ND	325.	--	ND	1590	--		1624
Tetrahydrofuran	ND	812.	--	ND	2390	--		1624
1,2-Dichloroethane	ND	325.	--	ND	1320	--		1624
n-Hexane	ND	325.	--	ND	1150	--		1624
1,1,1-Trichloroethane	ND	325.	--	ND	1770	--		1624
Benzene	ND	325.	--	ND	1040	--		1624
Carbon tetrachloride	ND	325.	--	ND	2040	--		1624
Cyclohexane	ND	325.	--	ND	1120	--		1624
1,2-Dichloropropane	ND	325.	--	ND	1500	--		1624
Bromodichloromethane	ND	325.	--	ND	2180	--		1624
1,4-Dioxane	ND	325.	--	ND	1170	--		1624
Trichloroethene	29100	325	--	156000	1750	--		1624
2,2,4-Trimethylpentane	ND	325.	--	ND	1520	--		1624
Heptane	ND	325.	--	ND	1330	--		1624
cis-1,3-Dichloropropene	ND	325.	--	ND	1480	--		1624
4-Methyl-2-pentanone	ND	812.	--	ND	3330	--		1624
trans-1,3-Dichloropropene	ND	325.	--	ND	1480	--		1624
1,1,2-Trichloroethane	ND	325.	--	ND	1770	--		1624
Toluene	ND	325.	--	ND	1220	--		1624
2-Hexanone	ND	325.	--	ND	1330	--		1624
Dibromochloromethane	ND	325.	--	ND	2770	--		1624
1,2-Dibromoethane	ND	325.	--	ND	2500	--		1624
Tetrachloroethene	580000	325	--	3930000	2200	--	E	1624
Chlorobenzene	ND	325.	--	ND	1500	--		1624
Ethylbenzene	ND	325.	--	ND	1410	--		1624
p/m-Xylene	ND	650.	--	ND	2820	--		1624
Bromoform	ND	325.	--	ND	3360	--		1624
Styrene	ND	325.	--	ND	1380	--		1624



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-02 D

Date Collected: 07/15/15 15:57

Client ID: AEI SV2

Date Received: 07/16/15

Sample Location: 180 E PARK AVE LONG BEACH

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	325.	--	ND	2230	--		1624
o-Xylene	ND	325.	--	ND	1410	--		1624
4-Ethyltoluene	ND	325.	--	ND	1600	--		1624
1,3,5-Trimethylbenzene	ND	325.	--	ND	1600	--		1624
1,2,4-Trimethylbenzene	ND	325.	--	ND	1600	--		1624
Benzyl chloride	ND	325.	--	ND	1680	--		1624
1,3-Dichlorobenzene	ND	325.	--	ND	1950	--		1624
1,4-Dichlorobenzene	ND	325.	--	ND	1950	--		1624
1,2-Dichlorobenzene	ND	325.	--	ND	1950	--		1624
1,2,4-Trichlorobenzene	ND	325.	--	ND	2410	--		1624
Hexachlorobutadiene	ND	325.	--	ND	3470	--		1624

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	96		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-02 D2  
 Client ID: AEI SV2  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 10:37  
 Analyst: RY

Date Collected: 07/15/15 15:57  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	595000	1620	--	4030000	11000	--		8117

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	94		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-03 D  
 Client ID: AEI SV3  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/22/15 23:51  
 Analyst: RY

Date Collected: 07/15/15 15:48  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	5.55	2.00	--	14.2	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	31.6	25.0	--	59.5	47.1	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	ND	10.0	--	ND	23.8	--		10
Trichlorofluoromethane	9.34	2.00	--	52.5	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Tertiary butyl Alcohol	9.89	5.00	--	30.0	15.2	--		10
Methylene chloride	ND	5.00	--	ND	17.4	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	2.50	2.00	--	7.79	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
2-Butanone	ND	5.00	--	ND	14.7	--		10
cis-1,2-Dichloroethene	89.2	2.00	--	354	7.93	--		10
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### SAMPLE RESULTS

Lab ID: L1516477-03 D  
 Client ID: AEI SV3  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/15/15 15:48  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	886	2.00	--	4330	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	89.2	2.00	--	314	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	70.3	2.00	--	242	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	50.7	2.00	--	272	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	81.0	2.00	--	332	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	ND	2.00	--	ND	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	1100	2.00	--	7460	13.6	--	E	10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	3.09	2.00	--	13.4	8.69	--		10
p/m-Xylene	16.7	4.00	--	72.5	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10





**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-03 D  
 Client ID: AEI SV3  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/15/15 15:48  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	7.04	2.00	--	30.6	8.69	--		10
4-Ethyltoluene	27.1	2.00	--	133	9.83	--		10
1,3,5-Trimethylbenzene	48.0	2.00	--	236	9.83	--		10
1,2,4-Trimethylbenzene	146	2.00	--	718	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	78		60-140
chlorobenzene-d5	91		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-03 D2  
 Client ID: AEI SV3  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 09:34  
 Analyst: RY

Date Collected: 07/15/15 15:48  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	1280	3.33	--	8680	22.6	--		16.67

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-04 D  
 Client ID: AEI SV4  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 00:22  
 Analyst: RY

Date Collected: 07/16/15 10:05  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	ND	131.	--	ND	648	--		653.8
Chloromethane	ND	131.	--	ND	271	--		653.8
Freon-114	ND	131.	--	ND	916	--		653.8
Vinyl chloride	163	131	--	417	335	--		653.8
1,3-Butadiene	ND	131.	--	ND	290	--		653.8
Bromomethane	ND	131.	--	ND	509	--		653.8
Chloroethane	ND	131.	--	ND	346	--		653.8
Ethanol	ND	1630	--	ND	3070	--		653.8
Vinyl bromide	ND	131.	--	ND	573	--		653.8
Acetone	ND	654	--	ND	1550	--		653.8
Trichlorofluoromethane	ND	131.	--	ND	736	--		653.8
Isopropanol	ND	327.	--	ND	804	--		653.8
1,1-Dichloroethene	ND	131.	--	ND	519	--		653.8
Tertiary butyl Alcohol	ND	327.	--	ND	991	--		653.8
Methylene chloride	ND	327	--	ND	1140	--		653.8
3-Chloropropene	ND	131.	--	ND	410	--		653.8
Carbon disulfide	ND	131.	--	ND	408	--		653.8
Freon-113	ND	131.	--	ND	1000	--		653.8
trans-1,2-Dichloroethene	276	131	--	1090	519	--		653.8
1,1-Dichloroethane	ND	131.	--	ND	530	--		653.8
Methyl tert butyl ether	ND	131.	--	ND	472	--		653.8
2-Butanone	ND	327.	--	ND	964	--		653.8
cis-1,2-Dichloroethene	30200	131	--	120000	519	--		653.8
Ethyl Acetate	ND	327	--	ND	1180	--		653.8



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-04 D  
 Client ID: AEI SV4  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/16/15 10:05  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	131.	--	ND	640	--		653.8
Tetrahydrofuran	ND	327.	--	ND	964	--		653.8
1,2-Dichloroethane	ND	131.	--	ND	530	--		653.8
n-Hexane	ND	131.	--	ND	462	--		653.8
1,1,1-Trichloroethane	ND	131.	--	ND	715	--		653.8
Benzene	ND	131.	--	ND	419	--		653.8
Carbon tetrachloride	ND	131.	--	ND	824	--		653.8
Cyclohexane	ND	131.	--	ND	451	--		653.8
1,2-Dichloropropane	ND	131.	--	ND	605	--		653.8
Bromodichloromethane	ND	131.	--	ND	878	--		653.8
1,4-Dioxane	ND	131.	--	ND	472	--		653.8
Trichloroethene	7040	131	--	37800	704	--		653.8
2,2,4-Trimethylpentane	ND	131.	--	ND	612	--		653.8
Heptane	ND	131.	--	ND	537	--		653.8
cis-1,3-Dichloropropene	ND	131.	--	ND	595	--		653.8
4-Methyl-2-pentanone	ND	327.	--	ND	1340	--		653.8
trans-1,3-Dichloropropene	ND	131.	--	ND	595	--		653.8
1,1,2-Trichloroethane	ND	131.	--	ND	715	--		653.8
Toluene	ND	131.	--	ND	494	--		653.8
2-Hexanone	ND	131.	--	ND	537	--		653.8
Dibromochloromethane	ND	131.	--	ND	1120	--		653.8
1,2-Dibromoethane	ND	131.	--	ND	1010	--		653.8
Tetrachloroethene	125000	131	--	848000	888	--	E	653.8
Chlorobenzene	ND	131.	--	ND	603	--		653.8
Ethylbenzene	ND	131.	--	ND	569	--		653.8
p/m-Xylene	ND	262	--	ND	1140	--		653.8
Bromoform	ND	131.	--	ND	1350	--		653.8
Styrene	ND	131.	--	ND	558	--		653.8



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-04 D  
 Client ID: AEI SV4  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/16/15 10:05  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	131.	--	ND	900	--		653.8
o-Xylene	ND	131.	--	ND	569	--		653.8
4-Ethyltoluene	ND	131.	--	ND	644	--		653.8
1,3,5-Trimethylbenzene	ND	131.	--	ND	644	--		653.8
1,2,4-Trimethylbenzene	ND	131.	--	ND	644	--		653.8
Benzyl chloride	ND	131.	--	ND	678	--		653.8
1,3-Dichlorobenzene	ND	131.	--	ND	788	--		653.8
1,4-Dichlorobenzene	ND	131.	--	ND	788	--		653.8
1,2-Dichlorobenzene	ND	131.	--	ND	788	--		653.8
1,2,4-Trichlorobenzene	ND	131.	--	ND	972	--		653.8
Hexachlorobutadiene	ND	131.	--	ND	1400	--		653.8

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	96		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-04 D2  
 Client ID: AEI SV4  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 11:41  
 Analyst: RY

Date Collected: 07/16/15 10:05  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	118000	436	--	800000	2960	--		2180

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	98		60-140



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### SAMPLE RESULTS

Lab ID: L1516477-05 D  
 Client ID: AEI SV5  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 01:26  
 Analyst: RY

Date Collected: 07/16/15 10:24  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	330.	--	ND	1630	--		1651
Chloromethane	ND	330.	--	ND	681	--		1651
Freon-114	ND	330.	--	ND	2310	--		1651
Vinyl chloride	1360	330	--	3480	844	--		1651
1,3-Butadiene	ND	330.	--	ND	730	--		1651
Bromomethane	ND	330.	--	ND	1280	--		1651
Chloroethane	ND	330.	--	ND	871	--		1651
Ethanol	ND	4130	--	ND	7780	--		1651
Vinyl bromide	ND	330.	--	ND	1440	--		1651
Acetone	ND	1650	--	ND	3920	--		1651
Trichlorofluoromethane	ND	330.	--	ND	1850	--		1651
Isopropanol	ND	826.	--	ND	2030	--		1651
1,1-Dichloroethene	ND	330	--	ND	1310	--		1651
Tertiary butyl Alcohol	ND	826.	--	ND	2500	--		1651
Methylene chloride	ND	826	--	ND	2870	--		1651
3-Chloropropene	ND	330.	--	ND	1030	--		1651
Carbon disulfide	ND	330.	--	ND	1030	--		1651
Freon-113	ND	330.	--	ND	2530	--		1651
trans-1,2-Dichloroethene	1760	330	--	6980	1310	--		1651
1,1-Dichloroethane	ND	330.	--	ND	1340	--		1651
Methyl tert butyl ether	ND	330.	--	ND	1190	--		1651
2-Butanone	ND	826.	--	ND	2440	--		1651
cis-1,2-Dichloroethene	276000	330	--	1090000	1310	--	E	1651
Ethyl Acetate	ND	826.	--	ND	2980	--		1651



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

### SAMPLE RESULTS

Lab ID: L1516477-05 D  
 Client ID: AEI SV5  
 Sample Location: 180 E PARK AVE LONG BEACH

Date Collected: 07/16/15 10:24  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	330.	--	ND	1610	--		1651
Tetrahydrofuran	ND	826.	--	ND	2440	--		1651
1,2-Dichloroethane	ND	330.	--	ND	1340	--		1651
n-Hexane	ND	330.	--	ND	1160	--		1651
1,1,1-Trichloroethane	ND	330.	--	ND	1800	--		1651
Benzene	ND	330.	--	ND	1050	--		1651
Carbon tetrachloride	ND	330.	--	ND	2080	--		1651
Cyclohexane	ND	330.	--	ND	1140	--		1651
1,2-Dichloropropane	ND	330.	--	ND	1530	--		1651
Bromodichloromethane	ND	330.	--	ND	2210	--		1651
1,4-Dioxane	ND	330.	--	ND	1190	--		1651
Trichloroethene	61500	330	--	331000	1770	--		1651
2,2,4-Trimethylpentane	ND	330.	--	ND	1540	--		1651
Heptane	ND	330.	--	ND	1350	--		1651
cis-1,3-Dichloropropene	ND	330.	--	ND	1500	--		1651
4-Methyl-2-pentanone	ND	826.	--	ND	3390	--		1651
trans-1,3-Dichloropropene	ND	330.	--	ND	1500	--		1651
1,1,2-Trichloroethane	ND	330.	--	ND	1800	--		1651
Toluene	ND	330.	--	ND	1240	--		1651
2-Hexanone	ND	330.	--	ND	1350	--		1651
Dibromochloromethane	ND	330.	--	ND	2810	--		1651
1,2-Dibromoethane	ND	330.	--	ND	2540	--		1651
Tetrachloroethene	580000	330	--	3930000	2240	--	E	1651
Chlorobenzene	ND	330.	--	ND	1520	--		1651
Ethylbenzene	ND	330.	--	ND	1430	--		1651
p/m-Xylene	ND	660.	--	ND	2870	--		1651
Bromoform	ND	330.	--	ND	3410	--		1651
Styrene	ND	330.	--	ND	1410	--		1651





**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-05 D

Date Collected: 07/16/15 10:24

Client ID: AEI SV5

Date Received: 07/16/15

Sample Location: 180 E PARK AVE LONG BEACH

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	330.	--	ND	2270	--		1651
o-Xylene	ND	330.	--	ND	1430	--		1651
4-Ethyltoluene	ND	330.	--	ND	1620	--		1651
1,3,5-Trimethylbenzene	ND	330.	--	ND	1620	--		1651
1,2,4-Trimethylbenzene	ND	330.	--	ND	1620	--		1651
Benzyl chloride	ND	330.	--	ND	1710	--		1651
1,3-Dichlorobenzene	ND	330.	--	ND	1980	--		1651
1,4-Dichlorobenzene	ND	330.	--	ND	1980	--		1651
1,2-Dichlorobenzene	ND	330.	--	ND	1980	--		1651
1,2,4-Trichlorobenzene	ND	330.	--	ND	2450	--		1651
Hexachlorobutadiene	ND	330.	--	ND	3520	--		1651

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	97		60-140



**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**SAMPLE RESULTS**

Lab ID: L1516477-05 D2  
 Client ID: AEI SV5  
 Sample Location: 180 E PARK AVE LONG BEACH  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/23/15 11:09  
 Analyst: RY

Date Collected: 07/16/15 10:24  
 Date Received: 07/16/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	235000	1650	--	932000	6540	--		8251
Tetrachloroethene	700000	1650	--	4750000	11200	--		8251

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	95		60-140



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 07/22/15 14:53

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG805076-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	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	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		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
1,1,2-Trichloro-1,2,2-Trifluoroethane	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



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 07/22/15 14:53

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG805076-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		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
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
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
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
Tetrachloroethene	ND	0.200	--	ND	1.36	--		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



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 07/22/15 14:53

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG805076-4								
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
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		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
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG805076-3								
Dichlorodifluoromethane	91		-		70-130	-		
Chloromethane	91		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	96		-		70-130	-		
Vinyl chloride	92		-		70-130	-		
1,3-Butadiene	98		-		70-130	-		
Bromomethane	90		-		70-130	-		
Chloroethane	88		-		70-130	-		
Ethyl Alcohol	88		-		70-130	-		
Vinyl bromide	92		-		70-130	-		
Acetone	94		-		70-130	-		
Trichlorofluoromethane	95		-		70-130	-		
iso-Propyl Alcohol	96		-		70-130	-		
1,1-Dichloroethene	91		-		70-130	-		
tert-Butyl Alcohol	88		-		70-130	-		
Methylene chloride	92		-		70-130	-		
3-Chloropropene	96		-		70-130	-		
Carbon disulfide	90		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	96		-		70-130	-		
trans-1,2-Dichloroethene	87		-		70-130	-		
1,1-Dichloroethane	90		-		70-130	-		
Methyl tert butyl ether	93		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NU-CLEAR CLEANERS

**Lab Number:** L1516477

**Project Number:** 341998

**Report Date:** 07/23/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG805076-3								
2-Butanone	93		-		70-130	-		
cis-1,2-Dichloroethene	103		-		70-130	-		
Ethyl Acetate	93		-		70-130	-		
Chloroform	96		-		70-130	-		
Tetrahydrofuran	86		-		70-130	-		
1,2-Dichloroethane	92		-		70-130	-		
n-Hexane	89		-		70-130	-		
1,1,1-Trichloroethane	95		-		70-130	-		
Benzene	89		-		70-130	-		
Carbon tetrachloride	99		-		70-130	-		
Cyclohexane	92		-		70-130	-		
1,2-Dichloropropane	93		-		70-130	-		
Bromodichloromethane	95		-		70-130	-		
1,4-Dioxane	92		-		70-130	-		
Trichloroethene	93		-		70-130	-		
2,2,4-Trimethylpentane	90		-		70-130	-		
Heptane	87		-		70-130	-		
cis-1,3-Dichloropropene	100		-		70-130	-		
4-Methyl-2-pentanone	92		-		70-130	-		
trans-1,3-Dichloropropene	86		-		70-130	-		
1,1,2-Trichloroethane	95		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG805076-3								
Toluene	91		-		70-130	-		
2-Hexanone	93		-		70-130	-		
Dibromochloromethane	98		-		70-130	-		
1,2-Dibromoethane	97		-		70-130	-		
Tetrachloroethene	95		-		70-130	-		
Chlorobenzene	94		-		70-130	-		
Ethylbenzene	93		-		70-130	-		
p/m-Xylene	94		-		70-130	-		
Bromoform	100		-		70-130	-		
Styrene	94		-		70-130	-		
1,1,2,2-Tetrachloroethane	98		-		70-130	-		
o-Xylene	96		-		70-130	-		
4-Ethyltoluene	88		-		70-130	-		
1,3,5-Trimethylbenzene	93		-		70-130	-		
1,2,4-Trimethylbenzene	94		-		70-130	-		
Benzyl chloride	100		-		70-130	-		
1,3-Dichlorobenzene	99		-		70-130	-		
1,4-Dichlorobenzene	98		-		70-130	-		
1,2-Dichlorobenzene	100		-		70-130	-		
1,2,4-Trichlorobenzene	115		-		70-130	-		
Hexachlorobutadiene	112		-		70-130	-		



## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Project Number: 341998

Lab Number: L1516477

Report Date: 07/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG805076-5 QC Sample: L1516477-01 Client ID: AEI SV1						
Dichlorodifluoromethane	ND	ND	ppbV	NC		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	8.81	7.67	ppbV	14		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	918	820	ppbV	11		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	74.9	67.4	ppbV	11		25
Trichlorofluoromethane	ND	ND	ppbV	NC		25
iso-Propyl Alcohol	74.1	66.1	ppbV	11		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	18.4	16.5	ppbV	11		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	3.10	2.86	ppbV	8		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Project Number: 341998

Lab Number: L1516477

Report Date: 07/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG805076-5 QC Sample: L1516477-01 Client ID: AEI SV1					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
2-Butanone	10.5	9.30	ppbV	12	25
cis-1,2-Dichloroethene	1.03	0.900	ppbV	13	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	2.96	2.91	ppbV	2	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	1.61	1.70	ppbV	5	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	1.68	1.65	ppbV	2	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	4.65	4.76	ppbV	2	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	1.54	1.63	ppbV	6	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Project Number: 341998

Lab Number: L1516477

Report Date: 07/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG805076-5 QC Sample: L1516477-01 Client ID: AEI SV1					
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	2.51	2.49	ppbV	1	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	1.83	1.83	ppbV	0	25
2-Hexanone	0.786	0.856	ppbV	9	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	164	165	ppbV	1	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	1.67	1.74	ppbV	4	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	0.936	0.943	ppbV	1	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.806	0.823	ppbV	2	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Project Number: 341998

Lab Number: L1516477

Report Date: 07/23/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG805076-5 QC Sample: L1516477-01 Client ID: AEI SV1					
Benzyl chloride	ND	ND	ppbV	NC	25
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: NU-CLEAR CLEANERS

Serial\_No:07231514:28  
Lab Number: L1516477

Project Number: 341998

Report Date: 07/23/15

### 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
L1516477-01	AEI SV1	0596	SV200	07/14/15	206582		-	-	-	Pass	220	215	2
L1516477-01	AEI SV1	1066	2.7L Can	07/14/15	206582	L1515395-01	Pass	-28.8	-3.8	-	-	-	-
L1516477-02	AEI SV2	0669	SV200	07/14/15	206582		-	-	-	Pass	216	219	1
L1516477-02	AEI SV2	468	2.7L Can	07/14/15	206582	L1515395-01	Pass	-29.4	-4.1	-	-	-	-
L1516477-03	AEI SV3	0605	SV200	07/14/15	206582		-	-	-	Pass	217	218	0
L1516477-03	AEI SV3	232	2.7L Can	07/14/15	206582	L1515395-01	Pass	-28.1	-4.3	-	-	-	-
L1516477-04	AEI SV4	0523	SV200	07/14/15	206582		-	-	-	Pass	220	213	3
L1516477-04	AEI SV4	2081	2.7L Can	07/14/15	206582	L1515395-01	Pass	-29.3	-4.4	-	-	-	-
L1516477-05	AEI SV5	0599	SV200	07/14/15	206582		-	-	-	Pass	215	212	1
L1516477-05	AEI SV5	2025	2.7L Can	07/14/15	206582	L1515395-01	Pass	-29.5	-4.4	-	-	-	-

**Project Name:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/07/15 17:19  
 Analyst: MB

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 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
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	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
iso-Propyl Alcohol	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
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1

**Project Name:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 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
1,1,2-Trichloro-1,2,2-Trifluoroethane	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
Vinyl acetate	ND	1.00	--	ND	3.52	--		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
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-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
Tertiary-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



**Project Name:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
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 (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1





**Project Name:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-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 (C10)	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 (C12)	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



Project Name:

Lab Number: L1515395

Project Number: CANISTER QC BAT

Report Date: 07/23/15

**Air Canister Certification Results**

Lab ID: L1515395-01

Date Collected: 07/06/15 18:00

Client ID: CAN 507 SHELF 7

Date Received: 07/07/15

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								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	101		60-140
chlorobenzene-d5	99		60-140

**Project Name:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/07/15 17:19  
 Analyst: MB

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 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
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	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	0.200	--	ND	0.721	--		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:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01  
 Client ID: CAN 507 SHELF 7  
 Sample Location:

Date Collected: 07/06/15 18:00  
 Date Received: 07/07/15  
 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:**  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1515395  
**Report Date:** 07/23/15

### Air Canister Certification Results

Lab ID: L1515395-01 Date Collected: 07/06/15 18:00  
 Client ID: CAN 507 SHELF 7 Date Received: 07/07/15  
 Sample Location: 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	89		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	91		60-140

**Project Name:** NU-CLEAR CLEANERS**Lab Number:** L1516477**Project Number:** 341998**Report Date:** 07/23/15**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(*)
L1516477-01A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1516477-02A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1516477-03A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1516477-04A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1516477-05A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)

\*Values in parentheses indicate holding time in days

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

## 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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.

Report Format: Data Usability Report



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

#### **Data Qualifiers**

- 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.
- 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:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516477  
**Report Date:** 07/23/15

## 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, NO<sub>2</sub>, NO<sub>3</sub>.

**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

CHAIN OF CUSTODY

PAGE 1 OF 1

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

**Client Information**

Client: AEI Consultants  
 Address: 20 Gibson Place  
Freehold NJ 07728  
 Phone: 732-414-2720  
 Fax: 732-414-2721  
 Email: jbernarducci@AEIconsultants.com

**Project Information**

Project Name: Nu-clear Cleaners  
 Project Location: 160 E Park ave Long Beach NY  
 Project #: 341998  
 Project Manager:  
 ALPHA Quote #:

Date Rec'd in Lab: 7/16/15

**Report Information - Data Deliverables**

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

ALPHA Job #: L1516477

**Billing Information**

Same as Client info PO #: 89245

**Regulatory Requirements/Report Limits**

State/Fed	Program	Criteria

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS						Sample Comments (i.e. PID)	
		Date	Start Time	End Time	Initial Vacuum						Final Vacuum	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES		TO-13A
16477-01	AEI SV1	7/15/15	1303	1315	-28.8	-3.89	SV	Q	2.7	1066	0596	X						
-02	AEI SV2	7/15/15	1545	1557	-29.4	-3.48	SV	Q	2.7	468	0669	X						
-03	AEI SV3	7/15/15	1537	1548	-28.1	-3.65	SV	Q	2.7	232	0605	X						
-04	AEI SV4	7/16/15	0954	1005	-29.3	-3.72	SV	Q	2.7	2081	0523	X						
-05	AEI SV5	7/16/15	1013	1024	-29.5	-3.69	SV	Q	2.7	2025	0599	X						

**\*SAMPLE MATRIX CODES**

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

Container Type

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

Tom  
Tom  
Tom

7/16/15 17:30  
 7/16/15 2000  
 7-17-15 0230

Michelle AAL  
 Tom  
 Betty Bedard

7/16/15 17:30  
 7-16-15 1900  
 7-17-15 0230



## ANALYTICAL REPORT

Lab Number:	L1516654
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU-CLEAR CLEANERS
Project Number:	341998
Report Date:	07/24/15

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1516654-01	AEI MW3 (8-12)	WATER	180 E PARK AVE., LONG BEACH, NY	07/17/15 10:15	07/17/15
L1516654-02	AEI MW3 (12-16)	WATER	180 E PARK AVE., LONG BEACH, NY	07/17/15 10:30	07/17/15
L1516654-03	AEI MW3 (16-20)	WATER	180 E PARK AVE., LONG BEACH, NY	07/17/15 10:45	07/17/15
L1516654-04	AEI MW3 (26-30)	WATER	180 E PARK AVE., LONG BEACH, NY	07/17/15 11:00	07/17/15

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

### 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.

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**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

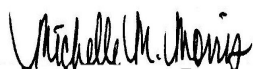
**Case Narrative (continued)**

Report Submission

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

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:



Michelle M. Morris

Title: Technical Director/Representative

Date: 07/24/15

# ORGANICS



# VOLATILES

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-01  
**Client ID:** AEI MW3 (8-12)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/22/15 13:30  
**Analyst:** PD

**Date Collected:** 07/17/15 10:15  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	30		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	4.5		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

## SAMPLE RESULTS

Lab ID: L1516654-01  
 Client ID: AEI MW3 (8-12)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/17/15 10:15  
 Date Received: 07/17/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-01  
**Client ID:** AEI MW3 (8-12)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/17/15 10:15  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Tentatively Identified Compounds						
No Tentatively Identified Compounds	ND		ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	80		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	108		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-02  
**Client ID:** AEI MW3 (12-16)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/22/15 13:58  
**Analyst:** PD

**Date Collected:** 07/17/15 10:30  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	7.4		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.28	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	2.3		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

## SAMPLE RESULTS

Lab ID: L1516654-02

Date Collected: 07/17/15 10:30

Client ID: AEI MW3 (12-16)

Date Received: 07/17/15

Sample Location: 180 E PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	0.76	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.76	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-02  
**Client ID:** AEI MW3 (12-16)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/17/15 10:30  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	5.2	J	ug/l			1
Unknown	5.2	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	81		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	109		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-03  
**Client ID:** AEI MW3 (16-20)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/22/15 14:26  
**Analyst:** PD

**Date Collected:** 07/17/15 10:45  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.19	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

## SAMPLE RESULTS

Lab ID: L1516654-03  
 Client ID: AEI MW3 (16-20)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/17/15 10:45  
 Date Received: 07/17/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	1.2	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-03  
**Client ID:** AEI MW3 (16-20)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/17/15 10:45  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	7.6	J	ug/l		1
Sulfur Dioxide	4.2	NJ	ug/l		1
Unknown	3.4	J	ug/l		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	81		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	107		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-04  
**Client ID:** AEI MW3 (26-30)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/22/15 14:53  
**Analyst:** PD

**Date Collected:** 07/17/15 11:00  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	7.4		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

## SAMPLE RESULTS

Lab ID: L1516654-04  
 Client ID: AEI MW3 (26-30)  
 Sample Location: 180 E PARK AVE., LONG BEACH, NY

Date Collected: 07/17/15 11:00  
 Date Received: 07/17/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	1.1	J	ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	0.95	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.95	J	ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	2.1	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**SAMPLE RESULTS**

**Lab ID:** L1516654-04  
**Client ID:** AEI MW3 (26-30)  
**Sample Location:** 180 E PARK AVE., LONG BEACH, NY

**Date Collected:** 07/17/15 11:00  
**Date Received:** 07/17/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatiles Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

Total TIC Compounds	12	J	ug/l		1
Propene	2.2	NJ	ug/l		1
Sulfur Dioxide	4.0	NJ	ug/l		1
Unknown	2.3	J	ug/l		1
Unknown	1.9	J	ug/l		1
Unknown	1.6	J	ug/l		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	80		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	107		70-130

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 11:10  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG805029-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 11:10  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG805029-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/22/15 11:10  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG805029-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l



Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/22/15 11:10  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG805029-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	80		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	104		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG805029-1 WG805029-2								
Methylene chloride	117		106		70-130	10		20
1,1-Dichloroethane	100		90		70-130	11		20
Chloroform	102		93		70-130	9		20
Carbon tetrachloride	108		102		63-132	6		20
1,2-Dichloropropane	99		90		70-130	10		20
Dibromochloromethane	112		104		63-130	7		20
1,1,2-Trichloroethane	101		93		70-130	8		20
Tetrachloroethene	112		103		70-130	8		20
Chlorobenzene	104		95		75-130	9		20
Trichlorofluoromethane	72		68		62-150	6		20
1,2-Dichloroethane	86		78		70-130	10		20
1,1,1-Trichloroethane	100		94		67-130	6		20
Bromodichloromethane	100		90		67-130	11		20
trans-1,3-Dichloropropene	94		88		70-130	7		20
cis-1,3-Dichloropropene	106		96		70-130	10		20
1,1-Dichloropropene	96		89		70-130	8		20
Bromoform	105		96		54-136	9		20
1,1,2,2-Tetrachloroethane	93		85		67-130	9		20
Benzene	105		95		70-130	10		20
Toluene	102		91		70-130	11		20
Ethylbenzene	94		86		70-130	9		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG805029-1 WG805029-2								
Chloromethane	76		69		64-130	10		20
Bromomethane	40		38	Q	39-139	5		20
Vinyl chloride	73		67		55-140	9		20
Chloroethane	50	Q	48	Q	55-138	4		20
1,1-Dichloroethene	112		104		61-145	7		20
trans-1,2-Dichloroethene	113		105		70-130	7		20
Trichloroethene	107		98		70-130	9		20
1,2-Dichlorobenzene	97		88		70-130	10		20
1,3-Dichlorobenzene	97		87		70-130	11		20
1,4-Dichlorobenzene	96		87		70-130	10		20
Methyl tert butyl ether	115		105		63-130	9		20
p/m-Xylene	101		93		70-130	8		20
o-Xylene	101		91		70-130	10		20
cis-1,2-Dichloroethene	114		104		70-130	9		20
Dibromomethane	107		99		70-130	8		20
1,2,3-Trichloropropane	84		78		64-130	7		20
Acrylonitrile	105		97		70-130	8		20
Styrene	96		89		70-130	8		20
Dichlorodifluoromethane	90		84		36-147	7		20
Acetone	98		84		58-148	15		20
Carbon disulfide	115		101		51-130	13		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG805029-1 WG805029-2								
2-Butanone	87		81		63-138	7		20
Vinyl acetate	70		63	Q	70-130	11		20
4-Methyl-2-pentanone	98		90		59-130	9		20
2-Hexanone	74		68		57-130	8		20
Bromochloromethane	130		119		70-130	9		20
2,2-Dichloropropane	109		99		63-133	10		20
1,2-Dibromoethane	107		101		70-130	6		20
1,3-Dichloropropane	94		88		70-130	7		20
1,1,1,2-Tetrachloroethane	107		99		64-130	8		20
Bromobenzene	107		96		70-130	11		20
n-Butylbenzene	84		73		53-136	14		20
sec-Butylbenzene	90		80		70-130	12		20
tert-Butylbenzene	95		84		70-130	12		20
o-Chlorotoluene	91		78		70-130	15		20
p-Chlorotoluene	89		79		70-130	12		20
1,2-Dibromo-3-chloropropane	74		71		41-144	4		20
Hexachlorobutadiene	101		96		63-130	5		20
Isopropylbenzene	96		84		70-130	13		20
p-Isopropyltoluene	97		84		70-130	14		20
Naphthalene	92		100		70-130	8		20
n-Propylbenzene	89		78		69-130	13		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG805029-1 WG805029-2								
1,2,3-Trichlorobenzene	88		97		70-130	10		20
1,2,4-Trichlorobenzene	91		91		70-130	0		20
1,3,5-Trimethylbenzene	94		82		64-130	14		20
1,2,4-Trimethylbenzene	93		82		70-130	13		20
1,4-Dioxane	152		122		56-162	22	Q	20
p-Diethylbenzene	95		83		70-130	13		20
p-Ethyltoluene	96		84		70-130	13		20
1,2,4,5-Tetramethylbenzene	93		82		70-130	13		20
Ethyl ether	74		62		59-134	18		20
trans-1,4-Dichloro-2-butene	72		67	Q	70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	78		78		70-130
Toluene-d8	96		96		70-130
4-Bromofluorobenzene	96		95		70-130
Dibromofluoromethane	104		105		70-130

Project Name: NU-CLEAR CLEANERS

Lab Number: L1516654

Project Number: 341998

Report Date: 07/24/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1516654-01A	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-01B	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-01C	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-02A	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-02B	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-02C	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-03A	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-03B	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-03C	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-04A	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-04B	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)
L1516654-04C	Vial HCl preserved	A	N/A	2.7	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

## 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.



**Project Name:** NU-CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1516654  
**Report Date:** 07/24/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## 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, NO<sub>2</sub>, NO<sub>3</sub>.

**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.

 <b>ALPHA</b> <small>LABORATORIAL</small>	<b>NEW JERSEY</b> <b>CHAIN OF</b> <b>CUSTODY</b>	<b>Service Centers</b> 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 1	Date Rec'd in Lab <b>7/17/15</b>	ALPHA Job # <b>L1516654</b>				
		Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	<b>Project Information</b>		<b>Deliverables</b>		<b>Billing Information</b>		
<b>Client Information</b>		Project Name: <b>Nu Clear Cleaners</b> Project Location: <b>180 E Park Ave Long Beach NY</b> Project # <b>341948</b> (Use Project name as Project #) <input type="checkbox"/>		<input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<input type="checkbox"/> Same as Client Info PO #				
Client: <b>AEI</b> Address: <b>20 Gibson Place</b> <b>Freehold NJ</b> Phone: <b>732-414-2720</b> Fax: <b>732-414-2721</b> Email: <b>jbernarducci@zeiconsultants.com</b>		Project Manager: <b>Joe Bernarducci</b> ALPHAQuote #:		<b>Regulatory Requirement</b>		<b>Site Information</b>				
		<b>Turn-Around Time</b>		<input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input checked="" type="checkbox"/> Other <b>NYSDEC</b>		Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:				
		Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<b>ANALYSIS</b>		<b>Sample Filtration</b>				
These samples have been previously analyzed by Alpha <input type="checkbox"/>		For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		<input type="checkbox"/> Done <input type="checkbox"/> Lab to do <b>Preservation</b> <input type="checkbox"/> Lab to do (Please Specify below)				
		Other project specific requirements/comments: <b>Include TICs</b> Please specify Metals or TAL.		VOCs <b>4080</b>		Total Bottles				
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date    Time		Sample Matrix	Sampler's Initials	Sample Specific Comments				
16654 - 01	AEI MW3 (8-12)	7/17/15	1015	G Water	JN	X				
02	AEI MW3 (12-16)	7/17/15	1030	G Water	JN	X				
03	AEI MW3 (16-20)	7/17/15	1045	G Water	JN	X				
04	AEI MW3 (26-30)	7/17/15	1100	G Water	JN	X				
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type <b>A</b>				
				Preservative <b>B</b>		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.)				
		Relinquished By:		Date/Time			Received By:		Date/Time	
		[Signature]		7/17/15 1815			[Signature] AAL		7/17/15 1815	
		[Signature]		7/17/15 1920		[Signature]		7/17/15 1920		
		[Signature]		7/17/15 2335		[Signature]		7/17/15 2335		



## ANALYTICAL REPORT

Lab Number:	L1517198
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Joseph Bernarducci
Phone:	(732) 414-2720
Project Name:	NU CLEAR CLEANERS
Project Number:	341998
Report Date:	08/03/15

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: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1517198-01	AEI MW 2	WATER	180 E. PARK AVE., LONG BEACH, NY	07/22/15 11:10	07/23/15
L1517198-02	AEI MW 3	WATER	180 E. PARK AVE., LONG BEACH, NY	07/22/15 12:20	07/23/15
L1517198-03	AEI MW 1	WATER	180 E. PARK AVE., LONG BEACH, NY	07/23/15 13:20	07/23/15
L1517198-04	DUP 1	WATER	180 E. PARK AVE., LONG BEACH, NY	07/23/15 13:27	07/23/15
L1517198-05	AEI DW (5.5-6)	SOIL	180 E. PARK AVE., LONG BEACH, NY	07/23/15 13:56	07/23/15
L1517198-06	DUP 1	SOIL	180 E. PARK AVE., LONG BEACH, NY	07/23/15 14:00	07/23/15
L1517198-09	TRIP BLANK	WATER	180 E. PARK AVE., LONG BEACH, NY	07/22/15 00:00	07/23/15

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

### 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.

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**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

### Case Narrative (continued)

#### Report Submission

At the client's request, an MS/MSD was performed on L1517198-03 and -05.

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

#### Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody. At the client's request, the Trip Blank was analyzed.

#### Volatile Organics

L1517198-03 and -04: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

The WG808391-4/-5 MS/MSD recoveries, performed on L1517198-05, are outside the acceptance criteria for tetrachloroethene (0%/0%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

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:

 Cristin Walker

Title: Technical Director/Representative

Date: 08/03/15

# ORGANICS



# VOLATILES

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

**Lab ID:** L1517198-01  
**Client ID:** AEI MW 2  
**Sample Location:** 180 E. PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/30/15 22:35  
**Analyst:** MS

**Date Collected:** 07/22/15 11:10  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.5		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.16	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	8.3		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	3.4		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-01

Date Collected: 07/22/15 11:10

Client ID: AEI MW 2

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	29		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	29		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

Lab ID: L1517198-01

Date Collected: 07/22/15 11:10

Client ID: AEI MW 2

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

No Tentatively Identified Compounds	ND	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	98		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

**Lab ID:** L1517198-02  
**Client ID:** AEI MW 3  
**Sample Location:** 180 E. PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/30/15 23:11  
**Analyst:** MS

**Date Collected:** 07/22/15 12:20  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.17	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-02

Date Collected: 07/22/15 12:20

Client ID: AEI MW 3

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-02

Date Collected: 07/22/15 12:20

Client ID: AEI MW 3

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

Lab ID: L1517198-03 D  
 Client ID: AEI MW 1  
 Sample Location: 180 E. PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 07/31/15 00:24  
 Analyst: MS

Date Collected: 07/23/15 13:20  
 Date Received: 07/23/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.3	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
1,1-Dichloropropene	ND		ug/l	25	7.0	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.4	10
Benzene	2.7	J	ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	39		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	56		ug/l	10	0.70	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.4	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10



Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-03 D

Date Collected: 07/23/15 13:20

Client ID: AEI MW 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	19	J	ug/l	25	7.0	10
o-Xylene	ND		ug/l	25	7.0	10
Xylenes, Total	19	J	ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
1,2-Dichloroethene, Total	ND		ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	20	J	ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	74		ug/l	25	7.0	10
n-Propylbenzene	8.3	J	ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-03 D

Date Collected: 07/23/15 13:20

Client ID: AEI MW 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	9.1	J	ug/l	25	7.0	10
1,4-Dioxane	ND		ug/l	2500	410	10
p-Diethylbenzene	ND		ug/l	20	7.0	10
p-Ethyltoluene	ND		ug/l	20	7.0	10
1,2,4,5-Tetramethylbenzene	7.6	J	ug/l	20	6.5	10
Ethyl ether	ND		ug/l	25	7.0	10
trans-1,4-Dichloro-2-butene	ND		ug/l	25	7.0	10

## Tentatively Identified Compounds

Total TIC Compounds	73	J	ug/l			10
Unknown	32	J	ug/l			10
Unknown Benzene	10	J	ug/l			10
Unknown Aromatic	15	J	ug/l			10
Unknown Aromatic	16	J	ug/l			10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	100		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

Lab ID: L1517198-04 D  
 Client ID: DUP 1  
 Sample Location: 180 E. PARK AVE., LONG BEACH, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 07/30/15 23:47  
 Analyst: MS

Date Collected: 07/23/15 13:27  
 Date Received: 07/23/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.3	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
1,1-Dichloropropene	ND		ug/l	25	7.0	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.4	10
Benzene	2.5	J	ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	42		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	57		ug/l	10	0.70	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.4	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-04 D

Date Collected: 07/23/15 13:27

Client ID: DUP 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	21	J	ug/l	25	7.0	10
o-Xylene	ND		ug/l	25	7.0	10
Xylenes, Total	21	J	ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
1,2-Dichloroethene, Total	ND		ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	17	J	ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	71		ug/l	25	7.0	10
n-Propylbenzene	9.7	J	ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-04 D

Date Collected: 07/23/15 13:27

Client ID: DUP 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	11	J	ug/l	25	7.0	10
1,4-Dioxane	ND		ug/l	2500	410	10
p-Diethylbenzene	ND		ug/l	20	7.0	10
p-Ethyltoluene	ND		ug/l	20	7.0	10
1,2,4,5-Tetramethylbenzene	9.2	J	ug/l	20	6.5	10
Ethyl ether	ND		ug/l	25	7.0	10
trans-1,4-Dichloro-2-butene	ND		ug/l	25	7.0	10

## Tentatively Identified Compounds

Total TIC Compounds	120	J	ug/l			10
Indane	36	NJ	ug/l			10
Unknown Benzene	13	J	ug/l			10
Unknown Aromatic	18	J	ug/l			10
Unknown 1H-Indene	12	J	ug/l			10
Unknown Benzene	11	J	ug/l			10
Unknown Aromatic	19	J	ug/l			10
Unknown Naphthalene	11	J	ug/l			10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	102		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

**Lab ID:** L1517198-05  
**Client ID:** AEI DW (5.5-6)  
**Sample Location:** 180 E. PARK AVE., LONG BEACH, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8260C  
**Analytical Date:** 08/01/15 12:55  
**Analyst:** BN  
**Percent Solids:** 78%

**Date Collected:** 07/23/15 13:56  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	740	81.	1
1,1-Dichloroethane	ND		ug/kg	110	6.3	1
Chloroform	ND		ug/kg	110	27.	1
Carbon tetrachloride	ND		ug/kg	74	15.	1
1,2-Dichloropropane	ND		ug/kg	260	17.	1
Dibromochloromethane	ND		ug/kg	74	11.	1
1,1,2-Trichloroethane	ND		ug/kg	110	22.	1
Tetrachloroethene	1000000	E	ug/kg	74	10.	1
Chlorobenzene	ND		ug/kg	74	26.	1
Trichlorofluoromethane	ND		ug/kg	370	28.	1
1,2-Dichloroethane	ND		ug/kg	74	8.3	1
1,1,1-Trichloroethane	ND		ug/kg	74	8.2	1
Bromodichloromethane	ND		ug/kg	74	13.	1
trans-1,3-Dichloropropene	ND		ug/kg	74	8.9	1
cis-1,3-Dichloropropene	ND		ug/kg	74	8.6	1
1,3-Dichloropropene, Total	ND		ug/kg	74	8.6	1
1,1-Dichloropropene	ND		ug/kg	370	10.	1
Bromoform	ND		ug/kg	290	17.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	74	7.4	1
Benzene	ND		ug/kg	74	8.7	1
Toluene	ND		ug/kg	110	14.	1
Ethylbenzene	ND		ug/kg	74	9.4	1
Chloromethane	ND		ug/kg	370	22.	1
Bromomethane	ND		ug/kg	150	25.	1
Vinyl chloride	800		ug/kg	150	8.6	1
Chloroethane	ND		ug/kg	150	23.	1
1,1-Dichloroethene	26	J	ug/kg	74	19.	1
trans-1,2-Dichloroethene	100	J	ug/kg	110	16.	1
Trichloroethene	16000		ug/kg	74	9.2	1
1,2-Dichlorobenzene	ND		ug/kg	370	11.	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-05

Date Collected: 07/23/15 13:56

Client ID: AEI DW (5.5-6)

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	370	9.9	1
1,4-Dichlorobenzene	ND		ug/kg	370	10.	1
Methyl tert butyl ether	ND		ug/kg	150	6.2	1
p/m-Xylene	ND		ug/kg	150	14.	1
o-Xylene	ND		ug/kg	150	13.	1
Xylenes, Total	ND		ug/kg	150	13.	1
cis-1,2-Dichloroethene	21000		ug/kg	74	10.	1
1,2-Dichloroethene, Total	21000	J	ug/kg	74	10.	1
Dibromomethane	ND		ug/kg	740	12.	1
Styrene	ND		ug/kg	150	30.	1
Dichlorodifluoromethane	ND		ug/kg	740	14.	1
Acetone	ND		ug/kg	740	76.	1
Carbon disulfide	ND		ug/kg	740	81.	1
2-Butanone	ND		ug/kg	740	20.	1
Vinyl acetate	ND		ug/kg	740	9.7	1
4-Methyl-2-pentanone	ND		ug/kg	740	18.	1
1,2,3-Trichloropropane	ND		ug/kg	740	12.	1
2-Hexanone	ND		ug/kg	740	49.	1
Bromochloromethane	ND		ug/kg	370	20.	1
2,2-Dichloropropane	ND		ug/kg	370	17.	1
1,2-Dibromoethane	ND		ug/kg	290	13.	1
1,3-Dichloropropane	ND		ug/kg	370	11.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	74	23.	1
Bromobenzene	ND		ug/kg	370	15.	1
n-Butylbenzene	ND		ug/kg	74	8.4	1
sec-Butylbenzene	ND		ug/kg	74	9.0	1
tert-Butylbenzene	ND		ug/kg	370	10.	1
o-Chlorotoluene	ND		ug/kg	370	12.	1
p-Chlorotoluene	ND		ug/kg	370	9.8	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	370	29.	1
Hexachlorobutadiene	ND		ug/kg	370	17.	1
Isopropylbenzene	ND		ug/kg	74	7.6	1
p-Isopropyltoluene	34	J	ug/kg	74	9.2	1
Naphthalene	59	J	ug/kg	370	10.	1
Acrylonitrile	ND		ug/kg	740	38.	1
n-Propylbenzene	37	J	ug/kg	74	8.0	1
1,2,3-Trichlorobenzene	ND		ug/kg	370	11.	1
1,2,4-Trichlorobenzene	ND		ug/kg	370	13.	1
1,3,5-Trimethylbenzene	42	J	ug/kg	370	10.	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-05

Date Collected: 07/23/15 13:56

Client ID: AEI DW (5.5-6)

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	80	J	ug/kg	370	10.	1
1,4-Dioxane	ND		ug/kg	7400	1100	1
p-Diethylbenzene	21	J	ug/kg	290	12.	1
p-Ethyltoluene	130	J	ug/kg	290	9.1	1
1,2,4,5-Tetramethylbenzene	17	J	ug/kg	290	9.6	1
Ethyl ether	ND		ug/kg	370	19.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	370	29.	1

## Tentatively Identified Compounds

Total TIC Compounds	2400	J	ug/kg			1
Unknown	140	J	ug/kg			1
Unknown Alkane	180	J	ug/kg			1
Unknown Naphthalene	180	J	ug/kg			1
Unknown Naphthalene	170	J	ug/kg			1
Unknown Naphthalene	200	J	ug/kg			1
Unknown Naphthalene	160	J	ug/kg			1
Unknown Naphthalene	260	J	ug/kg			1
Unknown Naphthalene	120	J	ug/kg			1
Unknown	580	J	ug/kg			1
Unknown	180	J	ug/kg			1
Fluorene	210	NJ	ug/kg			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	97		70-130



**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

**Lab ID:** L1517198-05 D  
**Client ID:** AEI DW (5.5-6)  
**Sample Location:** 180 E. PARK AVE., LONG BEACH, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8260C  
**Analytical Date:** 08/02/15 16:03  
**Analyst:** BN  
**Percent Solids:** 78%

**Date Collected:** 07/23/15 13:56  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab						
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Tetrachloroethene	2600000		ug/kg	37000	5200	500
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

Lab ID: L1517198-06 D  
 Client ID: DUP 1  
 Sample Location: 180 E. PARK AVE., LONG BEACH, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 08/02/15 16:30  
 Analyst: BN  
 Percent Solids: 72%

Date Collected: 07/23/15 14:00  
 Date Received: 07/23/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	9100	1000	10
1,1-Dichloroethane	ND		ug/kg	1400	78.	10
Chloroform	ND		ug/kg	1400	340	10
Carbon tetrachloride	ND		ug/kg	910	190	10
1,2-Dichloropropane	ND		ug/kg	3200	210	10
Dibromochloromethane	ND		ug/kg	910	140	10
1,1,2-Trichloroethane	ND		ug/kg	1400	280	10
Tetrachloroethene	260000		ug/kg	910	130	10
Chlorobenzene	ND		ug/kg	910	320	10
Trichlorofluoromethane	ND		ug/kg	4600	350	10
1,2-Dichloroethane	ND		ug/kg	910	100	10
1,1,1-Trichloroethane	ND		ug/kg	910	100	10
Bromodichloromethane	ND		ug/kg	910	160	10
trans-1,3-Dichloropropene	ND		ug/kg	910	110	10
cis-1,3-Dichloropropene	ND		ug/kg	910	110	10
1,3-Dichloropropene, Total	ND		ug/kg	910	110	10
1,1-Dichloropropene	ND		ug/kg	4600	130	10
Bromoform	ND		ug/kg	3600	220	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	910	92.	10
Benzene	ND		ug/kg	910	110	10
Toluene	ND		ug/kg	1400	180	10
Ethylbenzene	ND		ug/kg	910	120	10
Chloromethane	ND		ug/kg	4600	270	10
Bromomethane	ND		ug/kg	1800	310	10
Vinyl chloride	3000		ug/kg	1800	110	10
Chloroethane	ND		ug/kg	1800	290	10
1,1-Dichloroethene	ND		ug/kg	910	240	10
trans-1,2-Dichloroethene	290	J	ug/kg	1400	190	10
Trichloroethene	11000		ug/kg	910	110	10
1,2-Dichlorobenzene	ND		ug/kg	4600	140	10

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-06 D

Date Collected: 07/23/15 14:00

Client ID: DUP 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4600	120	10
1,4-Dichlorobenzene	ND		ug/kg	4600	130	10
Methyl tert butyl ether	ND		ug/kg	1800	77.	10
p/m-Xylene	ND		ug/kg	1800	180	10
o-Xylene	ND		ug/kg	1800	160	10
Xylenes, Total	ND		ug/kg	1800	160	10
cis-1,2-Dichloroethene	27000		ug/kg	910	130	10
1,2-Dichloroethene, Total	27000	J	ug/kg	910	130	10
Dibromomethane	ND		ug/kg	9100	150	10
Styrene	ND		ug/kg	1800	370	10
Dichlorodifluoromethane	ND		ug/kg	9100	170	10
Acetone	ND		ug/kg	9100	950	10
Carbon disulfide	ND		ug/kg	9100	1000	10
2-Butanone	ND		ug/kg	9100	250	10
Vinyl acetate	ND		ug/kg	9100	120	10
4-Methyl-2-pentanone	ND		ug/kg	9100	220	10
1,2,3-Trichloropropane	ND		ug/kg	9100	150	10
2-Hexanone	ND		ug/kg	9100	610	10
Bromochloromethane	ND		ug/kg	4600	250	10
2,2-Dichloropropane	ND		ug/kg	4600	210	10
1,2-Dibromoethane	ND		ug/kg	3600	160	10
1,3-Dichloropropane	ND		ug/kg	4600	130	10
1,1,1,2-Tetrachloroethane	ND		ug/kg	910	290	10
Bromobenzene	ND		ug/kg	4600	190	10
n-Butylbenzene	ND		ug/kg	910	100	10
sec-Butylbenzene	ND		ug/kg	910	110	10
tert-Butylbenzene	ND		ug/kg	4600	120	10
o-Chlorotoluene	ND		ug/kg	4600	150	10
p-Chlorotoluene	ND		ug/kg	4600	120	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	4600	360	10
Hexachlorobutadiene	ND		ug/kg	4600	210	10
Isopropylbenzene	ND		ug/kg	910	95.	10
p-Isopropyltoluene	ND		ug/kg	910	110	10
Naphthalene	ND		ug/kg	4600	130	10
Acrylonitrile	ND		ug/kg	9100	470	10
n-Propylbenzene	ND		ug/kg	910	100	10
1,2,3-Trichlorobenzene	ND		ug/kg	4600	130	10
1,2,4-Trichlorobenzene	ND		ug/kg	4600	170	10
1,3,5-Trimethylbenzene	ND		ug/kg	4600	130	10

**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

Lab ID: L1517198-06 D

Date Collected: 07/23/15 14:00

Client ID: DUP 1

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/kg	4600	130	10
1,4-Dioxane	ND		ug/kg	91000	13000	10
p-Diethylbenzene	ND		ug/kg	3600	150	10
p-Ethyltoluene	ND		ug/kg	3600	110	10
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3600	120	10
Ethyl ether	ND		ug/kg	4600	240	10
trans-1,4-Dichloro-2-butene	ND		ug/kg	4600	360	10

**Tentatively Identified Compounds**

No Tentatively Identified Compounds ND ug/kg 10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	101		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

**Lab ID:** L1517198-09  
**Client ID:** TRIP BLANK  
**Sample Location:** 180 E. PARK AVE., LONG BEACH, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 07/30/15 20:46  
**Analyst:** MS

**Date Collected:** 07/22/15 00:00  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## SAMPLE RESULTS

Lab ID: L1517198-09

Date Collected: 07/22/15 00:00

Client ID: TRIP BLANK

Date Received: 07/23/15

Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**SAMPLE RESULTS**

Lab ID: L1517198-09  
 Client ID: TRIP BLANK  
 Sample Location: 180 E. PARK AVE., LONG BEACH, NY

Date Collected: 07/22/15 00:00  
 Date Received: 07/23/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

**Tentatively Identified Compounds**

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	100		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/30/15 18:19  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04,09 Batch: WG807621-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18



**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/30/15 18:19  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04,09 Batch: WG807621-3					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylene (Total)	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene (total)	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 07/30/15 18:19  
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04,09 Batch: WG807621-3					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 07/30/15 18:19  
 Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04,09 Batch: WG807621-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	99		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/01/15 10:21  
**Analyst:** BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG808391-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 08/01/15 10:21  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG808391-3					
Trichloroethene	ND		ug/kg	50	6.2
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylene (Total)	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene (total)	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 08/01/15 10:21  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG808391-3					
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	150
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
Methyl Acetate	ND		ug/kg	1000	14.
Ethyl Acetate	ND		ug/kg	1000	46.
Acrolein	ND		ug/kg	1200	400
Cyclohexane	ND		ug/kg	1000	7.3
1,4-Dioxane	ND		ug/kg	5000	720
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	50.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.
Methyl cyclohexane	ND		ug/kg	200	7.7
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	5.8

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 08/01/15 10:21  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG808391-3					
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	4.8

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	99		70-130

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 08/02/15 11:31  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05-06 Batch: WG808391-8					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.



**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 08/02/15 11:31  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05-06 Batch: WG808391-8					
Trichloroethene	ND		ug/kg	50	6.2
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylene (Total)	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene (total)	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 08/02/15 11:31  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05-06 Batch: WG808391-8					
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	150
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
Methyl Acetate	ND		ug/kg	1000	14.
Ethyl Acetate	ND		ug/kg	1000	46.
Acrolein	ND		ug/kg	1200	400
Cyclohexane	ND		ug/kg	1000	7.3
1,4-Dioxane	ND		ug/kg	5000	720
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	50.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.
Methyl cyclohexane	ND		ug/kg	200	7.7
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	5.8

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 08/02/15 11:31  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05-06 Batch: WG808391-8					
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	4.8

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	103		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 Batch: WG807621-1 WG807621-2								
Methylene chloride	82		83		70-130	1		20
1,1-Dichloroethane	85		85		70-130	0		20
Chloroform	83		83		70-130	0		20
Carbon tetrachloride	93		92		63-132	1		20
1,2-Dichloropropane	88		88		70-130	0		20
Dibromochloromethane	97		98		63-130	1		20
1,1,2-Trichloroethane	101		102		70-130	1		20
Tetrachloroethene	104		105		70-130	1		20
Chlorobenzene	93		92		75-130	1		20
Trichlorofluoromethane	82		81		62-150	1		20
1,2-Dichloroethane	82		83		70-130	1		20
1,1,1-Trichloroethane	85		84		67-130	1		20
Bromodichloromethane	82		82		67-130	0		20
trans-1,3-Dichloropropene	95		96		70-130	1		20
cis-1,3-Dichloropropene	85		86		70-130	1		20
1,1-Dichloropropene	82		80		70-130	2		20
Bromoform	99		101		54-136	2		20
1,1,2,2-Tetrachloroethane	95		98		67-130	3		20
Benzene	91		92		70-130	1		20
Toluene	92		92		70-130	0		20
Ethylbenzene	88		89		70-130	1		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 Batch: WG807621-1 WG807621-2								
Chloromethane	53	Q	52	Q	64-130	2		20
Bromomethane	66		64		39-139	3		20
Vinyl chloride	64		65		55-140	2		20
Chloroethane	88		87		55-138	1		20
1,1-Dichloroethene	88		89		61-145	1		20
trans-1,2-Dichloroethene	90		90		70-130	0		20
Trichloroethene	84		84		70-130	0		20
1,2-Dichlorobenzene	91		92		70-130	1		20
1,3-Dichlorobenzene	88		89		70-130	1		20
1,4-Dichlorobenzene	88		90		70-130	2		20
Methyl tert butyl ether	92		94		63-130	2		20
p/m-Xylene	93		93		70-130	0		20
o-Xylene	91		91		70-130	0		20
cis-1,2-Dichloroethene	88		87		70-130	1		20
Dibromomethane	92		94		70-130	2		20
1,2,3-Trichloropropane	92		98		64-130	6		20
Acrylonitrile	91		96		70-130	5		20
Styrene	94		95		70-130	1		20
Dichlorodifluoromethane	95		94		36-147	1		20
Acetone	74		81		58-148	9		20
Carbon disulfide	74		74		51-130	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 Batch: WG807621-1 WG807621-2								
2-Butanone	85		86		63-138	1		20
Vinyl acetate	67	Q	66	Q	70-130	2		20
4-Methyl-2-pentanone	86		88		59-130	2		20
2-Hexanone	73		78		57-130	7		20
Bromochloromethane	94		96		70-130	2		20
2,2-Dichloropropane	96		94		63-133	2		20
1,2-Dibromoethane	97		97		70-130	0		20
1,3-Dichloropropane	96		98		70-130	2		20
1,1,1,2-Tetrachloroethane	99		99		64-130	0		20
Bromobenzene	91		92		70-130	1		20
n-Butylbenzene	76		77		53-136	1		20
sec-Butylbenzene	82		83		70-130	1		20
tert-Butylbenzene	81		82		70-130	1		20
o-Chlorotoluene	79		81		70-130	3		20
p-Chlorotoluene	81		83		70-130	2		20
1,2-Dibromo-3-chloropropane	83		88		41-144	6		20
Hexachlorobutadiene	80		82		63-130	2		20
Isopropylbenzene	82		84		70-130	2		20
p-Isopropyltoluene	83		85		70-130	2		20
Naphthalene	88		92		70-130	4		20
n-Propylbenzene	83		84		69-130	1		20

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 Batch: WG807621-1 WG807621-2								
1,2,3-Trichlorobenzene	87		92		70-130	6		20
1,2,4-Trichlorobenzene	83		86		70-130	4		20
1,3,5-Trimethylbenzene	85		85		64-130	0		20
1,2,4-Trimethylbenzene	83		84		70-130	1		20
1,4-Dioxane	142		118		56-162	18		20
p-Diethylbenzene	83		84		70-130	1		20
p-Ethyltoluene	86		87		70-130	1		20
1,2,4,5-Tetramethylbenzene	82		83		70-130	1		20
Ethyl ether	104		106		59-134	2		20
trans-1,4-Dichloro-2-butene	83		84		70-130	1		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	90		90		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	86		87		70-130
Dibromofluoromethane	97		96		70-130



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG808391-1 WG808391-2								
Methylene chloride	94		94		70-130	0		30
1,1-Dichloroethane	92		92		70-130	0		30
Chloroform	98		102		70-130	4		30
Carbon tetrachloride	104		106		70-130	2		30
1,2-Dichloropropane	90		91		70-130	1		30
Dibromochloromethane	92		95		70-130	3		30
2-Chloroethylvinyl ether	78		74		70-130	5		30
1,1,2-Trichloroethane	98		100		70-130	2		30
Tetrachloroethene	118		114		70-130	3		30
Chlorobenzene	103		102		70-130	1		30
Trichlorofluoromethane	107		106		70-139	1		30
1,2-Dichloroethane	83		90		70-130	8		30
1,1,1-Trichloroethane	102		104		70-130	2		30
Bromodichloromethane	91		96		70-130	5		30
trans-1,3-Dichloropropene	92		96		70-130	4		30
cis-1,3-Dichloropropene	96		96		70-130	0		30
1,1-Dichloropropene	106		104		70-130	2		30
Bromoform	94		96		70-130	2		30
1,1,2,2-Tetrachloroethane	90		89		70-130	1		30
Benzene	104		103		70-130	1		30
Toluene	101		101		70-130	0		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG808391-1 WG808391-2								
Ethylbenzene	104		103		70-130	1		30
Chloromethane	74		73		52-130	1		30
Bromomethane	96		96		57-147	0		30
Vinyl chloride	92		91		67-130	1		30
Chloroethane	94		93		50-151	1		30
1,1-Dichloroethene	113		106		65-135	6		30
trans-1,2-Dichloroethene	108		106		70-130	2		30
Trichloroethene	106		103		70-130	3		30
1,2-Dichlorobenzene	101		99		70-130	2		30
1,3-Dichlorobenzene	104		101		70-130	3		30
1,4-Dichlorobenzene	102		100		70-130	2		30
Methyl tert butyl ether	90		93		66-130	3		30
p/m-Xylene	107		106		70-130	1		30
o-Xylene	105		105		70-130	0		30
cis-1,2-Dichloroethene	104		102		70-130	2		30
Dibromomethane	93		96		70-130	3		30
Styrene	104		104		70-130	0		30
Dichlorodifluoromethane	101		103		30-146	2		30
Acetone	77		75		54-140	3		30
Carbon disulfide	98		95		59-130	3		30
2-Butanone	72		74		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG808391-1 WG808391-2								
Vinyl acetate	74		76		70-130	3		30
4-Methyl-2-pentanone	72		74		70-130	3		30
1,2,3-Trichloropropane	88		89		68-130	1		30
2-Hexanone	62	Q	64	Q	70-130	3		30
Bromochloromethane	105		103		70-130	2		30
2,2-Dichloropropane	99		100		70-130	1		30
1,2-Dibromoethane	96		98		70-130	2		30
1,3-Dichloropropane	96		98		69-130	2		30
1,1,1,2-Tetrachloroethane	99		102		70-130	3		30
Bromobenzene	102		99		70-130	3		30
n-Butylbenzene	105		100		70-130	5		30
sec-Butylbenzene	105		100		70-130	5		30
tert-Butylbenzene	101		98		70-130	3		30
o-Chlorotoluene	91		98		70-130	7		30
p-Chlorotoluene	98		96		70-130	2		30
1,2-Dibromo-3-chloropropane	85		86		68-130	1		30
Hexachlorobutadiene	126		119		67-130	6		30
Isopropylbenzene	107		106		70-130	1		30
p-Isopropyltoluene	103		99		70-130	4		30
Naphthalene	90		89		70-130	1		30
Acrylonitrile	71		73		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG808391-1 WG808391-2								
Diisopropyl Ether	76		76		66-130	0		30
Tert-Butyl Alcohol	69	Q	72		70-130	4		30
n-Propylbenzene	101		98		70-130	3		30
1,2,3-Trichlorobenzene	110		107		70-130	3		30
1,2,4-Trichlorobenzene	114		112		70-130	2		30
1,3,5-Trimethylbenzene	101		98		70-130	3		30
1,2,4-Trimethylbenzene	99		96		70-130	3		30
Methyl Acetate	67		70		51-146	4		30
Ethyl Acetate	63	Q	65	Q	70-130	3		30
Acrolein	68	Q	70		70-130	3		30
Cyclohexane	94		90		59-142	4		30
1,4-Dioxane	91		92		65-136	1		30
Freon-113	115		110		50-139	4		30
p-Diethylbenzene	110		107		70-130	3		30
p-Ethyltoluene	108		106		70-130	2		30
1,2,4,5-Tetramethylbenzene	104		103		70-130	1		30
Tetrahydrofuran	69		70		66-130	1		30
Ethyl ether	99		99		67-130	0		30
trans-1,4-Dichloro-2-butene	69	Q	72		70-130	4		30
Methyl cyclohexane	116		110		70-130	5		30
Ethyl-Tert-Butyl-Ether	83		86		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG808391-1 WG808391-2								
Tertiary-Amyl Methyl Ether	92		94		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	83		88		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	91		91		70-130
Dibromofluoromethane	97		99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 Batch: WG808391-6 WG808391-7								
Methylene chloride	100		96		70-130	4		30
1,1-Dichloroethane	102		93		70-130	9		30
Chloroform	102		96		70-130	6		30
Carbon tetrachloride	112		99		70-130	12		30
1,2-Dichloropropane	96		91		70-130	5		30
Dibromochloromethane	99		95		70-130	4		30
2-Chloroethylvinyl ether	87		88		70-130	1		30
1,1,2-Trichloroethane	96		94		70-130	2		30
Tetrachloroethene	105		94		70-130	11		30
Chlorobenzene	100		94		70-130	6		30
Trichlorofluoromethane	128		111		70-139	14		30
1,2-Dichloroethane	96		94		70-130	2		30
1,1,1-Trichloroethane	105		94		70-130	11		30
Bromodichloromethane	97		93		70-130	4		30
trans-1,3-Dichloropropene	92		89		70-130	3		30
cis-1,3-Dichloropropene	95		92		70-130	3		30
1,1-Dichloropropene	102		90		70-130	13		30
Bromoform	94		93		70-130	1		30
1,1,2,2-Tetrachloroethane	92		92		70-130	0		30
Benzene	100		92		70-130	8		30
Toluene	98		89		70-130	10		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 Batch: WG808391-6 WG808391-7								
Ethylbenzene	99		90		70-130	10		30
Chloromethane	105		95		52-130	10		30
Bromomethane	135		129		57-147	5		30
Vinyl chloride	115		100		67-130	14		30
Chloroethane	113		102		50-151	10		30
1,1-Dichloroethene	109		96		65-135	13		30
trans-1,2-Dichloroethene	103		94		70-130	9		30
Trichloroethene	104		94		70-130	10		30
1,2-Dichlorobenzene	100		96		70-130	4		30
1,3-Dichlorobenzene	101		95		70-130	6		30
1,4-Dichlorobenzene	100		95		70-130	5		30
Methyl tert butyl ether	90		88		66-130	2		30
p/m-Xylene	102		94		70-130	8		30
o-Xylene	100		92		70-130	8		30
cis-1,2-Dichloroethene	102		96		70-130	6		30
Dibromomethane	101		100		70-130	1		30
Styrene	100		94		70-130	6		30
Dichlorodifluoromethane	181	Q	157	Q	30-146	14		30
Acetone	90		90		54-140	0		30
Carbon disulfide	96		85		59-130	12		30
2-Butanone	83		86		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 Batch: WG808391-6 WG808391-7								
Vinyl acetate	100		101		70-130	1		30
4-Methyl-2-pentanone	89		87		70-130	2		30
1,2,3-Trichloropropane	93		92		68-130	1		30
2-Hexanone	75		75		70-130	0		30
Bromochloromethane	106		102		70-130	4		30
2,2-Dichloropropane	100		89		70-130	12		30
1,2-Dibromoethane	95		94		70-130	1		30
1,3-Dichloropropane	94		92		69-130	2		30
1,1,1,2-Tetrachloroethane	98		92		70-130	6		30
Bromobenzene	100		95		70-130	5		30
n-Butylbenzene	103		92		70-130	11		30
sec-Butylbenzene	102		93		70-130	9		30
tert-Butylbenzene	102		92		70-130	10		30
o-Chlorotoluene	100		93		70-130	7		30
p-Chlorotoluene	99		92		70-130	7		30
1,2-Dibromo-3-chloropropane	93		94		68-130	1		30
Hexachlorobutadiene	102		90		67-130	13		30
Isopropylbenzene	102		92		70-130	10		30
p-Isopropyltoluene	105		95		70-130	10		30
Naphthalene	92		91		70-130	1		30
Acrylonitrile	86		87		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 Batch: WG808391-6 WG808391-7								
Diisopropyl Ether	90		87		66-130	3		30
Tert-Butyl Alcohol	86		88		70-130	2		30
n-Propylbenzene	100		90		70-130	11		30
1,2,3-Trichlorobenzene	99		94		70-130	5		30
1,2,4-Trichlorobenzene	101		96		70-130	5		30
1,3,5-Trimethylbenzene	100		92		70-130	8		30
1,2,4-Trimethylbenzene	99		92		70-130	7		30
Methyl Acetate	84		85		51-146	1		30
Ethyl Acetate	77		79		70-130	3		30
Acrolein	83		86		70-130	4		30
Cyclohexane	106		93		59-142	13		30
1,4-Dioxane	92		92		65-136	0		30
Freon-113	106		93		50-139	13		30
p-Diethylbenzene	104		96		70-130	8		30
p-Ethyltoluene	105		97		70-130	8		30
1,2,4,5-Tetramethylbenzene	104		98		70-130	6		30
Tetrahydrofuran	85		74		66-130	14		30
Ethyl ether	87		86		67-130	1		30
trans-1,4-Dichloro-2-butene	81		80		70-130	1		30
Methyl cyclohexane	112		97		70-130	14		30
Ethyl-Tert-Butyl-Ether	92		90		70-130	2		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 Batch: WG808391-6 WG808391-7								
Tertiary-Amyl Methyl Ether	93		91		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		98		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	94		95		70-130
Dibromofluoromethane	101		101		70-130

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 QC Batch ID: WG807621-4 WG807621-5 QC Sample: L1517198-03 Client ID: AEI MW 1												
Methylene chloride	ND	100	94	94		95	95		70-130	1		20
1,1-Dichloroethane	ND	100	97	97		99	99		70-130	2		20
Chloroform	ND	100	95	95		96	96		70-130	1		20
Carbon tetrachloride	ND	100	100	102		100	100		63-132	0		20
1,2-Dichloropropane	ND	100	97	97		100	100		70-130	3		20
Dibromochloromethane	ND	100	100	104		100	104		63-130	0		20
1,1,2-Trichloroethane	ND	100	110	106		110	109		70-130	0		20
Tetrachloroethene	ND	100	110	115		110	110		70-130	0		20
Chlorobenzene	ND	100	100	102		100	100		75-130	0		20
Trichlorofluoromethane	ND	100	97	97		92	92		62-150	5		20
1,2-Dichloroethane	ND	100	90	90		91	91		70-130	1		20
1,1,1-Trichloroethane	ND	100	96	96		96	96		67-130	0		20
Bromodichloromethane	ND	100	90	90		91	91		67-130	1		20
trans-1,3-Dichloropropene	ND	100	95	95		98	98		70-130	3		20
cis-1,3-Dichloropropene	ND	100	89	89		90	90		70-130	1		20
1,1-Dichloropropene	ND	100	91	91		90	90		70-130	1		20
Bromoform	ND	100	100	101		100	104		54-136	0		20
1,1,2,2-Tetrachloroethane	ND	100	95	95		100	100		67-130	5		20
Benzene	2.7J	100	110	107		110	108		70-130	0		20
Toluene	ND	100	100	104		100	103		70-130	0		20
Ethylbenzene	39	100	140	99		130	92		70-130	7		20

## Matrix Spike Analysis

Batch Quality Control

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 QC Batch ID: WG807621-4 WG807621-5 QC Sample: L1517198-03 Client ID: AEI MW 1												
Chloromethane	ND	100	69	69		66	66		64-130	4		20
Bromomethane	ND	100	56	57		64	64		39-139	13		20
Vinyl chloride	56	100	120	63		110	57		55-140	9		20
Chloroethane	ND	100	100	103		100	103		55-138	0		20
1,1-Dichloroethene	ND	100	100	103		100	103		61-145	0		20
trans-1,2-Dichloroethene	ND	100	110	107		100	105		70-130	10		20
Trichloroethene	ND	100	95	95		93	93		70-130	2		20
1,2-Dichlorobenzene	ND	100	96	96		96	96		70-130	0		20
1,3-Dichlorobenzene	ND	100	95	95		93	93		70-130	2		20
1,4-Dichlorobenzene	ND	100	94	94		93	93		70-130	1		20
Methyl tert butyl ether	ND	100	96	96		100	102		63-130	4		20
p/m-Xylene	19.J	200	220	113		210	107		70-130	5		20
o-Xylene	ND	200	200	103		200	100		70-130	0		20
cis-1,2-Dichloroethene	ND	100	110	108		110	108		70-130	0		20
Dibromomethane	ND	100	98	98		100	101		70-130	2		20
1,2,3-Trichloropropane	ND	100	94	94		96	96		64-130	2		20
Acrylonitrile	ND	100	90	90		98	98		70-130	9		20
Styrene	ND	200	210	104		200	102		70-130	5		20
Dichlorodifluoromethane	ND	100	120	120		110	110		36-147	9		20
Acetone	20.J	100	92	92		93	93		58-148	1		20
Carbon disulfide	ND	100	83	84		85	86		51-130	2		20

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 QC Batch ID: WG807621-4 WG807621-5 QC Sample: L1517198-03 Client ID: AEI MW 1												
2-Butanone	ND	100	100	102		100	106		63-138	0		20
Vinyl acetate	ND	100	71	72		72	72		70-130	1		20
4-Methyl-2-pentanone	ND	100	76	76		85	85		59-130	11		20
2-Hexanone	ND	100	67	67		72	72		57-130	7		20
Bromochloromethane	ND	100	100	106		110	111		70-130	10		20
2,2-Dichloropropane	ND	100	85	85		84	84		63-133	1		20
1,2-Dibromoethane	ND	100	100	100		100	104		70-130	0		20
1,3-Dichloropropane	ND	100	100	102		100	104		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	100	110	108		110	106		64-130	0		20
Bromobenzene	ND	100	99	99		100	100		70-130	1		20
n-Butylbenzene	ND	100	84	84		80	80		53-136	5		20
sec-Butylbenzene	ND	100	91	91		86	86		70-130	6		20
tert-Butylbenzene	ND	100	90	90		86	86		70-130	5		20
o-Chlorotoluene	ND	100	88	88		86	87		70-130	2		20
p-Chlorotoluene	ND	100	88	88		87	87		70-130	1		20
1,2-Dibromo-3-chloropropane	ND	100	78	78		78	78		41-144	0		20
Hexachlorobutadiene	ND	100	84	84		82	82		63-130	2		20
Isopropylbenzene	ND	100	98	98		95	95		70-130	3		20
p-Isopropyltoluene	ND	100	92	92		87	87		70-130	6		20
Naphthalene	74	100	160	90		170	96		70-130	6		20
n-Propylbenzene	8.3J	100	100	100		96	96		69-130	4		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04,09 QC Batch ID: WG807621-4 WG807621-5 QC Sample: L1517198-03 Client ID: AEI MW 1												
1,2,3-Trichlorobenzene	ND	100	85	85		87	87		70-130	2		20
1,2,4-Trichlorobenzene	ND	100	90	90		90	90		70-130	0		20
1,3,5-Trimethylbenzene	ND	100	95	95		92	92		64-130	3		20
1,2,4-Trimethylbenzene	9.1J	100	100	102		99	99		70-130	1		20
1,4-Dioxane	ND	5000	4500	91		5800	116		56-162	25	Q	20
p-Diethylbenzene	ND	100	92	92		88	88		70-130	4		20
p-Ethyltoluene	ND	100	98	98		95	95		70-130	3		20
1,2,4,5-Tetramethylbenzene	7.6J	100	100	102		99	99		70-130	1		20
Ethyl ether	ND	100	110	109		120	117		59-134	9		20
trans-1,4-Dichloro-2-butene	ND	100	69	69	Q	72	72		70-130	4		20

<i>Surrogate</i>	<i>MS % Recovery</i>	<i>Qualifier</i>	<i>MSD % Recovery</i>	<i>Qualifier</i>	<i>Acceptance Criteria</i>
1,2-Dichloroethane-d4	90		88		70-130
4-Bromofluorobenzene	87		87		70-130
Dibromofluoromethane	99		98		70-130
Toluene-d8	101		100		70-130

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 QC Batch ID: WG808391-4 WG808391-5 QC Sample: L1517198-05 Client ID: AEI DW (5.5-6)												
Methylene chloride	ND	1470	1300	86		1200	83		70-130	3		30
1,1-Dichloroethane	ND	1470	1300	89		1200	82		70-130	8		30
Chloroform	ND	1470	1500	99		1300	90		70-130	9		30
Carbon tetrachloride	ND	1470	1500	99		1300	86		70-130	14		30
1,2-Dichloropropane	ND	1470	1300	87		1200	83		70-130	5		30
Dibromochloromethane	ND	1470	1200	82		1200	83		70-130	1		30
1,1,2-Trichloroethane	ND	1470	1300	87		1200	84		70-130	3		30
Tetrachloroethene	1000000E	1470	930000E	0	Q	810000E	0	Q	70-130	14		30
Chlorobenzene	ND	1470	1500	99		1400	94		70-130	6		30
Trichlorofluoromethane	ND	1470	770	52	Q	590	40	Q	70-139	27		30
1,2-Dichloroethane	ND	1470	1400	94		1200	84		70-130	11		30
1,1,1-Trichloroethane	ND	1470	1500	101		1300	90		70-130	11		30
Bromodichloromethane	ND	1470	1400	95		1300	86		70-130	10		30
trans-1,3-Dichloropropene	ND	1470	610	41	Q	540	37	Q	70-130	12		30
cis-1,3-Dichloropropene	ND	1470	1400	93		1300	89		70-130	4		30
1,1-Dichloropropene	ND	1470	1500	99		1300	90		70-130	9		30
Bromoform	ND	1470	1300	91		1300	88		70-130	3		30
1,1,2,2-Tetrachloroethane	ND	1470	1300	87		1300	86		70-130	1		30
Benzene	ND	1470	1400	96		1400	92		70-130	4		30
Toluene	ND	1470	1600	105		1500	101		70-130	4		30
Ethylbenzene	ND	1470	1500	101		1400	95		70-130	6		30

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 QC Batch ID: WG808391-4 WG808391-5 QC Sample: L1517198-05 Client ID: AEI DW (5.5-6)												
Chloromethane	ND	1470	1100	75		1000	69		52-130	9		30
Bromomethane	ND	1470	1400	97		1200	84		57-147	14		30
Vinyl chloride	800	1470	2100	91		2000	79		67-130	9		30
Chloroethane	ND	1470	1000	68		840	57		50-151	17		30
1,1-Dichloroethene	26.J	1470	1400	92		1300	90		65-135	3		30
trans-1,2-Dichloroethene	100J	1470	1500	100		1500	99		70-130	1		30
Trichloroethene	16000	1470	18000	102		17000	41	Q	70-130	5		30
1,2-Dichlorobenzene	ND	1470	1400	96		1400	94		70-130	2		30
1,3-Dichlorobenzene	ND	1470	1400	97		1400	94		70-130	3		30
1,4-Dichlorobenzene	ND	1470	1400	97		1400	92		70-130	4		30
Methyl tert butyl ether	ND	1470	1400	92		1300	87		66-130	5		30
p/m-Xylene	ND	2940	3100	104		2900	98		70-130	6		30
o-Xylene	ND	2940	3100	105		2900	100		70-130	5		30
cis-1,2-Dichloroethene	21000	1470	22000E	75		22000	48	Q	70-130	2		30
Dibromomethane	ND	1470	1400	95		1300	90		70-130	5		30
Styrene	ND	2940	3200	107		3000	101		70-130	6		30
Dichlorodifluoromethane	ND	1470	1400	95		1300	88		30-146	7		30
Acetone	ND	1470	1300	88		1200	79		54-140	11		30
Carbon disulfide	ND	1470	1200	78		1100	74		59-130	5		30
2-Butanone	ND	1470	1200	82		1100	76		70-130	8		30
Vinyl acetate	ND	1470	1100	77		1100	72		70-130	6		30

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 QC Batch ID: WG808391-4 WG808391-5 QC Sample: L1517198-05 Client ID: AEI DW (5.5-6)												
4-Methyl-2-pentanone	ND	1470	150J	10	Q	140J	10	Q	70-130	2		30
1,2,3-Trichloropropane	ND	1470	1300	89		1300	86		68-130	3		30
2-Hexanone	ND	1470	1000	68	Q	940	64	Q	70-130	5		30
Bromochloromethane	ND	1470	1400	97		1400	92		70-130	4		30
2,2-Dichloropropane	ND	1470	1400	97		1200	84		70-130	14		30
1,2-Dibromoethane	ND	1470	1400	92		1300	89		70-130	4		30
1,3-Dichloropropane	ND	1470	1300	90		1300	87		69-130	4		30
1,1,1,2-Tetrachloroethane	ND	1470	1500	103		1400	97		70-130	6		30
Bromobenzene	ND	1470	1300	89		1300	88		70-130	1		30
n-Butylbenzene	ND	1470	1400	94		1300	91		70-130	3		30
sec-Butylbenzene	ND	1470	1400	92		1300	90		70-130	2		30
tert-Butylbenzene	ND	1470	1300	89		1300	87		70-130	2		30
o-Chlorotoluene	ND	1470	1400	95		1200	80		70-130	17		30
p-Chlorotoluene	ND	1470	1300	91		1300	88		70-130	4		30
1,2-Dibromo-3-chloropropane	ND	1470	1300	89		1300	86		68-130	3		30
Hexachlorobutadiene	ND	1470	1600	107		1500	103		67-130	4		30
Isopropylbenzene	ND	1470	1600	109		1500	102		70-130	6		30
p-Isopropyltoluene	34.J	1470	1400	95		1300	91		70-130	4		30
Naphthalene	59.J	1470	1400	92		1400	92		70-130	0		30
Acrylonitrile	ND	1470	1000	71		1100	72		70-130	2		30
n-Propylbenzene	37.J	1470	1300	90		1300	88		70-130	2		30



## Matrix Spike Analysis

Batch Quality Control

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05-06 QC Batch ID: WG808391-4 WG808391-5 QC Sample: L1517198-05 Client ID: AEI DW (5.5-6)												
1,2,3-Trichlorobenzene	ND	1470	1500	101		1500	101		70-130	0		30
1,2,4-Trichlorobenzene	ND	1470	1500	103		1500	102		70-130	1		30
1,3,5-Trimethylbenzene	42.J	1470	1400	94		1300	91		70-130	3		30
1,2,4-Trimethylbenzene	80.J	1470	1400	97		1400	94		70-130	3		30
1,4-Dioxane	ND	73600	68000	92		68000	92		65-136	0		30
p-Diethylbenzene	21.J	1470	1600	107		1500	99		70-130	8		30
p-Ethyltoluene	130J	1470	1600	112		1600	105		70-130	6		30
1,2,4,5-Tetramethylbenzene	17.J	1470	1500	105		1500	99		70-130	6		30
Ethyl ether	ND	1470	1300	90		1300	88		67-130	2		30
trans-1,4-Dichloro-2-butene	ND	1470	1100	72		1000	70		70-130	3		30

<i>Surrogate</i>	<i>MS</i>		<i>MSD</i>		<i>Acceptance Criteria</i>
	<i>% Recovery</i>	<i>Qualifier</i>	<i>% Recovery</i>	<i>Qualifier</i>	
1,2-Dichloroethane-d4	96		88		70-130
4-Bromofluorobenzene	88		88		70-130
Dibromofluoromethane	100		96		70-130
Toluene-d8	110		109		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

**Lab ID:** L1517198-05  
**Client ID:** AEI DW (5.5-6)  
**Sample Location:** 180 E. PARK AVE., LONG BEACH,  
**Matrix:** Soil

**Date Collected:** 07/23/15 13:56  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.9		%	0.100	NA	1	-	07/27/15 19:22	30,2540G	RT



**Project Name:** NU CLEAR CLEANERS**Lab Number:** L1517198**Project Number:** 341998**Report Date:** 08/03/15**SAMPLE RESULTS**

**Lab ID:** L1517198-06  
**Client ID:** DUP 1  
**Sample Location:** 180 E. PARK AVE., LONG BEACH,  
**Matrix:** Soil

**Date Collected:** 07/23/15 14:00  
**Date Received:** 07/23/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.2		%	0.100	NA	1	-	07/27/15 19:22	30,2540G	RT



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NU CLEAR CLEANERS

**Project Number:** 341998

**Lab Number:** L1517198

**Report Date:** 08/03/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 05-06 QC Batch ID: WG806398-1 QC Sample: L1516194-28 Client ID: DUP Sample						
Solids, Total	76.3	75.9	%	1		20

Project Name: NU CLEAR CLEANERS

Lab Number: L1517198

Project Number: 341998

Report Date: 08/03/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 07/24/2015 03:33

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1517198-01A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-01B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-01C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-02A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-02B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-02C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03A1	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03A2	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03B1	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03B2	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03C1	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-03C2	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-04A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-04B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-04C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-05A	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05A1	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05A2	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05B	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05B1	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05B2	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05C	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05C1	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-05C2	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)

\*Values in parentheses indicate holding time in days



**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1517198-05D	Plastic 2oz unpreserved for TS	A	N/A	3.0	Y	Absent	TS(7)
L1517198-05D1	Plastic 2oz unpreserved for TS	A	N/A	3.0	Y	Absent	TS(7)
L1517198-05D2	Plastic 2oz unpreserved for TS	A	N/A	3.0	Y	Absent	TS(7)
L1517198-05X	Vial MeOH preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-05Y	Vial Water preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-05Z	Vial Water preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-05Z1	Vial Water preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-06A	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-06B	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-06C	5 gram Encore Sampler	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(2)
L1517198-06D	Plastic 2oz unpreserved for TS	A	N/A	3.0	Y	Absent	TS(7)
L1517198-06X	Vial MeOH preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-06Y	Vial Water preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-06Z	Vial Water preserved split	A	N/A	3.0	Y	Absent	NYTCL-8260HLW(14)
L1517198-07A	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-07B	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-07C	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-08A	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-08B	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-08C	Vial HCl preserved	A	N/A	3.0	Y	Absent	-
L1517198-09A	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-09B	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-09C	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)
L1517198-09D	Vial HCl preserved	A	N/A	3.0	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

## 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.
LCS D	- 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.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### 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.

**Report Format:** DU Report with 'J' Qualifiers





**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

#### Data Qualifiers

- 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.
- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** NU CLEAR CLEANERS  
**Project Number:** 341998

**Lab Number:** L1517198  
**Report Date:** 08/03/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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

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**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, NO<sub>2</sub>, NO<sub>3</sub>.

**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.

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**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.**

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

 <b>NEW JERSEY CHAIN OF CUSTODY</b>	<b>Service Centers</b> 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 1		Date Rec'd in Lab 7/23/15		ALPHA Job # 1517198				
	Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288								
<b>Client Information</b> Client: <b>AEI</b> Address: <b>20 Gibson Place Freehold NJ</b> Phone: _____ Fax: _____ Email: <b>jbernarducci@aeiconsultants.com</b>		<b>Project Information</b> Project Name: <b>Nuclear Cleaners</b> Project Location: <b>180E Park Ave Long Beach NY</b> Project # <b>341998</b> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input checked="" type="checkbox"/> Other <b>NYS DEC Asp B</b>		<b>Billing Information</b> <input type="checkbox"/> Same as Client Info PO # <b>89811</b>					
		<b>Regulatory Requirement</b> <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input type="checkbox"/> Other		<b>Site Information</b> Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:							
Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:											
These samples have been previously analyzed by Alpha <input type="checkbox"/>		<b>ANALYSIS</b>		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottle					
For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		Other project specific requirements/comments: <b>Include TICs</b> Please specify Metals or TAL.							
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials		Sample Specific Comments	
17798-01		AEI MW 2		7/22 1110		GW		JMB		X	
02		AEI MW 3		7/22 1220		GW		ED		X	
03		AEI MW 1		7/23 1320		GW		JMB		X	
04		DUP 1		7/23 1327		GW		JMB		X	
07		MS		7/23 1333		GW		JMB		X	
08		MSD		7/23 1335		GW		JMB		X	
05		AEI DW (5-5-6)		7/23 1356		Soil		JMB		X X	
06		DUP 1		7/23 1400		Soil		JMB		X X	
05		MS		7/23 1402		Soil		JMB		X X	
05		MSD		7/23 1405		Soil		JMB		X X	
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type E V P		Preservative A B A		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.)	
		Relinquished By:		Date/Time		Received By:		Date/Time			
		[Signature]		7/23/15 1930		[Signature]		7/23/15 1428			
		[Signature]		7/23/15 0020		[Signature]		7/23/15 0020			