Feasibility Study Report

Former Elka Chemical Corporation Site

NYSDEC Site Number: 152239

Prepared for:

The New York State Department of Environmental Conservation,
Division of Environmental Remediation

Prepared by:

Eastern Environmental Solutions, Inc.
Manorville, New York
and
Dermody Consulting
Center Moriches, NY

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CERTIFICATION

This Feasibility Study Report was prepared by Eastern Environmental Solutions, Inc./Dermody Consulting under the responsible charge of Dr. Ravi Korlipara, P.E.

Dr. Ravi Korlipara, P.E.

SECTION 1.0
INTRODUCTION

1.1 Purpose

This Feasibility Study (FS) Report has been prepared by Eastern Environmental Solutions, Inc. and Dermody Consulting (jointly referred to as EES) for the property at 340 West Hoffman Avenue, Lindenhurst, New York (the "Site"). The Suffolk County Tax Map Number for the Site is District 103, Section 9, Block 1, and Lot 81.5. The purpose of this FS is to present remedial alternatives for Site-related impacts.

The Site is listed on the New York State Department of Environmental Conservation (NYSDEC) Registry of Inactive Hazardous Waste Disposal Sites (Class 2) as Site No. 152239. A survey showing the Site boundaries is provided in Appendix A. A segment of the US Geological Survey Topographic Map for the Site area is provided in Appendix B.

Previous Site investigations performed by others from 2001 to 2015 showed that the former Elka Chemical Corp. (Elka) discharged petroleum at the Site that resulted in the presence of a smear zone at and near the water table. In addition, a petroleum groundwater plume was present at the Site, as well as in the groundwater downgradient of the Site.

The Remedial Investigation (RI) Site work included the collection of on-Site and off-Site soil, groundwater, and sub-slab soil vapor and indoor/outdoor air samples. The investigation was performed in two phases. The first phase included on-Site soil and groundwater sampling to determine the nature and extent of on-Site contamination. The results of the first phase of investigation were used to assist in the determination of off-Site groundwater sampling locations. The second phase of the investigation included off-Site groundwater sampling as well as soil vapor intrusion investigations at the on-Site commercial building and the off-Site, downgradient commercial building.

1.2 Site Background

The Site is located in a commercial/industrial area at the northwest corner of the intersection of West Hoffman and New York Avenues. The Site is approximately 0.5 acres in size and consists of a paved parking lot on its east end, a 4000-square-foot commercial/industrial building on its central portion that is being used as a church, and an unpaved area on its west end. West Hoffman Avenue is a divided road with the Long Island Rail Road (LIRR) elevated tracks present in its median. The Site location is presented in

Figure 1. The Site and the downgradient area, including the location of the off-site, downgradient commercial building, are shown in Figure 2.

The building at the Site was previously occupied by Elka from the 1920s until approximately 1985. Elka was involved in the business of repackaging petroleum fuels and it has been determined that the releases at the Site were attributable to operations at Elka. From approximately 1985 to 2013, the Site was occupied by Roy's Auto Repair and a Volvo dealership that was known as Verness Motoring Co. In 2013, the Site was used as a gymnasium, and since 2014, the Site has contained a building and an asphalt-paved parking lot to the east. The unpaved western portion of the Site is currently occupied by a landscaping company and is used to store landscaping vehicles, wood, and piles of mulch and soil.

SECTION 2.0
SITE SETTING AND ENVIRONMENTAL HISTORY

2.1 Geology and Hydrogeology

The regional geology of the Site area consists of a base of Precambrian crystalline bedrock predominantly composed of schist and gneiss overlain by the Lloyd Sand Member of the Cretaceous Raritan Formation. The clay member of the Raritan Formation overlies the Lloyd Sand Member, and acts as a confining unit. Overlying the Raritan Formation is the Cretaceous Magothy Formation which, in the Site area, is overlain by the Pleistocene Upper Glacial Formation that is composed of stratified medium to coarse-grained sand and gravel. The Upper Glacial deposits are estimated to be approximately 75 feet thick in the Site area. The soils at and in the area of the Site are classified by the US Department of Agriculture as consisting primarily of urban land soils, which generally contain a mix of sand, gravel, silt, clay, and fill material.

Site-specific geology was recorded during a previous subsurface investigation at the Site. Based on the Site Characterization Report prepared by HRP Associates (2015), the geology was evaluated to a depth of 70 feet below grade. The boring logs from that report indicate that the Site geology generally consists of tan, medium-to-coarse-grained sand with some gravel and pebbles to a depth of at least 70 feet below grade. No clay or other potentially confining layers were identified.

Based on the US Geological Survey topographic quadrangle map, the elevation at the Site is approximately 20 feet above mean sea level and is generally flat. Groundwater beneath the Site occurs at approximately 5 feet below grade. The groundwater flow direction is to the south-southeast.

2.2 Environmental History

Impact Environmental Investigation (2001)

In 2001, a groundwater investigation performed by Impact Environmental at a property on the south side of West Hoffman Ave., which is downgradient of the Site, detected groundwater contamination at that property. Impact Environmental then performed Geoprobe groundwater sampling at five locations downgradient of the Site along the south side of the West Hoffman Ave. median. The results of the investigation showed that petroleum constituents were present in the groundwater downgradient of the Site (see Appendix C for the Impact Environmental Site investigation figures and summary of the

sampling results). Based on this information, it was concluded that the contamination appeared to be emanating from the Site.

In 2006, based on the Impact Environmental data, the Site was listed as a NYSDEC petroleum spill site (Site No. 0650126, see Appendix D for the NYSDEC spill report form).

SCDHS Investigation (2001-2011)

In 2011, the Suffolk County Department of Health Services (SCDHS) prepared a summary report of its activities at the Site. The report stated that in 2001, the SCDHS visited the Site and observed the presence of "hundreds of solvent drums and a xylene tank." Also, in 2001, samples were obtained from "in front of the old Elka site" (in the area adjacent and downgradient of the Site). Samples were obtained from just beneath the water table and from a depth of 20 feet below the water table. The results for the shallow samples included the detection of 7,700 parts per billion (ppb) of xylene and the deeper sample showed 34 ppb of xylene (Appendix E provides the SCDHS letter report, figures showing sampling locations, and summary results tables).

The SCDHS reported that in 2002, two paired groundwater monitoring wells, one shallow [5 to 10 feet below grade (the depth to groundwater in the Site area is approximately five feet below grade)] and one deep (20 to 25 feet below grade), were installed to the north of the Site on Akron Avenue at a location 100 feet west of New York Avenue (see Figure 2 for the layout and street names for the upgradient and downgradient groundwater areas as well as the location of the SCDHS upgradient wells). This location was directly upgradient of the eastern portion of the Site. These upgradient wells were sampled and the results showed that "the highest results were from the water table sample and revealed tetrachloroethylene at 140 ppb and trichloroethylene at 100 ppb." The results show that there was a release of tetrachloroethylene and trichloroethylene in the area upgradient of the Site that was likely to have impacted the groundwater at the Site.

In 2010, as part of a well survey, the SCDHS reported that no public water supply wells existed in the area downgradient of the Site. There were also no private water supply wells identified in a downgradient area during a mail survey, however, three residents did not respond to the SCDHS. Public drinking water is supplied to the area by the Suffolk County Water Authority.

In 2011, the SCDHS performed 12 downgradient Geoprobe borings. Groundwater samples were obtained at various depth intervals to a maximum depth of 55 feet. The sampling was performed along the south side of West Hoffman Ave. and further south,

along Kent Avenue. The wells were sampled and the results showed that groundwater in the downgradient area contains petroleum-related volatile organic compounds (VOCs) that included relatively elevated concentrations of xylene. For chlorinated VOCs (CVOCs), chloroethane was detected at one location along West Hoffman Ave. Also, vinyl chloride was not detected in the West Hoffman Avenue samples, however, it was detected in two of the samples obtained along Kent Ave. This appears to indicate that there may be a source of vinyl chloride emanating from the area between West Hoffman Ave. and Kent Ave.

The downgradient plume appeared to be substantially confined to the area between 11th and 12th Streets. The SCDHS concluded that the Elka Site appeared to be the source of the petroleum contamination.

The sampling results for the borings along the south side of West Hoffman Ave. showed that contamination was primarily confined to the shallowest groundwater sampling interval (5 to 10 feet below grade). At the locations further south and downgradient (Kent Ave.), the contamination was detected primarily in the zones from 15 to 20 feet and 25 to 30 feet. No contamination was detected in the zone from 35 to 40 feet. Plume descent is expected due to the influence of infiltrating precipitation entering the groundwater over the area of the plume.

EAR Investigation (2012)

In 2012, Environmental Assessment & Remediation (EAR) performed two soil and groundwater investigations along the north side of West Hoffman Ave., and then the north and south sides of West Hoffman Ave. In addition, one soil vapor probe was installed and sampled on the property adjacent and south of West Hoffman Ave. The soil and groundwater samples were obtained at depths that ranged from 5 to 19 feet below grade (the figures and data in Appendix F show the sampling locations and sampling results).

The results generally showed groundwater contamination to both the east and west of the building at the Site. The west area contained xylene levels as high as 18,000 ppb and total VOC concentrations as high as 25,378 ppb. Elevated levels of xylenes and VOCs were also present in the saturated soil at 10 to 12 feet below grade at locations adjacent and downgradient of the west side of the Site.

The soil vapor investigation consisted of the installation of one soil gas probe adjacent and south of West Hoffman Avenue between 11th and 12th Streets. The probe was installed to a depth of 4.5 feet below grade. The sample obtained from the probe showed the presence, primarily, of tetrachloroethylene [180 micrograms per cubic meter (mcg/m3)];

1,1,1-trichloroethane (310 mcg/m3); 1,1-dichloroethane (250 mcg/m3); and trichloroethylene (42 mcg/m3). The total BTEX (the sum of the concentrations of benzene, toluene, ethylbenzene, and xylene) was 3.5 ug/m3.

HRP Investigation (2015)

The HRP Site Characterization Report (2015) provided information from the on-Site sampling of soil, groundwater, and soil vapor. Appendix G provides the figures showing the sampling locations and the summary results tables).

The investigation included the performance of 12 borings including saturated soil samples and groundwater samples obtained starting at the water table interface (approximately 5 feet below grade) and at 10-foot intervals thereafter. Samples were obtained at depths of up to 70 feet below grade and showed contamination. Piezometers were installed at three locations. Shallow soil samples and soil vapor samples were also obtained.

The groundwater results showed elevated concentrations of xylene and other petroleum constituents in most areas from the water table interface to a depth of 70 feet. The boring logs for 11 of the 12 locations showed gray-stained soil and elevated photoionization detector (PID) readings in the soil just below the water table. Four surface soil samples were obtained at depth intervals of 0 to 6 inches. The results of the sampling showed no detections of petroleum constituents and trace concentrations of tetrachloroethylene and trichloroethylene. Based on this information, as well as the soil borings which reported no soil staining in the vadose zone at any of the 12 locations (although there were relatively low PID readings and minor petroleum odors at 3 of the 12 boring locations), the entry point of the petroleum constituents into the subsurface was not identified.

Three piezometers were installed at the Site. The piezometers were installed to depths ranging from approximately 30 to 33 feet below grade. The screen lengths are not known. The piezometers were sampled for semi-volatile organic compounds (SVOCs) and metals. The results showed a minor exceedance of the NYSDEC Class GA groundwater standards for bis(2-ethylhexyl)phthalate at one location. The metals results showed exceedances for iron and minor exceedances for sodium. Iron is found naturally-occurring at high concentrations in Long Island groundwater. Sodium is also often typically found at elevated concentrations in the vicinity of coastal areas and tidally-influenced creeks.

Six soil vapor probe samples were obtained at the Site. The results of the sampling showed the presence of elevated concentrations of CVOCs and petroleum-related VOCs. Again, the presence of CVOCs upgradient of the Site have likely contributed to the CVOCs detected in the soil vapor at the Site.

Based on the Site Characterization Report, information that a xylene tank was present during Elka's occupancy of the Site, and the detection of elevated concentrations of xylene in the groundwater, the NYSDEC listed the Site as a Class 2 Inactive Hazardous Waste Disposal Site.

2.3 Site Inspection and Database Search Results

A Site and Site vicinity inspection was performed in August, 2017 by EES. The results of the inspection showed the following:

- There are two stormwater drainpools in the east parking lot at the Site. There was no information in the files reviewed to indicate that these drainpools were ever evaluated or sampled.
- The 2015 Site Characterization Report indicated that "Elevated PID readings were observed at each of the borings, with the highest the highest frequency of readings found on the borings on the north side of the site…" Based on this information, the area between the Site and Akron Avenue were visually evaluated and it was determined that the building adjacent and north of the Site building is occupied by Bruce Transmission & Motor Co. The lot to the east of this building was unpaved and contained many parked fuel oil delivery trucks. These properties may have contributed to the contamination at the Site. EES also reviewed the NYSDEC Spills Incident Database for Akron Ave., Lindenhurst, Suffolk County, and found no reported spills.
- An environmental database report was obtained from EDR, Inc. Based on a review of that report, there were several spills reported for the area within 0.5 miles of the Site. Four spills were reported for the area upgradient or adjacent to the Site, however, these spills were addressed to the satisfaction of the NYSDEC and were closed. No spills were reported for the downgradient area.

2.4 Summary of Prior Site Conditions

Based on the previous investigations, the gray-stained soil with elevated PID readings in soil just below the water table appears to be a smear zone that is present throughout most areas of the Site. The smear zone is an indication that floating petroleum

product was likely to have been present on the surface of the water table in the past. The smear zone soil and groundwater contamination consist of petroleum constituents, primarily BTEX (benzene, toluene, ethylbenzene, and xylene).

Elka is reported to have vacated the Site in 1985. Therefore, the smear zone is apparently several decades old and its gray color indicates that it is likely to be highly weathered. The HRP Site Characterization Report showed the presence of groundwater contamination from the water table to approximately 65 feet below the water table (the water table occurs at approximately 5 feet below grade). However, due to the Site being located in a groundwater discharge area (where there is an upward component of groundwater flow), the lack of an apparent mechanism to transport contamination to the significant depths, and no deep contamination detected during the SCDHS investigation along West Hoffman Ave., the deep groundwater contamination at the Site appears to be the result of Geoprobe sampling rods passing through the smear zone and then contaminating the groundwater below the smear zone.

In the area downgradient of the Site, Geoprobe groundwater sampling had been performed on three occasions during the period from 2001 to 2012. Based on the findings of these investigations, it was determined that, primarily, petroleum constituents were detected in the groundwater. The groundwater contamination was generally confined to the area between 11th and 12th Streets and, therefore, the groundwater flow direction appears to be generally south-southeast and parallel to 11th and 12th Streets. This groundwater flow direction is consistent with groundwater flow directions obtained from US Geological Survey and SCDHS groundwater elevation maps for the Site area.

The data showed that the contamination was confined to the shallow groundwater, however, as the plume travels southward to Kent Avenue, it was detected at deeper depths of up to 30 feet below grade (due to plume descent). Kent Avenue is the southernmost location where groundwater sampling had been performed prior to the EES investigation. Elevated concentrations of xylene and trimethylbenzenes, as well as other petroleum constituents, had been detected along Kent Avenue, which is approximately 650 feet downgradient of the Site.

A soil vapor probe installed on the south side of West Hoffman Ave. showed elevated concentrations of CVOCs, and a trace concentration of xylene (3.5 ug/m3), which was the only BTEX constituent detected. CVOCs from the upgradient (Akron St.) groundwater appear to have contributed to this contamination. It is also known that the

property adjacent and south of West Hoffman Ave., which is currently a vacant parcel had an apparent building and other possible structures in a Suffolk County GIS Viewer aerial photograph from 1962. The parcel appears as if it may have been used for industrial purposes and, therefore, may have had chemical releases.

2.5 Wetlands

To evaluate the potential presence of wetlands on and in the vicinity of the Site, a Site inspection was performed. In addition, the NYSDEC Environmental Resource Mapper was evaluated to determine the presence of National Wetlands Inventory or NYSDEC regulated wetlands. Based on the evaluation, there are no wetlands present at the Site. The nearest wetlands to the Site is a National Wetlands Inventory freshwater wetlands and NYSDEC-regulated wetlands located 0.5 miles to the south-southeast of the Site that is associated with the headwaters of Strongs Creek.

The Environmental Database Report was also evaluated and confirmed the presence of the Strongs Creek federal and state wetlands present approximately 0.5 miles to the south-southeast of the Site.

SECTION 3.0
REMEDIAL INVESTIGATION RESULTS

3.1 Remedial Investigation Description

The RI performed by EES (2018) included sampling the on-Site soil, sediment, indoor air and sub-slab soil vapor, and groundwater samples along with the off-Site groundwater and indoor air and sub-slab soil vapor samples.

3.2 Standards, Criteria, and Guidance

Standards, Criteria, and Guidance (SCGs) for the laboratory chemical analytical results included 6 NYCRR 375-6 Soil Cleanup Objectives (SCOs) for comparison of the unsaturated soil sample results, the NYSDEC Class GA Groundwater Standards for groundwater sample results, and the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates) (NYSDOH Guidance) for evaluation of the soil vapor intrusion samples.

3.2.1 Soil Sampling Procedures

To determine the current soil conditions at the Site, 20 Geoprobe borings (GP-1 through GP-20, as shown on Figure 3) were performed by EES as part of the RI.

Prior to commencing these borings, a surface soil sample was obtained from Geoprobe locations in unpaved areas (GP-1 through GP-10) at a depth of 0 to 2 inches below any vegetative level from each of these locations. Then, continuous Geoprobe soil cores were obtained from grade to 20 feet for borings GP-1 to GP-16. The samples at GP-17 to GP-20 were obtained from 1 to 3 feet below the concrete floor within the Site building. In addition, the two on-Site storm drains SD-1 and SD-2 in the east parking lot (as shown on Figure 3) were sampled.

The soil cores from borings GP-1 to GP-16 were inspected to determine if gray stained soil is present (to provide visual evidence of the presence of a petroleum smear zone generally from 5 to 15 feet below grade) and to obtain photoionization detector (PID) readings from the cores. At four selected locations [GP-7 (7-9'), GP-8 (10-14'), GP-9 (5-7'), and GP-11 (5-7')] saturated soil samples were obtained from within the smear zone to determine the current concentrations of contaminants.

The sediment in the two storm drains was obtained from approximately 0 to 1 foot below the sediment surface (which occurred at a depth of approximately two feet below grade at each storm drain).

3.2.2 On-Site Groundwater Monitoring Wells

Groundwater monitoring wells were installed at boring locations GP-2, GP-6, GP-7, GP-8, GP-10, GP-12, GP-14, GP-15, and GP-16. These locations contain one shallow and one deeper well. The shallow well contains a 7-foot-long, 0.01-inch slotted PVC screen and a three-foot riser pipe that extends to grade. These wells were installed to monitor the zone from 5 to 10 feet below grade (0 to 5 feet below the water table). The deeper wells were installed using the same procedures but contain five-foot screens from 15 to 20 feet below grade.

To determine if there was evidence of deeper contamination at the Site, two deeper wells (MW-3 and MW-4 as shown on Figure 3) were installed near the southern, downgradient border of the Site where HRP Associates previously detected soil contamination at depths up to 70 feet near the southeast and southwest corners of the building. At each location, two wells were installed and contain a five-foot screens from 35 to 40 feet and from 55 to 60 feet.

For the upgradient sampling locations (GW-1 and GW-2 as shown on Figure 4), the wells were installed to a depth of 10 feet below grade and contain 7-foot-long screens.

3.2.3 Soil Sampling Results

The soil samples were laboratory analyzed for VOCs, VOC TICs, SVOCs, SVOC TICs, and metals. The soil sampling locations are provided in Figure 3.

VOC and VOC TIC Results

The VOC laboratory analytical results are shown in Table 1 and the exceedances of the SCOs are graphically presented in Figure 6. The shallow surface soil samples (GP-1 through GP-10), obtained at 0 to 2 inches below any vegetative layer, showed trace and sporadic detections of chlorinated and non-chlorinated VOCs. All detections were well below the NYSDEC Part 375-6.8 Commercial Use Soil Cleanup Objectives (SCOs). For the four samples obtained from within the smear zone GP-7(7-9'), GP-8(10-14'), GP-9(5-7') and GP-11(5-7'), the laboratory results showed the detection of numerous petroleum-related VOCs, however, no CVOCs were detected in the smear zone. In addition, all VOCs detected were well below the Commercial Use SCOs.

For the soil beneath the Site building, samples were obtained at locations GP-17 through GP-20 at depths of 2-3' below the concrete floor of the building. The results show the detection of n-propylbenzene at an estimated concentration of 330 mcg/kg at

three locations (GP-18 through GP-20) and one detection of tetrachloroethylene at a concentration of 5.5 mcg/kg at GP-17. No other VOCs were detected.

Based on this information, no areas of elevated VOCs are present in the unsaturated soil at the Site.

Table 2 provides the laboratory results for VOC TICs. The results generally show sporadic and mostly minor or trace detections of VOC TICs with some elevated detections. The highest detections were found within the smear zone soil and showed estimated concentrations of 100,000 mcg/kg at GP-7(7-9') and GP-8 (10-14') for the TIC octane. There are no standards or guidelines for VOC TICs.

SVOC and SVOC TIC Results

The SVOC laboratory analytical results are shown in Table 3 and the exceedances of the SCOs are graphically presented in Figure 7. The shallow surface soil samples (GP-1 through GP-11), obtained at 0 to 2 inches below any vegetative layer, showed minor and sporadic detections of SVOCs, however, at two locations GP-6 and GP-8, there were exceedances of the Commercial Use SCOs for benzo(a)anthracene (at concentrations up to 19,300 mcg/kg), benzo(a) pyrene (at concentrations up to 19,100 mcg/kg), benzo(b)fluoranthene (at concentrations up to 25,400 mcg/kg), dibenzo(a,h)anthracene (at concentrations up to 5,280 mcg/kg), and indeno(1,2,3-cd)pyrene (at concentrations up to 17,400 ug/kg). For the four samples obtained from the smear zone soil, there were no exceedances of the Commercial Use SCOs.

The SVOC TICs laboratory analytical results are shown in Table 4. The shallow surface soil samples (GP-1 through GP-11), obtained at 0 to 2 inches below any vegetative layer, showed no detections of SVOC TICs, with the exception of locations GP-6 and GP-8 which showed moderate concentrations of SVOC TICs that included a maximum detection of an estimated concentration of 80,000 mcg/kg for "Unknown PAH MW=202." For the four samples obtained within the smear zone, there were detections at all four locations with a maximum detection of an estimated 25,800 mcg/kg for ethyldimethyl benzene isomer. There are no standards or guidelines for SVOC TICs.

Metals Results

The metals laboratory analytical results are shown in Table 5. The shallow surface soil samples (GP-1 through GP-11), obtained at 0 to 2 inches below any vegetative layer, showed detections of metals. In addition, the four samples obtained from within the

smear zone also showed the detection of metals. However, none of the metals were detected at concentrations above the Commercial Use SCOs.

3.2.4 Storm Drain Sediment Sampling Results

The locations of the two storm drains at the Site are shown on Figure 3. The two storm drains are identified as SD-1 and SD-2. Each of the two samples was laboratory analyzed for VOCs, SVOCs, and metals. The sampling results are provided in Table 6 and the exceedances of the SCOs are graphically presented in Figure 8. The results show that there are minor detections of some VOCs, SVOCs, and metals, however, there were no exceedances of the Commercial Use SCOs.

3.2.5 On-Site Groundwater Sampling Results

Groundwater samples were obtained at on-Site locations GP-6D, GP-7S, GP-7D, GP-12S, GP-12D, GP-14D, GP-15S, GP-15D, and GP-16D. These shallow wells ("S") are screened at depths of 5 to 10 feet below grade and the screens intersect the water table. The deeper wells ("D") are screed from 15 to 20 feet below grade. Four additional on-Site wells were also sampled: MW-3 (35-40'), MW-3 (55-60'), MW-4 (35-40'), and MW-4 (55-60'). The sampling locations are shown in Figure 3.

VOC and VOC TIC Results

The VOC results are summarized in Table 7 and the exceedances of the Class GA Standards are graphically presented in Figure 9. The results for the deepest wells installed at the Site (MW-3 and MW-4, both with screens from 35 to 40 and 55 to 60 feet below grade), which were installed near the downgradient border of the Site, show trace to minor detections of several petroleum-related VOCs including a maximum detection of 2.8 mcg/l for total xylenes. Therefore, a deeper plume does not appear to be present at the Site.

For the GP wells sampled, the results show the presence of petroleum-related VOCs at concentrations above the Class GA Groundwater Standards at all these wells with the exception of GP-6D and GP-16D. The concentrations were higher and more prevalent in the shallow wells. The highest concentration of any compound detected was for total xylenes (5,800 mcg/l) at GP-15S. VOCs detected at concentrations above the Standards include 1,2,4-trimethylbenzene (at concentrations up to 990 mcg/l) at GP-7S, acetone (at concentrations up to 850 mcg/l) at GP-15S, and 1,3,5-trimethylbenzene (at concentrations up to 590 mcg/l), 1,4-dioxane (at one location at a concentration of 390 mcg/l), isopropylbenzene (at concentrations up to 130 mcg/l), n-butylbenzene (at

concentrations up to 26 mcg/l), n-propylbenzene (at concentrations up to 260 mcg/l), o-xylene (at concentrations up to 470 mcg/l), p&m xylene (at concentrations up to 1,600 mcg/l), total xylenes (at concentrations up to 2,100 mcg/l), and sec-butylbenzene ((at concentrations up to 12 mcg/l).

The VOC TICs results are summarized in Table 8. For the VOC TICs, there were sporadic and generally minor detections of VOC TICs in the groundwater. The highest VOC TIC detection was for indane (220 mcg/l) at GP-15S.

In summary, the VOC contamination at the Site is generally confined to the shallow groundwater, and although there are exceedances of the standards in the deeper (15-20'), they are generally significantly lower in the deeper groundwater. For the deepest groundwater sampled at the Site (MW-3 and MW-4), there were no exceedances of the standards and only trace to minor detections of VOCs.

SVOC and SVOC TIC Results

The SVOC results are summarized in Table 9 and the exceedances of the Class GA Standards are graphically presented in Figure 10. The SVOC results for the on-Site groundwater generally show minor and sporadic detections. There were exceedances of the Standards for naphthalene at GP-7S (92.6 mcg/l) and GP-15 (72.5 mcg/l). Also, there was an exceedance at GP15S for di-n-butylphthalate (73 mcg/l). There were no SVOC exceedances of the Standards in the deeper wells.

The SVOC TIC results are summarized in Table 10. The detections of SVOC TICs were minor and sporadic. The highest detection of an SVOC TIC was for an indane isomer (48 mcg/l) at GP-15S.

Metals Results

The metals results are summarized in Table 11. The metals results for the on-Site groundwater show detections of metals at all wells. The exceedances of the Standards included iron, manganese, iron plus manganese, and sodium. Iron and manganese are typically found at naturally-occurring elevated concentrations on Long Island. Sodium was detected at concentrations in exceedance of the standards, however, groundwater near the coastline or near tidally-influenced creeks may contain elevated concentrations of sodium due to nearby saltwater bodies of water.

3.3 Off-Site Well Sampling Results

One-inch-diameter cluster wells were installed at off-Site well locations GW-3 through GW-12. These locations contain one shallow and one or more deeper wells.

Three well transects were installed as shown on Figure 4. The first off-Site transect was installed along the south side of West Hoffman Ave. and each of the locations (GW-3 through GW-5) contain two wells: the shallow well is screened at 3 to 10 feet below grade (the depth to groundwater is approximately 5 feet below grade, and the deeper well is screened at 15 to 20 feet below grade). For the well clusters along Kent Ave. (GW-6 through GW-8), each location contains a cluster of four wells including a shallow well [screened from 5 to 12 feet within the aquifer (the water table occurred at 7 feet below grade at Kent Ave.] and deeper depths of 15 to 25, 25 to 30, and 35 to 40 feet below grade. For the furthest downgradient well transect, along West Gates Ave., each cluster location (GW- 9 through GW-12) contains five wells including a shallow well [screened from 5 to 12 feet within the aquifer (due to the water table occurring at 7 feet below grade at West Gates Ave.)] and deeper depths of 15 to 20, 25 to 30, 35 to 40, and 55 to 60 feet below grade.

Off-Site VOC and VOC TIC Results

The VOC results are summarized in Table 12 and the exceedances of the Standards are graphically presented in Figure 11 and the total VOC exceedances for the on and off-Site shallow groundwater are provided in the contour map in Figure 11A. The results for the off-Site groundwater sampling show that the highest concentrations of contamination are found along the West Hoffman Ave. transect, and that the transects along Kent Ave. and West Gates Ave. generally show minor and sporadic detections of VOCs with very few and minor exceedances of the Standards.

For the West Hoffman Ave. transect (wells GW-3 through GW-5), the results show that the contamination consists primarily of petroleum-related contaminants and the highest concentrations are present in the central portion of the area between 11th and 12th Streets (at GW-4). The highest detection of any VOC in the West Hoffman Ave. transect was for ethylbenzene was 867 mcg/l at GW-4 (5-10') (GW-4A, a duplicate of GW-4, contained 1,030 mcg/l of ethylbenzene). There were also elevated detections of several other petroleum constituents including 1,3,5-trimethylbenzene (at concentrations up to 570 mcg/l), isopropylbenzene (at concentrations up to 489 mcg/l), n-propylbenzene (at concentrations up to 635 mcg/l), naphthalene (at concentrations up to 16.3 mcg/l), n-butylbenzene (at concentrations up to 27.9 mcg/l), o-xylene (at concentrations up to 10.6 mcg/l), m&p xylenes (at concentrations up to 147 mcg/l), total xylenes (at concentrations up to 158 mcg/l)sec-butylbenzene (at concentrations up to 35.2 mcg/l) and tert-

butylbenzene (at one location at 5.46 mcg/l). Wells GW-3 and GW-5 generally contained a reduced subset of the VOCs detected at GW-4 (5-10') and the concentrations were significantly lower, although exceedances of the Standards were present. The highest detection at GW-3 (5-10') was n-propylbenzene at 379 mcg/l. The highest detection at GW-5 (5-10') was for total xylenes at 158 mcg/l.

For the deeper samples at the West Hoffman Ave. transect, there were few and trace detections of petroleum constituents. For CVOCs, trichloroethylene and tetrachloroethylene were not detected in the shallow wells, but tetrachloroethylene was detected in two of the deeper wells along West Hoffman Ave. at minor concentrations.

For the Kent Ave. transect (wells GW-6 through GW-8), at GW-6 there were exceedances of the Class GA Standards for chloroform (at concentrations up to 12.3 mcg/l) isopropylbenzene (at concentrations up to 73.5 mcg/l), and n-propylbenzene (at one location at 11.1 mcg/l).

For the West Gates Ave. transect, for the four well cluster locations (GW-9 through GW-12) and for each of the five depth intervals sampled, there were two minor exceedance of the Standards at one location (vinyl chloride at 4.29 mcg/l and 1,2,4-trimethylbenzene at 5.93 mcg/l) Otherwise, there were sporadic minor to trace concentrations of VOCs. Since well cluster GW-12 is located to the east of 11th Street, it is not clear that the detections of vinyl chloride and 1,2,4-trimethylbenzene are related to the plume present between 11th and 12th Streets.

The VOC TICs results are summarized in Table 13. The results for the off-Site groundwater sampling for all wells and all depths show relatively low levels of VOC TICs, however, the highest TIC detected was at GW-4 (5-10') for a detection of 490 mcg/l for a methyl cyclopentane isomer.

SVOC and SVOC TIC Results

The SVOC results are summarized in Table 14 and the exceedances of the Class GA Standards are graphically presented in Figure 12. For the wells sampled for SVOCs (GW-3, GW-4, GW-5, and GW-6), there were no exceedances of the groundwater Standards and the detections included sporadic and minor and trace concentrations.

The SVOC TICs results are summarized in Table 15. For the well clusters sampled for SVOCs TICs (GW-3, GW-4, GW-5, and GW-6), there were generally sporadic and minor and trace concentrations. The highest detection was for propyl benzene isomer at GW-5 (5-10') at an estimated concentration of 307 mcg/l.

Metals Results

The metals results are summarized in Table 16. The results for the off-Site groundwater sampling show that metals were detected at all locations, however, exceedances of the Standards were found in the dissolved sample analyses for iron and sodium. As discussed previously, iron is typically found in groundwater at elevated concentrations on Long Island and sodium is found at elevated concentrations near coastal areas.

3.4 Soil Vapor Intrusion Investigation and Results

Due to the presence of groundwater contamination at the Site and a plume migrating off-Site to the south-southeast, a soil vapor intrusion investigation was performed for both the Site building and the off-site, downgradient commercial building.

The investigation of the two buildings included sub-slab soil vapor samples, indoor air samples, and outdoor air samples. In addition, for the off-site building, two groundwater samples were obtained adjacent and upgradient of the off-site building unit to determine the VOC compounds and concentrations in the shallow groundwater to evaluate the potential for off-gassing of VOCs in the area beneath the off-site building.

A separate report was completed by EES regarding the Site building and the off-site, downgradient commercial building and were previously submitted to NYSDEC.

To summarize the report, the layout of the two locations along with the sample locations at each building are shown in Figure 5. For the Site building, two sub-slab soil vapor samples, two indoor samples, and one outdoor air sample were obtained. The results of the sampling are provided in Table 17.

The results for the Site building show that there were no exceedances of the NYSDOH Table C1 “Study of Volatile Organic chemicals in Air of Fuel Oil Heated Homes” 90th percentile values or the NYSDOH Indoor Air Values. However, due to elevated concentrations of trichloroethylene in the sub-slab soil vapor, mitigation was recommended.

For the off-site, downgradient building, three sub-slab soil vapor samples were obtained along with three co-located indoor air samples, and an outdoor air sample. The results of the sampling are provided in Table 18.

The indoor air results showed that 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, and methyl methacrylate were detected at concentrations exceeding the 90th Percentile Values. None of the detected chemicals exceed the NYSDOH Indoor Air Guideline Values. The concentrations of these chemicals were higher in the indoor air than in the sub-slab area. Therefore, the trimethylbenzenes and methyl methacrylate may have a source within the off-site building. There are no health-based standards or guidelines established for the trimethylbenzenes or methyl methacrylate in indoor air.

The soil vapor intrusion results showed that due primarily to the concentrations in the sub-slab soil, resampling or mitigation is recommended to address cis-1,2-dichloroethylene, and mitigation is recommended to address trichloroethylene. The NYSDOH concurred with this conclusion. As an additional component of the off-site building soil vapor intrusion investigation, two shallow groundwater samples (SPG-1 and SPG-2 as shown on Figure 5) were obtained in the parking lot adjacent to, and 53 feet north (upgradient) of, the off-site building. The samples were obtained from the upper three feet of groundwater. The sampling results are provided in Table 19.

The groundwater sampling results show no exceedances of the Standards. The detections included trace concentrations of petroleum constituents and low concentrations of cis-1,2- dichloroethylene (0.26 mcg/l at SPG-1) and tetrachloroethylene (2.3 mcg/l at SPG-2). Also, trichloroethylene was not detected in the shallow groundwater upgradient of the building. Therefore, there is no evidence that the trichloroethylene present beneath the off-site building in the soil vapor was the result of contaminated groundwater from an upgradient source. It appears that there may be a source of VOC contamination beneath the off-site building since there were numerous VOCs detected in the sub-slab area and indoor air, yet only trace and low detections of seven VOCs in groundwater adjacent and upgradient of the building. It was also noted that a 55-gallon chemical drum, several small gasoline containers, and automobile engines were observed along the exterior of the north-south portion of the building at the time of the sampling.

3.5 PFAS and 1,4-Dioxane Groundwater Sampling Results

PFAS Sampling Results

To address the PFAS (per- and polyfluoroalkyl substances) issue, three rounds of groundwater sampling were performed. For the first round, on-Site groundwater monitoring wells GP-6S, GP-8S, GP-14S, and GP-16S, as well as upgradient wells GW-1

and GW-2 were sampled (Figure 3 shows the on-Site sampling locations and Figure 4 includes the two upgradient well locations).

Table 20 provides a summary of the first round of PFAS analytical results. The analyses were performed for 21 PFASs. The sampling results show that 11 PFASs were detected in the upgradient groundwater and 12 PFAS were detected in the on-Site groundwater. The 11 types of PFAS that were detected in the upgradient wells were all matches of the types that were detected in the downgradient wells. The one additional PFAS that was detected on-Site was found in only one of four on-Site wells sampled. Therefore, the upgradient suite of PFAS types is nearly identical to the on-Site PFAS. Therefore, the evidence indicates that PFAS detected on the Site is the result of on-Site migration from upgradient sources. At one location, GP-14S, 6:2 fluorotelemersulfonate was detected at a concentration of 990 nanograms per liter (ng/l). This concentration is above the NYSDEC guideline of 100 ng/l. All other on-Site and upgradient samples obtained showed no detections or significantly lower detections of 6:2 fluorotelomersulfonate. In addition, PFOS and PFOA exceed the NYSDEC guidelines of 10 ng/l both on-Site and in the upgradient groundwater.

Based on the first round of sampling, 6:2 fluorotelomersulfonate and PFOS/PFOA were both detected above the NYSDEC guidelines both on-Site and in the upgradient groundwater.

A second round of PFAS sampling was performed. During this round, and in consultation with the NYSDEC, selected off-Site wells were sampled. The results are summarized in Table 21. The results of the off-Site sampling show that no 6:2 fluorotelomersulfonate was detected. In addition, the downgradient wells also contained concentrations of PFOS/PFOA that exceeded the NYSDEC guidelines. Based on the second round of results, the upgradient, on-Site and off-Site concentrations of PFOS/PFOA were above the guidelines and were detected at similar concentrations and were, therefore, determined to be background concentrations. However, the NYSDEC requested a third round of PFAS sampling on-Site to address the issue of the elevated 6:2 fluorotelomersulfonate at GP-14S. NYSDEC requested that well GP-14S be resampled, along with a well in the vicinity of GP-14S. Therefore, GP-10S was also sampled. The two upgradient wells were also re-sampled.

The results of the third round of PFAS sampling are provided in Table 22 and the exceedances of the NYSDEC Guidelines are graphically presented in Figure 13. The

results of the sampling show that 6:2 fluorotelomersulfonate was not detected in the upgradient or on-Site wells. Therefore, the prior detection of 6:2 fluorotelomersulfonate appears to have been an anomaly.

1,4-Dioxane Sampling Results

For the 1,4-dioxane sampling, the sample results are summarized in Table 20. 1,4 - dioxane was included in the first round of PFAS sampling. The results of the 1,4-dioxane sampling showed no detections in the on-Site or upgradient groundwater. However, as previously discussed, 1,4-dioxane was detected at one deeper on-Site location (15 to 20 feet below grade) during the standard SVOC analyses. As per the NYSDEC, the detection of 1,4-dioxane is considered to be anomalous.

3.6 Nature and Extent of Contamination

Based on the results of the results of the previous investigations performed from 2001 to 2015, as well as the EES RI, the nature and extent of contamination at and downgradient of the Site is as follows:

On-Site Soil

The on-Site vadose zone soil at the Site is approximately 5 feet in thickness. A smear zone is present throughout most of the area of the Site and is present at and near the water table. Samples of the sediment within the smear zone shows the presence of VOCs and SVOCs, however, none of the samples show exceedances of the Commercial Use SCOs. For the surface soil samples obtained at the Site, two locations showed exceedances of the Commercial Use SCOs for SVOCs. These areas appear to be limited in areal extent and may be due to oil leakage from landscaping vehicles that are parked in this unpaved western portion of the Site. In addition, based on previous sampling performed by HRP Associates in 2014, there were also exceedances of the VOCs 1,2-4-trimethylbenzene and 1,3,5-trimethylebenzene. The three areas of proposed soil excavation and disposal were shown in Figure 7, The NYSDEC added these VOCs since they were detected in the groundwater and, therefore, the protection of groundwater SCOs were applicable and these VOCs exceeded the protection of groundwater SCOs.

There were no exceedances of the Commercial Use SCOs associated with the two storm drains at the Site.

On-Site Groundwater

The on-Site groundwater contains primarily petroleum-related VOCs at concentrations in exceedances of the Standards in the shallow groundwater (from 5 to 10

feet below grade) and, to a significantly lesser extent, the deeper groundwater (15 to 20 feet below grade).

Off-Site Groundwater

Off-Site groundwater contamination at concentrations in exceedance of the Standards is present from the southern Site boundary to the groundwater monitoring wells along the south side of West Hoffman Ave. The contamination at the south side of West Hoffman Ave. is confined to the shallow groundwater and is at its highest total concentrations at the well halfway between 11th and 12th Streets (GP-4). Further downgradient, at Kent Ave., there are concentrations of contaminants at the central well cluster (GP-7) that exceed the Standards for VOCs, minor exceedances of the Standards for chloroform (that does not appear to be related to Site activities) at GP-6 (near 11th St.) Further downgradient, at West Gates Ave., there are no exceedances of the Standards that appear to be related to Site activities.

On-Site Sub-Slab Soil Vapor/Indoor Air

For the on-Site building, there were no elevated concentrations of VOCs detected in the indoor air of the building, however, there were elevated concentrations of trichloroethylene detected in the sub-slab soil vapor.

Off-Site Sub-Slab Soil Vapor/Indoor Air

For the off-Site downgradient commercial building, there were potentially elevated concentrations of three VOCs detected in the indoor are of the building (the concentrations of the of the three VOCs were above the EPA 90th percentile values). And there were elevated concentrations of cis-1,2- dichloroethylene and trichloroethylene detected in the sub-slab soil vapor.

SECTION 4.0
REMEDIAL ACTION OBJECTIVES

Based on the investigation performed at the Site and the area downgradient of the Site, it has been determined that primarily petroleum-related contamination has impacted the on and off-Site groundwater. In addition, trichloroethylene is present in soil vapor beneath the Site building.

The Remedial Action Objectives (RAOs) for the Site and downgradient area are as follows:

Groundwater

RAOs for Public Health Protection:

- Prevent ingestion of groundwater with contaminant levels exceeding the New York State drinking water standards.
- Prevent contact with, or inhalation of, volatile organic compounds from contaminated groundwater.

RAOs for Environmental Protection:

- Restore groundwater to pre-disposal/pre-release conditions to the extent practicable.
- Remove the source of groundwater contamination.

Soil

RAOs for Protection of Public Health:

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation or other exposure from contaminants volatizing from the soil.

RAOs for Environmental Protection:

- Prevent the migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection:

- Mitigate impacts to public health resulting from existing or potential soil vapor intrusion at the Site building.

The mitigation of the sub-slab soil vapor at the off-site, downgradient building is not included in the RAOs since the contaminants in the indoor air and sub-slab soil vapor do not appear to be related to activities at the Site, but appear to be related to the apparent

commercial/industrial former and current history of the properties bounded by West Hoffman Ave,, Kent Ave., and 11th and 12th Streets.

4.1 Potential Human or Ecological Receptors

The contamination that is known to be associated with the Site based on the completed investigations includes on-Site groundwater VOC and SVOC contamination as well soil and sub-slab soil vapor VOC contamination. Groundwater contamination is known to be emanating from the Site and is travelling generally to the south-southeast.

The adjacent areas upgradient and cross-gradient contain commercial and industrial properties (and New York Ave. is adjacent and east of the Site). The downgradient area consists of West Hoffman Ave. and to south of West Hoffman Ave. are commercial/industrial properties bounded by West Hoffman Ave,, Kent Ave., and 11th and 12th Streets. The area to the south of these properties is a residential area that extends southward to the Great South Bay.

4.1.1 Potential Human Receptors

For the on-Site area, the contaminated groundwater is located at a depth of approximately five feet below grade. There are no drinking water wells on Site and there is no surface water on Site. Therefore, there are no likely potential concerns with contacting or ingesting groundwater from the Site.

For the on-Site soil, there are two shallow soil sample locations at which SVOCs were detected at concentrations above the SCOs. These samples, GP-6 (0-2") and GP-8 (0-2"), are located near the southeast and southwest corners of the unpaved western portion of the Site that is currently being used by a landscaping business. Also, based on a previous investigation by HRP Associates, it was found that contamination was found in a boring for the area of the concrete pad located to the east of the Site building. The sample (identified at sample SB-3) was found to contain VOCs at concentrations in exceedance of the SCOs at a depth of 6 to 7 feet below grade.

Soil vapor VOCs were detected in the sub-slab area of the Site building. Although no soil vapor intrusion was detected during the previous investigations, the potential exists for future soil vapor intrusion to impact the Site building.

For the off-Site area, the groundwater contamination emanating from the Site is present 640 feet downgradient of the Site at Kent Ave. (although at relatively low exceedances of the Standards and only at the central well cluster (no exceedances of the Standards were found at the well clusters adjacent to 12th St. (GP-6) or 11th St. (GP-8).

Groundwater emanating from the Site does not appear to be present at the cluster well transect at Gates Ave. (which is 1,600 feet downgradient of the Site). It is expected that groundwater containing VOCs at concentrations above the Standards do not extend a significant distance south of Kent Ave.

Therefore, since the Site and the downgradient area of the plume are reported to be provided with public drinking water through the Suffolk County Water Authority (as stated in Section 2.2), there is unlikely to be any human consumption of impacted groundwater. In addition, the impacted groundwater is not accessible to humans since it located below the ground surface. The two areas of surficial SVOC contamination and the soil in the area of the concrete pad containing elevated concentrations of VOCs to the east of the building should be remediated to protect human health, and the soil vapor should be mitigated to prevent soil vapor intrusion.

4.1.2 Potential Ecological Receptors

There are no surface water bodies or open space located within the area of the plume The headwaters of Strongs Creek are located to the south of West Gates Ave. Since the area of contamination terminates in the area to the north of West Gates Ave. (that is, the contamination disperses as it moves downgradient to a point where the concentrations are low enough for the natural oxygen levels in the groundwater to be sufficient to support biodegradation of the contamination and create what can be considered a line that is perpendicular to the long axis of the plume across which the contamination is no longer present), there is no reasonable potential for the contamination to have impacted the creek. No parklands or other open space areas are present within or adjacent to the area of the plume.

4.2 Remedial Action Goals and Objectives

The Remedial Action Goal for the groundwater at and downgradient of the Site is to reduce the concentrations of VOCs and SVOCs to pre-disposal levels to the extent practicable. The Remedial Action Goal for the soil is to address all areas of soil containing contamination above the applicable SCOs. The Remedial Action Goal to address the potential for on- Site soil vapor intrusion is to mitigate the soil vapor to reduce the potential for impacts to public health.

4.3 Identification of Remedial Alternatives

The remedial alternatives to address the contamination in the groundwater are as follows:

- Alternative 1: No Action. This alternative will include the following:

  -Prohibition of the use of on-Site groundwater for any purpose unless groundwater treatment is performed.

  -Limit the Site usage to commercial or industrial purposes as defined in NYCRR Part 375-1.8(g).

  -Abandon existing groundwater monitoring wells associated with this Site.

- Alternative 2: Natural Attenuation and Monitoring. This alternative will include the following:

  -No remedial activities for the groundwater.

  -Periodic groundwater monitoring to determine the progress of the natural attenuation of groundwater contaminants.

  -Excavation and disposal of approximately 10 to 25 cubic yards of soil at concentrations in exceedance of the 6 NYCRR Part 375-6.8 SCOs for Commercial Use.

  -Installation of a Sub-Slab Depressurization System (SSDS) to address the potential for soil vapor intrusion at the Site building.

  -Prohibition of the use of on-Site groundwater for any purpose unless groundwater treatment is performed.

  -Limit the Site usage to commercial or industrial purposes as defined in NYCRR Part 375-1.8(g).

  See Figure 14 for the locations of the natural attenuation monitoring wells.

- Alternative 3: On-Site Air Sparging/Soil Vapor Extraction (AS/SVE). This alternative will include the following:

  -Installation of an AS/SVE system to address impacted groundwater on Site.

  -Chemical injections to address impacted groundwater off Site using Oxygen Release Compound (ORC), Petrofix, or other similar product.

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-Excavation and disposal of approximately 10 to 25 cubic yards of soil at concentrations in exceedance of the 6 NYCRR Part 375-6.8 SCOs for Commercial Use.

-Installation of an SSDS to address the potential for soil vapor intrusion at the Site building.

-Prohibition of the use of on-Site groundwater for any purpose unless groundwater treatment is performed.

-Limit the Site usage to commercial or industrial purposes as defined in NYCRR Part 375-1.8(g).

See Figure 15 for proposed locations of AS and Chemical Bioremediation injection wells.

- Alternative 4: Chemical Bioremediation of On- and Off-Site Groundwater Contamination. This alternative will include the following:

  -Chemical injections to address impacted on- and off-Site groundwater using Oxygen Release Compound (ORC), Petrofix, or other similar product.

  -Excavation and disposal of approximately 10 to 25 cubic yards of soil at concentrations in exceedance of the 6 NYCRR Part 375-6.8 Soil Cleanup Objectives (SCOs) for Commercial Use.

  -Installation of an SSDS at the Site building to address the potential for Soil Vapor Intrusion.

  -Prohibition of the use of on-Site groundwater for any purpose unless groundwater treatment if performed.

  -Restrict the Site usage to commercial or industrial purposes as defined in NYCRR Part 375-1.8(g).

  See Figure 16 for the proposed locations of AS and Chemical Injection wells.

- Alternative 5: Excavation and disposal of the petroleum smear zone sludge layer plus contaminated vadose zone soil at concentrations in exceedance of the SCOs for Unrestricted Use, followed by on-Site AS/SVE plus off-Site Chemical Bioremediation of contamination using ORC, Petrofix, or other similar product. This alternative will include the following:

-Removal of all asphalt and concrete on the central and eastern portions of the property, excavate the overlying four to five feet of vadose zone soil, excavation of the smear zone layer throughout the Site which is estimated to be approximately four feet thick with approximately three feet of this material present below the water table. This highly weathered layer is estimated to be present beneath 80 percent of the Site. It is expected that the excavation would be capable of removing 70 to 80 percent of the smear zone material. The smear zone appears dense, impermeable, and exhibits plasticity.

-Installation of an AS/SVE following the removal of the smear zone to address impacted groundwater on Site.

-Chemical injections to address impacted off-Site groundwater using ORC, Petrofix, or other similar product.

-Excavation and disposal of approximately 10 to 25 cubic yards of soil at concentrations in exceedance of the 6 NYCRR Part 375-6.8 SCOs for Unrestricted Use.

See Figure 17 for locations of smear zone removal locations, AS and chemical injection wells.

4.4 Comparative Analysis of Alternatives

The comparative analysis (using the threshold and balancing criteria as per DER-10) of the Remedial Alternatives to address the groundwater contamination is as follows:

4.4.1 Alternative 1: No Action Alternative

The No Action Alternative would allow the contamination in the on- and off-Site groundwater to remain present. Also, the areas of contaminated soil in the vadose would remain and the Site building would have the potential for soil vapor intrusion. The contamination levels will decrease over time due to the natural processes of advection, dispersion, and biodegradation, however, the contamination would likely remain present in the groundwater, soil, and soil vapor for several decades before natural attenuation would reduce the concentrations to levels below the Standards and guidance levels.

Overall Protection of Public Health and the Environment

Alternative 1 would not be protective of Public Health and the Environment since the contamination would continue to be present in the groundwater at concentrations above the Standards and the contaminated soil and potential soil vapor intrusion would remain at the Site. No action would provide no meaningful reduction in the concentrations

of contaminants for an estimated one or more decades.

Standards Criteria and Guidance (SCGs)

The SCGs for the Site groundwater are the NYSDEC Ambient Groundwater Standards. The SCGs for the soil are the Commercial Use SCOs, and the SCG for potential soil vapor intrusion is the NYSDOH guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates).

Long-Term Effectiveness and Permanence

No Action has long-term effectiveness and permanence, however, the timeframe to achieve those conditions is likely to be one or more decades. Other alternatives can achieve these goals in shorter durations of time.

Reduction of Toxicity, Mobility, or Volume of Contamination

The toxicity, mobility, or volume of contaminants will not be meaningfully reduced with No Action for a period of one or more decades.

Short-Term Impact and Effectiveness

The No Action Alternative would have little or no short-term impacts since the plume appears to have been present in the groundwater for a minimum of five decades and, at present, the plume contains elevated concentrations of contaminants on Site and in the groundwater monitoring wells adjacent and south of West Hoffman Avenue. The concentrations are significantly diminished in the wells along Kent Ave. and do not appear to be present at West Gates Ave. There are no groundwater users in this area and no surface water in or near the plume. However, this method of remediation should not be considered effective due to the duration to achieve the RAOs.

Implementability

The No Action Alternative would not require implementation with the exception of the abandonment of existing Site and off-Site groundwater monitoring wells.

Cost Effectiveness

There is no cost associated with this alternative with the exception of abandoning the existing groundwater monitoring wells. Therefore, this alternative is cost effective.

4.4.2 Alternative 2: Natural Attenuation and Monitoring

This alternative is similar to the No Action Alternative, however, it would include groundwater monitoring (periodic sampling and analysis) to determine the rate of decrease in the concentrations of contaminants over time. This alternative would also include soil

excavation to address the remaining impacted soil at the Site. An SSDS would be installed to address the potential for soil vapor intrusion at the Site building.

Overall Protection of Public Health and the Environment

This alternative would not be protective of Public Health and the Environment since contamination would continue to be present in the groundwater at concentrations above the groundwater standards and would provide no substantive reduction in the concentrations of contaminants for an estimated period of one or more decades. This alternative would also permanently remove the vadose zone soil contamination to concentrations below the Commercial Use SCOs, and the SSDS would significantly reduce the potential for soil vapor intrusion in the Site building.

Standards Criteria and Guidance (SCGs)

The SCGs for the Site groundwater are the NYSDEC Ambient Groundwater Standards. The SCGs for the soil are the Commercial Use SCOs, and the SCG for potential soil vapor intrusion is the NYSDOH guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates).

Long-Term Effectiveness and Permanence

Natural Attenuation has long-term effectiveness and permanence, however, the timeframe to achieve those conditions is likely to be an estimated period of one or more decades.

Reduction of Toxicity, Mobility, or Volume of Contamination

The toxicity, mobility, or volume of contaminants will not be substantively reduced with Natural Attenuation for an estimated period of one or more decades.

Short-Term Impact and Effectiveness

The Natural Attenuation and Monitoring Alternative would have little or no short-term groundwater impacts since the plume appears to have been present in the groundwater for a minimum of five decades and, at present, the plume contains elevated concentrations of contaminants on Site and in the groundwater monitoring wells adjacent and south of West Hoffman Avenue. The concentrations are significantly diminished in the wells along Kent Ave. As discussed previously, it appears that the plume is not migrating further downgradient to the area of West Gates Ave. There are no apparent groundwater users in this area and no surface water in or near the plume. However, this method of remediation should not be considered effective due to the duration required to achieve the RAOs. The excavation and disposal of contaminated vadose zone soil and the installation of an SSDS

would provide significant and effective short-term impacts.

Cost Effectiveness

It is estimated that the groundwater monitoring and SSDS operation would be required for a period of at least 20 years. The vadose zone soil excavation and disposal would be completed in the first year. This alternative is cost effective due to the lack of active groundwater remediation.

Implementability

The Natural Attenuation Alternative implementation would entail quarterly sampling of the wells, soil excavation, and SSDS installation. These steps would be implementable within the first year.

4.4.3 Alternative 3: Air Sparging/Soil Vapor Extraction (AS/SVE)

This would entail the installation of a system of piping and electric motors that would introduce air into the groundwater in the impacted areas to allow the contaminants to partition into the air bubbles and transport the contamination to the water table surface where the contamination would enter a vapor state and could be removed with vapor with vapor extraction pipes.

The AS/SVE alternative would address the on-Site contamination. This alternative would also require Chemical Bioremediation to address the off-Site contamination, on-Site vadose zone soil excavation and disposal, and the installation of an SSDS at the Site building.

Overall Protection of Public Health and the Environment

The AS/SVE Alternative would be protective of Public Health and the Environment since the contamination at the Site would be removed over a period of approximately 4 to 8 years. This would reduce or eliminate the concentrations of contamination migrating off-Site. The off-Site concentrations of groundwater contaminants would be addressed by Chemical Bioremediation and would reduce the concentrations of VOCs in that area. This alternative would also permanently remove the vadose zone soil contamination to concentrations below the Commercial Use SCOs, and the SSDS would significantly reduce the potential for soil vapor intrusion in the Site building and be protective of public health and the environment.

Standards Criteria and Guidance (SCGs)

The SCGs for the Site groundwater are the NYSDEC Ambient Groundwater Standards. The SCGs for the soil are the Commercial Use SCOs, and the SCG for potential

soil vapor intrusion is the NYSDOH guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates).

Long-Term Effectiveness and Permanence

Since the AS/SVE system would operate until the contamination is substantially removed from the groundwater, this alternative would be both effective and permanent.

This alternative would also permanently remove the vadose zone soil contamination to concentrations below the Commercial Use SCOs, and the SSDS would significantly reduce the potential for soil vapor intrusion in the Site building and would provide long-term effectiveness and permanence.

Reduction of Toxicity, Mobility, or Volume of Contamination

The toxicity, mobility, and volume of contaminants will be reduced significantly since the contamination will be permanently removed or degraded in the groundwater, soil, and soil vapor.

Short-Term Impact and Effectiveness

The AS/SVE Alternative would have an immediate impact since it will begin to remove contamination from the groundwater and soil vapor from essentially the moment it begins operation. It will continue to remove contaminants from the groundwater and soil vapor for the period it remains operational and, therefore, it will be effective. The off-Site Chemical Bioremediation would effectively reduce VOC concentrations in short periods of time. The soil excavation and SSDS installation would also provide a significant and effective measure in the short term.

Implementability

It is unlikely that the AS/SVE Alternative would be implementable due the presence of the extensive smear zone at and near the water table surface throughout the majority of the Site that has created what appears to be an impermeable layer that would likely prevent the sparging system from transferring the air bubbles from the groundwater to the vadose zone. The air released from the sparge wells have the potential to accumulate beneath the smear zone and then migrate laterally to an area where the smear zone is not present. It would be difficult to determine the location or locations where sparged air would emerge from beneath the smear zone and, therefore, it would have the potential to create a vapor plume that would be difficult to locate and capture. This could result in soil vapor migrating off Site with the potential to impact structures in the vicinity of the Site.

Therefore, this alternative should be considered to be unacceptable.

Cost Effectiveness

The cost effectiveness of this alternative is not provided since it does not appear to be implementable due to the apparent impermeable weathered petroleum layer. However, the cost is higher than Alternative 4, which can likely provide similar results for a lower cost.

4.4.4 Alternative 4: Chemical Bioremediation of Contamination

Chemical Bioremediation of contamination using Oxygen Release Compound, Petrofix, or other similar product has been employed successfully nationwide at petroleum-impacted sites. This alternative would allow the compound to be injected into the subsurface as a slurry at precise locations to target areas of contamination. The compound would address the contamination primarily by the introduction of oxygen into the groundwater which would support the aerobic biodegradation of the petroleum chemicals present in the groundwater. In addition, the existing on-Site and off-Site wells may be used as chemical injection wells and additional injection points would likely be added.

This alternative would also include on-Site soil excavation and disposal, and the installation of an SSDS at the Site building.

Overall Protection of Public Health and the Environment

The Chemical Bioremediation of Contamination Alternative is expected to significantly reduce the concentrations of contaminants in the groundwater. This would achieve the RAOs for the Site and downgradient area. Also, the time required to achieve these goals is estimated to be 2 to 5 years. However, it may not be effective in completely biodegrading contamination within the smear zone since the smear zone permeability is low or impermeable. The contaminated soil would be permanently removed and would no longer provide a source of groundwater contamination or soil vapor. The SSDS would address the potential for soil vapor intrusion at the Site building.

Standards Criteria and Guidance (SCGs)

The SCGs for the Site groundwater are the NYSDEC Ambient Groundwater Standards. The SCGs for the soil are the Commercial Use SCOs, and the SCG for potential soil vapor intrusion is the NYSDOH guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates).

Long-Term Effectiveness and Permanence

This alternative has long-term effectiveness and permanence since the existing

contamination in the groundwater will generally be biodegraded to concentrations near or below the Standards. The excavated soil would be permanently removed and the SSDS would provide an effective and long-term measure to address the potential for soil vapor intrusion.

Reduction of Toxicity, Mobility, or Volume of Contamination

The toxicity, mobility, or volume of contaminants in the groundwater will begin to be reduced upon the initial application of the chemical. The toxicity will be reduced by the bioremediation of the toxic chemicals and transforming them into less toxic or non-toxic compounds. The mobility will be reduced or essentially eliminated since the contamination will be biodegraded and will, therefore, no longer exist. The volume of the contamination will also be reduced through biodegradation. The soil removal would permanent eliminate that contamination and the SSDS would address the potential for soil vapor intrusion.

Short-Term Impact and Effectiveness

The chemicals are expected to be effective in the short term in reducing the concentrations of chemicals in and downgradient of the area where they are to be applied. It is also likely that more than one application of the chemicals will be required to address the contamination. The excavated soil would be permanently removed and the SSDS would provide an effective measure to address the potential for soil vapor intrusion within the first year.

Implementability

This alternative can be implemented with a relatively low level of effort (compared to other active remedial methods). It would entail introducing the chemical into the groundwater through wells or direct Geoprobe injection and there would be no permanent equipment, motors, machinery, or structures above ground. Groundwater monitoring would also be performed at the existing groundwater monitoring wells.

Cost Effectiveness

It is expected that the cost for the implementation of this alternative will be between $393,000 to $731,000 to implement and monitor this alternative. This alternative is both feasible and cost effective when compared to Alternatives 3 and 5.

4.4.5 Alternative 5: Restore Site to Pre-Disposal Conditions

This alternative would require the removal of the weathered impermeable petroleum layer from the area of the water table, followed by AS/SVE to address the residual soil and groundwater contamination on Site, chemical biodegradation for the off-Site groundwater,

excavation and disposal of the areas of contaminated soil, and addressing soil vapor intrusion.

The weathered petroleum removal would require removal of the asphalt at the east parking lot and the areas adjacent to the Site building. The western portion of the Site is unpaved. The overlying vadose zone would require removal and stockpiling at the Site (with the exception of the relatively small areas of contaminated soil which would be removed and disposed off Site). It is estimated that the weathered petroleum is present throughout approximately 80 percent of the Site based on the soil borings performed at the Site. This dense, sludge-like material is present in layer that is expected to be approximately four feet deep with approximately 75 percent of its volume being present below the water table. Eastern Environmental Solutions, Inc. estimates that 70 to 80 percent of the material could be removed. The estimated total volume that would be excavated is 2,900 cubic yards. This would leave residual material that could be addressed by AS/SVE. The AS/ SVE would be installed as described above. An SSDS would also be installed to reduce the potential for soil vapor intrusion I the Site building.

Overall Protection of Public Health and the Environment

The excavation of the weathered petroleum, following by AS/SVE on Site, Chemical Bioremediation off-Site, contaminated soil excavation, and installation of an SSDS is expected to reduce the concentrations of contaminants in the groundwater. The on-Site contaminated soil would be addressed, and SSDS would address the potential for soil vapor intrusion.

This alternative would also leave residual weathered petroleum which would be require addressing using an additional groundwater remedial method. In addition, any weathered petroleum that is present beneath the building could not feasibly removed.

Standards Criteria and Guidance (SCGs)

The SCGs for the Site groundwater are the NYSDEC Ambient Groundwater Standards. The SCGs for the soil are the Unrestricted Use SCOs, and the SCG for potential soil vapor intrusion is the NYSDOH guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006, plus updates).

Long-Term Effectiveness and Permanence

This alternative has long-term effectiveness and permanence since the existing contamination will generally be removed or biodegraded to concentrations near or below

the Standards. However, it may require the same remedial duration as Chemical Bioremediation.

Reduction of Toxicity, Mobility, or Volume of Contamination

The combination of the alternatives would both remove and degrade the contamination at and downgradient of the Site and will remove much of the weathered petroleum, however, much of the weathered petroleum contains relatively low concentrations of contaminants since the Elka Chemical Corporation has not been operating since 1985 and much of the weathered petroleum has already biodegraded through natural processes.

Short-Term Impact and Effectiveness

The short-term impacts will include a significant disturbance of the site during asphalt and concrete removal, excavation, and restoration of the Site. There is also likely to be fugitive petroleum odors in the area of Site the during the 3 to 6 weeks needed to complete the project.

Implementability

This alternative would require the two current businesses operating at the site to cease operations until the excavation is complete and the Site is restored. It would require excavation and stockpiling of excavated materials in stages. There would also be the generation of numerous truck trips to enter the Site, dewater then load the excavated materials, and transport them to the disposal facility. There would then be additional truck trips to transport and deliver backfill sand and restore the Site.

Cost Effectiveness

The cost for this alternative is estimated to be $1.018 million to $1.703 million to complete. However, since it is expected that only 70 to 80 percent of the weathered petroleum is expected to be removed, this alternative will not return the Site to pre-disposal conditions due to the residual weathered petroleum sludge. Since Alternative 4 is a less costly alternative that will provide a similar outcome in similar timeframes, Alternative 5 does not appear to be cost effective.

4.5 Recommended Remedial Alternative

Prior to the NYSDEC's selection of a remedy, community acceptance of the proposed remedy will be evaluated after any public comments on the remedy have been received. For each of the alternatives discussed above, there is no expected change in the land use or uses at the Site. It is anticipated that the Site will continue to be used for commercial purposes during and following the period of the remediation.

The evaluation of the remedial alternatives shows that Alternative 1: No Action, and Alternative 2, Natural Attenuation with Monitoring, are options that will result in a reduction of contamination but will likely require several decades to achieve these goals.

Alternative 3, AS/SVE on-Site with Chemical Bioremediation, Soil Excavation, and SSDS, is not feasible due to the presence of a weathered petroleum smear zone above and below the water table. This layer is dense and appears to be impermeable and exhibits plasticity. Air introduced to the groundwater during sparging would not be able to reach the vadose zone to be collected by an SVE system. Therefore, the air would accumulate below the dense layer and move laterally and the release point of the sparge air could not be predicted and, therefore, it could not be collected. Alternative 4, On- and Off-Site Chemical Bioremediation of the groundwater, soil excavation, and SSDS, may remediate the groundwater in 2-5 years, and the small areas of contaminated soil would be removed and the SSDS would address the potential for soil vapor intrusion. Alternative 5 is similar to Alternative 4, but adds the removal of smear zone sludge and substitutes AS/SVE for Chemical Bioremediation for the on-Site groundwater remediation. The timeframe for cleanup is estimated to be the similar for Alternatives 4 and 5, but since excavating below the water table is difficult, it is expected that 70 to 80 percent of the smear zone sludge will be removed and a significant amount of the sludge will remain in the groundwater and, therefore, will require further remediation by other methods to address the groundwater contamination. Therefore, the excavation of the sludge will provide little benefit to the project.

Based on the analysis, Alternative 4 is recommend since it provides a cost-effective solution for the issues of groundwater contamination, soil contamination, and soil vapor intrusion. It is also significantly less disruptive to the existing businesses at the Site and to the surrounding community and businesses.

4.6 Engineering/Institutional Controls (EC/ICs)

Upon completion of the Remedial Action, the Site may contain groundwater that exceeds the Standards, soils that exceed the SCOs, and soil vapor. ECs have been incorporated into the Remedial Action to render the Site remedy protective of public health and the environment. Two elements have been designed to assure continual and proper management of soils that exceed SCOs in perpetuity: an Environmental Easement and a Site Management Plan (SMP).

In addition, during the implementation of Alternative 4, the asphalt parking lot will be maintained to prevent exposure to subsurface chemicals.

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when soils exceeding the SCOs remains at the Site after the Remedial Action is complete. As part of this Remedial Action, an Environmental Easement approved by NYSDEC will be filed and recorded with the Suffolk County Clerk.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement:

1. Requires the remedial party or Site owner to complete and submit to the NYSDEC a periodic certification of ICs and ECs in accordance with Part 375-1.8 (h)(3);
2. allows the use and development of the controlled property for commercial (or less restrictive uses) as defined by Part 375-1.8(g), although land use is subject to local zoning laws; and
3. requires compliance with the Department-approved SMP.

The Environmental Easement must be recorded with the Suffolk County Clerk before the Certificate of Completion can be issued by NYSDEC. A series of ICs are required under this remedy to implement, maintain and monitor the ECs. These ICs are requirements or restrictions placed on the Site, that are listed in and required by, the Environmental Easement. ICs can, generally, be subdivided between controls that support ECs, and those that place general restrictions on-Site usage or other requirements. ICs in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The ICs that support ECs are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must

be reported at the frequency and in a manner defined in the SMP; and

- ECs may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these ICs for the Site is mandated by the Environmental Easement and will be implemented under the SMP. The Site will also have a series of ICs in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited.
- The Controlled Property may be used for commercial or industrial use (and less restrictive uses as defined in 6 NYCRR Part 375) only, provided the long-term ECs and ICs included in the SMP are employed.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the SCDHS to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval from the NYSDEC.
- Groundwater and other environmental and public health monitoring shall be performed as defined in the SMP.
- The potential for vapor intrusion shall be evaluated for any newly-developed buildings on the property.
- All future activities that may disturb the remaining contaminated material shall be conducted in accordance with the SMP.
- Monitoring to assess the performance and the effectiveness of the remedy shall be performed as defined in the SMP.
- Operation, maintenance, monitoring, inspection and reporting of the SSDS shall be performed as defined in the SMP.
- The Controlled Property may not be used for a higher level of use, such as residential or unrestricted use without an amendment or extinguishment of this Environmental Easement and unless allowed by local zoning.
- The Grantor agrees to submit to NYSDEC a written statement that certifies, under

penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

Site management is the last phase of remediation and includes issuance of the Certificate of Completion for the Remedial Action. The SMP will be written in a manner that allows its use as a complete and independent document. Site management continues in perpetuity or until extinguished in writing by NYSDEC. The property owner is responsible to ensure that all Site management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage soils that exceed the SCOs and are left in place at the Site, following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all ECs and ICs; and (2) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC.

A SMP is required, which includes the following:

1. An Institutional and Engineering Control Plan that identifies all use restrictions and ECs for the Site and details the steps and media-specific requirements necessary to ensure the following ICs and/or ECs remain in place and effective:

   a. Institutional Controls: The Environmental Easement as discussed above.

   b. Engineering Controls

   This plan includes, but may not be limited to:

   - A work plan as an appendix, which details the provisions for management of future excavations or other work and handling of soil, groundwater, or soil vapor

in areas where concentrations that exceed the SCGs;

- descriptions of the provisions of the Environmental Easement including any land use,
- provisions for the management and inspection of the identified ECs;
- maintaining Site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the ICs and/or ECs.

2. Site management reporting requirements for submittal of data, information, recommendations, and certifications to NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually, or an alternate period of time that NYSDEC may allow. The SMP will be based on a calendar year and will be due for submission to NYSDEC by March 1 of the year following the reporting period.

APPROXIMATE SCALE: 1" = 40'

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FIGURE 1
GENERAL SITE LAYOUT
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

SCALE: 1" = 280'

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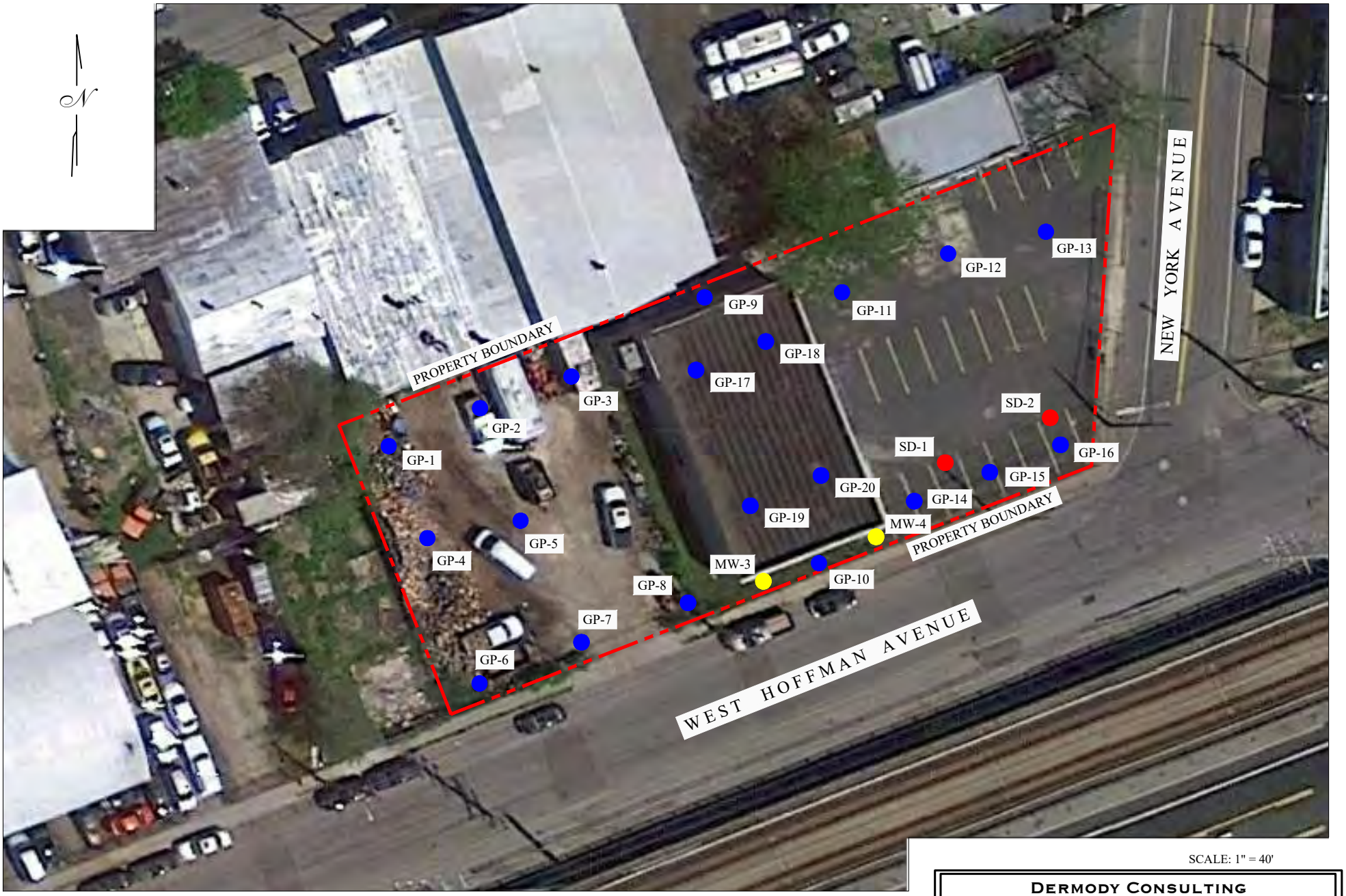
FIGURE 2
SITE AND
DOWNGRADIENT AREA
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



SCALE: 1" = 40'

LEGEND

- GP-1 GEOPROBE BORING LOCATION
- MW-3 SOIL BORING / SAMPLING LOCATION
- SD-1 EXISTING STORMWATER DRAIN POOL LOCATION

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FIGURE 3
ON-SITE SAMPLING LOCATIONS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

SCALE: 1" = 280'

LEGEND

GW-1 OFF-SITE GROUNDWATER MONITORING WELL LOCATION

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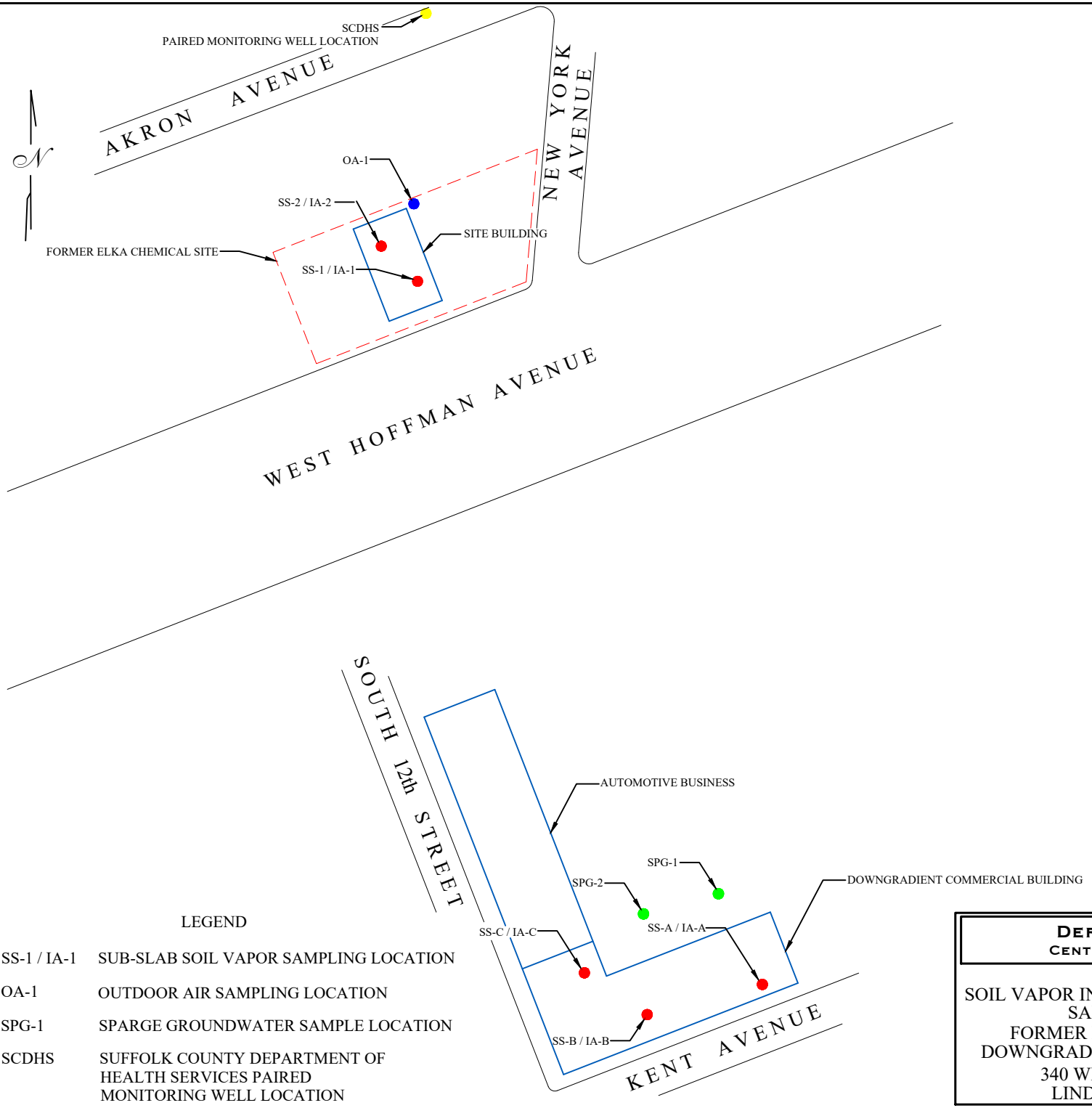
FIGURE 4
OFF-SITE GROUNDWATER
MONITORING WELL LOCATIONS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



LEGEND

SS-1 / IA-1	SUB-SLAB SOIL VAPOR SAMPLING LOCATION
OA-1	OUTDOOR AIR SAMPLING LOCATION
SPG-1	SPARGE GROUNDWATER SAMPLE LOCATION
SCDHS	SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES PAIRED MONITORING WELL LOCATION

SCALE: 1" = 116'

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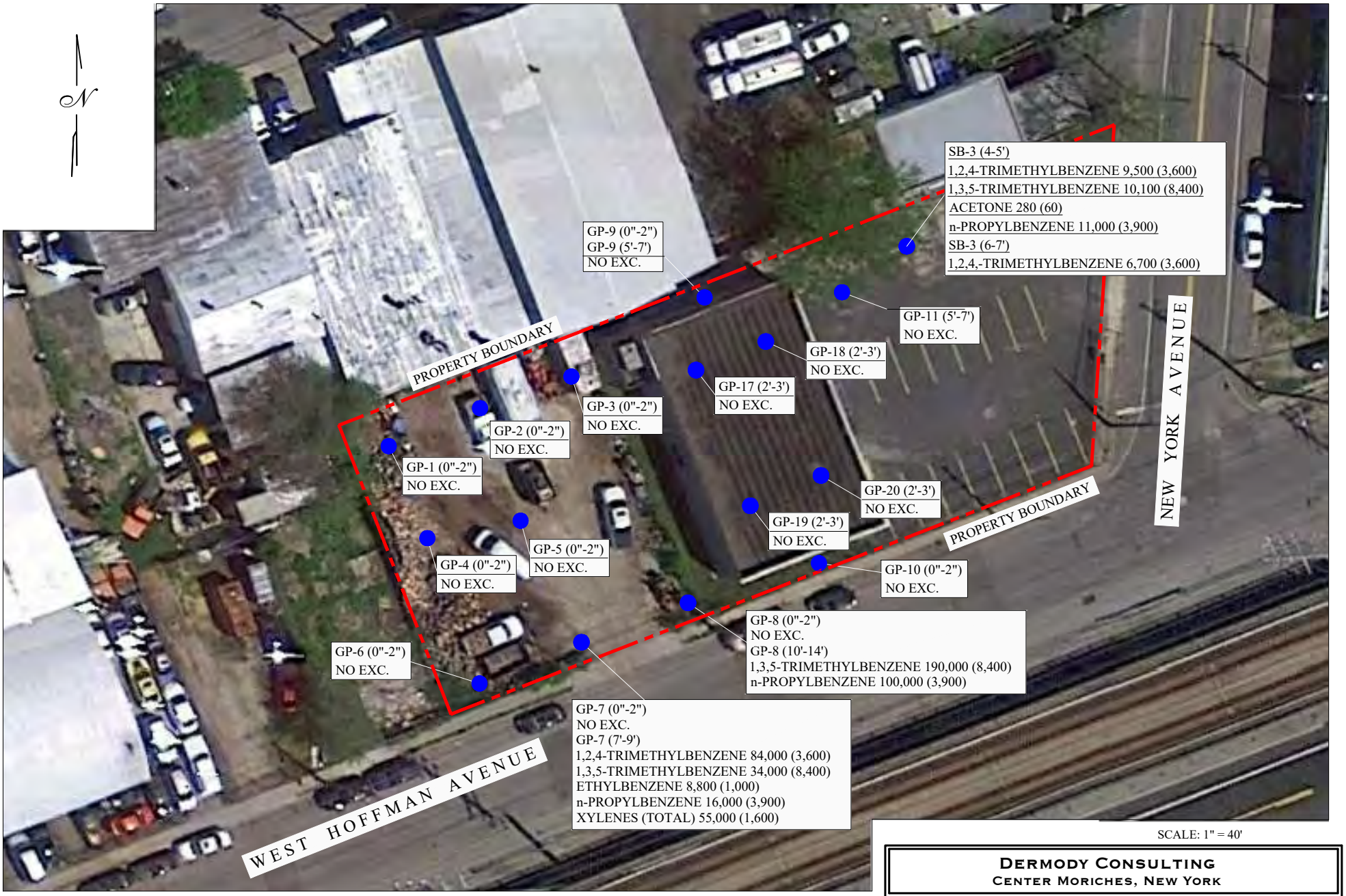
FIGURE 5
SOIL VAPOR INTRUSION AND GROUNDWATER SAMPLING LOCATIONS
FORMER ELKA CHEMICAL SITE AND DOWNGRADIENT COMMERCIAL BUILDING
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



SCALE: 1" = 40'

LEGEND

GP-1 (0"-2") / NO EXC. — SOIL SAMPLING LOCATION, AND VOC EXCEEDANCES OF PROTECTION OF GROUNDWATER SCOs

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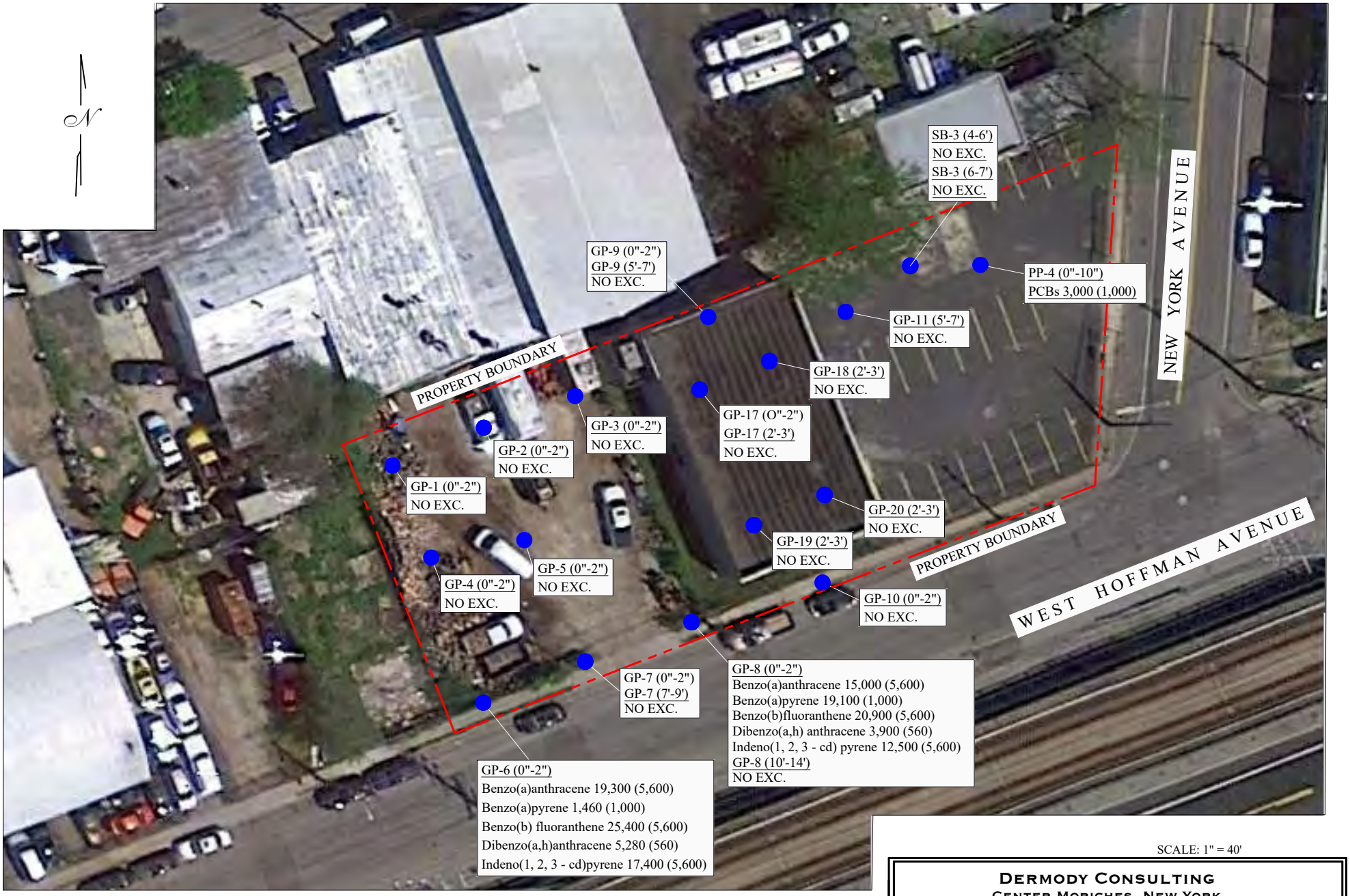
FIGURE 6
ON-SITE SOIL SAMPLING LOCATIONS AND VOC EXCEEDANCES OF PROTECTION OF GROUNDWATER SCOs
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



LEGEND

GP-1 (0"-2")
NO EXC.

SOIL SAMPLING LOCATION
AND SVOC AND PCB EXCEEDANCES OF
COMMERCIAL SOIL CLEANUP OBJECTIVES.
SOIL CLEANUP OBJECTIVE VALUES ARE
SHOWN IN PARENTHESIS.
ALL VALUES SHOWN ARE IN mcg / Kg.

SCALE: 1" = 40'

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FIGURE 7
ON-SITE SOIL SAMPLING LOCATIONS AND
SVOC AND PCB EXCEEDANCES
OF APPLICABLE SCOs
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

LEGEND

SD-1
NO EXC.

SEDIMENT SAMPLING LOCATION AND COMMERCIAL SOIL CLEAN UP EXCEEDANCES FOR VOC's, SVOC's AND METALS

SCALE: 1" = 40'

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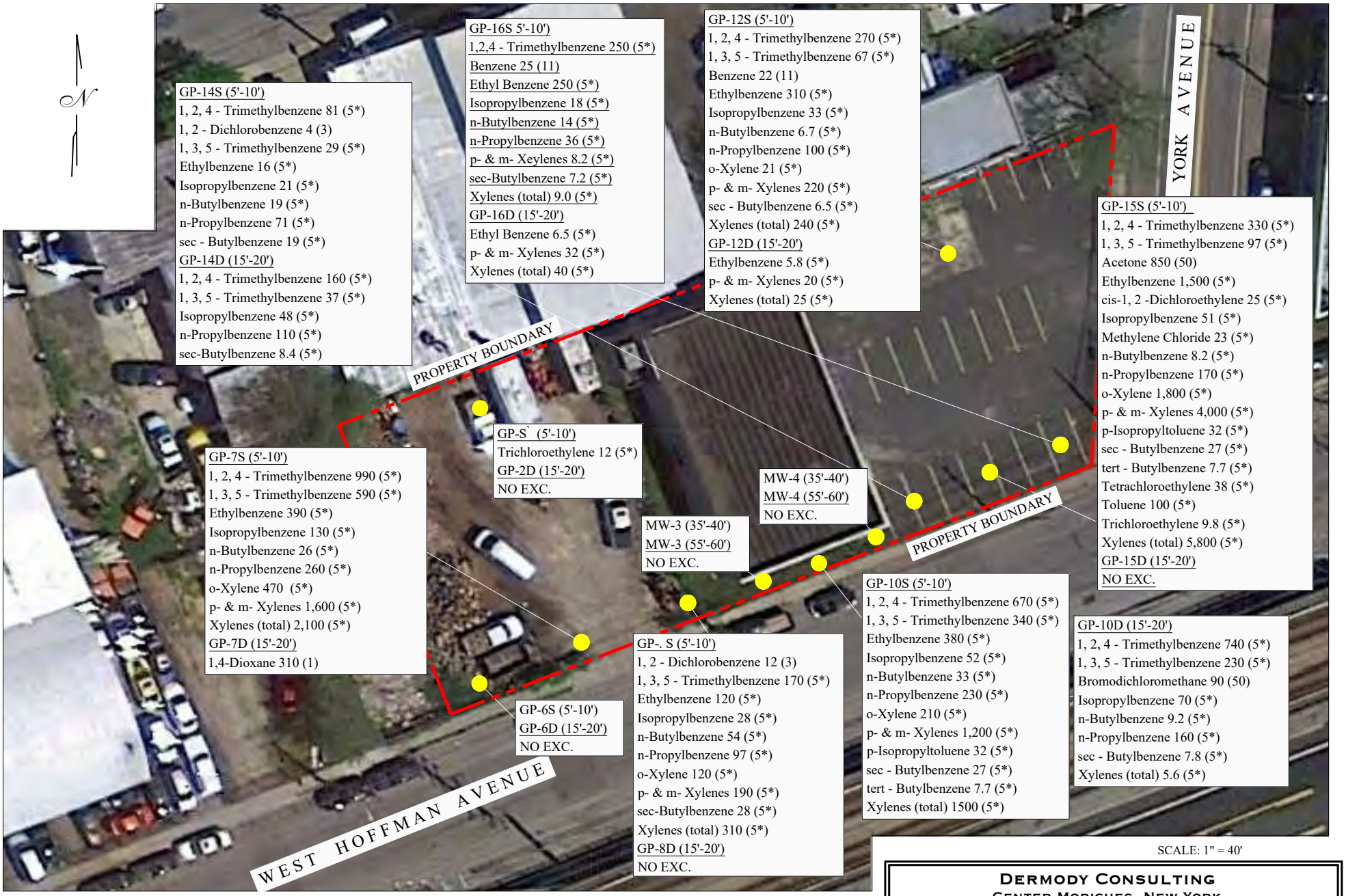
FIGURE 8
ON-SITE STORM DRAIN SEDIMENT SAMPLING LOCATIONS AND COMMERCIAL SOIL CLEANUP OBJECTIVE EXCEEDANCES

340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



SCALE: 1" = 40'

LEGEND

GP-6S
NO EXC.

GROUNDWATER SAMPLING LOCATION
AND VOC EXCEEDANCES OF CLASS GA STANDARDS. CLASS GA STANDARDS ARE SHOWN IN PARENTHESIS. ALL VALUES SHOWN ARE IN mcg / l.
(5*) THE PRINCIPLE ORGANIC CONTAMINANT STANDARD FOR GROUNDWATER OF 5 mcg/l APPLIES TO THIS SUBSTANCE.

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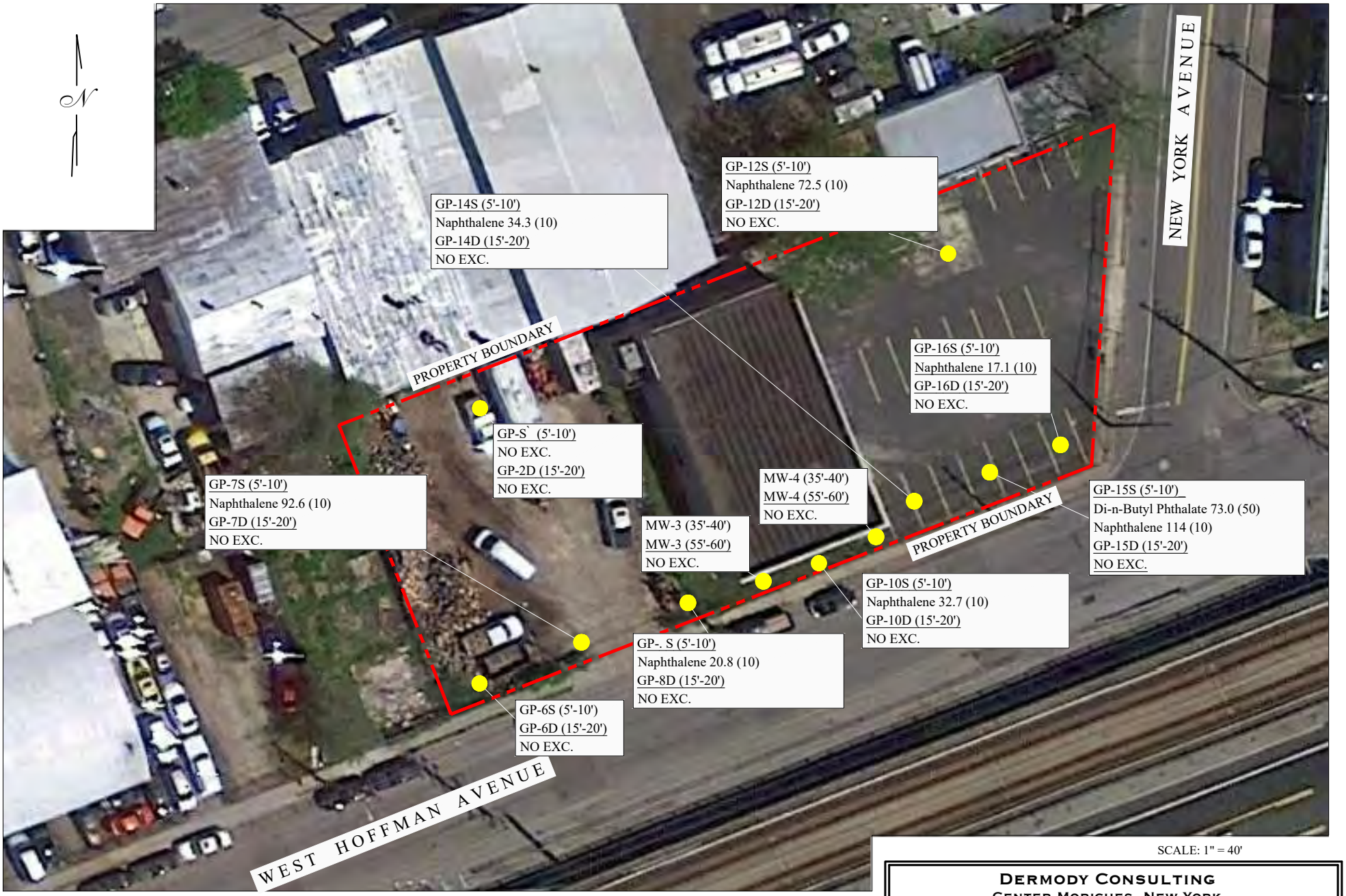
FIGURE 9
ON-SITE GROUNDWATER SAMPLING LOCATIONS AND VOC EXCEEDANCES OF CLASS GA STANDARDS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK



SCALE: 1" = 40'

LEGEND

GP-6S
NO EXC.

GROUNDWATER SAMPLING LOCATION
AND SVOC EXCEEDANCES OF CLASS GA STANDARDS. CLASS GA STANDARDS ARE SHOWN IN PARENTHESIS. ALL VALUES SHOWN ARE IN mcg / l.
(5*) THE PRINCIPLE ORGANIC CONTAMINANT STANDARD FOR GROUNDWATER OF 5 mcg/l APPLIES TO THIS SUBSTANCE.

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FIGURE 10
ON-SITE GROUNDWATER SAMPLING LOCATIONS AND SVOC EXCEEDANCES OF CLASS GA STANDARDS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

LEGEND

GW-4
NO EXC.

OFF-SITE GROUNDWATER SAMPLING LOCATION
AND VOC EXCEEDANCES OF CLASS GA STANDARDS. CLASS GA STANDARDS ARE SHOWN IN PARENTHESIS. ALL VALUES SHOWN ARE IN mcg / l.
(5*) THE PRINCIPLE ORGANIC CONTAMINANT STANDARD OF 5 mcg / l FOR GROUNDWATER APPLIES TO THIS SUBSTANCE.

SCALE: 1" = 280'

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FIGURE 11
OFF-SITE GROUNDWATER SAMPLING LOCATIONS
AND VOC EXCEEDANCES OF
CLASS GA STANDARDS

340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

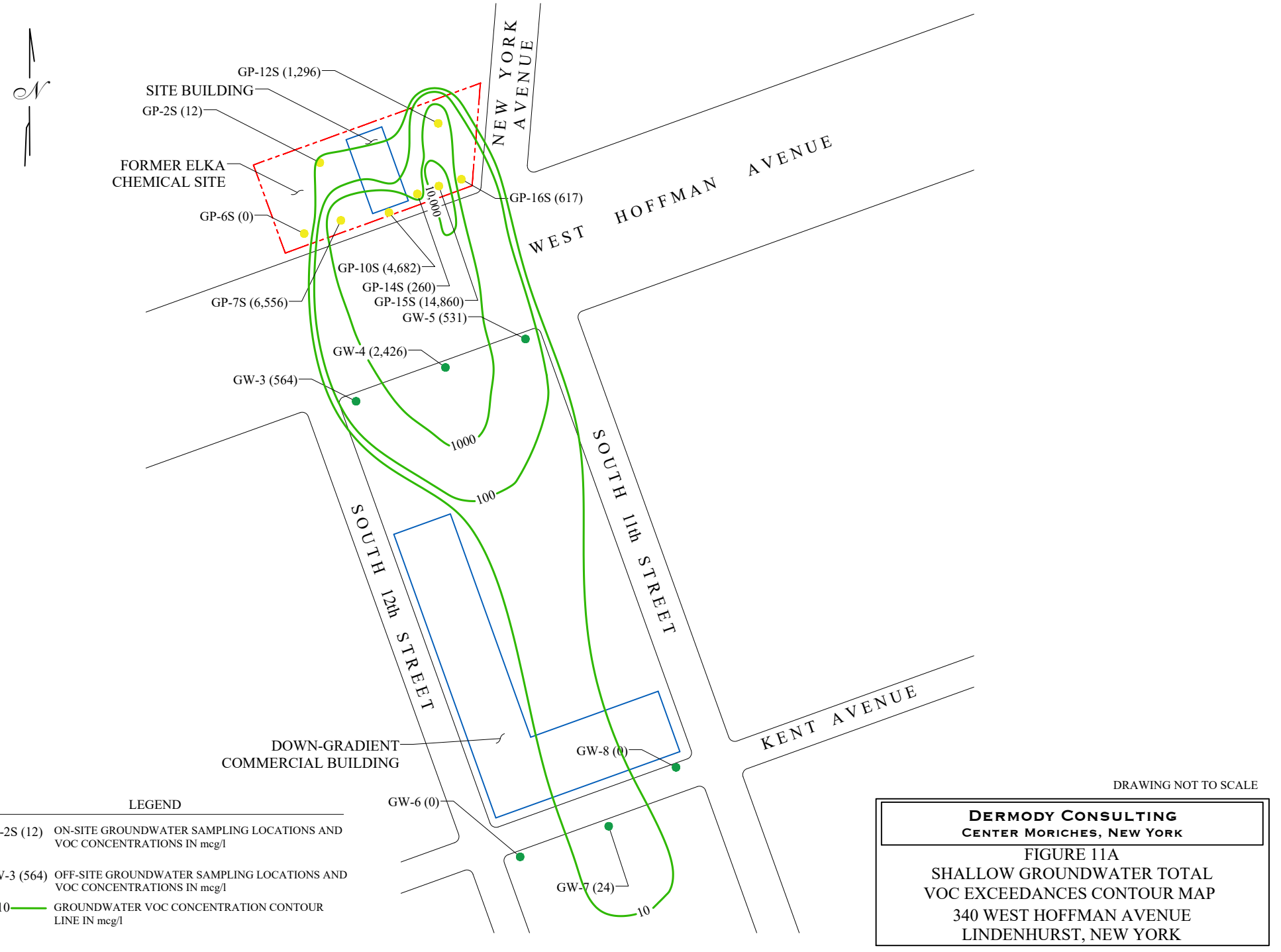
N
GP-12S (1,296)
SITE BUILDING
GP-2S (12)
FORMER ELKA
CHEMICAL SITE
GP-6S (0)
GP-7S (6,556)
GP-10S (4,682)
GP-14S (260)
GP-15S (14,860)
GP-16S (617)
GW-5 (531)
GW-4 (2,426)
GW-3 (564)
10,000
1000
100
10
NEW YORK AVENUE
WEST HOFFMAN AVENUE
SOUTH 12th STREET
SOUTH 11th STREET
KENT AVENUE
DOWN-GRADIENT
COMMERCIAL BUILDING
GW-8 (0)
GW-6 (0)
GW-7 (24)
LEGEND
GP-2S (12) ON-SITE GROUNDWATER SAMPLING LOCATIONS AND VOC CONCENTRATIONS IN mcg/l
GW-3 (564) OFF-SITE GROUNDWATER SAMPLING LOCATIONS AND VOC CONCENTRATIONS IN mcg/l
10 GROUNDWATER VOC CONCENTRATION CONTOUR LINE IN mcg/l
DRAWING NOT TO SCALE
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FIGURE 11A
SHALLOW GROUNDWATER TOTAL
VOC EXCEEDANCES CONTOUR MAP
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

SCALE: 1" = 280'

LEGEND

GW-4
NO EXC.

OFF-SITE GROUNDWATER SAMPLING LOCATION AND SVOC EXCEEDANCES OF CLASS GA STANDARDS. CLASS GA STANDARDS ARE SHOWN IN PARENTHESIS. ALL VALUES SHOWN ARE IN mcg / l.

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FIGURE 12
OFF-SITE GROUNDWATER SAMPLING LOCATIONS AND SVOC EXCEEDANCES OF CLASS GA STANDARDS

340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

LEGEND

GW-3 (5'-10')
PFOS 20.1
PFOA 15.7

GROUNDWATER SAMPLING LOCATION AND EXCEEDANCES OF NYSDEC PFAS GUIDELINES. NYSDEC GUIDLINES ARE SHOWN IN PARENTHESIS. ALL VALUES ARE IN MICROGRAMS PER LITER.

SCALE: 1" = 280'

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FIGURE 13
ON-SITE AND OFF-SITE GROUNDWATER SAMPLING LOCATIONS AND EXCEEDANCES OF NYSDEC PFAS GUIDELINES

340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

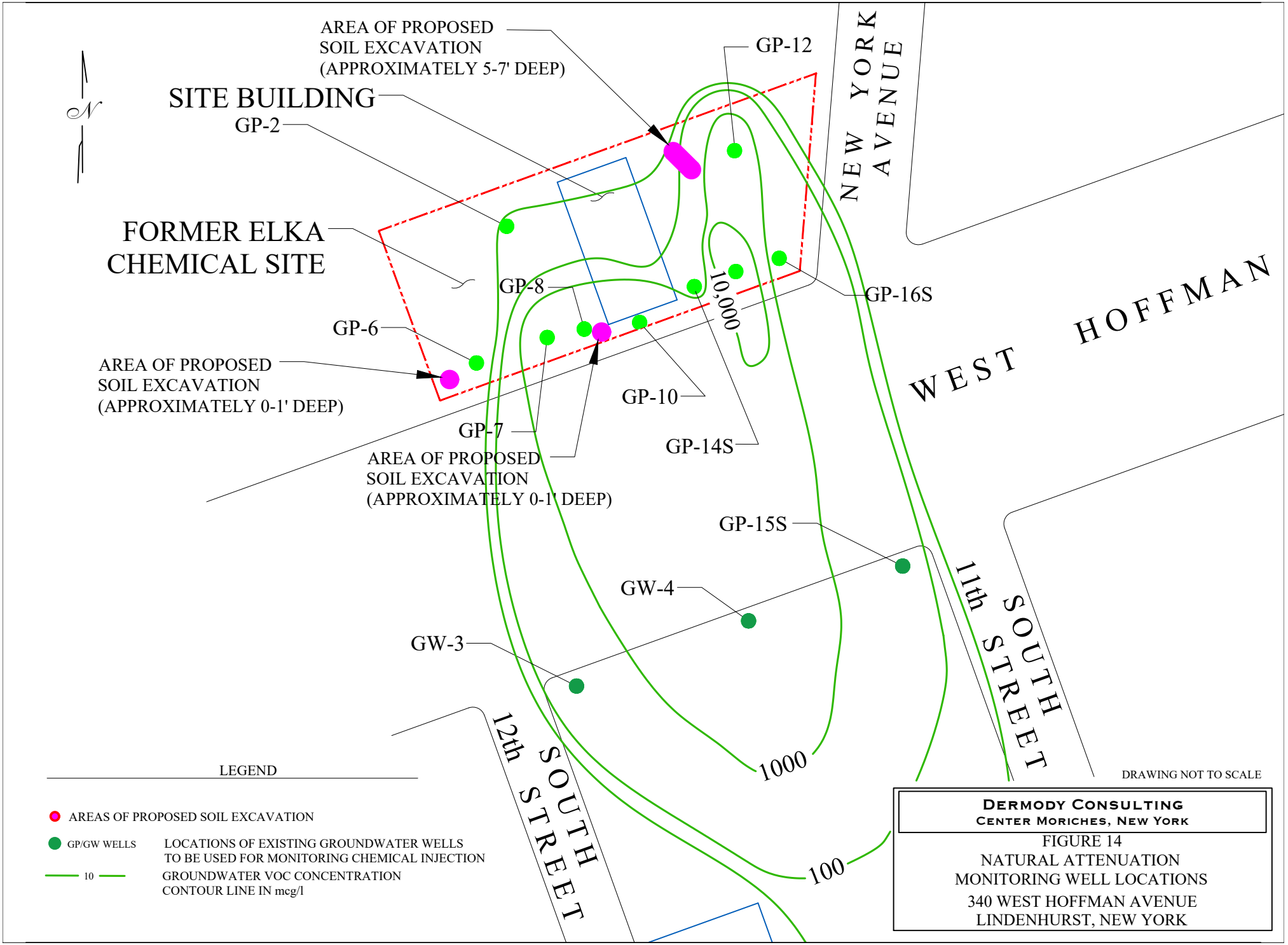
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 5-7' DEEP)
SITE BUILDING
GP-2
GP-12
NEW YORK AVENUE
FORMER ELKA
CHEMICAL SITE
GP-8
10,000
GP-16S
GP-6
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
WEST HOFFMAN
GP-10
GP-7
GP-14S
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
GP-15S
GW-4
11th SOUTH STREET
GW-3
12th SOUTH STREET
1000
100
LEGEND
AREAS OF PROPOSED SOIL EXCAVATION
GP/GW WELLS
LOCATIONS OF EXISTING GROUNDWATER WELLS
TO BE USED FOR MONITORING CHEMICAL INJECTION
10
GROUNDWATER VOC CONCENTRATION
CONTOUR LINE IN mcg/l
DRAWING NOT TO SCALE
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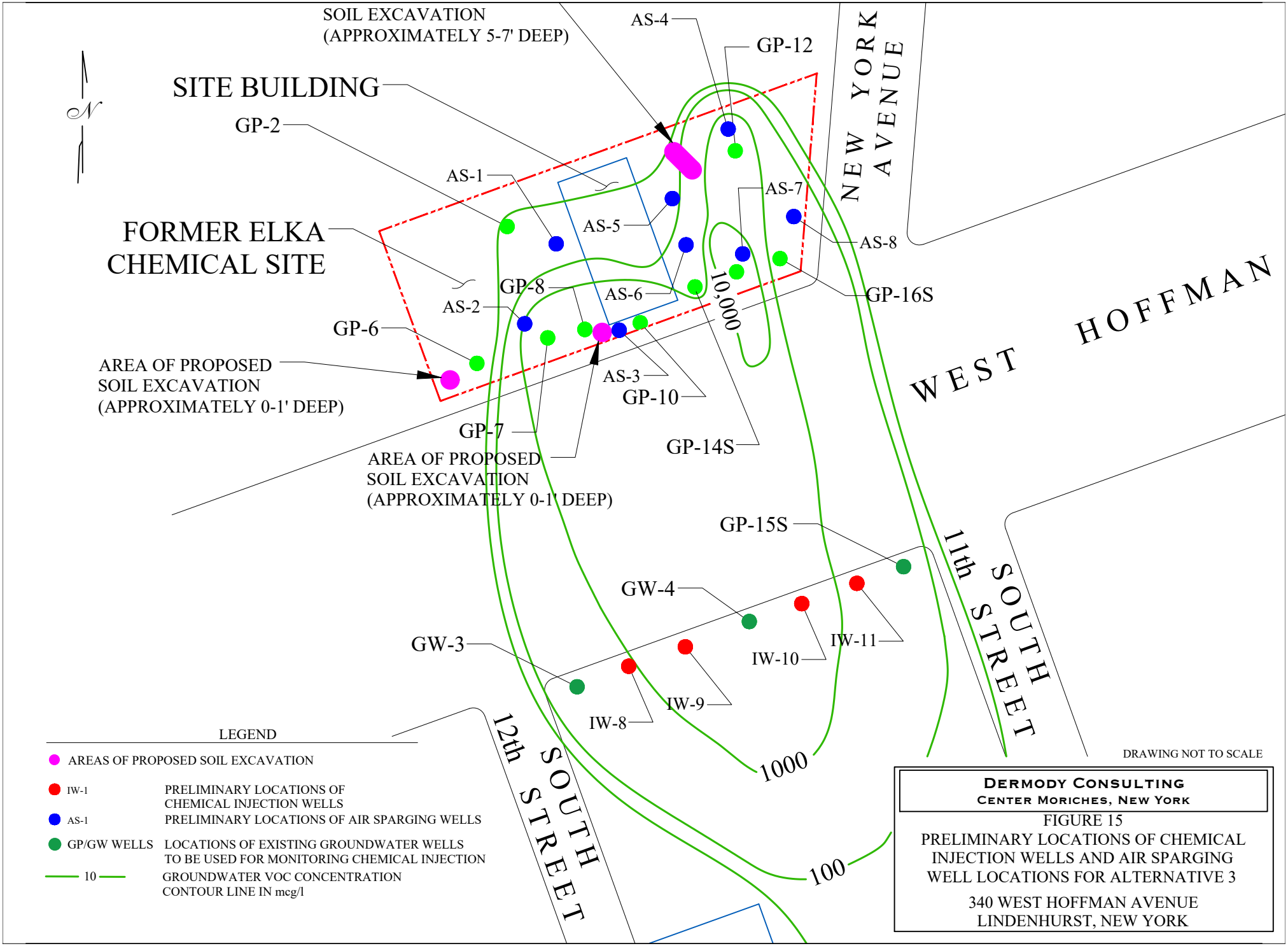
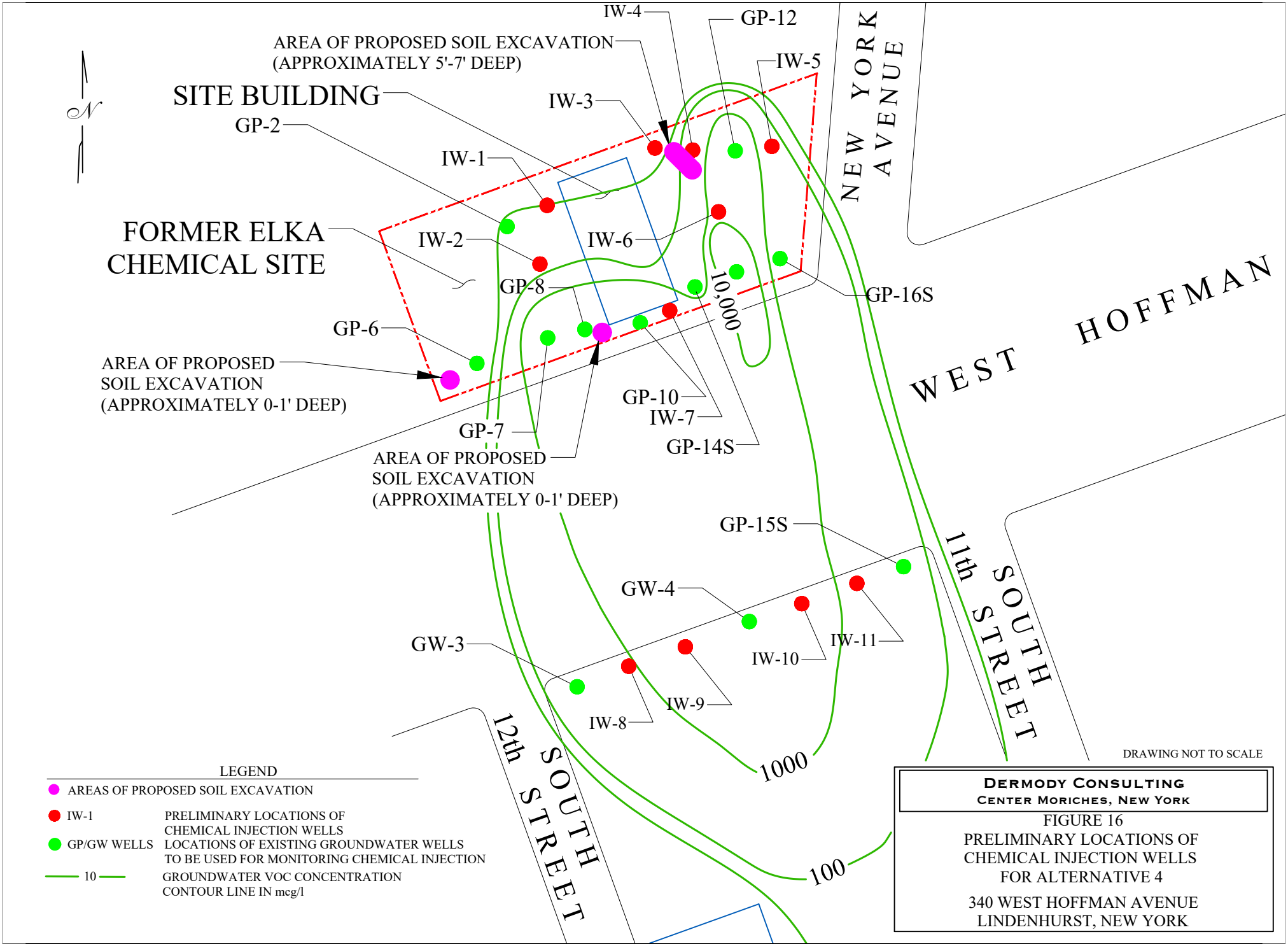
FIGURE 14
NATURAL ATTENUATION
MONITORING WELL LOCATIONS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK


SOIL EXCAVATION
(APPROXIMATELY 5-7' DEEP)
AS-4
GP-12
SITE BUILDING
GP-2
AS-1
AS-7
NEW YORK AVENUE
FORMER ELKA
CHEMICAL SITE
AS-5
AS-8
GP-8
AS-6
10,000
GP-16S
AS-2
GP-6
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
AS-3
GP-10
WEST HOFFMAN
GP-7
GP-14S
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
GP-15S
11th STREET SOUTH
GW-4
IW-11
IW-10
GW-3
IW-9
IW-8
1000
12th STREET SOUTH
100
LEGEND
AREAS OF PROPOSED SOIL EXCAVATION
IW-1 PRELIMINARY LOCATIONS OF CHEMICAL INJECTION WELLS
AS-1 PRELIMINARY LOCATIONS OF AIR SPARGING WELLS
GP/GW WELLS LOCATIONS OF EXISTING GROUNDWATER WELLS TO BE USED FOR MONITORING CHEMICAL INJECTION
10 GROUNDWATER VOC CONCENTRATION CONTOUR LINE IN mcg/l
DRAWING NOT TO SCALE
DERMODY CONSULTING
CENTER MORICHES, NEW YORK
FIGURE 15
PRELIMINARY LOCATIONS OF CHEMICAL INJECTION WELLS AND AIR SPARGING WELL LOCATIONS FOR ALTERNATIVE 3
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK


IW-4
GP-12
AREA OF PROPOSED SOIL EXCAVATION
(APPROXIMATELY 5'-7' DEEP)
IW-5
SITE BUILDING
IW-3
GP-2
NEW YORK AVENUE
IW-1
FORMER ELKA
CHEMICAL SITE
IW-2
IW-6
GP-8
10,000
GP-16S
GP-6
WEST HOFFMAN
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
GP-10
IW-7
GP-7
GP-14S
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
GP-15S
11th STREET SOUTH
GW-4
GW-3
IW-10
IW-11
IW-9
IW-8
1000
12th STREET SOUTH
100
DRAWING NOT TO SCALE
LEGEND
AREAS OF PROPOSED SOIL EXCAVATION
IW-1 PRELIMINARY LOCATIONS OF CHEMICAL INJECTION WELLS
GP/GW WELLS LOCATIONS OF EXISTING GROUNDWATER WELLS TO BE USED FOR MONITORING CHEMICAL INJECTION
10 GROUNDWATER VOC CONCENTRATION CONTOUR LINE IN mcg/l
DERMODY CONSULTING
CENTER MORICHES, NEW YORK
FIGURE 16
PRELIMINARY LOCATIONS OF
CHEMICAL INJECTION WELLS
FOR ALTERNATIVE 4
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

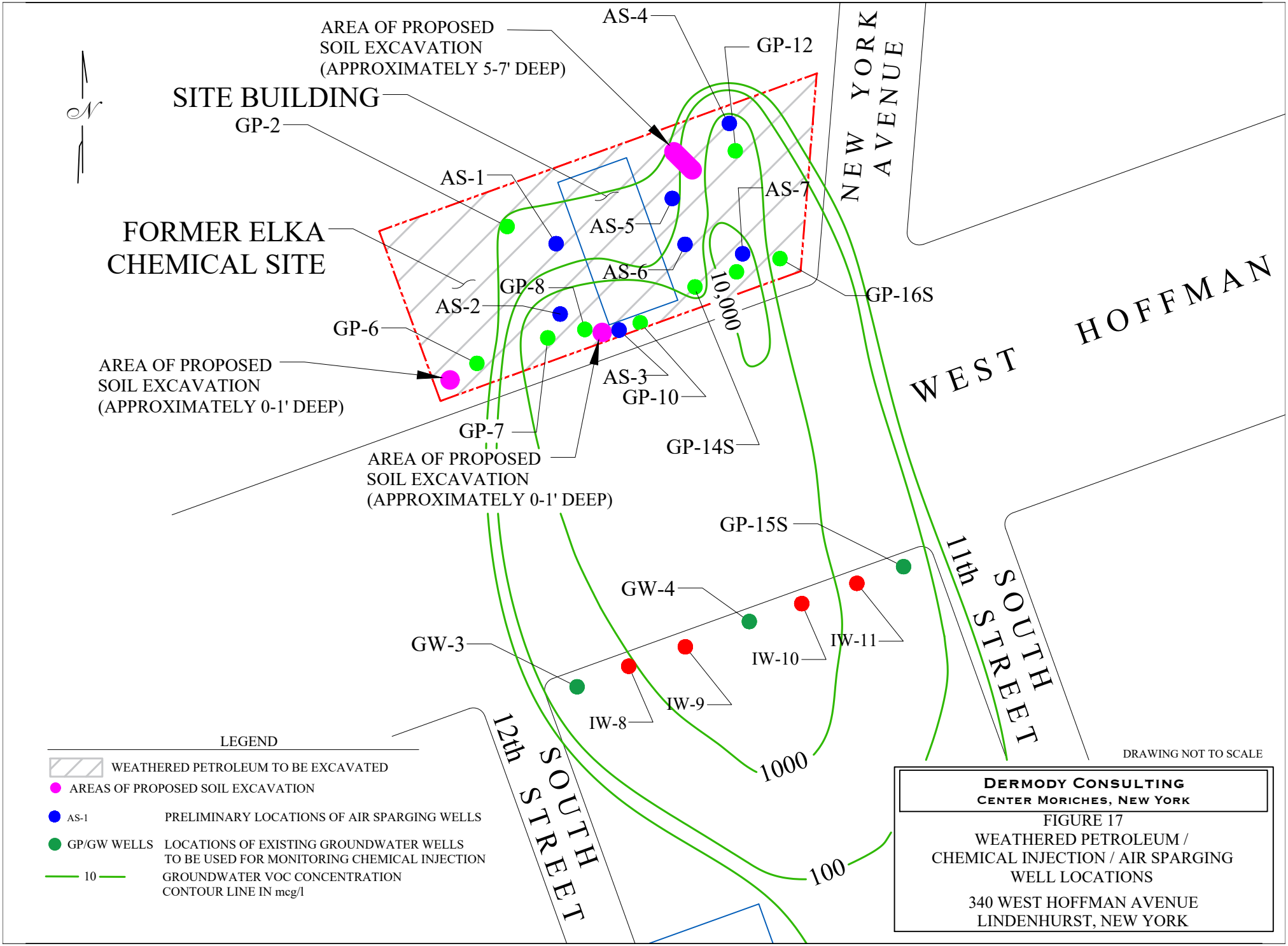

AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 5-7' DEEP)
AS-4
GP-12
SITE BUILDING
GP-2
AS-1
AS-7
NEW YORK AVENUE
FORMER ELKA
CHEMICAL SITE
AS-5
AS-6
GP-8
AS-2
10,000
GP-16S
GP-6
WEST HOFFMAN
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
AS-3
GP-10
GP-7
GP-14S
AREA OF PROPOSED
SOIL EXCAVATION
(APPROXIMATELY 0-1' DEEP)
GP-15S
GW-4
11th SOUTH STREET
GW-3
IW-10
IW-11
IW-9
IW-8
12th SOUTH STREET
1000
100
LEGEND
WEATHERED PETROLEUM TO BE EXCAVATED
AREAS OF PROPOSED SOIL EXCAVATION
AS-1 PRELIMINARY LOCATIONS OF AIR SPARGING WELLS
GP/GW WELLS LOCATIONS OF EXISTING GROUNDWATER WELLS TO BE USED FOR MONITORING CHEMICAL INJECTION
10 GROUNDWATER VOC CONCENTRATION CONTOUR LINE IN mcg/l
DRAWING NOT TO SCALE
DERMODY CONSULTING
CENTER MORICHES, NEW YORK
FIGURE 17
WEATHERED PETROLEUM /
CHEMICAL INJECTION / AIR SPARGING
WELL LOCATIONS
340 WEST HOFFMAN AVENUE
LINDENHURST, NEW YORK

Table 1
Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 0"-2"	GP-2 0"-2"	GP-3 0"-2"	GP-4 0"-2"	GP-5 0"-2"	GP-6 0"-2"	GP-7 7'-9'	GP-8 0"-2"	GP-8 10'-14'	NYSDEC Protection of Groundwater SCOs	NYSDEC Commercial Use SCOs
Volatile Organic Compounds *(in micrograms per kilogram)*											
Sample Date	**4/18/18**	**4/18/18**	**4/19/18**	**4/19/18**	**4/19/18**	**4/18/18**	**4/18/18**	**4/18/18**	**4/18/18**		
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**	**500,000**
1,2,4-Trimethylbenzene	ND	4.2 J	ND	ND	ND	18	**84,000**	3.3 J	ND	**3,600**	**190,000**
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	11	**34,000**	31	**190,000**	**8,400**	**190,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	**8,800**	4.9 J	ND	**1,000**	**390,000**
Isopropylbenzene	ND	ND	ND	ND	ND	3.7 IS-LO, J	5,900	9.4	33,000	-	-
Methylcyclohexane	26	5.2 J	ND	ND	ND	ND	20,000	6.5	23,000	-	-
Methylene chloride	ND	7.1 J, B	7.5 J	ND	ND	12 B	ND	12 J, B	ND	**50**	**500,000**
n-Butylbenzene	ND	ND	ND	ND	ND	ND	3,600	ND	13,000	-	**500,000**
n-Propylbenzene	ND	ND	ND	ND	ND	5.4 IS-LO, J	**16,000**	18	**100,000**	**3,900**	**500,000**
o-Xylene	ND	ND	ND	ND	ND	3.5 J	9,000	4.9 J	ND	-	**500,000**
p&m- Xylenes	ND	ND	ND	ND	ND	ND	46,000	ND	ND	-	**500,000**
p-Isopropyltoluene	ND	3.9 J	ND	ND	ND	3.2 IS-LO, J	19,000	9.1	35,000	-	-
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	1,300	ND	3,200	**11,000**	**500,000**
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,300**	**150,000**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**700**	**500,000**
Xylenes Total	ND	ND	ND	ND	ND	9.2 J	**55,000**	4.9 J	ND	**1,600**	**500,000**

Table 1
Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-9 0"-2"	GP-9 5'-7'	GP-10 0"-2"	GP-11 5'-7'	GP-17 0"-2"	GP-17 2'-3'	GP-18 2'-3'	GP-19 2'-3'	GP-20 2'-3'	GP-21 Dup. of GP-7 7'-9'	NYSDEC Protection of Groundwater SCOs	NYSDEC Commercial Use Soil Cleanup Objectives
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	**4/19/18**	**7/5/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/18/18**		
Volatile Organic Compounds *(in micrograms per kilogram)*												
Acetone	ND	ND	ND	ND	11 CCV-E, SCAL-E	ND	ND	ND	ND	ND	**50**	**500,000**
1,2,4-Trimethylbenzene	ND	ND	5.8	ND	ND	ND	ND	ND	ND	ND	**3,600**	**190,000**
1.3.5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**64,000**	**8,400**	**190,000**
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11,000**	**1,000**	**390,000**
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,000	-	-
Methylcylohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	38,000	-	-
Methylene chloride	6.8 J	5.7 J	ND	ND	ND	ND	ND	ND	ND	ND	**50**	**500,000**
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	8,500	**8,500**	**500,000**
n-Propylbenzene	ND	ND	ND	330 J	ND	ND	330 J	330 J	330 J	**32,000**	**3,900**	**500,000**
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,000	-	**500,000**
p&m- Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	54,000	-	**500,000**
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	42,000	-	-
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,800	**11,000**	**500,000**
Tetrachloroethylene	4.1 J	ND	ND	ND	6.0	5.5	ND	ND	ND	ND	**1,300**	**150,000**
Toluene	ND	ND	ND	ND	2.9 J	ND	ND	ND	ND	ND	**700**	**500,000**
Xylenes Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65,000**	**1,600**	**500,000**

Notes:
Only detected analytes are reported.
ND = Not Detected

Table 1
Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

J = The concentration is estimated.
Bold values indicate an exceedance of the NYSDEC Protection of Groundwater SCOs
B = The analyte was also detected in the laboratory method blank sample.
CCV-SCAL-E = The analyte value reported is estimated due to its behavior during the initial calibration.
- = No Soil Cleanup Objective available.

Table 2
Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)
Sample Date	4/18/18	4/18/18	4/19/18	4/19/18	4/19/18	4/18/18	4/18/18	4/18/18	4/18/18
Volatile Organics, Tentatively Identified Compounds (in micrograms per kilogram)									
Dimethyl Cyclohexane Isomers	ND	ND	ND	ND	ND	ND	38,000	ND	ND
Dihydro Dimethyl Indene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Dimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Decane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Alkane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Alkyl Substituted Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Cyclohexane	ND	ND	ND	ND	ND	ND	16,000 N	ND	17,000
Hexane	33 N	6.3 N	ND	ND	ND	ND	ND	ND	51,000 N
Octane	ND	ND	ND	ND	ND	ND	100,000 N	ND	100,000 N
Propyl Cyclohexane	ND	ND	ND	ND	ND	ND	14,000 N	ND	27,000 N
Unknown Diethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	9.5	ND
Undecane	ND	ND	ND	ND	ND	ND	ND	ND	15,000 N
Unknown Dimethyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	22,000
Unknown Ethylmethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	44,000
Unknown Diethylmethyl Cyclohexane Isomer	ND	ND	ND	ND	ND	24	ND	ND	ND
Unknown Dimethylnonane Isomer	ND	ND	ND	ND	ND	77	ND	ND	ND
Unknown Dimethyl Heptane Isomer	ND	ND	ND	ND	ND	ND	9,400	ND	ND
Unknown Dimethyl Hexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2 *(continued)*
Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)
Sample Date	4/18/18	4/18/18	4/19/18	4/19/18	4/19/18	4/18/18	4/18/18	4/18/18	4/18/18
Volatile Organics, Tentatively Identified Compounds (in micrograms per kilogram)									
Unknown Methyl Nonane Isomer	ND	ND	ND	ND	ND	ND	15,000	ND	23,000
Unknown Methyl Octane Isomer	ND	ND	ND	ND	ND	ND	15,000	ND	23,000
Unknown Methyl Pentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Trimethylbenzene isomer	ND	ND	ND	ND	ND	ND	ND	24	ND
Unknown Ethylmethylbenzene Isomer	ND	19	ND	ND	ND	ND	12,000	37	ND
Unknown Tert-Butyl Phenol Isomer	ND	7.0	ND	ND	ND	ND	ND	ND	ND
Methyl Cyclopentane	38 N	ND	ND	ND	ND	ND	ND	ND	1,100 N
Methyl Heptane Isomers	ND	ND	ND	ND	ND	ND	ND	ND	25,000 N
Unknown Methylbutyl Benzene Isomer	ND	7.3	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Heptane Isomer	ND	ND	ND	ND	ND	ND	31,000	ND	ND
Unknown Trimethyl Decane Isomer	9.9	ND	ND	ND	ND	190	ND	ND	ND
Unknown Trimethylhexane Isomer	ND	ND	ND	ND	ND	750	ND	ND	ND
Unknown Ethyl Methyl Octane Isomer	ND	ND	ND	ND	ND	40	ND	ND	ND
Unknown Dimethyl Octane Isomer	ND	ND	ND	ND	ND	ND	10,000	ND	ND
Unknown Methyl Pentane Isomer	36	ND	ND	ND	ND	ND	ND	ND	17,000
Unknown Methyl decane Isomer	ND	ND	ND	ND	ND	680	ND	ND	ND
Unknown Trimethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	23,000
Unknown Methyl Hexane Isomer	ND	ND	ND	ND	ND	ND	19,000	ND	ND

Table 2 *(continued)*
Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)
Sample Date	4/19/18	4/19/18	4/19/18	4/19/18	7/5/18	4/16/18	4/16/18	4/16/18	4/16/18	4/18/18
Volatile Organics, Tentatively Identified Compounds (in micrograms per kilogram)										
Dimethyl Cyclohexane Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dihydro Dimethyl Indene Isomers	ND	ND	ND	3,100	ND	ND	ND	ND	ND	ND
Ethyl Dimethyl Benzene Isomer	ND	ND	ND	2,000	ND	ND	ND	ND	ND	ND
Methyl Decane Isomer	ND	ND	ND	1,300	ND	ND	ND	ND	ND	ND
Propyl Cyclohexane Isomer	ND	ND	ND	1,200	ND	ND	ND	ND	ND	ND
Unknown Alkene Isomer	ND	ND	ND	1,800	ND	ND	ND	ND	ND	ND
Unknown Alkyl Substituted Benzene Isomer	ND	ND	ND	6,100	ND	ND	ND	ND	ND	ND
Ethyl Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Octane	ND	ND	ND	ND	ND	ND	ND	ND	ND	170,000
Propyl Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	26,000
Unknown Diethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Undecane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Diethylmethyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	63,000
Unknown Dimethylnonane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Dimethyl Heptane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	80,000
Unknown Dimethyl Octane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	15,000
Unknown Ethylmethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000

Table 2 *(continued)*
Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)
Sample Date	4/19/18	4/19/18	4/19/18	4/19/18	7/5/18	4/16/18	4/16/18	4/16/18	4/16/18	4/18/18
Volatile Organics, Tentatively Identified Compounds (in micrograms per kilogram)										
Unknown Ethyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	29,000
Methyl Cyclopentane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Nonane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	21,000
Unknown Methylbutyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Heptane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	46,000
Unknown Methyl Hexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000
Unknown Methyl Nonane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Octane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	24,000
Unknown Methyl Pentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Trimethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Ethylmethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Tert Butyl Phenol Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Cyclopentante	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Heptane Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methylbutyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2 *(continued)*
Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)
Sample Date	4/19/18	4/19/18	4/19/18	4/19/18	7/5/18	4/16/18	4/16/18	4/16/18	4/16/18	4/18/18
Volatile Organics, Tentatively Identified Compounds (in micrograms per kilogram)										
Unknown Methyl Heptane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Trimethyl Decane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Trimethylhexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Ethyl Methyl Octane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Dimethyl Octane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Pentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl decane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Trimethylbenzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Hexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Only detected analytes are reported.
ND = Not Detected.
Samples Analyzed by EPA Method 8260C.

Table 3
Semi-Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)	NYSDEC Part 375 Commercial Use Soil Cleanup Objectives
Sample Date	**4/18/18**	**4/18/18**	**4/19/18**	**4/19/18**	**4/19/18**	**4/18/18**	**4/18/18**	**4/18/18**	**4/18/18**	
Semi-Volatile Organic Compounds *(in micrograms per kilogram)*										
Acenaphthene	ND	ND	ND	ND	ND	774	ND	524	ND	**500,000**
Acenaphthylene	ND	ND	ND	ND	ND	147	ND	120	ND	**500,000**
Anthracene	ND	ND	65.9 J	ND	86.8 J	1,670	ND	1,350	ND	**500,000**
Benzo(a)anthracene	156	ND	269	455	428	**19,300**	ND	**15,000**	ND	**5,600**
Benzo(a)pyrene	144 J	ND	353	505	440	**1,460**	ND	**19,100**	ND	**1,000**
Benzo(b)fluoranthene	146 J	ND	357	501	463	**25,400**	ND	**20,900**	ND	**5,600**
Benzo (g,h,i)perylene	121 J	ND	330	369	320	18,700	ND	13,700	ND	**500,000**
Benzo(k)fluoranthene	112 J	ND	326	443	395	19,600	ND	14,600	ND	**56,000**
Benzyl butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
1,1-Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Bis(2-ethylhexyl)phthalate	129 J	ND	134	135 J	136	142	144	200	124	-
Carbazole	ND	ND	ND	ND	77.2 J	2,360	ND	1,860	ND	-
Chrysene	134 J	ND	346	518	530	1,090	ND	18,800	ND	**56,000**
Dibenzo(a,h)anthracene	ND	ND	52.7 J	ND	84.2 J	**5,280**	ND	**3,900**	ND	**560**
Dibenzofuran	ND	ND	ND	ND	ND	333	ND	206	ND	-
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	73.8 J	-
Fluoranthene	244	56.2 J	695	992	1,220	56,400	ND	44,200	ND	**500,000**
Fluorene	ND	ND	ND	ND	ND	815	ND	585	ND	**500,000**
Indeno(1,2,3-cd)pyrene	101 J	ND	270	302	288	**17,400**	ND	**12,500**	ND	**5,600**
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	516	ND	64.9 J	-
Naphthalene	ND	ND	ND	ND	ND	ND	598	ND	ND	**500,000**
Phenanthrene	97.1 J	ND	274	261	636	21,600	ND	15,100	ND	**500,000**
Pyrene	265	ND	502	761	907	41,500	ND	31,800	ND	**500,000**

Table 3 *(continued)*
Semi-Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)	NYSDEC Part 375 Commercial Use Soil Cleanup Objectives
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	**4/19/18**	**7/5/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/18/18**	
Semi-Volatile Organic Compounds *(in micrograms per kilogram)*											
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**500,000**
Acenaphthelyne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**500,000**
Anthracene	ND	ND	ND	71.4 J	ND	ND	ND	ND	ND	ND	**500,000**
Benzo(a)anthracene	367 J	ND	61.7 J	ND	ND	ND	ND	ND	ND	ND	**5,600**
Benzo(a)pyrene	372 J	ND	74.0 J	ND	ND	ND	ND	ND	ND	ND	**1,000**
Benzo(b)fluoranthene	ND	ND	81.7 J	ND	ND	ND	ND	ND	ND	ND	**5,600**
Benzo (g,h,i)perylene	ND	ND	59.4 J	ND	ND	ND	ND	ND	ND	ND	**500,000**
Benzo(k)fluoranthene	ND	ND	77.1 J	ND	ND	ND	ND	ND	ND	ND	**56,000**
Benzyl butyl phthalate	ND	ND	77.1 J	ND	ND	ND	ND	ND	ND	ND	**-**
1,1-Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	69.2 J	**-**
Bis(2-ethylhexyl)phthalate)	ND	ND	163	172	ND	ND	ND	ND	ND	228	**-**
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**-**
Chrysene	ND	ND	72.5 J	ND	ND	ND	ND	ND	ND	ND	**56,000**
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**560**
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**-**
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND		**-**
Fluoranthene	649 J	ND	128	ND	ND	ND	ND	ND	ND	ND	**500,000**
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**500,000**
Indeno(1,2,3-cd)pyrene	ND	ND	48.6 J	ND	ND	ND	ND	ND	ND	ND	**5,600**
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,350	**-**
Naphthalene	ND	ND	ND	159	ND	ND	ND	ND	ND	4,030	**500,000**
Phenanthrene	ND	ND	ND	306	ND	ND	ND	ND	ND	ND	**500,000**
Pyrene	592 J	ND	100	ND	ND	ND	ND	ND	ND	ND	**500,000**

Table 3 *(continued)*
Semi-Volatile Organic Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Notes:
Only detected analytes are reported.
ND = Not Detected.
J = The concentration is estimated.
B = The analyte was also detected in the laboratory method blank sample.
- = No Soil Cleanup Objective available.
Samples Analyzed by EPA Method 8270C.

Table 4
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)
Sample Date	**4/18/18**	**4/18/18**	**4/19/18**	**4/19/18**	**4/19/18**	**4/18/18**	**4/18/18**	**4/18/18**	**4/18/18**
Semi-Volatile Organics, Tentatively Identified Compounds *(in microgram per kilogram)*									
Unknown PAH MW=232	ND	ND	853 J	ND	ND	ND	ND	ND	ND
Dimethyl Naphthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Fluorene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl propyl naphthalene isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propenyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethyl Naphthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Aliphatic Hydrocarbon	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Dimethybiphenyl Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=142	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracenedione Isomer	ND	ND	ND	ND	ND	6,480 J	ND	4,910 J	ND
Cyclopenta Phenanthrene Isomer	ND	ND	ND	ND	ND	5,250 J	ND	ND	ND
Methyl Fluoranthene Isomer	ND	ND	ND	ND	ND	ND	ND	899 J	ND
Methyl Phenanthrene Isomer	ND	ND	ND	ND	ND	2,780 J	ND	2,040 J	ND
Phenyl Naphthalene Isomer	ND	ND	ND	ND	ND	ND	ND	2,210 J	ND
Naphthacendione Isomer	ND	ND	ND	ND	ND	2,700 J	ND	ND	ND
Unknown PAH MW=202	ND	ND	ND	ND	ND	83,600 J	ND	ND	ND
Unknown PAH MW=204	ND	ND	ND	ND	ND	80,000 J	ND	ND	ND
Unknown PAH MW=216	ND	ND	ND	ND	ND	926 J	ND	ND	ND

Table 4 *(continued)*
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)
Sample Date	**4/18/18**	**4/18/18**	**4/19/18**	**4/19/18**	**4/19/18**	**4/18/18**	**4/18/18**	**4/18/18**	**4/18/18**
Semi-Volatile Organics, Tentatively Identified Compounds *(in microgram per kilogram)*									
Unknown PAH MW=252	ND	ND	ND	ND	ND	36,000 J	ND	25,900 J	ND
Unknown PAH MW=266	ND	ND	ND	ND	ND	2,620 J	ND	2,040 J	ND
Unknown PAH MW=276	ND	ND	ND	ND	ND	4,240 J	ND	3,110 J	ND
Unknown PAH MW=278	ND	ND	ND	ND	ND	8,560 J	ND	6,050 J	ND
Ethyldimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	25,800 J	ND	1,710 J
Ethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	3,800 J	ND	10,800 J
Methyl benzaldehyde Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Trimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	1,320 J	ND	ND
Methyl Methylethyl benzene Isomer	ND	ND	ND	ND	ND	ND	4,030 J	ND	1,490 J
Methyl Propenyl Benzene Isomer	ND	ND	ND	ND	ND	ND	10,500 J	ND	ND
Methyl Propyl Benzene Isomer	ND	ND	ND	ND	ND	ND	7,600 J	ND	1,790 J
Methylphenyl Ethanone Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Propyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	1,710 J	ND	ND
Propyl Benzene Isomer	ND	ND	ND	ND	ND	ND	1,780 J	ND	2,760 J
Tetramethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	18,600 J	ND	895 J
Trimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	12,300 J	ND	21,800 J
Unknown Alkane Hydrocarbon	ND	ND	ND	ND	ND	ND	1,320 J	ND	ND
Butylcyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	745 J
Dimethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	969 J

Table 4 *(continued)*
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	**4/19/18**	**7/5/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/18/18**
Semi-Volatile Organic Compounds Tentatively Identified Compounds *(in micrograms per kilogram)*										
Unknown PAH MW=232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Naphthalene Isomer	ND	ND	ND	4,360 J	ND	ND	ND	ND	ND	ND
Methyl Fluorene Isomer	ND	ND	ND	3,250 J	ND	ND	ND	ND	ND	ND
Methyl propyl naphthalene isomer	ND	ND	ND	2,300 J	ND	ND	ND	ND	ND	ND
Propenyl Cyclohexane Isomer	ND	ND	ND	1,980 J	ND	ND	ND	ND	ND	ND
Trimethyl Naphthalene Isomer	ND	ND	ND	2,380 J	ND	ND	ND	ND	ND	ND
Unknown Aliphatic Hydrocarbon	ND	ND	ND	22,600 J	ND	ND	ND	ND	ND	ND
Unknown Dimethybiphenyl Isomer	ND	ND	ND	5,240 J	ND	ND	ND	ND	ND	ND
Unknown PAH MW=142	ND	ND	ND	2,140 J	ND	ND	ND	ND	ND	ND
Anthracenedione Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclopenta Phenanthrene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Fluoranthene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Phenanthrene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenyl Naphthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthacendione Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=202	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=204	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=216	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 4 *(continued)*
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	**4/19/18**	**7/5/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/18/18**
Semi-Volatile Organics, Tentatively Identified Compounds *(in micrograms per kilogram)*										
Unknown PAH MW=252	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=266	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=276	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown PAH MW=278	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyldimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,150 J
Ethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,000 J
Methyl benzaldehyde Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	22,900 J
Ethyl Trimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Methylethyl benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Propenyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	9,460 J
Methyl Propyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,610 J
Methylphenyl Ethanone Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	15,600 J
Methyl Propyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,850 J
Tetramethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Alkane Hydrocarbon	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,150 J
Butylcyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,540 J
Dimethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 4 *(continued)*
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Notes:
Only detected analytes are reported.
ND = Not Detected
J = The concentration is estimated.
There are no standards or guidance values for TICs.
Samples Analyzed by EPA Method 8270C.

Table 5
Metals
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-1 (0”-2”)	GP-2 (0”-2”)	GP-3 (0”-2”)	GP-4 (0”-2”)	GP-5 (0”-2”)	GP-6 (0”-2”)	GP-7 (7’-9’)	GP-8 (0”-2”)	GP-8 (10’-14’)	NYSDEC Part 375 Commercial Use Soil Cleanup Objectives
Sample Date	**4/18/18**	**4/18/18**	**4/19/18**	**4/19/18**	**4/19/18**	**4/18/18**	**4/18/18**	**4/18/18**	**4/18/18**	
Metals *(in milligrams per kilogram)*										
Aluminum	3,500	1,050	4,650	3,520	3,570	2,600	1,690	2,600	551	**-**
Arsenic	2.73	ND	3.55	6.14	3.15	3.09	ND	1.86	ND	**16**
Barium	48.6	7.59	39.1	77.4	32.5	28.3	5.07	33.2	1.59	**400**
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**590**
Cadmium	0.844	ND	0.549	1.22	ND	0.743	ND	ND	ND	**9.3**
Calcium	14,600	4,010	37,200	21,500	33,800	10,900	104	20,000	22.7	**-**
Chromium	11.9	3.43	13.9	17.2	9.56	8.50	1.68	12.8	1.32	**400***
Cobalt	2.67	0.867	3.35	2.85	2.25	1.55	ND	3.74	ND	**-**
Copper	23.4	3.93	24.4	26.2	14.7	19.5	1.62	36.4	0.718	**270**
Iron	6,660	2,190	13,000	5,930	4,780	4,290	1,360	7,390	993	**-**
Lead	49.7	503.59	25.3	74.6	24.5	41.1	0.969	18.3	ND	**1,000**
Magnesium	1,500	670	3,170	1,510	4,080	4,280	183	6,350	54.1	**-**
Manganese	146	31.7	188	221	98.1	78.6	9.27	93.8	6.46	**-**
Mercury	0.0892	ND	0.0591	0.188	ND	0.0820	ND	ND	ND	**2.8**
Nickel	8.04	1.76	9.67	9.56	5.85	4.27	1.13	7.36	0.964	**310**
Potassium	540	164	646	612	548	427	125	272	17.6	**-**
Sodium	78.0 B	36.2 B	130	75.6	158	45.1 B	43.3 B	183 B	15.3 B	**-**
Vanadium	10.1	3.43	13.9	9.67	10.7	5.87	2.10	15.0	1.23	**-**
Zinc	99.3	15.1	90.6	199	53.1	96.7	8.51	110	3.86	**10,000**

Table 5 *(continued)*
Metals
On-Site Soil Sample Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GP-9 (0”-2”)	GP-9 (5’-7’)	GP-10 (0”-2”)	GP-11 (5’-7’)	GP-17 (0”-2”)	GP-17 (2’-3’)	GP-18 (2’-3’)	GP-19 (2’-3’)	GP-20 (2’-3’)	GP-21 Dup of GP-7 (7’-9’)	NYSDEC Part 375 Commercial Use Soil Cleanup Objectives
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	**4/19/18**	**7/5/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/16/18**	**4/18/18**	
Metals *(in milligrams per kilogram)*											
Aluminum	6,470	711	4,940	1,070	4,130	7,160	8,940	7,650	11,000	1,990	-
Arsenic	4.88	ND	2.46	ND	3.55	1.65	2.14	2.30	2.37	ND	**16**
Barium	59.8	2.00	23.0	3.49	23.3	10.0	13.3	12.3	16.4	3.20	**400**
Beryllium	ND	ND	ND	ND	0.235	ND	ND	ND	0.232	ND	**590**
Cadmium	0.469	ND	0.533	ND	ND	ND	ND	ND	ND	ND	**9.3**
Calcium	36,300	41.0	2,250	64.0	2,040 B	136	132	113	142	65.6	-
Chromium	16.4	1.17	10.1	2.54	9.18	6.44	8.53	7.06	10.7	2.71	**400***
Cobalt	5.67	0.789	2.59	0.849	1.94	2.52	3.08	2.52	3.74	0.817	-
Copper	24.1	1.06	22.0	1.63	14.6	1.48	2.32	1.88	3.10	1.78	**270**
Iron	10,600	1,930	6,990	1,750	7,070	6,220	8,940	7,620	11,000	2,780	-
Lead	44.8	0.679	51.6	0.839	49.3	3.21	3.64	3.11	4.96	0.914	**1,000**
Magnesium	12,900	126	1,020	247	807	655	805	681	1,020	553	-
Manganese	217	55.3	59.7	12.2	79.5	39.3	65.3	53.8	78.4	17.3	-
Mercury	0.0782	ND	0.0807	ND	NA	ND	ND	ND	ND	ND	**2.8**
Nickel	14.6	1.27	6.03	1.79	5.16	4.09	4.74	3.94	5.82	2.04	**310**
Potassium	1,050	29.5	226	119	335	198	276	230	381	99.0	-
Sodium	180	15.7	55.3	18.1	26.7 B	16.8	20.7	15.4	38.5	18.7 B	-
Vanadium	20.2	1.47	10.7	3.19	10.5	9.84	13.1	11.4	16.6	2.95	-
Zinc	69.6	3.52	163	7.82	44.9	7.70	9.46	7.99	11.2	9.58	**10,000**

Notes:
Only detected analytes are reported.
ND = Not Detected.
J = The concentration is estimated.
B = The analyte was also detected in the laboratory method blank sample.
NA = Not Analyzed.
- = Not Soil Cleanup Objective available.
Samples Analyzed by EPA Method 9014\9010C

Table 6
Sediment Sample Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	SD-1 (0'-1')	SD-2 (0'-1')	SD-10 Dup. of SD-1 (0'-1')	NYSDEC Part 375 Commercial Use Soil Cleanup Objectives
Sample Date	**4/19/18**	**4/19/18**	**4/19/18**	
Volatile Organic Compounds *(in micrograms per kilogram)*				
1,2,4-Trimethylbenzene	210	6.1 IS-LO	290	**190,000**
1.3.5-Trimethylbenzene	70	3.1 J, IS-LO	80	**190,000**
Ethyl Benzene	40 J	ND	92	**390,000**
Methylcylohexane	1,400	3.3 J	170	**-**
n-Butylbenzene	49 J	ND	41 J	**500,000**
n-Propylbenzene	94	ND	110	**500,000**
Semi-Volatile Organic Compounds *(in micrograms per kilogram)*				
2-Methylnaphthalene	ND	490 J	ND	**-**
Bis(2-ethylhexyl)phthalate	190	1,500	158	**-**
Di-n-butyl phthalate	128	ND	575	**-**
Metals *(in milligrams per kilogram)*				
Aluminum	1,070	1,070	699	**-**
Antimony	ND	1.97	ND	**-**
Arsenic	ND	1.69	ND	**16**
Barium	11.9	11.2	3.38	**400**
Cadmium	ND	0.717	ND	**9.3**
Calcium	81.3	34,500	53.5	**-**
Chromium	1.89	20.8	1.69	**400***
Cobalt	1.55	3.03	1.22	**-**
Copper	4.06	40.3	2.97	**270**
Iron	2,120	9,860	1,700	**-**
Lead	2.90	40.0	2.18	**1,000**
Magnesium	209	19,900	135	**-**
Manganese	10.7	56.8	7.83	**-**
Nickel	1.85	14.5	1.55	**310**
Potassium	55.9	271	41.4	**-**
Sodium	11.7	59.3	ND	**-**
Vanadium	2.39	9.70	2.08	**-**
Zinc	13.0	166	8.99	**10,000**

Notes:
Only detected analytes are reported.
ND = Not Detected.
J = The concentration is estimated.
- = No Soil Cleanup Objective available.
* = The Principal Organic Contaminant Standard applies.
Samples Analyzed by EPA Methods: VOCs 8260C, SVOCs 8270C & Metals 9014\9010C.

Table 7
Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**7/5/18**	**7/5/18**	**5/24/18**	**5/24/18**	**5/24/18**	**5/24/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/5/18**	**7/5/18**	
Volatile Organic Compounds *(in micrograms per liter)*																
1,2,4-Trimethylbenzene	0.49 J	0.30 J	ND	2.6	ND	ND	2.8	4.5	2.2	0.64	**990**	2.3	ND	0.39 J	0.34 J	**5***
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52	ND	**12**	ND	ND	**3**
1,3,5-Trimethylbenzene	ND	ND	ND	0.99	ND	ND	1.3	0.76	0.38 J	0.21 J	**590**	0.78 J	**170**	ND	ND	**5***
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**310** CCV-E, SCAL-E	ND	ND	ND	**1**
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	1.3	ND	ND	**50**
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND	ND	ND	**50**
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	ND	ND	ND	ND	ND	**50**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5***
Chloroform	ND	ND	0.76	0.61	0.44 J	0.62	ND	ND	ND	0.81	ND	ND	ND	ND	ND	**7**
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	2.5	ND	0.92 J	ND	ND	**5***
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75	ND	17	ND	ND	**-**
Ethyl Benzene	ND	ND	ND	0.24 J	ND	0.50	1.3	2.1	0.99	ND	**390**	0.62 J	**120**	ND	ND	**5***
Isopropylbenzene	ND	ND	ND	0.24 J	ND	ND	0.24 J	0.27 J	ND	ND	**130**	ND	**28**	ND	ND	**5***
Methylcyclohexane	ND	ND	ND	0.86	ND	ND	1.6	0.24 J	ND	ND	160	ND	ND	ND	0.48 J	**-**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5***
n-Butylbenzene	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	**26 CCV-E**	ND	**54**	0.28 J	0.30 J	**5***

Table 7 (*Continued*)
Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**7/5/18**	**7/5/18**	**5/24/18**	**5/24/18**	**5/24/18**	**5/24/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/5/18**	**7/5/18**	
Volatile Organic Compounds *(in micrograms per liter)*																
n-Propylbenzene	ND	ND	ND	0.58 SCAL-E	ND	ND	1.3	0.85	0.49 J	ND	**260**	0.54 J	**97**	0.33 J	0.34 J	**5***
o-Xylene	ND	ND	ND	0.20 J	ND	0.53	0.70	ND	ND	ND	**470**	ND	**120**	ND	ND	**5***
p- & m- Xylenes	ND	ND	ND	1.1	ND	2.3	4.1 SCAL-E	ND	ND	ND	**1600** SCAL-E	2.0 SCAL-E	**190**	ND	ND	**5***
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	11 SCAL-E	ND	25	ND	ND	**-**
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	2.0	ND	ND	ND	**12 SCAL-E**	ND	**28**	0.98	1.0	**5***
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	3.4	ND	ND	**5***
Tetrachloroethylene	0.80	1.5	ND	ND	ND	ND	0.28 J	0.72	1.6	1.3	2.4	2.1	0.74 J	ND	0.47 J	**5***
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	**5***
Trichloroethylene	ND	ND	ND	ND	ND	ND	**12**	ND	0.67	ND	0.98	ND	2.9	0.43 J	ND	**5***
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
Xylenes, Total	ND	ND	ND	1.3 J	ND	2.8	4.8	ND	ND	ND	**2100 SCAL-E**	2.0 J	**310**	ND	ND	**5***

Table 7 (*Continued*)
Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	
Volatile Organic Compounds *(in micrograms per liter)*											
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.42 J	ND	**5***
1,2,4-Trimethylbenzene	**670**	**740**	**270**	4.2	**81**	**160 E**	**330**	1.3	**250**	1.7	**5***
1,2-Dichlorobenzene	1.4	ND	ND	ND	**4.0**	ND	ND	ND	ND	ND	**3**
1,2-Dichloropropane	ND	0.86	ND	ND	ND	ND	ND	ND	ND	ND	**1**
1,3,5-Trimethylbenzene	**340**	**230**	**67**	0.64	**29**	**37**	**97**	0.22 J	1.9	0.39 J	**5***
1,4-Dichlorobenzene	0.27 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-Butanone	ND	ND	0.76 J	ND	7.8 CCV-E	ND	11	ND	ND	ND	**50**
2-Hexanone	ND	ND	ND	ND	ND	ND		ND	ND	ND	**50**
Acetone	ND	ND	ND	ND	7.7	ND	**850** CCV-E, SCAL-E	ND	2.6 J	ND	**50**
Benzene	ND	ND	**22**	ND	0.36 J	ND	**27**	ND	**25**	ND	**11**
Bromodichloromethane	ND	**90**	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Chlorobenzene	ND	ND	0.66 J	ND	ND	ND	ND	ND	0.40 J	ND	**5***
Chloroform	ND	ND	ND	ND	ND	ND	ND	0.22 J	ND	ND	**7**
cis-1,2-Dichloroethylene	4.9	0.37 J	ND	ND	0.21 J	ND	**25**	ND	ND	0.80	**5***
Cyclohexane	36	19	170	1.1	ND	19	200	ND	17	0.28 J	**-**
Ethyl Benzene	**380**	1.1	**310**	**5.8**	**16**	ND	**1500**	ND	**250**	**6.5**	**5***
Isopropylbenzene	**52**	**70**	**33**	0.33 J	**21**	**48**	**51**	0.25 J	**18**	0.22 J	**5***
Methylcyclohexane	260	72	390	2.9	47	46	570	ND	19	0.71	**-**
Methylene Chloride	ND	ND	ND	ND	ND	ND	**23** CCV-E,J	ND	ND	ND	**5***
n-Butylbenzene	**33**	**9.2**	**6.7**	ND	**19**	4.2	**8.2 J**	ND	**14**	ND	**5***

Table 7 (*Continued*)
Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	7/2/18	7/2/18	5/22/18	5/22/18	7/2/18	5/22/18	5/22/18	5/22/18	7/2/18	5/22/18	
Volatile Organic Compounds *(in micrograms per liter)*											
n-Propylbenzene	**230**	**160**	**100 SCAL-E**	1.1 SCAL-E	**71**	**110 SCAL-E**	**170 SCAL-E**	0.89 SCAL-E	**36**	0.68 SCAL-E	**5***
o-Xylene	**210**	1.2	**21**	4.3	1.1	ND	**1800**	ND	0.76 J	**7.7**	**5***
p- & m- Xylenes	**1200**	4.4 SCAL-E	**220**	**20**	3.8 SCAL-E	ND	**4000**	ND	**8.2 SCAL-E**	**32**	**5***
p-Isopropyltoluene	**32**	5.3	0.90 J	ND	0.27 J	0.53	ND	ND	1.5	ND	-
sec-Butylbenzene	**27**	**7.8**	**6.5**	ND	**19**	**8.4**	**10**	ND	**7.2**	ND	**5***
tert-Butylbenzene	**7.7**	1.4	ND	ND	1.6	0.84	ND	ND	0.60 J	ND	**5***
Tetrachloroethylene	ND	ND	ND	0.91	ND	ND	**38 CCV-E**	0.23 CCV-E,J	ND	3.7	**5***
Toluene	2.3	ND	1.8	0.21 J	0.50	ND	**100**	ND	ND	0.36 J	**5***
Trichloroethylene	0.42 J	ND	ND	ND	0.26 J	ND	**9.8 J**	ND	ND	0.78	**5***
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28 J	**2**
Xylenes, Total	**1500**	**5.6**	**240**	**25**	4.8	ND	**5800**	ND	**9.0**	**40**	**5***

Notes:
SCAL-E The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%).
J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-E The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
B Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
*The principal organic contaminant standard for groundwater of 5 ug/L applies to this substance.
Samples Analyzed by EPA Method 8260C.
As per the NYSDEC, the detection of 1,4-dioxane is an erroneous result and is to be disregarded.

Table 8
Volatile Organics, Tentatively Identified Compounds
On- Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')
Sample Date	7/5/18	7/5/18	5/24/18	5/24/18	5/24/18	5/24/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/5/18	7/5/18
Volatile Organics, Tentatively Identified Compounds ***(in micrograms per liter)***															
Diethyl Benzene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230 J	ND	ND
Dihydro Methyl Indene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140 J	ND	ND
Dimethyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	6.9 J	ND	ND	ND	ND	ND	110 J	ND	ND
Ethyl Cyclopentane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Dimethyl Benzene Isomers	ND	ND	ND	ND	ND	ND	19 J	ND	ND	ND	16 J	ND	ND	ND	ND
Ethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	48 J	ND	300 J	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Cyclopentane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl (methylethyl) Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140 J	ND	ND
Methyl Pentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND
Tetramethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.2 J	ND	390 J	ND	ND
Unknown Alkane Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	300 J	ND	330 J	ND	ND
Unknown Alkyl Subst. Benzene Isomers	ND	ND	ND	ND	ND	ND	71 J	ND	ND	ND	28 J	ND	1700 J	ND	ND
Unknown Cyclopentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Cyclic Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND	ND	ND
Unknown Cyclic Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35 J	ND	ND

Table 8 (*Continued*)
Volatile Organics, Tentatively Identified Compounds
On- Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')
Sample Date	**7/5/18**	**7/5/18**	**5/24/18**	**5/24/18**	**5/24/18**	**5/24/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/5/18**	**7/5/18**
Volatile Organics, Tentatively Identified Compounds *(in micrograms per liter)*															
Unknown Dihydromethyl Indene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Diethyl Benzene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Dimethyl Cyclohexane Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Dimethyl Cyclopentane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Ethenyl Dimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Ethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Methyl Methylethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Tetrahydro Napthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 8 (*Continued*)
Volatile Organics, Tentatively Identified Compounds
On- Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**
Volatile Organics, Tentatively Identified Compounds *(in micrograms per liter)*										
2-Methyl Hexane	ND	ND	110 J,N	ND	ND	ND	120 J,N	ND	ND	ND
2-Methyl Napthalene	ND	ND	170 J,N	ND	ND	ND	ND	ND	ND	ND
2- Methyl Pentane	ND	ND	ND	ND	ND	45 J,N	180 J,N	ND	ND	ND
3-Methyl Hexane	ND	ND	160 J,N	ND	ND	ND	190 J,N	ND	ND	ND
3-Methyl Pentane	ND	N	29 J,N	ND	ND	73 J,N	ND	ND	ND	ND
Diethyl Benzene Isomers	30 J	47 J	ND	ND	93 J	ND	ND	ND	64 J	ND
Dihydro Dimethyl Indene Isomer	ND	ND	ND	ND	20 J	ND	ND	ND	ND	ND
Dihydro Methyl Indene Isomers	ND	ND	ND	ND	220 J	ND	ND	ND	500 J	ND
Ethyl Cyclopentane	ND	ND	32 J,N	ND	ND	ND	ND	ND	ND	ND
Ethyl Dimethyl Benzene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Methyl Benzene Isomer	49 J	290 J	ND	ND	28 J	ND	ND	ND	11 J	ND
Hexane	ND	ND	ND	ND	ND	15 J,N	ND	ND	ND	ND
Indane	ND	ND	130 J,N	ND	ND	ND	220 J,N	ND	ND	ND
Methyl Cyclopentane	ND	ND	42 J,N	ND	ND	84 J	ND	ND	ND	ND
Tetrahydro Methyl Naphthalene Isomer	ND	ND	ND	ND	34 J	ND	ND	ND	ND	ND
Tetramethyl Benzene Isomer	ND	ND	ND	ND	90 J	ND	ND	ND	300 J	ND
Unknown Alkane Isomers	1000 J	420 J	ND	ND	150 J	ND	ND	ND	ND	ND
Unknown Alkyl Subst. Benzene Isomers	240 J	270 J	ND	ND	390 J	ND	ND	ND	520 J	ND
Unknown Cyclopentane Isomer	ND	ND	ND	ND	ND	ND	140 J	ND	ND	ND
Unknown Cyclic Hydrocarbons	220 J	140 J	ND	ND	72 J	ND	ND	ND	ND	ND

Table 8 (*Continued*)
Volatile Organics, Tentatively Identified Compounds
On- Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**
Volatile Organics, Tentatively Identified Compounds *(in micrograms per liter)*										
Unknown Dihydromethyl Indene Isomer	ND	ND	37 J	ND	ND	ND	ND	ND	ND	ND
Unknown Diethyl Benzene Isomers	ND	ND	ND	ND	ND	44 J	ND	ND	ND	ND
Unknown Dimethyl Cyclohexane Isomers	ND	ND	ND	ND	ND	17 J	ND	ND	ND	ND
Unknown Dimethyl Cyclopentane Isomer	ND	ND	62 J	ND	ND	ND	ND	ND	ND	ND
Unknown Ethenyl Dimethyl Benzene Isomer	ND	ND	110 J	ND	ND	56 J	ND	ND	ND	ND
Unknown Ethyl Methyl Benzene Isomer	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND
Unknown Methyl Methylethyl Benzene Isomer	ND	ND	61 J	ND	ND	ND	ND	ND	ND	ND
Unknown Tetrahydro Napthalene Isomer	ND	ND	48 J	ND	ND	ND	ND	ND	ND	ND

Notes:
SCAL-E The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf>20%).
J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-E The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
N The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
B Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
*The principal organic contaminant standard for groundwater of 5 ug/L applies to this substance.
Samples Analyzed by EPA Method 8260C

Table 9
Semi-Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20')	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**5/24/18**	**5/24/18**	**5/24/18**	**5/24/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/5/18**	
Semi-Volatile Compounds *(in micrograms per liter)*													
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	10.5 J	ND	ND	ND	**-**
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**20**
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**-**
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Bis (2-ethylhexl)phthalate)	ND	ND	ND	ND	ND	ND	1.72 B	ND	ND	1.34	ND	ND	**5***
Di-n-butyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0941	ND	**50**
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Naphthalene	ND	ND	ND	0.0700	0.422	0.133	0.100	0.0821	**92.6**	0.106	**20.8**	0.0513	**10**
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0706	ND	**50**
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0706	ND	**50**

Table 9 *(Continued)*
Semi-Volatile Organic Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20')	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (15'-20')	GP-16S (5'-10')	GP-16D (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	
Semi-Volatile Compounds *(in micrograms per liter)*											
2,4-Dimethylphenol	3.01 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**
2-Methylnaphthalene	27.8	3.14 J	110	ND	3.81 J	ND	16.1	ND	9.41	ND	**-**
Acenaphthene	0.216	ND	3.79	ND	1.43	0.0500	0.260	ND	2.58	ND	**20**
Acenaphthylene	ND	ND	0.462	ND	0.189	ND	0.0800	ND	0.642	ND	**-**
Anthracene	ND	ND	0.349	ND	0.158	ND	0.190	ND	0.505	ND	**50**
Bis (2-ethylhexl)phthalate	**10.7**	ND	ND	ND	2.51 B	ND	ND	ND	1.20 B	ND	**5***
Di-n-butyl Phthalate	4.05 J	ND	ND	ND	ND	ND	**73.0**	ND	ND	ND	**50**
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	0.116	ND	**50**
Fluorene	0.216	ND	3.47	ND	1.79	0.0600	0.410	ND	4.32	ND	**50**
Naphthalene	**32.7**	0.778	**72.5**	ND	**34.3**	0.180	**114**	0.0541	**17.1**	0.432	**10**
Phenanthrene	ND	ND	1.18	ND	0.200	ND	0.220	ND	0.705	ND	**50**
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	0.0947	ND	**50**

Notes:
J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
*The principal organic contaminant standard for groundwater of 5 ug/L applies to this substance.
Samples Analyzed by EPA Method 8270C.

Table 10
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')
Sample Date	7/5/18	7/5/18	5/24/18	5/24/18	5/24/18	5/24/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/5/18	7/5/18
Semi-Volatiles, Tentatively Identified Compounds *(in micrograms per liter)*															
(1,1-Dimethylpropyl)-Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclic Octaatomic Sulfur Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.5 J	ND	ND	ND	ND
Dimethoxy Benzonitrile Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.24 J, N	ND	ND
Dimethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31.8 J, N	ND	ND
Dimethyl Benzoic Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Ethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	221 J, N	ND	ND
Dimethyl Naphthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	48.2 J	ND	24.7 J, N	ND	ND
Naphalenecarboxylic Acid Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Propyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51.8 J, N	ND	ND
Methyl Propyl Cyclohexane Isomer	ND	ND	ND	ND	ND	ND	ND	12.2 J, N	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	16.7 J, N	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43.5 J, N	ND	ND
Unknown Alkyl Substituted Alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	79.0 J	84.2 J
Unknown Methyl Ester	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.5 J	23.2 J

Table 10 *(Continued)*
Semi-Volatile Organics, Tentatively Identified Compounds
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**
Semi-Volatiles, Tentatively Identified Compounds *(in micrograms per liter)*										
(1,1-Dimethylpropyl)-Benzene Isomer	ND	ND	26.7	ND	ND	ND	32.0	ND	ND	ND
Aminoindazole Isomer	ND	ND	ND	ND	32.6 J	ND	ND	ND	ND	ND
Benzothiazole Isomer	ND	ND	ND	ND	29.5 J	ND	ND	ND	ND	ND
Dimethyl Benzoic Acid Isomer	ND	ND	ND	ND	47.4 J, N	ND	ND	ND	ND	ND
Dimethyl Benzoic Isomer	ND	ND	ND	ND	ND	ND	39.0	ND	ND	ND
Dimethyl Dihydro Indene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	11.6 J	ND
Dimethyl Naphthalene Isomer	ND	ND	35.9	ND	ND	ND	40.0	ND	21.1 J	ND
Indane Isomer	37.8 J	ND	46.2	ND	27.4 J, N	89.0	ND	ND	24.2 J	ND
Methoxy Benzonitrile Isomer	ND	ND	ND	ND	28.4 J, N	ND	ND	ND	ND	ND
Methyl Ethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	12.6 J	ND
Naphalenecarboxylic Acid Isomer	ND	ND	26.7	ND	ND	ND	ND	ND	ND	ND
Nitro Dihydro Indene Isomer	ND	ND	ND	ND	64.2 J, N	ND	ND	ND	ND	ND
Phenyl Methyl Ethanone Isomer	ND	ND	ND	ND	41.1 J, N	ND	ND	ND	ND	ND
Tetramethyl Benzene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	42.1 J	ND
Trimethyl Napthalene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	13.7 J	ND

Notes:
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
Samples Analyzed by EPA Method 8270C.

Table 11
Metals
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	MW-3 (35'-40')	MW-3 (55'-60')	MW-4 (35'-40')	MW-4 (55'-60')	GP-2S (5'-10')	GP-2D (15'-20)	GP-6S (5'-10')	GP-6D (15'-20')	GP-7S (5'-10')	GP-7D (15'-20')	GP-8S (5'-10')	GP-8D (15'-20')	GP-8E (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	7/5/18	7/5/18	5/24/18	5/24/18	5/24/18	5/24/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/2/18	7/5/18	7/5/18	
Metals *(in milligrams per liter)*																
Aluminum	ND	ND	ND	ND	ND	ND	0.151 B	ND	0.0780 B	ND	0.078 B	ND	1.17 B	ND		-
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	1.35	ND	ND	ND	ND	ND		**0.003**
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.64	ND		**0.025**
Barium	0.0356	0.0360	0.039	0.034	0.044	0.041	0.0121	ND	0.0710	0.013	0.053	0.023	0.0596	0.0346		**1**
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND		**5***
Calcium	63.1	42.4	19.1	12.0	19.9	13.1	29.7	38.5	61.9	18.5	58.0	32.4	83.0	28.2		-
Copper	ND	ND	ND	ND	ND	ND	ND	ND	0.0103	ND	ND	ND	0.00666	ND		**200**
Iron	0.0499	0.0475	ND	0.054	0.047 B	ND	1.21	ND	0.331	ND	**8.67**	0.166	**3.58**	**1.16**		**0.3**
Lead	ND	ND	ND	ND	ND	ND	0.00723	0.00782	0.00557	ND	0.007	ND	0.00763	ND		**0.025**
Magnesium	8.31	4.71	3.07	2.35	3.37	2.58	5.00	5.52	7.81	2.57	8.05	3.83	5.60	4.68		**35**
Manganese	0.0241	0.0506	ND	0.076	ND	0.061	0.0121	0.165	0.0525	ND	**1.08**	0.158	**0.0275**	0.134		**0.3**
Iron & Manganese	ND	ND	ND	0.13	0.047	0.061	ND	ND	ND	ND	**9.75**	**0.324**	**ND**	ND		**0.5**
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		**0.1**
Potassium	4.84 B	5.08 B	2.41	2.83	2.76	2.85	3.70	2.16	19.8	2.94	15.4	7.59	9.14	3.70 B		-
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		**0.010**
Sodium	**33.4 B**	**46.2 B**	**32.5**	**26.7**	**29.3 B**	**26.6**	**5.61**	ND	**31.6**	**45.2**	**27.6**	**36.1**		**35.1**	**52.0 B**	**20**
Thallium	3.42	ND	ND	**0.008**	ND	**0.006**	ND	ND	ND	ND	ND	ND		ND	ND	**0.005**
Zinc	ND	ND	ND	ND	ND	ND	ND	ND	0.481	ND	0.030	0.018		0.018	ND	**2**

Table 11
Metals
On-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue
Lindenhurst, New York

Sample ID	GP-10S (5'-10')	GP-10D (15'-20')	GP-12S (5'-10')	GP-12D (15'-20)	GP-14S (5'-10')	GP-14D (15'-20')	GP-15S (5'-10')	GP-15D (5'-10')	GP-16S (5'-10')	GP-16D (15'-20')	NYSDEC Class GA Ambient Water Quality Standards
Sample Date	**7/2/18**	**7/2/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	**5/22/18**	**5/22/18**	**7/2/18**	**5/22/18**	
Metals *(in milligrams per liter)*											
Aluminum	0.076	ND	ND	ND	ND	ND	ND	ND	0.0800 B	ND	-
Antimony	ND	ND	ND	ND	ND	ND	ND	**0.006**	ND	ND	**0.003**
Arsenic	ND	ND	ND	ND	4.95	0.006	ND	ND	**6.15**	ND	**0.025**
Barium	0.042	0.023	0.150	0.015	0.0578	0.053	0.157	0.022	0.163	0.034	**1**
Calcium	39.4	23.5	38.3	18.7	65.4	40.7	44.0	23.5	56.2	24.5	-
Iron	13.0	2.81	**35.8 B**	0.043 B	13.4	**1.04 B**	**61.0 B**	ND	**25.4**	0.041 B	**0.3**
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.025**
Magnesium	5.03	2.92	5.96	2.58	4.81	5.49	8.23	3.56	8.03	3.36	**35**
Manganese	0.319	0.111	**1.90**	0.006	0.302	0.213	**1.64**	ND	**1.00**	0.016	**0.3**
Iron & Manganese	ND	ND	**37.7**	0.049	ND	**1.253**	**62.64**	ND	ND	0.057	**0.5**
Nickel	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND	**0.1**
Potassium	5.42 B	3.40 B	4.86	2.21	5.01	4.46	4.39	2.01	5.23	3.67	-
Selenium	ND	ND	ND	ND	ND	**0.012**	ND	ND	ND	ND	**0.010**
Sodium	**36.4**	**55.9**	8.68 B	**49.3 B**	**15.9**	**29.9 B**	**21.6 B**	**40.3 B**	**32.7**	**42.6 B**	**20**
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.005**
Zinc	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**

Notes:
J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
Samples Analyzed by EPA Method 9014\9010C.

Table 12
Volatile Organic Compounds
Off-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-3 (15'-20')	GW-4 (5'-10')	GW-4 (15'-20')	GW-4A (5'-10')	GW-5 (5'-10')	GW-5 (15'-20')	GW-6 (7'-12')	GW-6 (15'-20')	GW-6 (25'-30')	GW-6 (35'-40')	GW-7 (7'-12')	GW-7 (15'-20')	GW-7 (15'-30')	NYSDEC Class GA Standards
Sample Date	5-31-20	5-28-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	
Volatile Organic Compounds *(in micrograms per liter)*															
1,2,4-Trimethylbenzene	ND	ND	ND	0.390 J	**962**	**25.6**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
1,2-Dichlorobenzene	ND	ND	0.840 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.230 J	ND	**3**
1,3,5-Trimethylbenzene	ND	ND	**450**	0.200 J	**570**	**10.4**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Acetone	ND	ND	ND	ND	ND	ND	ND	1.59 J	1.29 J	ND	ND	3.04	1.22 CCV-E, J	ND	**50**
Benzene	ND	ND	ND	ND	ND	**2.73**	ND	ND	ND	ND	ND	ND	0.460 J	ND	**1**
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.310 J	ND	ND	**~**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.300 J	ND	**5**
Chloroform	ND	ND	ND	0.280 J	ND	ND	0.980	ND	ND	**7.41**	**12.3**	ND	ND	3.32	**7**
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.520 CCV-E, QL-02, J, B	ND	**5**
Cyclohexane	ND	ND	58.7 ICV-E, QL-02	ND	64.0 ICV-E, QL-02	4.66 ICV-E, QL-02	ND	ND	ND	ND	ND	ND	0.530	ND	**~**
Ethyl Benzene	1.55	ND	**867**	ND	**1,030**	**95.0**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Isopropylbenzene	**116**	ND	**391**	ND	**489**	**14.8**	0.260 J	ND	ND	ND	ND	**23.7**	**73.5**	ND	**5**
Methylcyclohexane	131	ND	175	ND	190	111	ND	ND	ND	ND	ND	ND	ND	ND	**~**
Naphthalene	ND	ND	**15.1**	ND	**16.3**	2.16	ND	ND	ND	ND	ND	ND	ND	ND	**10**
n-Butylbenzene	**27.9**	ND	**13.8**	ND	**15.0**	3.37	ND	ND	ND	ND	ND	0.600	ND	ND	**5**
n-Propylbenzene	**379**	ND	**503**	0.480 J	**635**	**59.0**	0.740	ND	ND	ND	ND	4.62	**11.1**	ND	**5**
o-Xylene	ND	ND	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
p- & m- Xylenes	4.77 SCAL-E	ND	**83.1**	ND	**91.2**	**147**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
***p-Diethylbenzene**	41.0	ND	39.0	0.480 J	42.5	5.51	ND	ND	ND	ND	ND	2.13	5.89	0.240 J	**~**
***p-Ethyltoluene**	ND	ND	8.14	ND	8.40	0.300 J	ND	ND	ND	ND	ND	ND	ND	ND	**~**
p-Isopropyltoluene	ND	ND	3.68	ND	3.90	0.380 J	ND	ND	ND	ND	ND	ND	ND	ND	**5**
sec-Butylbenzene	**35.2**	ND	**20.2**	0.880	**23.0**	**7.42**	ND	ND	ND	ND	ND	2.17	**6.46**	ND	**5**
tert-Butylbenzene	**5.46**	ND	3.06	ND	3.30	0.840	ND	ND	ND	ND	ND	0.340 J	1.04	ND	**5**
Tetrachloroethylene	ND	1.44	ND	1.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.210 J	**5**
Toluene	ND	ND	ND	ND	ND	0.290 J	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Xylenes, Total	4.77	ND	**83.1**	ND	**91.2**	**158**	ND	ND	ND	ND	ND	ND	ND	ND	**5**

Table 12 (*Continued*)
Volatile Organic Compounds
Off-Site Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-7 (35'-40')	GW-7 (7'-12'A)	GW-8 (7'-12')	GW-8 (15'-20')	GW-8 (25'-30')	GW-8 (35'-40')	GW-9 (5'-10')	GW-9 (15'-20')	GW-9 (25'-30')	GW-9 (35'-40')	GW-9 (55'-60')	GW-10 (7'-12')	GW-10 (20'-25')	GW-10 (30'-35')	NYSDEC Class GA Standards
Sample Date	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-27-20	5-28-20	5-27-20	5-27-20	5-27-20	
Volatile Organic Compounds *(in micrograms per liter)*															
1,2,4-Trimethylbenzene	ND	ND	0.270 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**
Acetone	ND	1.76 J	ND	ND	1.01 J	ND	ND	ND	ND	ND	ND	1.72 J	ND	ND	**50**
Benzene	ND	0.260 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
Carbon Disulfide	ND	0.230 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**~**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Chloroform	5.34	ND	ND	ND	0.640	0.520	ND	0.360 J	0.290 J	ND	0.380 J	ND	ND	0.380 J	**7**
Chloromethane	ND	ND	ND	ND	ND	ND	ND	0.780 CCV-E, QL-02, J, B	0.690 CCV-E, QL-02, J, B	0.480 CCV-E, QL-02, J, B	ND	ND	ND	ND	**5**
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**~**
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Isopropylbenzene	ND	25.1	1.16	ND	ND	ND	ND	ND	ND	ND	ND	0.390 J	ND	ND	**5**
Methylcyclohexane	ND	ND	0.540	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**~**
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
n-Butylbenzene	ND	0.590	0.940	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
n-Propylbenzene	ND	4.79	0.480 J	ND	ND	ND	ND	ND	ND	ND	ND	0.690	ND	ND	**5**
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
p- & m- Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
***p-Diethylbenzene**	ND	2.17	4.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
***p-Ethyltoluene**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**~**
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**~**
sec-Butylbenzene	ND	2.21	0.620	ND	ND	ND	ND	ND	ND	ND	ND	0.240 J	ND	ND	**5**
tert-Butylbenzene	ND	0.340 J	0.890	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.300 J	ND	ND	ND	**5**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.250 J	ND	ND	ND	ND	**5**
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

Table 12 (*Continued*)
Volatile Organic Compounds
Off-Site Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-10 (45'-50')	GW-10 (55'-60')	GW-11 (7'-12')	GW-11 (20'-25')	GW-11 (30'-35')	GW-11 (45'-50')	GW-11 (55'-60')	GW-12 (7'-12')	GW-12 (20'-25')	GW-12 (30'-35')	GW-12 (45'-50')	GW-12 (55'-60')	EB-1	TB-1	NYSDEC Class GA Standards
Sample Date	5-27-20	5-27-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-28-20	5-27-20	5-27-20	
Volatile Organic Compounds *(in micrograms per liter)*															
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	**5.93**	ND	ND	ND	ND	ND	**5**
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.320 J	ND	ND	ND	ND	ND	**3**
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.330 J	ND	**50**
Acetone	ND	ND	ND	1.11 CCV-E, J	ND	ND	ND	ND	ND	ND	ND	ND	1.85 J	ND	**50**
Benzene	ND	ND	ND	0.390 J	0.350 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.330 J	ND	ND	ND	ND	ND	**5**
Chloroform	0.930	0.520	ND	ND	ND	0.750	0.430 J	ND	ND	0.470 J	0.630	ND	ND	ND	**7**
Chloromethane	0.740 CCV-E, QL-02, J, B	0.720 CCV-E, QL-02, J, B	0.800 CCV-E, QL-02, J, B	0.570 CCV-E, QL-02, J, B	0.410 CCV-E, QL-02, J, B	0.590 CCV-E, QL-02, J, B	0.740 CCV-E, QL-02, J, B	0.460 CCV-E, QL-02, J, B	0.520 CCV-E, QL-02, B	0.470 CCV-E, QL-02, J, B	0.470 CCV-E, QL-02, J, B	0.440 J, B	ND	ND	**5**
cis-1,2-Dichloroethylene	ND	ND	ND	0.200 J	0.200 J	ND	ND	ND	3.84	0.970	ND	ND	ND	ND	**5**
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	5.08 CCV-E, ICV-E, QL-02	ND	ND	ND	ND	ND	**~**
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	1.21	ND	ND	ND		ND	**5**
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.01	ND	ND	ND	ND	ND	**5**
Methyl Tert-Butyl Ether (MTBE)	ND	ND	ND	0.380 J	0.440 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
Methylcyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	0.520 CCV-E, QL-02	ND	ND	ND	ND	ND	**~**
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.970	ND	ND	ND	ND	ND	**5**
***p-Diethylbenzene**	ND	ND	ND	1.59	2.40	ND	ND	ND	5.05	ND	ND	ND	ND	ND	**~**
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.410 J	0.210 J	ND	ND	ND	ND	**5**
tert-Butylbenzene	ND	ND	ND	0.420 J	0.450 J	ND	ND	ND	1.00	ND	ND	ND	ND	ND	**5**
Tetrachloroethylene	0.220 J	ND	ND	ND	ND	ND	ND	ND	1.38	1.88	ND	1.69	ND	ND	**5**
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	0.940	0.300 J	ND	0.940	ND	ND	**5**
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	**4.29**	ND	ND	ND	ND	ND	**2**

Table 12 (*Continued*)
Volatile Organic Compounds
Off-Site Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

NOTES:

ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL).
CCV-E: The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
QL-02: This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B: Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
~: No regulatory limit has been established for this analyte.
Samples Analyzed by EPA Method 8260C

Table 13
Volatile Organics, Tentatively Identified Compounds
Off-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-4 (5'-10')	GW-4 (15'-20')	GW-4A (5'-10')	GW-5 (5'-10')	GW-7 (7'-12')	GW-7 (15'-20')	GW-7 (25'-30')	GW-7 (7'-12'A)	GW-8 (7'-12')	GW-10 (7'-12')	GW-11 (20'-25')	GW-11 (30'-35')	GW-12 (20'-25')
Sample Date	**5-31-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-27-20**	**5-28-20**	**5-28-20**	**5-28-20**
Volatile Organics, Tentatively Identified Compounds *(in micrograms per liter)*														
Adamantane Isomer	ND	ND	5.6	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND
Butenyl Benzene Isomers	ND	ND	ND	ND	ND	5.5	3.8	ND	ND	ND	ND	ND	ND	ND
Cyclopropyl Benzene Isomer	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl Benzene Isomer	37 J	3.2	ND	6.4	ND	1.8	3.0	ND	1.9	1.7	ND	1.2	ND	1.7
Dimethyl Benzene Isomers	ND	ND	ND	73	12	ND	ND	ND	ND	ND	ND	ND	1.6	ND
Dimethyl Butane Isomer	ND	ND	ND	ND	ND	ND	2.8	ND	ND	6.0	ND	ND	ND	9.2
Dimethyl Cyclohexane Isomer	ND	22	ND	24	14	1.9	4.1	ND	1.8	8.0	ND	ND	ND	ND
Dimethyl Cyclopentane Isomers	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Pentane Isomer	ND	ND	ND	ND	9.0	1.5	ND	ND	1.6	4.6	ND	ND	ND	1.3
Dimethyl Pentene Isomer	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Styrene Isomer	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Cyclohexane Isomer	ND	8.7	ND	9.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Cyclopentane Isomer	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H-Indene Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND
Indane Isomer	ND	57	ND	ND	ND	22	76	3.9	23	1.0	3.1	16	23	3.5
Methyl 2-Propenyl Benzene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	3.5	1.4
Methyl Benzamide Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND
Methyl Butane Isomer	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1
Methyl Cyclopentane Isomer	ND	490	ND	550	10	ND	7.8	ND	ND	ND	ND	ND	ND	16
Methyl Indan Isomers	ND	5.5	ND	11	2.8	2.7	15	ND	7.0	ND	1.5	ND	ND	ND
Methyl Pentane Isomers	ND	110	ND	120	9.0	14	18	ND	14	12	ND	ND	ND	18
Methylethyl Benzene Isomers	ND	38	ND	ND	ND	5.4	5.2	ND	5.5	ND	ND	ND	ND	6.4
Methylpropenyl Benzene Isomers	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND
Phenyl-1-Butene Isomers	ND	17	ND	65	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propenyl Benzene Isomer	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethyl Benzene Isomer	ND	10	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydronaphthalene Isomer	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND
Unknown Alkane Isomer	5.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Alkyl Subst. Benzene Isomers	300 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown Cyclic Hydrocarbons	37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 13 (*Continued*)
Volatile Organics, Tentatively Identified Compounds
Off-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

NOTES:

ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL).
CCV-E: The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
QL-02: This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B: Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
Wells GW-3(20'), GW-5(20'), GW-6(12'), GW-6(20'), GW-6(30'), GW-6(40'), GW-7(40'), GW-8(20'), GW-8(30'), GW-8(40'), GW-9(10'), GW-9(20'), GW-9(30')
GW-9(40'), GW-9(60'), GW-10(25'), GW-10(35'), GW-10(50'), GW-10(60'), GW-11(12'), GW-11 (50'), GW-11(60'), GW-12(12'), GW-12(35'), GW-12(50'), GW-12(60')
EB-1 and TB-1 sampled on May 27 & 28 2020 reported no detections for this analysis.
Wells GW-3(20'), GW-4 (10'), GW-4(20'), GW-4A(10'), GW-5(10'), GW-6(20') and EB-2 sampled on May 29, 2020 were not included in this analysis.
Samples Analyzed by EPA Method 8260C.

Volatile

Table 14
Semi-Volatile Organic Compounds
Off-Site Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-3 (15'-20')	GW-4 (5'-10')	GW-4 (15'-20')	GW-4A (5'-10')	GW-5 (5'-10')	GW-6 (15'-20')	EB-2	NYSDEC Class GA Standards
Sample Date	**5-31-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	
Semi-Volatile Compounds *(in micrograms per liter)*									
2-Methylnaphthalene	4.16 J	ND	4.76 J	ND	3.10 J	ND	ND	ND	**~**
Acenaphthene	0.0821	ND	ND	ND	ND	0.287	ND	ND	**20**
Acenaphthylene	ND	ND	ND	ND	ND	0.0513	ND	ND	**~**
Anthracene	ND	ND	ND	ND	ND	0.236	ND	ND	**50**
Bis (2-Ethylhexyl) Phthalate	ND	ND	ND	ND	ND	ND	0.605	ND	**5**
Di-n-Butyl Phthalate	ND	ND	ND	ND	ND	2.79 J	ND	ND	**50**
Fluoranthene	ND	ND	ND	ND	ND	1.49	ND	ND	**50**
Fluorene	0.0615	ND	0.0889	ND	0.0649	0.646	ND	ND	**50**
Naphthalene	0.246	ND	8.44	ND	5.75	1.24	ND	ND	**10**
Phenanthrene	ND	ND	0.0667	ND	ND	0.0718	ND	ND	**50**
Pyrene	ND	ND	0.111	ND	ND	0.595	ND	ND	**50**

NOTES:
ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
CCV-E: The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
QL-02: This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B: Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
~: no regulatory limit has been established for this analyte.
Samples Analyzed by EPA Method 8270C.

Table 15
Semi-Volatile Organics, Tentatively Identified Compounds
Off-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-3 (15'-20')	GW-4 (5'-10')	GW-4 (15'-20')	GW-4A (5'-10')	GW-5 (5'-10')	GW-6 (15'-20')	EB-2
Sample Date	**5-31-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**
Semi-Volatile Organics, Tentatively Identified Compounds *(in micrograms per liter)*								
Butenyl Benzene Isomer	ND	ND	ND	ND	23.8 J	ND	ND	ND
Diethyl Benzene Isomer	39.0 J	ND	35.6 J	ND	23.8 J	10.3 J	ND	ND
Dimethyl Propyl Benzene Isomer	10.3 J	ND	ND	ND	ND	ND	ND	ND
Dimethyl Benzoic Acid Isomer	ND	ND	38.9	ND	14.1 J	ND	ND	ND
Ethenyl Dimethyl Benzene Isomer	94.4 J	ND	32.2 J	ND	ND	ND	ND	ND
Ethyl Dimethyl Benzene Isomer	ND	ND	68.9 J	ND	47.6 J	ND	ND	ND
Ethylbenzene Isomer	ND	ND	412 J	ND	303 J	36.9 J	ND	ND
Indane mw117	55.4 J	ND	140 J	ND	94.1 J	ND	ND	ND
Methylethyl Benzene Isomer	46.2 J	ND	214 J	ND	155 J	ND	ND	ND
Propyl Benzene Isomer	168 J	ND	307 J	ND	219 J	27.7 J	ND	ND
Tetramethyl Benzene Isomer	55.4 J	ND	33.3 J	ND	25.9 J	ND	ND	ND
Trimethyl Benzene Isomer	ND	ND	491 J	ND	360 J	12.3 J	ND	ND
Unknown Aliphatic Hydrocarbon	21.5 J	ND	ND	ND	ND	ND	ND	ND
Unknown Carboxylic Acid	13.3 J	ND	ND	ND	ND	ND	ND	ND

NOTES:
ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
Only the wells as shown on the above Table 15 sampled on May 29 & 31, 2020 were included in this analysis.
Samples Analyzed by EPA Method 8270C.

Table 16
Metals
Off-Site Groundwater Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-3 (15'-20')	GW-4 (5'-10')	GW-4 (15'-20')	GW-4A (5'-10')	GW-5 (5'-10')	GW-6 (15'-20')	EB-2	NYSDEC Class GA Standards
Sample Date	**5-31-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	**5-29-20**	
Metals (Unfiltered) ***(in milligrams per liter)***									
Arsenic	1.32	ND	2.19	ND	2.29	2.22	ND	ND	**25**
Aluminum	0.544	ND	0.150	ND	0.129	0.540	ND	ND	**~**
Barium	0.0411	ND	ND	ND	ND	0.0643	0.0311	ND	**1**
Calcium	47.6	27.2	19.9	21.1	19.5	40.5	21.3	10.5	**~**
Iron	**16.3**	ND	**26.3**	**2.28**	**25.5**	**18.1**	**0.731**	ND	**0.3**
Magnesium	9.27	3.58	2.76	3.33	2.70	6.36	3.66	6.00	**35**
Manganese	0.242	0.0142	0.268	0.157	0.271	0.413	0.00878	ND	**0.3**
Potassium	10.5 B	2.35	1.45	3.60	1.45	4.11	1.75	21.2	**~**
Sodium	**49.5**	**20.7**	8.51	**29.3**	8.42	**62.5**	**39.1**	ND	**20**
Metals (Dissolved) ***(in milligrams per liter)***									
Barium	0.0333	ND	ND	ND	ND	0.0550	0.0308	ND	**1**
Calcium	47.4	27.4	19.4	20.6	18.9	40.4	21.2	10.5	**~**
Iron	**1.45**	ND	**4.17**	**1.92**	**4.89**	**4.25**	**0.596**	ND	**0.3**
Magnesium	9.54	3.56	2.69	3.31	2.60	6.42	3.65	6.04	**35**
Manganese	0.238	0.0139	0.269	0.153	0.262	0.413	0.00863	ND	**0.3**
Potassium	10.1 B	2.33	1.44	3.47	1.46	4.16	1.77	21.1	**~**
Selenium	1.21	ND	ND	ND	ND	ND	ND	ND	**10**
Sodium	**50.6**	**20.4**	8.48	**29.0**	8.31	**62.8**	**38.6**	ND	**20**

NOTES:
ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
CCV-E: The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
QL-02: This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J: Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
B: Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
~: No regulatory limit has been established for this analyte.
Only the wells as shown on the above Table 15 sampled on May 29 & 31, 2020 were included.
Samples Analyzed by EPA Method 9014\9010C.

Table 17
Soil Vapor Intrusion Chemical Analytical Results
On-Site Building, Former Elka Chemical Site
340 W. Hoffman Avenue Lindenhurst, New York

Sample ID	IA-1	IA-2	SS-1	SS-2	OA-1	NYSDOH Table C-1 90th Percentile Values
Sample Date	**03-21-2020**	**03-21-2020**	**03-21-2020**	**03-21-2020**	**03-21-2020**	
Volatile Organic Compounds *(ug/m³)*						
1,1,1-Trichloroethane	ND (0.49)	ND (0.45)	320	99	ND (0.47)	6.9
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND (0.69)	0.63	ND (7.0)	ND (6.6)	ND (0.66)	3.4
1,2,4-Trimethylbenzene	4.1	3.9	4.5	4.3	ND (0.42)	18
1,3,5-Trimethylbenzene	1.5	1.5	ND (4.5)	ND (4.3)	ND (0.42)	6.5
2-Butanone	2.0	2.2	8.1	9.2	0.68	-
4-Methyl-2-pentanone	4.4	4.9	5.2	5.3	ND (0.35)	-
Acetone	10	10	18	130	3.4	140
Benzene	2.3	2.8	4.1	ND (2.8)	0.41	29
Carbon Disulfide	0.31	0.41	ND (2.8)	ND (2.7)	ND (0.27)	-
Carbon tetrachloride	0.45	0.52	ND (1.4)	ND (1.4)	0.54	1.1
Chloroform	ND (0.44)	ND (0.40)	38	4.2	ND (0.42)	4.6
Chloromethane	1.1	1.1	ND (1.9)	ND (2.3)	1.2	5.2
cis-1,2-Dichloroethylene	ND (0.089)	ND (0.081)	12	2.1	ND (0.085)	1.2
Cyclohexane	2.5	2.9	ND (3.1)	5.4	ND (0.30)	19
Dichlorodifluoromethane	1.9	2.0	ND (4.5)	ND (4.3)	2.0	26
Ethyl Acetate	ND (0.65)	ND (0.59)	13	14	ND (0.62)	-
Ethyl Benzene	2.3	2.6	4.4	24	ND (0.37)	13
Isopropanol	5.2	5.1	6.5	19	0.67	-
Methyl Methacrylate	ND (0.37)	ND (0.34)	ND (3.7)	ND (3.5)	0.35	1.1
Methylene chloride	2.0	2.0	8.5	6.0	2.3	60*
n-Heptane	4.9	5.5	ND (3.7)	29	ND (0.35)	33
n-Hexane	8.9	11	8.3	7.6	ND (0.30)	35
o-Xylene	3.2	3.6	5.5	20	ND (0.37)	13

Table 17 (*Continued*)
Soil Vapor Intrusion Chemical Analytical Results
On-Site Building, Former Elka Chemical Site
340 W. Hoffman Avenue, Lindenhurst, New York

Sample ID	IA-1	IA-2	SS-1	SS-2	OA-1	NYSDOH Table C-1 90th Percentile Values
Sample Date	**03-21-2020**	**03-21-2020**	**03-21-2020**	**03-21-2020**	**03-21-2020**	
Volatile Organic Compounds *(ug/m³)*						
p- & m-Xylenes	8.1	9.0	14	**59**	ND (0.75)	21
p-Ethyltoluene	3.1	3.3	ND (4.5)	5.1	ND (0.42)	-
Tetrachloroethylene	4.3	5.2	**810**	**860**	ND (0.58)	30*
Toluene	11	13	24	44	0.65	110
Trichloroethylene	0.48	0.57	**490**	**210**	ND (0.12)	2*
Trichlorofluoromethane (Freon 11)	23	27	6.1	ND (4.9)	1.3	30

Notes:
- No concentration established
ND- not detected
NYSDOH Guidance Table C1. "Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes"90th Percentile values for indoor air of fuel oil heated homes were compared to the sample results.
*The NYSDOH Indoor Air Guidance Value was applied.
(0.58) Values in parentheses are the Limit Of Quantitation value representing the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analysis.
Bold values for indoor air indicate an exceedance of the 95th percentile values from NYSDOH Air Guideline Values.

Table 18
Soil Vapor Intrusion Chemical Analytical Results
Off-Site Commercial Building
Lindenhurst, New York

Sample ID	IA-A	IA-B	IA-C	SS-A	SS-B	SS-C	NYSDOH 95th Percentile Values
Sample Date	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	
Volatile Organic Compounds *(ug/m³)*							
1,1,1-Trichloroethane	ND (0.51)	ND (0.53)	ND (0.58)	ND (0.64)	22	18	6.9
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.78	ND (0.75)	ND (0.81)	ND (0.89)	ND (0.64)	ND (0.72)	3.4
1,1-Dichloroethane	ND (0.38)	ND (0.40)	ND (0.43)	ND (0.47)	1.1	0.60	0.25
1,2,4-Trimethylbenzene	1.8	2.8	**41**	3.8	2.7	3.0	18
1,3,5-Trimethylbenzene	0.50	0.82	**11**	0.97	0.78	0.78	6.5
1,3-Butadiene	ND (0.62)	ND ((0.65)	ND (0.70)	5.6	ND (0.55)	3.3	-
2-Butanone	3.6	2.3	2.7	15	9.3	5.1	-
4-Methyl-2-pentanone	1.4	1.4	1.9	0.86	0.96	0.76	-
Acetone	54	61	71	130	260	66	140
Acrylonitrile	ND (0.20)	ND (0.21)	ND (0.23)	ND (0.25)	0.36	ND (0.20)	-
Benzene	1.2	1.6	2.5	3.3	2.5	3.2	29
Carbon Disulfide	ND (0.29)	ND (0.31)	ND (0.33)	0.91	0.73	0.73	-
Carbon tetrachloride	0.76	0.55	0.53	0.37	0.47	0.35	1.1
Chloroform	ND (0.45)	ND (0.48)	ND (0.52)	2.7	1.6	0.50	4.6
Chloromethane	1.8	1.3	1.3	0.53	0.81	0.67	5.2
cis-1,2-Dichloroethylene	ND (0.092)	ND (0.097)	ND (0.11)	100	0.30	0.26	1.2
Cyclohexane	0.90	1.6	2.5	0.68	0.89	1.3	19
Dichlorodifluoromethane	2.6	2.0	2.0	1.3	1.9	1.9	26
Ethyl acetate	3.3	ND (0.71)	ND (0.76)	ND (0.84)	0.72	0.84	-
Ethyl Benzene	2.1	2.1	2.9	2.1	2.0	2.2	13
Isopropanol	110	100	74	37	31	54	-
Methyl Methacrylate	**46**	**2.5**	ND (0.43)	2.9	0.51	ND (0.38)	1.1
Methyl tert-butyl ether (MTBE)	ND (0.34)	0.46	0.80	ND (0.42)	ND (0.30)	0.40	71
Methylene chloride	2.8	3.7	6.5	3.0	2.3	3.2	60*
n-Heptane	4.0	5.0	5.5	6.4	4.8	3.5	33

Table 18 (*Continued*)
Soil Vapor Intrusion Chemical Analytical Results
Off-Site Commercial Building
Lindenhurst, New York

Sample ID	IA-A	IA-B	IA-C	SS-A	SS-B	SS-C	NYSDOH 95th Percentile Values
Sample Date	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	**03-29-2020**	
Volatile Organic Compounds *(ug/m³)*							
n-Hexane	5.0	4.8	8.4	6.0	4.1	4.7	35
o-Xylene	2.2	2.5	5.5	2.5	1.8	2.1	13
p- & m-Xylenes	7.8	7.7	15	7.3	6.3	7.5	21
p-Ethyltoluene	1.6	2.1	20	3.8	3.0	3.4	-
Propylene	ND (0.16)	ND (0.17)	ND (0.18)	77	ND (0.14)	13	-
Styrene	2.1	0.79	0.81	ND (0.50)	ND (0.36)	ND (0.40)	2.3
Tetrachloroethylene	3.7	ND (0.66)	1.4	3.3	12	3.5	30*
Tetrahydrofuran	ND (0.55)	ND (0.58)	ND (0.63)	2.5	1.6	1.9	9.4
Toluene	11	13	20	12	9.8	13	110
trans-1,2-Dichloroethylene	ND (0.37)	ND (0.39)	ND (0.42)	29	ND (0.33)	ND (0.37)	-
Trichloroethylene	0.30	ND (0.13)	0.34	310	10	1.4	2*
Trichlorofluoromethane (Freon 11)	1.9	1.7	1.5	2.2	1.6	1.7	30

Notes:
- No concentration established
ND- not detected
*The NYSDOH Indoor Air Guidance Value was applied.
(0.58) Values in parentheses are the Limit Of Quantitation value representing the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analysis.
Bold values for indoor air indicate an exceedance of the 95th percentile values from NYSDOH Air Guideline Values.

Table 19
Groundwater Chemical Analytical Results
Off-Site Commercial Property
Lindenhurst, New York

Sample ID	SPG-1	SPG-2	NYS Class GA Standards
Sample Date	**04-13-2020**	**04-13-2020**	
Volatile Organic Compounds *(ug/l)*			
2-Butanone	ND	0.71	50**
Acetone	8.0	7.2	50**
Carbon Disulfide	0.65	ND	60
Chloromethane	ND	0.43 CCV-E, J	5
cis-1,2-Dichloroethylene	0.26 J	ND	5
Isopropylbenzene	0.98	ND	5*
Tetrachloroethylene	ND	2.3	5*

NOTES:
J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-E - The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
ND - Not Detected.
* The principal organic contaminant standard for groundwater of 5 ug/L applies to this substance.
** TOGS 1.1.1 standard applies.

Table 20
PFAS
On-Site and Upgradient Groundwater Chemical Analytical Results
Former Elka Chemical Site
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	FB-2	EB-3	GP-16S (5'-10')	GP-14S (5'-10')	GP-6S (5'-10')	GP-8S (5'-10')	FB-1	EB-1A	NYSDEC Class GA Standards
Sample Date	**7/5/18**	**7/5/18**	**7/5/18**	**7/5/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	**7/2/18**	
PFAS (ng/l)/ 1,4-Dioxane(ug/l)											
6:2 Fluorotelomersulfonate	ND	9.2	ND	ND	40	**990**	ND	2.8	2.6	17	100
Perfluorobutanesulfonic acid	7.5	6.9	ND	ND	18	21	10	6.2	ND	ND	100
Perfluorohexanoic acid	21	19	ND	ND	**110**	14	14	9.5	ND	ND	100
Perfluoroheptanoic acid	16	22	ND	ND	58	34	9.4	9.5	ND	ND	100
Perfluorobutanoic acid	4.2	7.2	ND	ND	12	88	2.4	4.4	ND	ND	100
Perfluoropentanoic acid	29	12	ND	ND	**170**	ND	9.4	5.9	ND	ND	100
Perfluorohexanesulfonic acid	3.2	3.6	ND	ND	8.6	6.9	23	5.7	ND	ND	100
Perfluorooctanoic acid (PFOA)	**46**	**49**	ND	ND	**53**	**44**	**21**	**48**	ND	ND	10
Perfluorooctanesulfonic acid (PFOS)	**22**	**27**	ND	ND	**31**	**16**	**34**	**58**	ND	ND	10
Perfluorononanoic acid	3.2	5.1	ND	ND	6.1	5.6	3.8	4.6	ND	ND	100
8:2 Fluorotelomersulfonate	ND	ND	ND	ND	ND	**110**	ND	ND	ND	ND	100
Perfluorodecanoic acid	2.3	ND	ND	ND	ND	2.1	ND	ND	ND	ND	100
1,4-Dioxane	ND	ND	NS	ND	ND	ND	ND	ND	NS	ND	100

Note:
ND – Not Detected
NS – Not Sampled
Samples Analyzed by EPA Method 537m PFAS.

Table 21
PFAS
Off-Site Groundwater
Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-3 (5'-10')	GW-4 (5'-10')	GW-4A (5'-10')	GW-5 (5'-10')	GW-7 (5'-10')	GW-7 (15'-20')	GW-7 (25'-30')	GW-8 (5'-10')	GW-12 (20'-25')	GW-12 (45'-50')	FB-1	EB-1	NYSDEC Guidance Values
Sample Date	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	**8-26-20**	
PFAS, NYSDEC Target List *(in nanograms per liter)*													
***Perfluorobutanesulfonic Acid (PFBS)**	4.73	ND	ND	3.77	4.34	2.39	3.82	8.09	3.22	2.88	ND	ND	**100**
***Perfluorohexanoic Acid (PFHxA)**	19.7	ND	ND	4.85	6.57	4.75	6.41	5.70	7.63	4.06	ND	ND	**100**
***Perfluoroheptanoic Acid (PFHpA)**	19.0	ND	ND	5.10	5.30	3.72	3.94	5.17	5.76	4.20	ND	ND	**100**
***Perfluorohexanesulfonic Acid (PFHxS)**	ND	ND	ND	ND	ND	ND	2.06	ND	2.08	3.30	ND	ND	**100**
***Perfluorooctanoic Acid (PFOA)**	**15.7**	2.04	ND	**17.2**	8.77	6.99	**12.4**	**11.7**	**19.2**	**13.8**	ND	ND	**10**
***Perfluorooctanesulfonic Acid (PFOS)**	**20.1**	**11.0**	**11.1**	**15.2**	**10.2**	**14.7**	**12.6**	**16.3**	**21.2**	**19.9**	ND	ND	**10**
***Perfluorononanoic Acid (PFNA)**	4.0	ND	ND	2.26	ND	2.14	ND	2.59	2.50	4.10	ND	ND	**100**
***Perfluoropentanoic Acid (PFPeA)**	20.7	3.24	3.12	5.28	12.0	9.04	7.65	4.83	8.02	4.26	ND	ND	**100**
***Perfluoro-n-Butanoic Acid (PFBA)**	19.2	2.01	ND	4.70	4.48	3.08	4.45	5.04	4.94	2.96	ND	ND	**100**

NOTES:
ND: NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL).
Samples Analyzed by EPA Method 537m PFAS.

Table 22
PFAS Upgradient and On-Site Groundwater
Chemical Analytical Results
340 West Hoffman Avenue Lindenhurst, New York

Sample ID	GW-1 (5'-10')	GW-2 (5'-10')	GP-10S (5'-10')	GP-14S (5'-10')	FB-1	NYSDEC Guidance Values
Sample Date	**11-04-2020**	**11-04-2020**	**11-04-2020**	**11-04-2020**	**11-04-2020**	
PFAS, NYSDEC Target List *(in nanograms per liter)*						
Perfluorobutanesulfonic Acid (PFBS)	ND	4.92	2.82	6.82	ND	**100**
Perfluorohexanoic Acid (PFHxA)	ND	11.2	2.20	17.1	ND	**100**
Perfluoroheptanoic Acid (PFHpA)	2.18	11.7	3.61	14.1	ND	**100**
Perfluorohexanesulfonic Acid (PFHxS)	ND	2.37	ND	3.00	ND	**100**
Perfluorooctanoic Acid (PFOA)	4.69	**36.4**	7.66	**15.1**	ND	**10**
Perfluorooctanesulfonic Acid (PFOS)	**10.4**	**20.1**	**21.9**	**22.5**	ND	**10**
Perfluorononanoic Acid (PFNA)	ND	2.91	2.14	2.56	ND	**100**
Perfluoropentanoic Acid (PFPeA)	ND	11.1	ND	17.7	ND	**100**
Perfluoro-n-Butanoic Acid (PFBA)	2.43	9.75	11.5	7.32	ND	**100**

NOTES:
ND: NOT DETECTED - the analyte is not detected at the Reported to level.
Bold values indicate an exceedance of the NYSDEC Class GA Standards Values.
Samples Analyzed by EPA Method 537m PFAS.

Table 23
Preliminary and Estimated Costs for Remedial Alternatives
Former Elka Chemical Site

Alternative	Capital Cost (Year 1 Cost)	O&M Cost Per Year	O&M Estimated Duration (in years)	O&M Cost	Present Value for O&M Cost	Total Cost (Present Value of O&M plus Capital Cost)
Site Remediation Costs						
Alternative 1: No Action	$10,000	0	0	0	0	$10,000
Alternative 2: Natural Attenuation and Monitoring	$100-180k	$26-52k	20	$520-1,040k	$196-392k	$296-577k
Alternative 3: On-Site AS/SVE, off-Site Chemical Bioremediation, Soil Removal, SSDS, Monitoring/Sampling, ECs/ICs, SMP	$225-363k	$72-144k	4-8 (SVE) 2-5 (Chem. Bio.) 20 (SSDS)	$528-1,176k	$357-796k	$582-1,159k
Alternative 4: On- and Off-Site Chemical Bioremediation, Soil Removal, SSDS, Monitoring/Sampling, ECs/ICs, SMP	$225-393k	$72-$142	2-5 20 (SSDS)	$248-500k	$168-338k	$393-731k
Alternative 5: Removal of Smear Zone Soil, plus Alternative 3 tasks	$661-907k	$72-144k	4-8 (SVE) 2-5 (Chem. Bio.) 20 (SSDS)	$528-1,176k	$357-796k	$1,018-1,703k

Capital cost includes work plans and reporting, equipment, materials, and labor costs for executing an alternative.
O&M-Operations and Maintenance
k-thousands of dollars
Present values were calculated using a 5 percent interest rate.and 8 periods for Alternatives 3, 4, and 5.

Appendix A- Site Survey

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.

COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY.

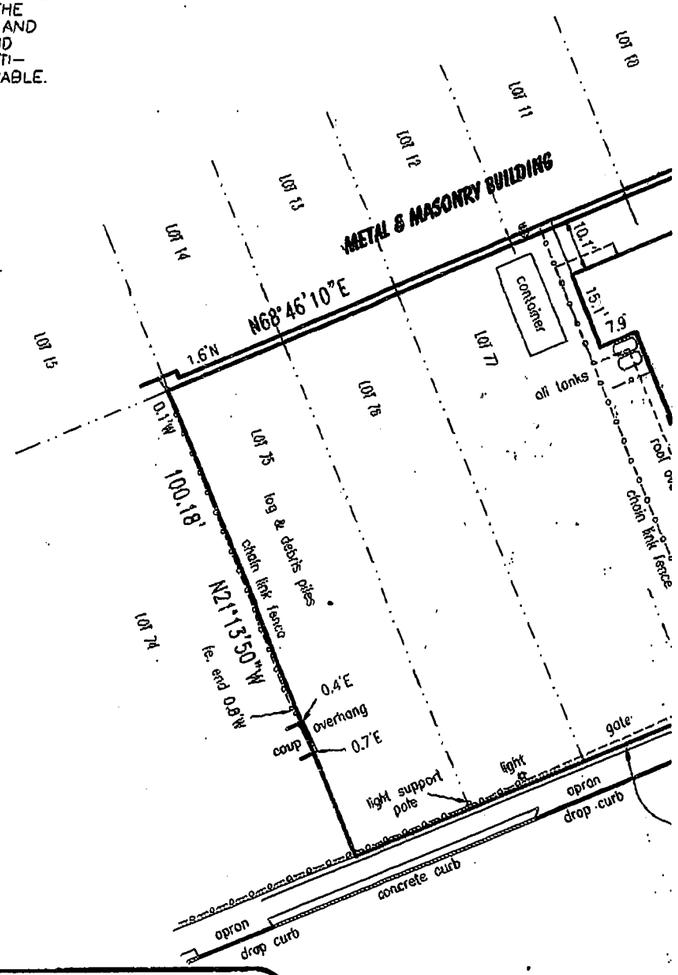
GUARANTEES INDICATED HEREON SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED, AND ON HIS BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION. GUARANTEES ARE NOT TRANSFERABLE.

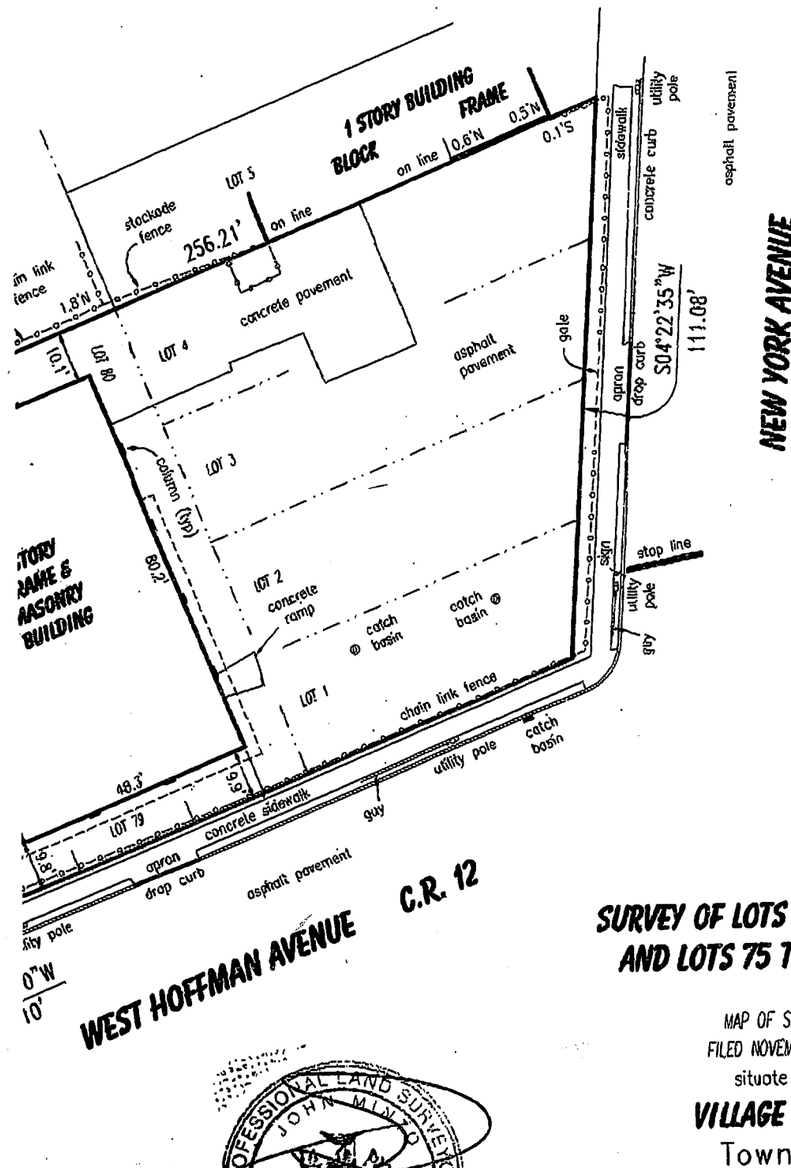
Note: ALL SUBSURFACE STRUCTURES: WATER SUPPLY, SANITARY SYSTEMS, DRAINAGE, DRYWELLS AND UTILITIES. SHOWN ARE FROM FIELD OBSERVATIONS AND OR DATA OBTAINED FROM OTHERS.

THE EXISTENCE OF RIGHTS OF WAY AND/OR EASEMENTS OF RECORD IF ANY, NOT SHOWN ARE NOT GUARANTEED.

AREA = 23,261 S.F.

DRAWN BY: RM	CHECKED BY: JM
CAD FILE DATE:	SEPTEMBER2012
DRAWING NO:	11\WESTHOFFMAN





JM LAND SURVEYING

JOHN MINTO, L.S.
LICENSED PROFESSIONAL LAND SURVEYOR
NEW YORK STATE LIC. NO. 49866

PHONE: (631) 724-4832
FAX: (631) 724-5455

93 SMITHTOWN BOULEVARD SMITHTOWN, N.Y. 11787

Certified to:
340 WEST HOFFMAN CORPORATI

Premises known as:
#340 West Hoffman Avenue,
rst, N.Y. 11757

PROFESSIONAL LAND SURVEYOR
JOHN MINTO
No. 49866
STATE OF NEW YORK

SURVEY OF LOTS 1 THROUGH 4 INCLUSIVE AND LOTS 75 THROUGH 80 INCLUSIVE

Block 5
MAP OF SHEET 1, CITY OF BRESLAU
FILED NOVEMBER 20, 1879 FILE NO 155
situate in the Incorporated

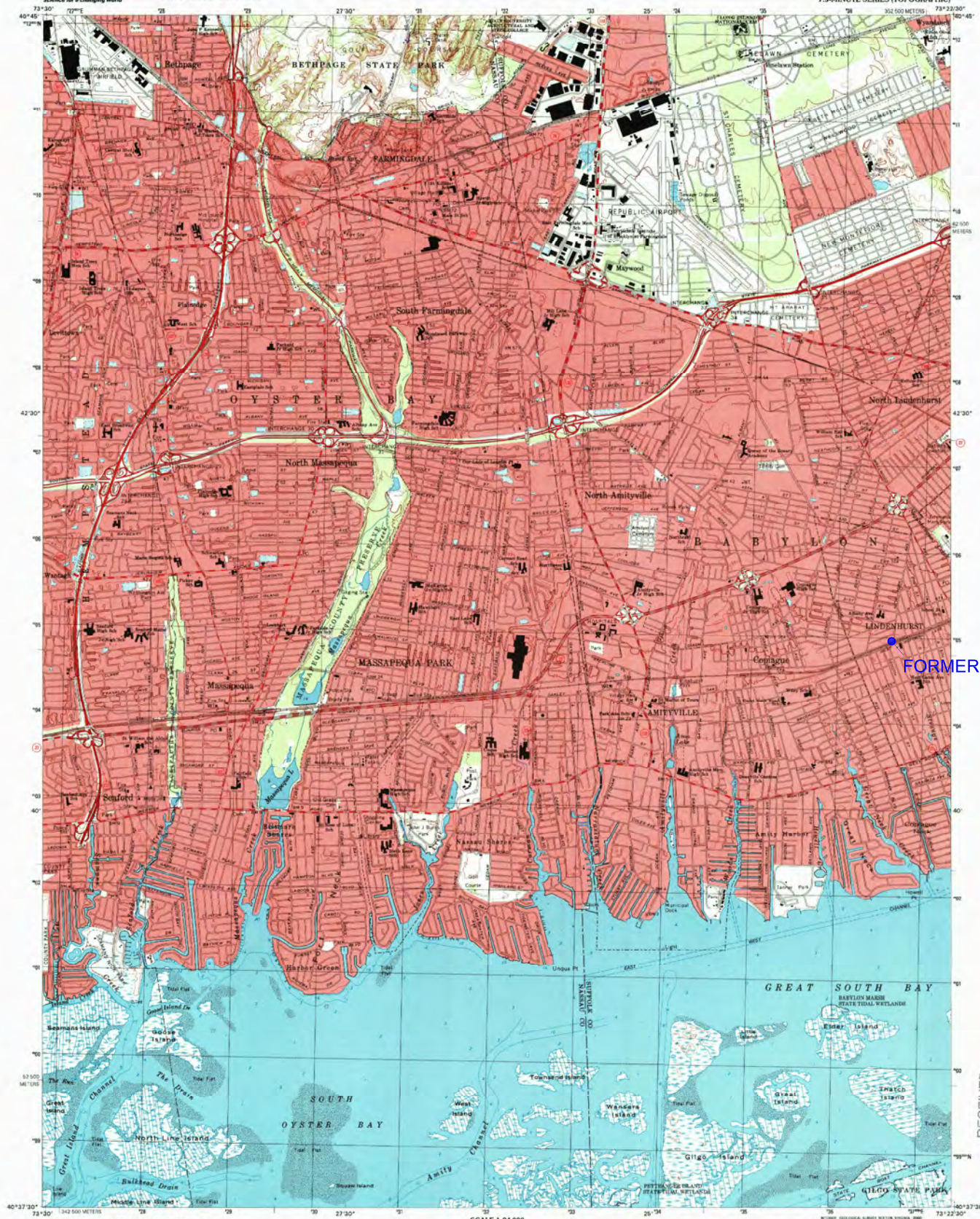
VILLAGE OF LINDENHURST

Town of Babylon
Suffolk County, New York
Tax Map #103-009-01-81.005
Scale 1"= 30' September26, 2012

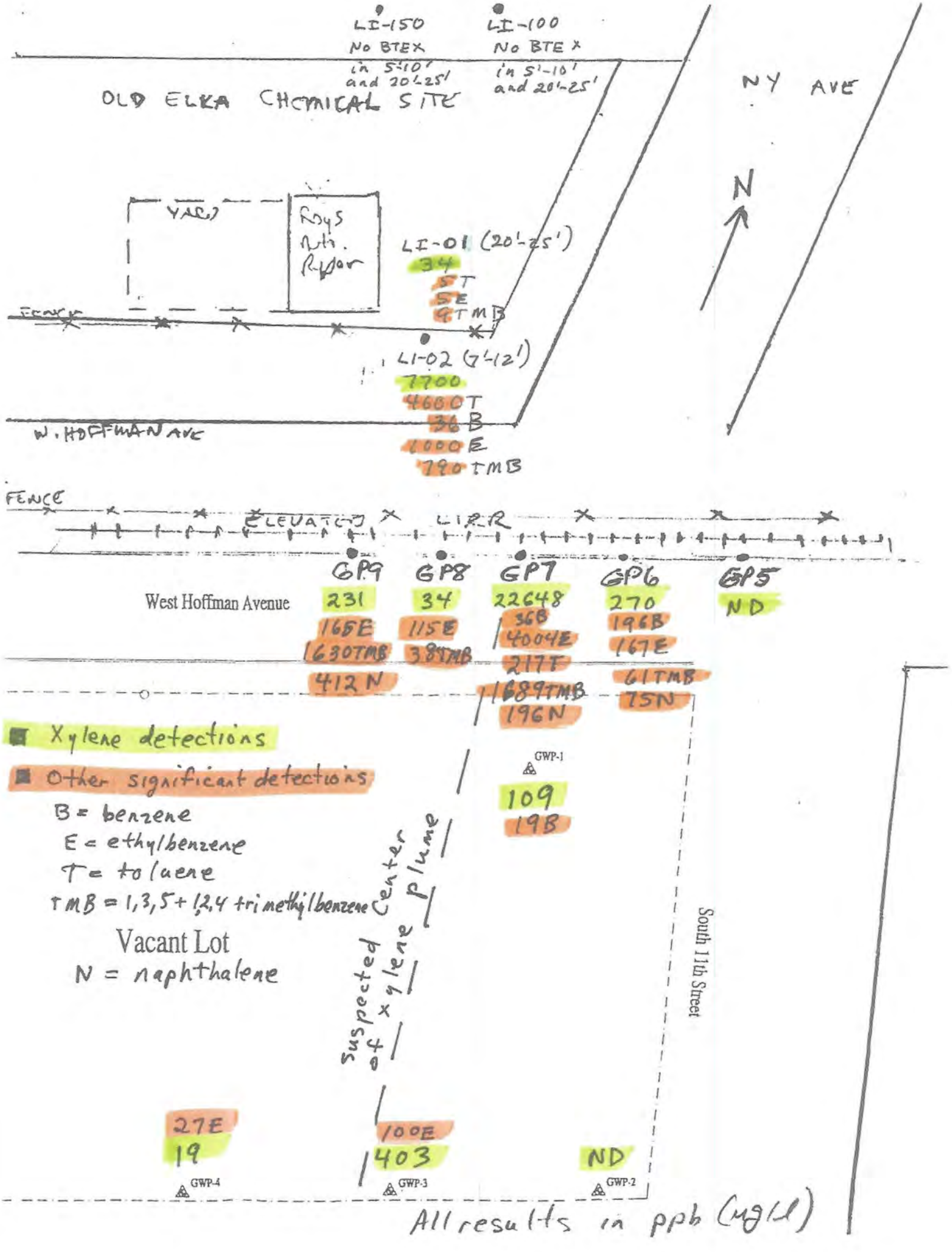
GRAPHIC SCALE

30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

Appendix B- USGS Quadrangle Map for Site Area


USGS
science for a changing world
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
AMITYVILLE QUADRANGLE
NEW YORK
7.5-MINUTE SERIES (TOPOGRAPHIC)
Bethpage
BETHPAGE STATE PARK
FARMINGDALE
Pinelawn Station
PINELAWN CEMETERY
REPUBLIC AIRPORT
Massapequa
South Farmingdale
OYSTER BAY
North Massapequa
North Amityville
BABYLON
North Lindenhurst
LINDENHURST
FORMER ELKA SITE
MASSAPEQUA PARK
Amityville
Copiague
AMITYVILLE
Seaford
Harbor Green
GREAT SOUTH BAY
BABYLON MARSH STATE TIDAL WETLANDS
Seamans Island
Goose Island
Townsend Island
Elder Island
Great Island
Gilgo Island
SOUTH OYSTER BAY
North Line Island
Middle Line Island
Bulkhead Drain
Amity Channel
GILGO STATE PARK
PETTIT'S ISLAND STATE TIDAL WETLANDS
Produced by the United States Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
AMITYVILLE, NY
1994
RECEIVED
AUG 31 2000

Appendix C- 2001 Impact Environmental Site Investigation Figures and Summary of Sampling Results


LI-150
No BTEX
in 5'-10'
and 20'-25'
LI-100
No BTEX
in 5'-10'
and 20'-25'
OLD ELKA CHEMICAL SITE
NY AVE
N
YARD
Roys Auto. Repair
LI-01 (20'-25')
34
ST
SE
TMB
FENCE
LI-02 (7'-12')
7700
4600 T
36 B
1000 E
790 TMB
W. HOFFMAN AVE
FENCE
ELEVATED RAILROAD
GP9
GP8
GP7
GP6
GP5
West Hoffman Avenue
231
165E
630TMB
412 N
34
115E
38TMB
22648
36B
4004E
217T
1689TMB
196N
270
19GB
167E
61TMB
75N
ND
Xylene detections
Other significant detections
B = benzene
E = ethylbenzene
T = toluene
TMB = 1,3,5+1,2,4 trimethylbenzene
Vacant Lot
N = naphthalene
GWP-1
109
19B
Center of plume
Suspected extent of xylene
South 11th Street
27E
19
GWP-4
100E
403
GWP-3
ND
GWP-2
All results in ppb (µg/L)


LI-150 @ 5-10' - 0 ppb
@ 20-25' - 0 ppb
LI-100 @ 5-10' - 0 ppb
@ 20-25' - 0 ppb
Former Elka Site
340 W. Hoffman Ave
Lindenhurst
LI-02 @ 7-12' - 7,700 ppb
LI-01 @ 20-25' - 34 ppb
All Concentratrions
are for Total Xylenes
AKRON
NEW YORK AV
LIRR
W. Hoffman Ave

Table 1: Detected Analytes
Lindenhurst, New York
00-312B

Sample ID	GWP-1[1]	GWP-2[1]	GWP-3[1]	GWP-4[1]	GWP-5[2]	GWP-6[2]	GWP-7[2]	GWP-8[2]	GWP-9[2]	NYSDEC Ambient Water Quality Standards & Guidance Values
Unit	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*	*ug/l*
Volatile Organic Analytes										
Benzene	19	2	1	ND	6	196	36	ND	ND	0.7
sec- Butylbenzene	ND	ND	ND	ND	ND	ND	ND	6	ND	5
Chloroethane	ND	ND	12	9	ND	27	ND	ND	ND	5
1,2 Dichloropropane	ND	ND	ND	ND	ND	ND	ND	13	ND	5
Ethylbenzene	ND	ND	100	27	ND	167	4004	115	165	5
Isopropylbenzene	ND	ND	ND	ND	ND	ND	66	23	66	5
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	9	75	5
Napthalene	ND	ND	ND	ND	8	75	196	ND	412	10
n-Propylbenzene	ND	ND	ND	ND	5	ND	161	93	204	5
Styrene	ND	ND	ND	ND	ND	ND	83	ND	ND	5
Toluene	ND	ND	ND	ND	ND	ND	214	ND	ND	5
1,1,2-Trichloroethane	ND	ND	26	ND	ND	ND	ND	ND	ND	5
1,3,5 Trimethylbenzene	ND	ND	ND	ND	ND	ND	327	ND	385	5
1,2,4 Trimethylbenzene	ND	ND	ND	ND	ND	61	1362	38	1245	5
Xylenes (Total)	107	ND	403	19	ND	270	22648	34	231	5
Semi-Volatile Organic Analytes										
Napthalene	19	ND	33	ND	NA	NA	NA	NA	NA	10

[1] Samples secured on December 12, 2000
[2] Samples secured on February 20, 2001.

Bold values represent concentrations above guidance values.
NA Not Available.
ND Not Detected.

Appendix D- NYSDEC Spill Report Form

NYSDEC SPILL REPORT FORM

DEC REGION: 1 **SPILL NUMBER:** 0650126

SPILL NAME: UNKNOWN **DEC LEAD:** KJGOMEZ

SPILL DATE: 04/26/2006 **SPILL TIME:** 9:00 am

CALL RECEIVED DATE: 04/26/2006 **RECEIVED TIME:** 9:00 am

SPILL LOCATION

PLACE: UNKNOWN **COUNTY:** Suffolk

STREET: 340 WEST HOFFMAN AVENUE **TOWN/CITY:** Babylon

COMMUNITY: LINDENHURST

CONTACT: **CONTACT PHONE:**

CONT. FACTOR: Other **SPILL REPORTED BY:** Health Department

FACILITY TYPE: Commercial/Industrial **WATERBODY:**

CALLER REMARKS:

IMPACT ENVIRONMENTAL PERFORMED A SITE ASSESSMENT IN 2001 FOR A VACANT LOT ACROSS THE STREET (339 WEST HOFFMAN). GROUNDWATER CONTAMINATION WAS DETECTED COMING ONTO THE PROPERTY FROM THE NORTH. CURRENTLY AT THE LOT ACROSS THE STREET TO THE NORTH (340 WEST HOFFMAN) IS AN AUTO REPAIR SHOP, BUT IN THE 70S IT WAS "ELKA CHEMICAL". THE SCHD PERFORMED ADDITIONAL SAMPLING AND FOUND GASOLINE CONSTITUENTS IN THE GROUNDWATER.

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
XYLENE (MIXED)	Hazardous Material	0 G	0 G	GW,

POTENTIAL SPILLERS

COMPANY	ADDRESS	CONTACT
UNK	NY	

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure

DEC REMARKS:

4/28/06 FILE ASSIGNED

PIN H1173 **T & A** **COST CENTER**

CLASS: B3 **CLOSE DATE:** **MEETS STANDARDS:** False

Created On: 04/26/2006

Date Printed: 9/6/2013 Last Updated: 02/29/2012

Appendix E- SCDHS 2011 Letter Report, Figures, and Sampling Results

COUNTY OF SUFFOLK

STEVE LEVY
SUFFOLK COUNTY EXECUTIVE

COPY

DEPARTMENT OF HEALTH SERVICES

JAMES L. TOMARKEN, MD
MSW, MPH, MBA, FRCPC, FACP
COMMISSIONER

September 13, 2011

RECEIVED
SEP 29 2011
REG 1 - OIL SPILLS

Walter Parish, P.E.
Regional Hazardous Waste Engineer
New York State Department of Environmental Conservation
Building 40 - SUNY Stony Brook
Stony Brook, NY 11790-2356

Re: Groundwater Investigation within the vicinity of Elka Chemical, located at West Hoffman Ave. and 11th Street, Lindenhurst, NY

Dear Mr. Parish:

At your request, staff within the Suffolk County Department of Health Services (SCDHS) Division of Environmental Quality compiled a chronology of our investigative efforts with respect to the referenced site.

Due to the extent of groundwater contamination discovered in several monitoring wells that were recently installed in the vicinity of this property, the SCDHS is referring this matter to your office for consideration for inclusion into the Superfund Program. The contaminants of concern include a variety of volatile organic compounds (VOCs) including Xylene and Trimethylbenzenes. In addition to impacts to our water resources, I would like to mention that we are concerned that developed properties in the area could potentially be impacted by soil vapor intrusion emanating from this groundwater contamination.

Enclosed for your use is a copy of the chronology of the work performed at the Elka Chemical site, together with our technical report. Should you require any additional information or have any questions with respect to this issue, please feel to contact Ron Paulsen, within the department's Office of Water Resources at (631) 852-5774.

Sincerely,

Walter Dawydiak, P.E., J.D., Acting Director
Division of Environmental Quality

WD.kn

Public Health
Prevent. Promote. Protect.

• OFFICE OF THE ACTING DIRECTOR •
DIVISION OF ENVIRONMENTAL QUALITY
360 YAPHANK AVENUE – YAPHANK, NY 11980
☎ 631.852.5803/FAX: 631.852.5825

cc: James L. Tomarken, M.D., MSW, MPH, MBA, FRCPC, FACP, Commissioner - SCDHS
Leonard Marchese, MBA, CPA - Director of Management / Research - SCDHS
Charlotte Bethoney, NYS Department of Health
Cathleen McBride, NYS Department of Health
Karen Gomaz, P.E., NYS Department of Environmental Conservation
Brian Culhane, Commissioner, SC Department of Environment and Energy
Amy Juchatz, MPH - Toxicologist - SC Department of Environment and Energy
Ronald Paulsen - Associate Hydrogeologist, Office of Water Resources - SCDHS
Andrew Rapiejko - Associate Hydrogeologist, Office of Water Resources - SCDHS
Douglas Feldman, P.E - Chief, Office of Water Resources - SCDHS
James Meyers, P.E. - Chief, Office of Pollution Control - SCDHS
Geralynn Rosser, Hydrogeologist, Office of Pollution Control - SCDHS

Chronology of Events
For Elka Chemical, W. Hoffman Ave. and S. 11th Street, Lindenhurst

July 2001 - A consultant performed work for a property assessment. Xylene was found in several temporary wells, the highest concentration was 22,600 ppb . The wells appear to be about 200' downgradient of the old Elka chemical site (now Roy's Auto Repair) at 340 W. Hoffman Ave. Elka Chemical was a site of large scale chemical storage about 20 years ago. Hundreds of solvent drums and a xylene tank were stored on the property. Groundwater flow appears to be south, but may be south-southeast. J. Gremli and E. Joungblood visited the site, took some measurements and sketched the area. The groundwater flow direction would have to be south-southeast for Elka to be in line with the impacted wells.

November 2001 – Groundwater samples were taken from a temporary well located on West Hoffman Avenue in front of the old Elka site. Samples were retrieved from the water table and 20 feet below the water table. Sample results revealed 7700 ppb and 34 ppb of total xylene respectively. Additional sampling upgradient of the site is scheduled.

April 2002 – Additional downgradient samples were secured and contained elevated volatile organic compounds (VOCs) including xylene.

July 2002 – The County installed 2 monitoring wells on the north side of Akron St. and 100' west of New York Ave. (upgradient of the old Elka site). Samples were collected from the water table (5'-10' below ground surface (bgs)) and 20'-25' bgs. The highest results were from the water table sample and revealed tetrachloroethene at 140 ppb and trichloroethene at 100 ppb. No xylene was present in any of the samples. It appears that the old Elka site is the source of the xylene plume.

December 2006 – There were no obvious discharges seen during an inspection of upgradient buildings. The state has a spill number for the old Elka site, #06-50120. W. Parish has informed Karen Yager, the PM, of the situation.

November 2010 – The County's Office of Water Resources (OWR) confirmed there are no public supply wells downgradient, they will be looking into private wells. They also installed and sampled groundwater monitoring wells downgradient of the site. The results revealed elevated levels of xylene and other VOCs.

February 2011 – OWR sent out private well notices, there has been no positive responses and 3 no responses remain.

June 30, 2011

Suffolk County Department of Health - Office of Water Resources Groundwater Investigative Report (Lindenhurst, N.Y.)

Monitoring Well Installation and Sampling Techniques

Suffolk County Department of Health Services (SCDHS) staff installed and sampled twelve profile monitoring wells in accordance with established SCDHS protocols. The one-inch diameter PVC monitoring wells with five foot slot 10 screens were installed using a GeoProbe (Direct Push Method) at locations down gradient of a possible source area (Elka Chemical) (Figure 1). Groundwater samples were collected from the profile wells at ten foot intervals through the water column, starting at the deepest depth and ending at the top of the water table. Tables 2-1, 2-2, 2-3 show the sample depth intervals of each monitoring well installed. Each sampling event was performed in accordance with SCDHS protocols and included purging the well a minimum of three well casing volumes and using low flow sampling techniques. Additionally, field parameters including pH, conductivity, temperature and dissolved oxygen were monitored to assure that ambient water was being collected. Sample aliquots were collected for Volatile Organic Compounds (VOCs), Standard Inorganics and Dissolved Metals at each profile well interval.

Laboratory Analysis

Water analyses for this study were conducted by the SCDHS Public Environmental Health Laboratory, which is certified by the New York State Department of Health's Environmental Laboratory Approval Program and the U.S. Environmental Protection Agency's National Environmental Laboratory Approval Program. Quality control measures are detailed in the laboratory's Quality Assurance Program Plan (QAPP). Table 1 below provides a summary of analytical methods that were used, and Appendix A contains laboratory analyses data sheets showing all possible analytes by method.

Analytical Methods Utilized for Groundwater Samples

Analysis	Method	Analysis	Method
Volatile Organic Compounds	EPA 524.2	Standard Inorganics	EPA 300.0
Metals	EPA 200.8		

Table 1 Analytical methods

Results and Findings

Water quality results of samples collected from the 12 profile monitoring wells are provided in Table 2-1 through 2-3. The contaminates of concern (COC) include Xylene(s), Trimethylbenzenes, Isopropylbenzene and N-propylbenzene. The usually high concentration of Xylene(s) is notable and consistent with the contamination found previously in the suspected upgradient source area. High concentrations of Xylene(s) contaminant were found in monitoring wells EC-3 (874 ppb) and EC-6 (2500 ppb) at or near the top of the water. A maximum concentration of 4,049 ppb (total VOC) was detected in monitoring well EC-6 at 25-30 foot interval below grade (Figure 3). Additional investigation will be required in order to fully delineate the extent of the groundwater contamination. Impacts to soil vapor are of concern is this area due to the high concentration of COC detected in the shallow groundwater and a depth to water of less than 10 feet.

Figure 1: Locations of SCDHS Monitoring Wells

Figure 2: Shows SCDHS Monitoring Wells with the Highest Total Xylene Contamination in Red and the Associated Sample Screen Interval (fbg)

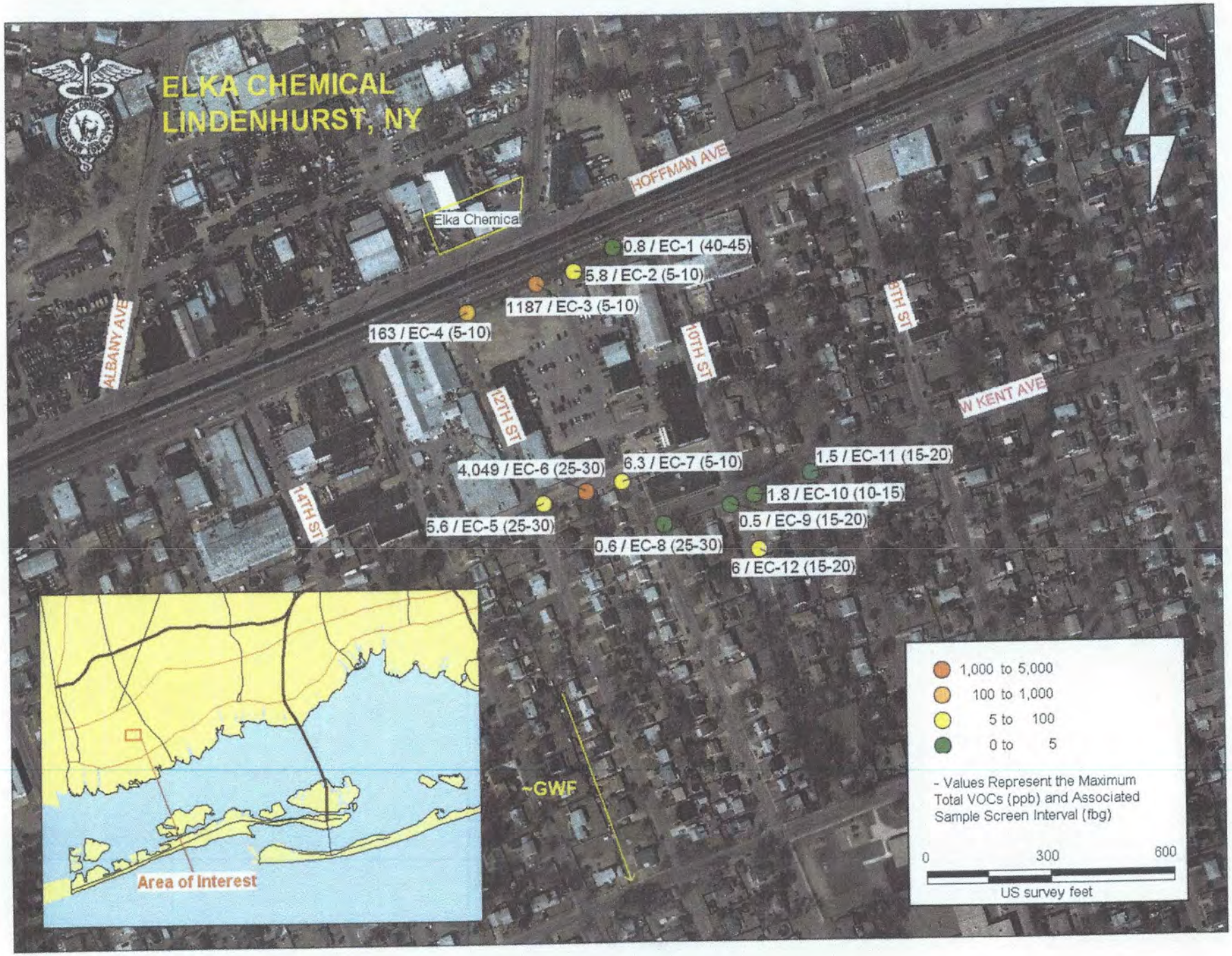


Figure 3: Shows the Maximum Total VOC Concentration (ppb) and Associated Sample Screen Interval (feet below grade)

Table 2-1: Water Quality Analysis Results

Well ID	Screen Interval	Depth to Water (feet)	Dissolved Oxygen (mg/L)	Temperature C	pH	Conductivity (umho)	Iron (mg/L)	Manganese	Arsenic	Copper	Aluminum	Chromium	1,3-Dichlorobenzene (m)	1,4-Dichlorobenzene (p)	Benzene	Toluene	Chlorobenzene	Total Xylene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Vinyl chloride	p-Diethylbenzene	1,2,4,5-Tetramethylbenzene	Isopropylbenzene	n-Propylbenzene	tert-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Butylbenzene	Ethylbenzene	Chloroethane
EC-1	10-15	7.67	0.07	21.7	5.78	504	3.61	817	<1	<1	<5	<1																			
	20-25	7.67	0.16	17.8	5.77	232	2.92	982	<1	1	42	3																			
	30-35	7.67	0.18	16	5.76	247	1.4	118	<1	1	26	2																			
	40-45	7.67	2.89	15.3	5.71	202	1.17	269	<1	2	129	6																			
	50-55	7.67	2.38	15.2	5.72	219	0.44	844	<1	1	29	2																			
EC-2	5-10	7.61	0.39	22.9	5.79	393	2.12	966	<1	<1	<5	<1	0.7	0.8																	
	15-20	7.61	0.11	19.7	5.76	263	3.42	568	<1	<1	7	<1																			
	25-30	7.61	0.12	16.9	5.7	284	2.45	1410	<1	<1	5	<1																			
	35-40	7.61	1.79	15.5	5.57	295	1.18	179	<1	1	36	2																			
	45-50	7.61	2.02	15.5	5.58	235	2.08	691	<1	2	38	2																			
EC-3	5-10	7	0.91	23.2	5.63	487	2.37	274	1	<1	<5	2			15	4.1	0.6	874	41	18		7.4	19	49	108	0.8	7		3.5	23	1
	15-20	7	0.19	20.1	5.62	308	3	103	<1	<1	11	1						2.9							0.6						
	25-30	7	0.3	17.2	5.58	268	0.18	15	<1	<1	12	1						0.7													
	35-40	7	0.69	16	5.59	255	0.3	62	<1	<1	18	<1																			
	45-50	7	0.87	15.9	5.48	230	0.16	270	<1	<1	<5	<1																			
EC-4	5-10	8.2	1.54	22.6	5.63	1033	4.37	383	1	<1	13	3							1.2	4.2		13	18	41	64	2.6	6.5		1.8	11	
	15-20	8.2	0.09	18.8	5.57	314	2.14	65	<1	<1	12	<1																			
	25-30	8.2	0.81	16.2	5.54	293	0.81	32	<1	<1	<5	<1																			
	35-40	8.2	1.3	15.4	5.5	277	0.68	83	<1	<1	6	<1																			
	45-50	8.2	1.87	15.3	5.5	294	0.58	156	<1	<1	9	<1																			
EC-5	15-20	9.5	0.09	18.9	5.66	690	0.73	1260	<1	2	<5	1										1.3									
	25-30	9.5	0.26	16.6	5.59	320	0.17	35	<1	<1	<5	<1																			
	35-40	9.5	0.56	15.7	5.54	291	0.84	112	<1	<1	<5	<1																			
	45-50	9.5	0.85	15.5	5.52	315	0.36	201	<1	1	10	1																			

Table 2-2: Water Quality Analysis Results (Continued)

Well ID	Screen Interval	Depth to Water (feet)	Dissolved Oxygen (mg/L)	Temperature C	pH	Conductivity (umho)	Iron (mg/L)	Manganese	Arsenic	Copper	Aluminum	Chromium	1,3-Dichlorobenzene (m)	1,4-Dichlorobenzene (p)	Benzene	Toluene	Chlorobenzene	Total Xylene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Vinyl chloride	p-Diethylbenzene	1,2,4,5-Tetramethylbenzene	Isopropylbenzene	n-Propylbenzene	tert-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Butylbenzene	Ethylbenzene
EC-6	5-10	7.9	0.98	20.9	5.89	870	1.18	719	<1	<1	<5	2					0.5	34	14	75		5.3	11	28	53	0.5	2.5		1.8	8.7
	15-20	7.9	0.08	18.3	5.82	491	0.79	702	<1	<1	<5	2					0.7	511	199	1300			29	105	185	1.4	8.3	1		21
	25-30	7.9	0.09	16.3	5.76	420	0.46	1460	<1	<1	<5	1				5		2510	93	508	10		15	48	94	0.8	4.8	1.7		715
	35-40	7.9	1.22	15.7	5.74	266	<0.1	18	<1	<1	6	<1																		
	45-50	7.9	2.78	15.5	5.7	263	0.17	320	<1	<1	7	<1																		
EC-7	5-10	7.65	3.63	23.7	6.11	571	1.77	473	<1	<1	66	1				0.5					0.7	4.5								
	15-20	7.65	0.07	20.8	5.81	545	1.66	204	<1	<1	<5	<1																		
	25-30	7.65	0.09	17.6	5.73	298	5.36	1070	1	<1	5	2			1.7						0.6	1.8					0.7			
	35-40	7.65	0.3	16.3	5.88	258	0.68	53	<1	<1	21	1																		
	45-50	7.65	2.28	16.1	5.86	235	<0.1	712	<1	<1	6	<1				0.6														
EC-8	5-10	5.6	0.05	19.9	6.3	649	4.57	988	<1	<1	257	2																		
	15-20	5.6	0.09	19.2	6	316	3	513	<1	<1	66	2																		
	25-30	5.6	0.11	17.4	5.8	274	0.13	78	<1	<1	33	1																		
	35-40	5.6	0.1	16	6.1	297	<0.1	781	<1	<1	19	<1																		
	45-50	5.6	0.14	15.7			0.11	1320	<1	<1	9	<1																		
EC-9	5-10	4.65	0.11	18.6	7.04	319	2.81	1040	<1	<1	<5	<1																		
	15-20	4.65	0.08	17	6.57	297	0.74	1130	<1	<1	17	2			0.5															
	25-30	4.65	0.1	15.9	6.12	264	<0.1	1630	<1	<1	7	1																		
	35-40	4.65	0.17	15.4	6.25	256	<0.1	2280	<1	<1	7	<1																		
	45-50	4.65	0.12	15.2	6.5	270	0.23	2220	<1	2	10	<1																		
EC-10	10-15	5	0.08	18.6	6.91	411	0.15	110	<1	<1	8	1																		
	20-25	5	0.38	17	6.92	269	1.2	96	<1	1	58	3																		
	30-35	5	0.23	15.6	6.7	282	<0.1	19	<1	<1	<5	<1																		
	40-45	5	1.46	15.2	7.07	267	0.1	30	<1	<1	12	<1																		
	50-55	5	0.7	15	6.8	308	<0.1	974	<1	<1	19	<1																		

Table 2-3: Water Quality Analysis Results (Continued)

Well ID	Screen Interval	Depth to Water (feet)	Dissolved Oxygen (mg/L)	Temperature C	pH	Conductivity (umho)	Iron (mg/L)	Manganese	Arsenic	Copper	Aluminum	Chromium	1,3-Dichlorobenzene (m)	1,4-Dichlorobenzene (p)	Benzene	Toluene	Chlorobenzene	Total Xylene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Vinyl chloride	p-Diethylbenzene	1,2,4,5-Tetramethylbenzene	Isopropylbenzene	n-Propylbenzene	tert-Butylbenzene	sec-Butylbenzene	p-Isopropyltoluene	n-Butylbenzene	Ethylbenzene	Chloroethane
EC-11	5-10	5.5	0.07	18.1	6.86	276	3.16	1110	<1	<1	13	2															1.4				
	15-20	5.5	0.1	18	6.89	440	2.98	296	<1	<1	5	1															0.5				
	25-30	5.5	0.56	16.2	6.87	299	<0.1	36	<1	<1	12	<1																			
	35-40	5.5	2.25	15.4	6.84	243	<0.1	8	<1	<1	16	<1																			
	45-50	5.5	4.41	15.3	6.88	232	<0.1	354	<1	3	35	<1																			
EC-12	5-10	5.14	0.11	17.3	6.93	560	4.11	292	<1	<1	131	4																			
	15-20	5.14	0.08	18	6.92	388	P	P	P	P	P	P																			
	25-30	5.14	0.15	16.8	6.93	234	<0.1	1770	<1	<1	<5	<1																			
	35-40	5.14	0.15	15.7	6.84	234	<0.1	1310	<1	<1	5	<1																			
	45-50	5.14	0.18	15.3	6.77	226	<0.1	1150	<1	<1	12	<1																			

Appendix F- EAR 2012 Figures and Sampling Results

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Site Map with Boring Locations

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 4

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Soil Analytical Results
Xylene Concentrations (ug/kg)
March 29, 2012
and January 19 - 24, 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 5

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Soil Analytical Results
VOC Concentrations (ug/kg)
March 29, 2012
and January 19 - 24, 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 6

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Xylene Concentrations (ug/L)
March 29, 2012
with January 19 - 24, 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
VOC Concentrations (ug/L)
March 29, 2012
and January 19 - 24, 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 8

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Soil Analytical Results
Adjusted VOC Concentrations (ug/kg)
March and January 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Adjusted VOC Concentrations (ug/L)
January and March 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 10

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Maximum Xylene Concentrations (ug/L)
December 2000 to March 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

0 90

SCALE IN FEET

Figure 11

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Maximum VOC Concentrations (ug/L)
Adjusted Values
December 2000 to March 2012

340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

0 50
SCALE IN FEET

Boring Location

B-4 Boring ID
<3 Concentration at water table
<3 Concentration at 5' below water table
<3 Concentration at 10' below water table

Figure 6

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Xylene Concentrations (ug/L)
January 19 - 24, 2012

Unknown
340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Figure 7

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results
Total VOC Concentrations (ug/L)
January 19 - 24, 2012

Unknown
340 West Hoffman Ave
Lindenhurst, NY
NYSDEC Spill #06-50126

Table 3

340 West Hoffman Ave
Lindenhurst, NY
Spill #06-50126

Groundwater Analytical Results (ug/L)
TestAmerica, Inc. EPA Method 8260

Location	B-1			B-2			B-3			B-4			B-5			NYSDEC TOGS111 ClassGA Standard	NYSDEC TOGS111 ClassGA Guidance
Depth Collected	5'-7'	10'-12'	15'-17'	6'-8'	11'-13'	16'-18'	5'-7'	10'-12'	15'-17'	5'-7'	10'-12'	15'-17'	5'-7'	10'-12'	15'-17'		
Category*	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below		
Date Collected	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012	1/19/2012		
1,1 Dichloroethane	<1	<1	<1	0.3 J	<1	<1	<1	<1	<1	1.7	<1	<1	14	<1	<1	5	n/a
1,1 Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
1,1,1 Trichloroethane	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	<1	<1	5	n/a
1,1,2 Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	n/a
1,1,2,2 Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
1,2 Dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.001	n/a
1,2 Dichlorobenzene	0.67 J	<1	<1	0.43 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	n/a
1,2 Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.6	n/a
1,2 Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	n/a
1,2,4 Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
1,3 Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	n/a
1,4 Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.26 J	<1	<1	3	n/a
2-Hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
4-Methyl-2-Pentanone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	n/a
Acetone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
Benzene	<1	0.51 J	<1	3.4	<1	<1	<1	2.7	0.14 J	0.79 J	3.6	0.18 J	<1	0.15 J	0.2 J	1	n/a
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
c 1,3 Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
Carbon Disulfide	<1	0.96 J	<1	1.2	1.1	0.88 J	<1	0.82 J	1.4	0.61 J	2.9	0.95 J	<1	0.92 J	1.6	n/a	60
Carbon Tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.3	<1	<1	5	n/a
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.5 J	<1	<1	7	n/a
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
cis-1,2-Dichloroethene	0.82 J	0.4 J	<1	0.36 J	<1	<1	0.51 J	0.73 J	<1	<1	0.77 J	<1	2.4	0.24 J	<1	5	n/a
Cyclohexane	7	110	1.9	240	170	95	<1	19	<1	13	18	<1	<1	60	19	n/a	n/a
Cyclohexane, methyl-	10	410	4.1	830	240	250	<1	11	0.74 J	<1	<1	<1	0.83 J	170	13	n/a	n/a
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Dibromochloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.04	n/a
Dichlorodifluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Ethylbenzene	0.48 J	12	<1	360	23	36	0.93 J	30	2.4	<1	<1	<1	<1	10	3.2	5	n/a
Freon 113	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Isopropylbenzene	3.9	430	3.7	32	6.7	6.4	<1	1.3	<1	<1	0.26 J	<1	<1	260	200	5	n/a
Methyl acetate	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	n/a	n/a
Methyl Ethyl Ketone	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
Methylene Chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
t 1,3 Dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
t butylmethylether	<1	3.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.2	<1	n/a	10
Tetrachloroethene	9	<1	0.22 J	0.33 J	<1	<1	3.1	0.74 J	1.3	0.41 J	1.2	0.39 J	1.3	<1	<1	5	n/a
Toluene	<1	0.38 J	<1	2.4	<1	0.21 J	<1	0.24 J	<1	<1	<1	<1	<1	0.19 J	<1	5	n/a
trans-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Trichloroethylene	5.2	<1	<1	<1	0.57 J	<1	0.74 J	0.65 J	<1	0.38 J	0.44 J	<1	2.9	<1	<1	5	n/a
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Vinyl Chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	n/a
Xylenes Total	0.98 J	3.3	<3	1,100	87	140	1.5 J	32	4.4	<3	<3	<3	<3	<3	<3	5**	n/a
Calculated Values																	
VOCs Total	39	971	9.92	2,570	528	528	6.78	99	10	17	27	1.52	27	504	237	n/a	n/a
BTEX Total	1.46 J	16	<6	1,466	110	176	2.43 J	65	6.94	0.79	3.6	0.18	<6	10	3.4	n/a	n/a

Indicates values that have exceeded the New York State Ambient Water Quality Standards and/or Guidance Values
n/a - analyzed chemicals with no established values
A "J" qualifier indicates a a laboratory estimated value, result is greater or equal to the MDL and less than the LOQ
* Categories (used on post maps); WT = concentration at water table; 5' below = concentration at 5' below water table; 10' below = concentration at 10' below water table
** Value applies to each isomer separately

Table 3

340 West Hoffman Ave
Lindenhurst, NY
Spill #06-50126

Groundwater Analytical Results (ug/L)
TestAmerica, Inc. EPA Method 8260

Location	B-6			B-7			B-8			B-9			B-10			B-11			NYSDEC TOGS111 ClassGA Standard	NYSDEC TOGS111 ClassGA Guidance
Depth Collected	7'-9'	12'-14'	17'-19'	5'-7'	10'-12'	15'-17'	6'-8'	11'-13'	16'-18'	7'-9'	12'-14'	17'-19'	7'-9'	12'-14'	17'-19'	7'-9'	12'-14'	17'-19'		
Category*	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below	WT	5' below	10' below		
Date Collected	1/19/2012	1/19/2012	1/19/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012		
1,1 Dichloroethane	<2	<5	<1	<1	<1	<1	0.17 J	<1	<1	<1	<1	<1	2.2	<1	<1	8.2	<1	<1	5	n/a
1,1 Dichloroethene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
1,1,1 Trichloroethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.7	<1	<1	8.8	<1	<1	5	n/a
1,1,2 Trichloroethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	n/a
1,1,2,2 Tetrachloroethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
1,2 Dibromoethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.001	n/a
1,2 Dichlorobenzene	2.6	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.33 J	<1	<1	0.24 J	<1	<1	3	n/a
1,2 Dichloroethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.6	n/a
1,2 Dichloropropane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	n/a
1,2,4 Trichlorobenzene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
1,3 Dichlorobenzene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.24 J	<1	<1	3	n/a
1,4 Dichlorobenzene	0.44 J	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.3	<1	<1	3	n/a
2-Hexanone	<10	<25	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
4-Methyl-2-Pentanone	<10	<25	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	n/a
Acetone	<10	<25	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
Benzene	4.9	<5	<1	<1	<1	<1	3.4	1.2	<1	13	0.57 J	<1	0.23 J	<1	<1	<1	<1	<1	1	n/a
Bromodichloromethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Bromoform	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Bromomethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
c 1,3 Dichloropropene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
Carbon Disulfide	0.82 J	<5	<1	<1	<1	<1	0.71 J	1.6	0.18 J	1.2	0.57 J	0.37 J	0.9 J	1.1	0.52 J	1.3	1.6	0.42 J	n/a	60
Carbon Tetrachloride	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Chlorobenzene	2.9	<5	<1	<1	<1	<1	<1	<1	<1	0.32 J	<1	<1	<1	<1	<1	4.9	0.26 J	<1	5	n/a
Chloroethane	22	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Chloroform	<2	<5	<1	<1	0.22 J	0.22 J	<1	<1	0.44 J	<1	<1	<1	0.2 J	<1	0.4 J	0.37 J	<1	<1	7	n/a
Chloromethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
cis-1,2-Dichloroethene	<2	190	2.5	1.3	0.27 J	<1	0.63 J	0.6 J	<1	<1	0.26 J	<1	1.4	<1	<1	5.7	0.97 J	<1	5	n/a
Cyclohexane	36	120	2.1	<1	<1	<1	0.65 J	0.48 J	<1	69	53	0.54 J	<1	<1	<1	0.9 J	16	<1	n/a	n/a
Cyclohexane, methyl-	34	120	1.3	<1	<1	<1	0.7 J	0.43 J	<1	230	460	4.4	<1	<1	<1	<1	12	<1	n/a	n/a
Dibromochloromethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	50
Dibromochloropropane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.04	n/a
Dichlorodifluoromethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Ethylbenzene	1,100	3,700	46	<1	<1	<1	<1	<1	<1	7.6	18	0.81 J	<1	<1	<1	<1	18	<1	5	n/a
Freon 113	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Isopropylbenzene	100	240	3.3	<1	<1	<1	3.7	<1	<1	58	19	0.24 J	19	36	0.25 J	14	57	0.39 J	5	n/a
Methyl acetate	<4	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	n/a	n/a
Methyl Ethyl Ketone	<10	<25	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	n/a	50
Methylene Chloride	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Styrene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
t 1,3 Dichloropropene	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	n/a
t butylmethylether	0.95 J	4.3 J	5.3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	n/a	10
Tetrachloroethene	<2	3.9 J	0.59 J	14	20	0.23 J	0.34 J	2.1	<1	<1	<1	2.7	1.5	<1	<1	2.8	0.47 J	2.6	5	n/a
Toluene	150	3,000	64	<1	<1	<1	<1	<1	<1	0.2 J	0.46 J	<1	<1	0.19 J	<1	<1	<1	<1	5	n/a
trans-1,2-Dichloroethene	1.6 J	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Trichloroethylene	<2	<5	0.42 J	2.7	0.54 J	<1	0.33 J	0.53 J	<1	<1	<1	0.46 J	1.3	0.3 J	<1	7.7	0.59 J	0.4 J	5	n/a
Trichlorofluoromethane	<2	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	n/a
Vinyl Chloride	<2	<5	<1	<1	<1	<1	0.14 J	0.13 J	<1	<1	0.17 J	<1	0.13 J	<1	<1	0.2 J	0.17 J	<1	2	n/a
Xylenes Total	360	18,000	200	<3	<3	<3	<3	<3	<3	350	48	2.8 J	<3	<3	<3	<3	6	<3	5**	n/a
Calculated Values																				
VOCs Total	1,816	25,378	326	18	21	0.45	11	7.07	0.62	729	600	12	29	38	1.17	57	113	3.81	n/a	n/a
BTEX Total	1,615	24,700	310	<6	<6	<6	3.4	1.2	<6	371	67	3.61 J	0.23	0.19	<6	<6	24	<6	n/a	n/a

Indicates values that have exceeded the New York State Ambient Water Quality Standards and/or Guidance Values
n/a - analyzed chemicals with no established values
A "J" qualifier indicates a a laboratory estimated value, result is greater or equal to the MDL and less than the LOQ
* Categories (used on post maps): WT = concentration at water table; 5' below = concentration at 5' below water table; 10' below = concentration at 10' below water table
** Value applies to each isomer separately

340 West Hoffman Ave
Lindenhurst, NY
Spill #06-50126

Soil Gas Analytical Results (ug/m3)
TestAmerica, Inc., Method TO-15

Location	SGP-1 (B-5)
Depth	4'-4.5'
Date Collected	1/25/2012
1,1 Dichloroethane	**250**
1,1 Dichloroethene	<3.2
1,1,1 Trichloroethane	**310**
1,1,2 Trichloroethane	<4.4
1,1,2,2 Tetrachloroethane	<5.5
1,2 Dibromoethane	<6.1
1,2 Dichlorobenzene	<4.8
1,2 Dichloroethane	<3.2
1,2 Dichloropropane	<3.7
1,2,4 Trichlorobenzene	<5.9
1,2,4 Trimethylbenzene	<3.9
1,3 Dichlorobenzene	<4.8
1,3,5 Trimethylbenzene	<3.9
1,4 Dichlorobenzene	<4.8
1,4-Dioxane	<7.2
2,2,4-Trimethylpentane	<9.3
4-Methyl-2-Pentanone	<8.2
Benzene	<2.6
Benzyl Chloride	<8.3
Bromodichloromethane	<5.4
Bromoform	<8.3
Bromomethane	<3.1
c 1,3 Dichloropropene	<3.6
Carbon Tetrachloride	<2.5
Chlorobenzene	<3.7
Chloroethane	<2.1
Chloroform	**7.3**
Chloromethane	<4.1
cis-1,2-Dichloroethene	**5.8**
Cyclohexane	<6.9
Dibromochloromethane	<6.8
Dichlorodifluoromethane	<4
Ethanol	**37**
Ethylbenzene	<3.5
Freon 113	<6.1
Freon 114	<5.6
Hexachlorobutadiene	<8.5
Hexane	<7
m + p Xylene	**3.5**
Methyl Ethyl Ketone	<9.4
Methylene Chloride	<6.9
o-Xylene	<3.5
Styrene	<3.4
t 1,3 Dichloropropene	<3.6
t butylmethylether	<5.8
Tert-Butyl Alcohol	<9.7
Tetrachloroethene	**180**
Toluene	<3
Total BTEX	**3.5**
trans-1,2-Dichloroethene	<3.2
Trichloroethlyene	**42**
Trichlorofluoromethane	<4.5
Vinyl Chloride	<2

Calculated Values	
Total Xylenes	**3.5**
Total VOCs	**835.6**

Table 2

340 West Hoffman Ave
Lindenhurst, NY
Spill #06-50126

Soil Analytical Results (ug/Kg)
TestAmerica, Inc. EPA Method 8260

Location	B-2	B-5	B-9	CP51 Table 1 375_6 unrestricted
Depth	10-12	10-12	10-12	
Date_Collected	1/19/2012	1/20/2012	1/24/2012	
% Solids	88.8	90.1	84.8	
1,1 Dichloroethane	<97	<1	<1.1	270
1,1 Dichloroethene	<97	<1	<1.1	330
1,1,1 Trichloroethane	<97	<1	<1.1	680
1,1,2 Trichloroethane	<97	<1	<1.1	n/a
1,1,2,2 Tetrachloroethane	<97	<1	<1.1	n/a
1,2 Dibromoethane	<97	<1	<1.1	n/a
1,2 Dichlorobenzene	<97	<1	<1.1	1,100
1,2 Dichloroethane	<97	<1	<1.1	20
1,2 Dichloropropane	<97	<1	<1.1	n/a
1,2,4 Trichlorobenzene	<97	<1	<1.1	n/a
1,3 Dichlorobenzene	<97	<1	<1.1	2,400
1,4 Dichlorobenzene	<97	<1	<1.1	1,800
2-Hexanone	<970	<10	<11	n/a
4-Methyl-2-Pentanone	<970	<10	<11	n/a
Acetone	<970	180	43	50
Benzene	<97	<1	<1.1	60
Bromodichloromethane	<97	<1	<1.1	n/a
Bromoform	<97	<1	<1.1	n/a
Bromomethane	<97	<1	<1.1	n/a
c 1,3 Dichloropropene	<97	<1	<1.1	n/a
Carbon Disulfide	<97	4.5	<1.1	n/a
Carbon Tetrachloride	<97	<1	<1.1	760
Chlorobenzene	<97	<1	<1.1	1,100
Chloroethane	<97	<1	<1.1	n/a
Chloroform	<97	<1	<1.1	370
Chloromethane	<97	<1	<1.1	n/a
cis-1,2-Dichloroethene	<97	<1	<1.1	250
Cyclohexane	<97	<1	<1.1	n/a
Cyclohexane, methyl-	23,000	0.89 J	0.39 J	n/a
Dibromochloromethane	<97	<1	<1.1	n/a
Dibromochloropropane	<97	<1	<1.1	n/a
Dichlorodifluoromethane	<97	<1	<1.1	n/a
Ethylbenzene	210	<1	0.88 J	1,000
Freon 113	<97	<1	<1.1	n/a
Isopropylbenzene	88 J	2.6	<1.1	n/a
Methyl acetate	<190	<1	<1.1	n/a
Methyl Ethyl Ketone	<970	5.7 J	4.4 J	120
Methylene Chloride	<97	11	3	50
Styrene	<97	<1	<1.1	n/a
t 1,3 Dichloropropene	<97	<1	<1.1	n/a
t butylmethylether	<97	<1	<1.1	930
Tetrachloroethene	<97	<1	<1.1	1,300
Toluene	15 J	<1	<1.1	700
trans-1,2-Dichloroethene	<97	<1	<1.1	190
Trichloroethlyene	<97	<1	<1.1	470
Trichlorofluoromethane	<97	<1	<1.1	n/a
Vinyl Chloride	<97	<1	<1.1	20
Xylenes Total	850	<3.1	5.2	260
Calculated Values				
VOCs Total	24,163	205	57	n/a
BTEX Total	1,075	<6.1	6.08	n/a

Indicates values that have exceeded the CP51 Table unrestricted guideline values.
n/a - analyzed chemicals with no established values
A "J" qualifier indicates a a laboratory estimated value, result is greater or equal to the MDL and less than the LOQ

Appendix G- 2015 HRP Site Characterization Report

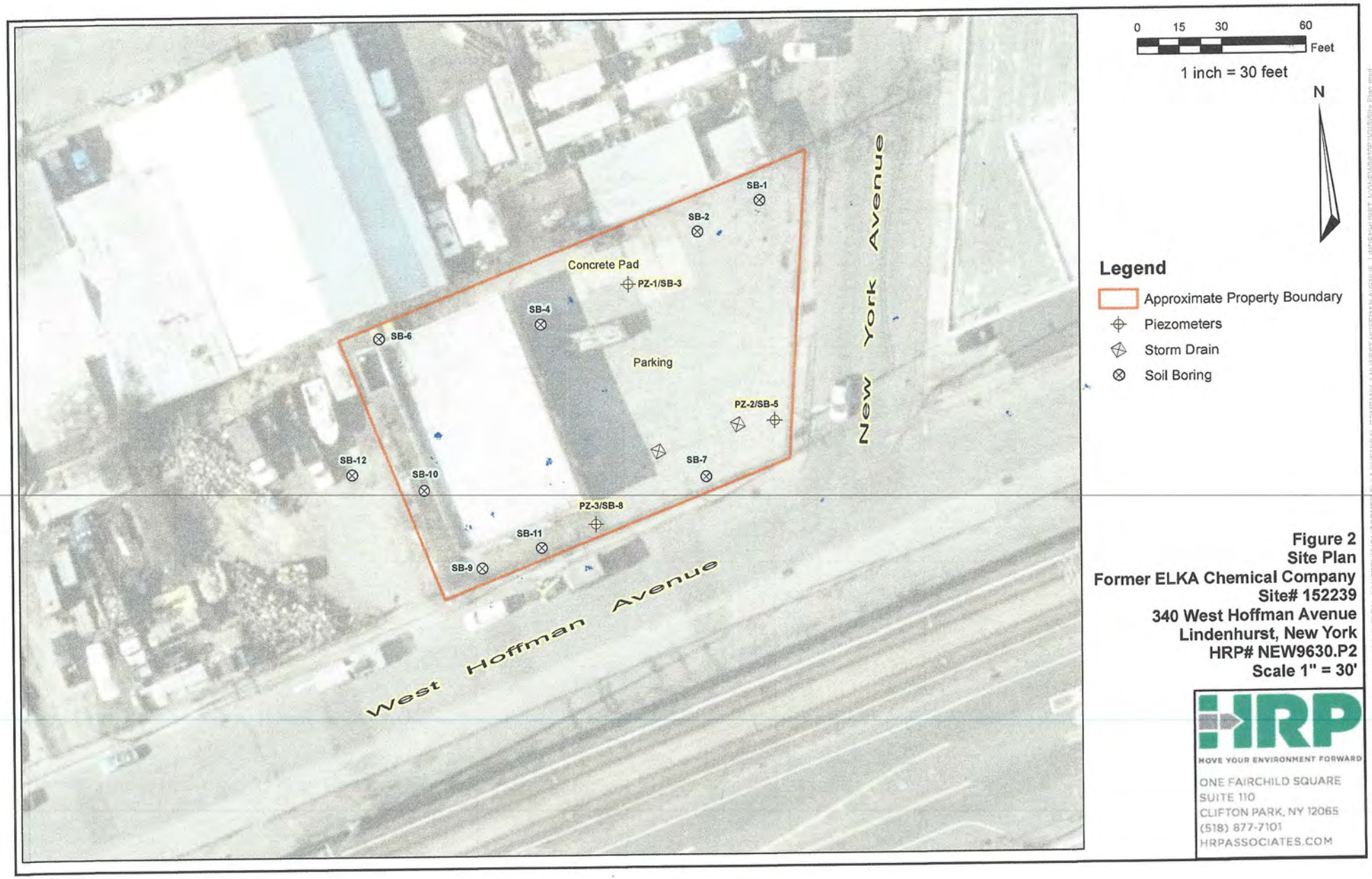


Figure 2
Site Plan
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 30'

HRP
MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

Path: S:\Data\NEW\EN - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY, 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\Site Plan.mxd

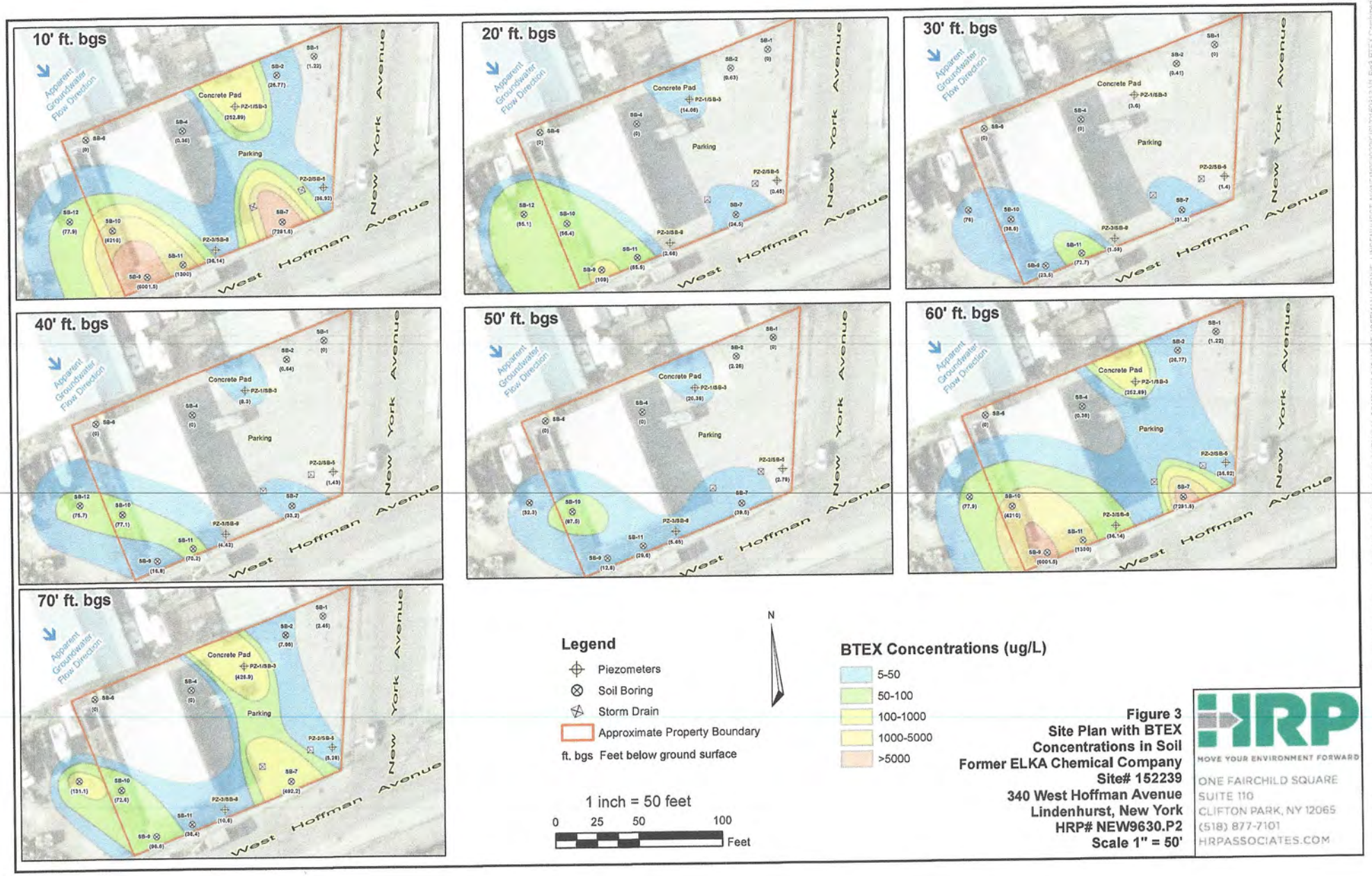


Figure 3
Site Plan with BTEX Concentrations in Soil
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 50'

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Path: G:\Data\NEW\NEW9630 - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\2016\13\Vit\Fig3 BTEX Combined.mxd

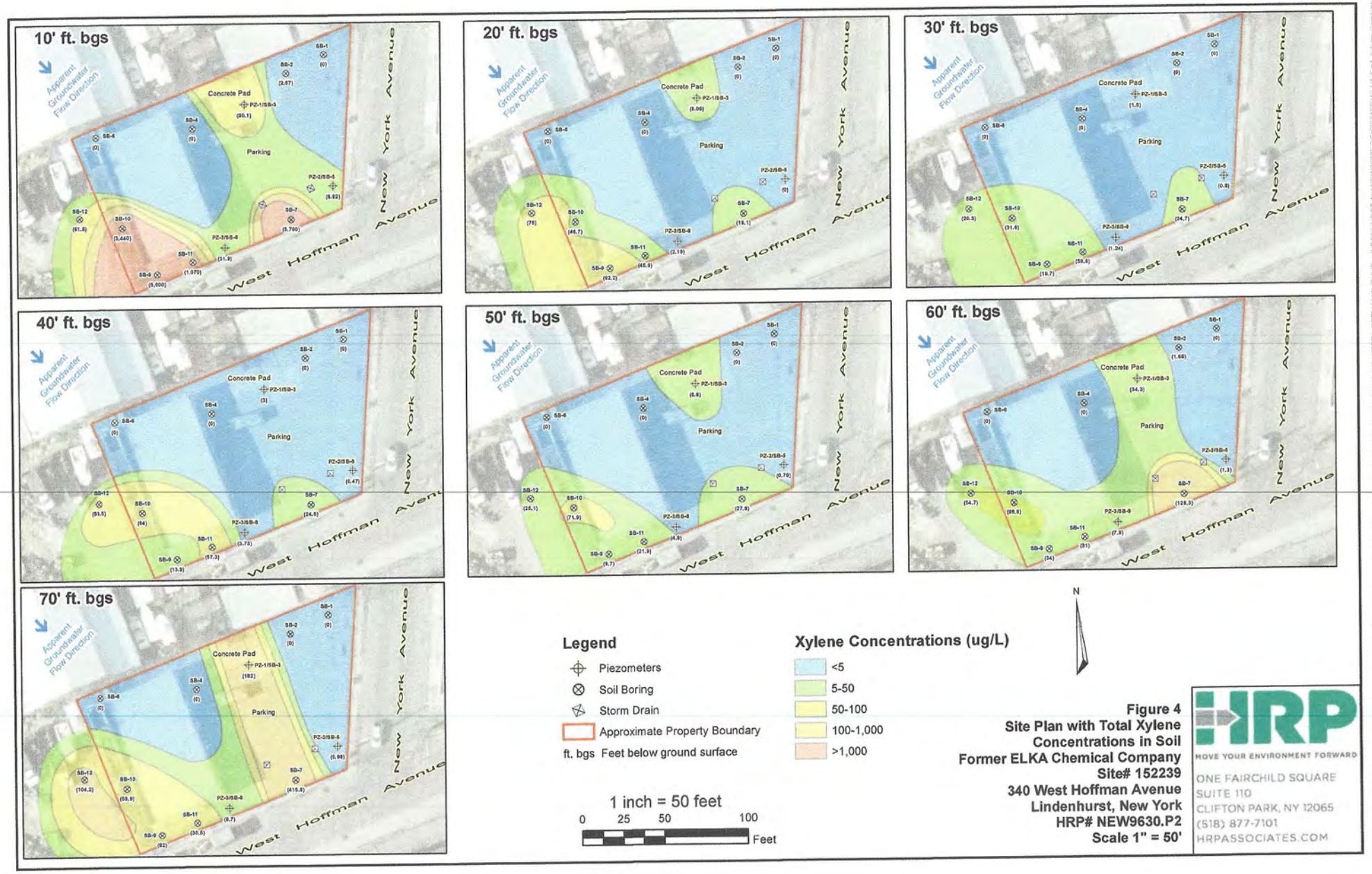

Figure 4
Site Plan with Total Xylene Concentrations in Soil
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 50'

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Path: S:\Data\NEW\NEW9630 - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\GIS\ESRI\7.x\VI-Fig4-Xylene Combined.mxd

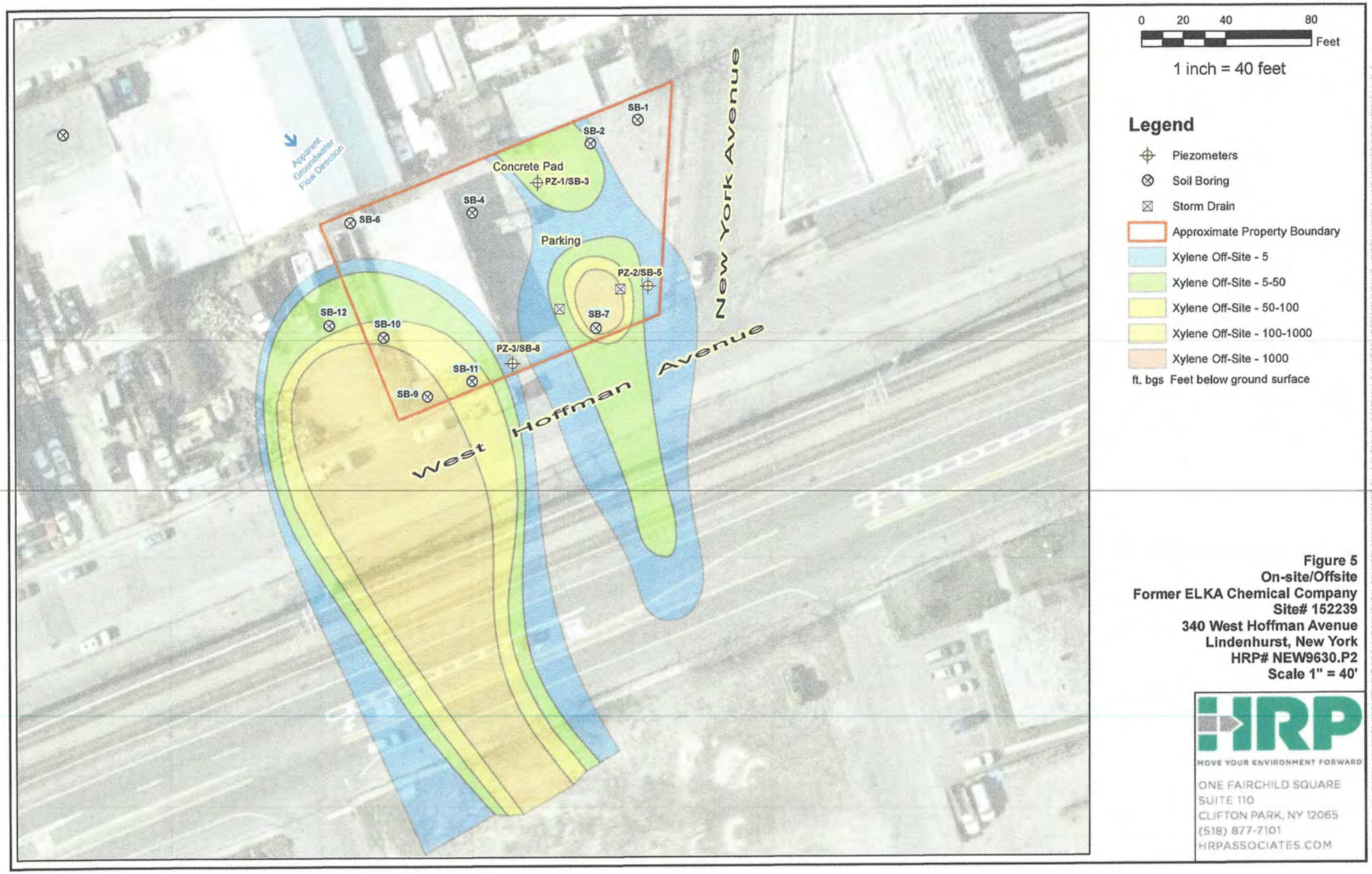

Figure 5
On-site/Offsite
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 40'

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Path: S:\Data\NEW\NEW9630 - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY, 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\2015\0313-V1-Fig5.mxd

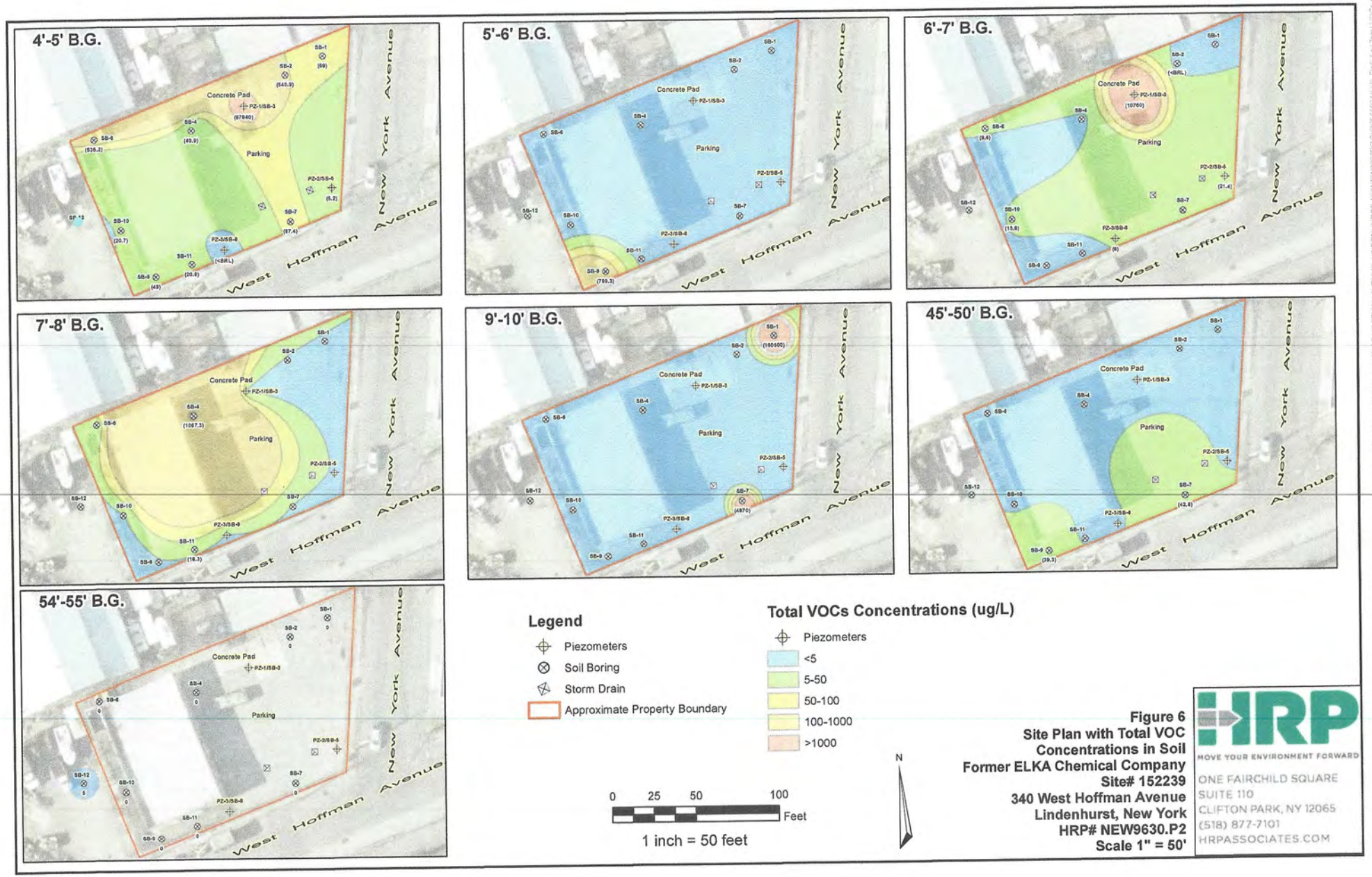

Figure 6
Site Plan with Total VOC Concentrations in Soil
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 50'

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(518) 877-7101
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Path: S:\Data\NNEW\ - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY, 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\GIS\MXD\VI-Fig6-Soil Total VOCs.mxd

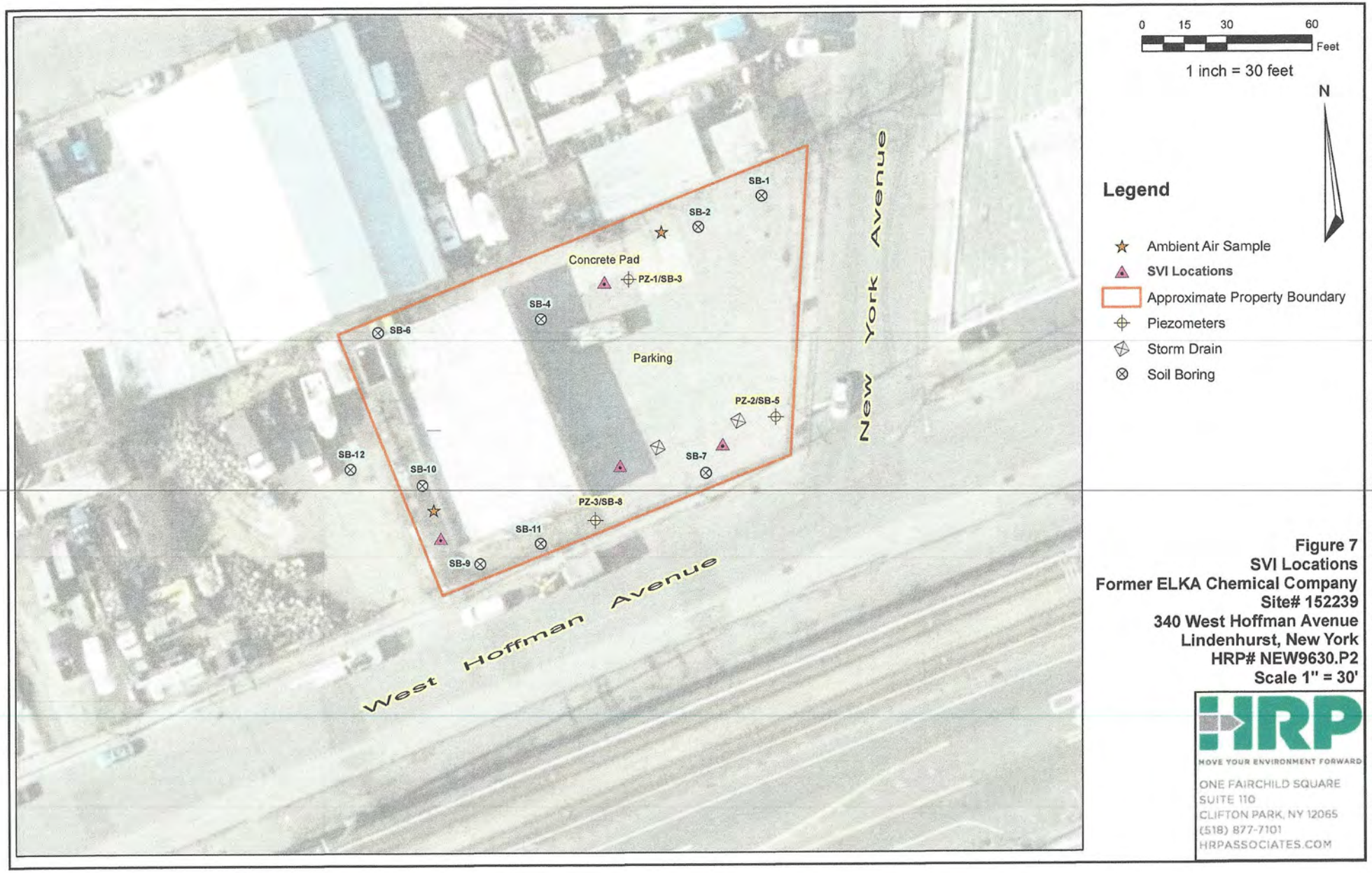

Figure 7
SVI Locations
Former ELKA Chemical Company
Site# 152239
340 West Hoffman Avenue
Lindenhurst, New York
HRP# NEW9630.P2
Scale 1" = 30'

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Path: S:\Data\NEW9630 - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\FORMER ELKA CHEMICAL COMPANY, 340 WEST HOFFMAN AVENUE, LINDENHURST, NY\NEW9630P2\GIS\20150119-SVI Locations.mxd

Table 1
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
March 31 - April 15, 2014 and February 17, 2015
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Commercial, and Industrial
Soil Samples - Analyzed for Volatile Organic Compounds (VOCs)
(Only detected constituents are listed)

Soil Sample ID		SB-1		SB-2		SB-3		SB-4		SB-5		SB-6		SB-7			375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
Sample Depth (ft. BGS)		4-5	9-10	4-5	6-7	4-5	6-7	4-5	7-8	4-5	6-7	4-5	6-7	4-5	9-10	45-50				
Date Collected		3/31/2014		3/31/2014		4/1/2014		4/2/2014		4/2/2014	4/3/2014	4/8/2014		4/10/2014	4/9/2014	4/10/2014				
SOIL-8260B (µg/kg)	CAS #																			
1,2,4-Trimethylbenzene	95-63-6	36.9 J	40000 J	9.7 J	NA	9500 J	6700 J	16.5 J	570 J	2.6 J	1.8 J	6.5 J	NA	3.1 J	580 J	2.1 J	3,600	52,000	190,000	380,000
1,3,5-Trimethylbenzene	108-67-8	14.2 J	31600 J	1.7 J	NA	10100 J	1100 J	5.6 J	210 J	NA	1.3 J	4.2 J	NA	1.5 J	330 J	NA	8,400	52,000	190,000	380,000
1H-Indene, 2,3-dihydro-1,1,5-trime	040050-41-7	NA	NA	21.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
1-Methylnaphthalene	90-12-0	NA	NA	42.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
2-Butanone (MEK)	78-93-3	<26.4 U	(<3100) U	25 J	<28.4 U	(<2600) U	(<2900) U	<26.9 U	<27.5 U	<28.5 U	<27 U	<27.1 U	<28.3 U	<26.2 U	(<1400) U	<31.5 U	120	100,000	500,000	1,000,000
2-Methylnaphthalene	91-57-6	NA	NA	27.3 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
2-Propenal, 3-(4-methylphenyl)-	001504-75-2	NA	NA	16.3 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
Acetone	67-64-1	<26.4 U	(<3100) U	250	<28.4 U	(<2600) U	(<2900) U	<26.9 U	19.8 J	<28.5 U	<27 U	<27.1 U	<28.3 U	21 J	(<1400) U	<31.5 U	50	100,000	500,000	1,000,000
Benzene, 1-methyl-2-(2-propenyl)-	001587-04-8	NA	NA	15.4 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
Benzene, 4-(2-butenyl)-1,2-dimethyl-	54340-86-2	NA	NA	14.3 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
Carbon disulfide	75-15-0	<5.3 U	<620 U	1.8 J	<5.7 U	<520 U	<570 U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	<5.4 U	<5.7 U	<5.6 U	<280 U	<6.3 U	NE	NE	NE	NE
Ethylbenzene	100-41-4	1.7 J	<620 U	<5.4 U	<5.7 U	12700	370 J	3.4 J	21.8	1.3 J	<5.4 U	25.1	<5.7 U	3.2 J	<280 U	2.1 J	1,000	41,000	390,000	780,000
Isopropylbenzene	98-82-8	<5.3 U	13700	<5.4 U	<5.7 U	2400	140 J	1.9 J	39.6	<5.7 U	<5.4 U	2.4 J	<5.7 U	<5.6 U	120 J	<6.3 U	NE	NE	NE	NE
m/p-Xylenes	179601-23-1	<10.6 U	<1200 U	<10.9 U	<11.4 U	5500	210 J	1.3 J	7.5 J	<11.4 U	1.4 J	100	<11.3 U	17.8	290 J	9.8 J	NE	NE	NE	NE
Methyl isobutyl ketone (MIBK)	108-10-1	4.6 J	<3100 U	10.7 J	<28.4 U	<2600 U	<2900 U	<26.9 U	<27.5 U	<28.5 U	9.3 J	8 J	8.1 J	8.1 J	<1400 U	12.4 J	NE	NE	NE	NE
Methylcyclohexane	108-87-2	<5.3 U	9900	<5.4 U	<5.7 U	3700	340 J	2.3 J	94.8	<5.7 U	<5.4 U	7	<5.7 U	<5.6 U	2500	<6.3 U	NE	NE	NE	NE
Methylene chloride (Dichloromethane)	75-09-2	<5.3 U	(<620) U	<5.4 U	<5.7 U	(<520) U	(<570) U	1.6 J	<5.5 U	<5.7 U	<5.4 U	1.9 J	1.6 J	1.5 J	(<280) U	<6.3 U	50	100,000	500,000	1,000,000
Naphthalene	91-20-3	1.1 J	10600 J	7.1 J	NA	4000 J	260 J	NA	9.9 J	NA	1.6 J	NA	NA	NA	290 J	NA	12,000	100,000	500,000	1,000,000
Naphthalene, 1,2,3,4-tetrahydro-1-	001559-81-5	NA	NA	28.9 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
Naphthalene, 1,2,3,4-tetrahydro-6-	001680-51-9	NA	NA	19.4 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
Naphthalene, 2-ethyl-1,2,3,4-tetra	032367-54-7	NA	NA	17.1 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	NE
n-Butylbenzene	104-51-8	1.4 J	29100 J	1.3 J	NA	2950 J	NA	NA	NA	2.1 J	NA	NA	NA	NA	NA	NA	12,000	100,000	500,000	1,000,000
n-Propylbenzene	103-65-1	7.4 J	25400 J	2.2 J	NA	11000 J	840 J	2.4 J	67.4 J	NA	1.2 J	4.4 J	NA	1.4 J	470 J	NA	3,900	100,000	500,000	1,000,000
o-Xylene	95-47-6	<5.3 U	<620 U	<5.4 U	<5.7 U	780	<570 U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	31.8	<5.7 U	<5.6 U	<280 U	3.3 J	NE	NE	NE	NE
Tetrachloroethylene	127-18-4	<5.3 U	<620 U	<5.4 U	<5.7 U	<520 U	<570 U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	36.6	<5.7 U	<5.6 U	<280 U	<6.3 U	1,300	19,000	150,000	300,000
Toluene	108-88-3	<5.3 U	<620 U	<5.4 U	<5.7 U	<520 U	<570 U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	5 J	<5.7 U	<5.6 U	<280 U	<6.3 U	700	100,000	500,000	1,000,000
trans-1,2-Dichloroethylene	156-60-5	<5.3 U	(<620) U	<5.4 U	<5.7 U	(<520) U	(<570) U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	<5.4 U	<5.7 U	<5.6 U	(<280) U	<6.3 U	190	100,000	500,000	1,000,000
Trichloroethylene	79-01-6	<5.3 U	(<620) U	<5.4 U	<5.7 U	(<520) U	(<570) U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	8.6	<5.7 U	<5.6 U	<280 U	<6.3 U	470	21,000	200,000	400,000
Vinyl chloride	75-01-4	<5.3 U	(<620) U	<5.4 U	<5.7 U	(<520) U	(<570) U	<5.4 U	<5.5 U	<5.7 U	<5.4 U	<5.4 U	<5.7 U	<5.6 U	(<280) U	<6.3 U	20	900	13,000	27,000
Xylene-Total		<BRL	<BRL	<BRL	<BRL	6280	210 J U	1.3 J U	7.5 J U	<BRL	1.4 J U	131.8	<BRL	23.8	290 J U	13.1 J	260	100,000	500,000	1,000,000
Total BTEX		1.7	<BRL	<BRL	<BRL	16980	580	4.7	29.3	1.3	1.4	161.9	<BRL	27	290	15.2	NE	NE	NE	NE
Total VOCs		69	160600	540.9	<BRL	97840	10750	40.9	1067.3	5.2	21.4	535.2	9.6	87.4	4870	42.8	NE	NE	NE	NE

Soil Sample ID		SB-8		SB-9			SB-10		SB-11		SB-12					375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health - Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
Sample Depth (ft.)		4-5	6-7	4-5	5-6	40-45	4-5	6-7	4-5	7-8	12-14	38-40	54-56							
Date Collected		4/10/2014		4/11/2014			4/14/2014		4/15/2014			02/17/15								
SOIL-8260B (µg/kg)	CAS #																			
1,2,4-Trimethylbenzene	95-63-6	NA	NA	8.8 J	420 J	8.3 J	1.7 J	1.6 J	2.5 J	1.6 J	<,580	<0.059	<0.059				3,600	52,000	190,000	380,000
1,3,5-Trimethylbenzene	108-67-8	NA	NA	4.2 J	240 J	1.9 J	NA	NA	NA	1.1 J	<,580	<0.059	<0.059				8,400	52,000	190,000	380,000
1H-Indene, 2,3-dihydro-1,1,5-trime	040050-41-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
1-Methylnaphthalene	90-12-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
2-Butanone (MEK)	78-93-3	<26.7 U	<28.5 U	<27.3 U	<27.4 U	<27.6 U	<28.1 U	<26.8 U	<27.1 U	<27.7 U	<,580	<0.059	<0.059				120	100,000	500,000	1,000,000
2-Methylnaphthalene	91-57-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
2-Propenal, 3-(4-methylphenyl)-	001504-75-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
Acetone	67-64-1	<26.7 U	<28.5 U	<27.3 U	<27.4 U	16.1 J	<28.1 U	<26.8 U	<27.1 U	<27.7 U	<,580	<0.059	14.3				50	100,000	500,000	1,000,000
Benzene, 1-methyl-2-(2-propenyl)-	001587-04-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
Benzene, 4-(2-butenyl)-1,2-dimethyl-	54340-86-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
Carbon disulfide	75-15-0	<5.3 U	<5.7 U	<5.6 U	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				NE	NE	NE	NE
Ethylbenzene	100-41-4	<5.3 U	<5.7 U	2.6 J	2.7 J	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				1,000	41,000	390,000	780,000
Isopropylbenzene	98-82-8	<5.3 U	<5.7 U	<5.6 U	11	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	6.9	<0.059	3.7				NE	NE	NE	NE
m/p-Xylenes	179601-23-1	<10.7 U	<11.4 U	10.9	17.9	<11 U	<11.2 U	<11.5 U	<10.8 U	<11.1 U	<,580	<0.059	1.3				NE	NE	NE	NE
Methyl isobutyl ketone (MIBK)	108-10-1	<26.7 U	9 J	<27.3 U	<27.4 U	11.6 J	19 J	14.2 J	16.7 J	16.6 J	<,580	<0.059	<0.059				NE	NE	NE	NE
Methylcyclohexane	108-87-2	<5.3 U	<5.7 U	<5.5 U	3.5 J	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	16.1	<0.059	9.6				NE	NE	NE	NE
Methylene chloride (Dichloromethane)	75-09-2	<5.3 U	<5.7 U	<5.5 U	<5.5 U	1.6 J	<5.6 U	<5.8 U	2.6 J	<5.5 U	<,580	0.0019	<0.059				50	100,000	500,000	1,000,000
Naphthalene	91-20-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				12,000	100,000	500,000	1,000,000
Naphthalene, 1,2,3,4-tetrahydro-1-	001559-81-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
Naphthalene, 1,2,3,4-tetrahydro-6-	001680-51-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
Naphthalene, 2-ethyl-1,2,3,4-tetra	032367-54-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				NE	NE	NE	NE
n-Butylbenzene	104-51-8	NA	NA	1.2 J	NA	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				12,000	100,000	500,000	1,000,000
n-Propylbenzene	103-65-1	NA	NA	3 J	69.7 J	NA	NA	NA	NA	NA	<,580	<0.059	<0.059				3,900	100,000	500,000	1,000,000
o-Xylene	95-47-6	<5.3 U	<5.7 U	2.9 J	8.3	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				NE	NE	NE	NE
Tetrachloroethylene	127-18-4	<5.3 U	<5.7 U	1.6 J	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				1,300	19,000	150,000	300,000
Toluene	108-88-3	<5.3 U	<5.7 U	<5.6 U	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				700	100,000	500,000	1,000,000
trans-1,2-Dichloroethylene	156-60-5	<5.3 U	<5.7 U	<5.5 U	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				190	100,000	500,000	1,000,000
Trichloroethylene	79-01-6	<5.3 U	<5.7 U	<5.5 U	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				470	21,000	200,000	400,000
Vinyl chloride	75-01-4	<5.3 U	<5.7 U	<5.5 U	<5.5 U	<5.5 U	<5.6 U	<5.8 U	<5.4 U	<5.5 U	<,580	<0.059	<0.059				20	900	13,000	27,000
Xylene-Total		<BRL	<BRL	13.9 J	26.2	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL				260	100,000	500,000	1,000,000
Total BTEX		<BRL	<BRL	15.4	28.9	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	1.3				NE	NE	NE	NE
Total VOCs		<BRL	8	49	799.3	39.3	20.7	15.8	20.8	18.3	23	0.0019	28.9				NE	NE	NE	NE

Soil Cleanup Objectives = NYSDEC 6 NYCRR Part 375-6

Bold	Sample is Above Non-Detect Value but Below Objective	J	Indicates an estimated value	ft BGS	Feet Below Ground Surface
Bold	Sample Exceeds Unrestricted Objective	U	Undetected, Analyte included in the analysis, but not detected	SB	Soil Boring
Bold	Sample Exceeds Residential Objective	CAS	Chemical Abstract Service	µg/kg	Micrograms per Kilogram
Bold	Sample Exceeds Commercial Objective	<BRL	below reporting level	VOCs	Volatile Organic Compounds
Bold	Sample Exceeds Industrial Objective				

Table 2
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
April 23, 2014
375-6 SCO - Protection of Public Health - Unrestricted, Residential, Commercial, and Industrial
Surface Soil Samples - Analyzed for Volatile Organic Compounds (VOCs)
(Only detected constituents are listed)

Surface Soil Sample ID		SS-1	SS-2	SS-3	SS-4	375-6 SCO - Protection of Public Health Unrestricted	375-6 SCO - Protection of Public Health -Residential	375-6 SCO - Protection of Public Health - Commercial	375-6 SCO - Protection of Public Health - Industrial
Sample Depth (ft. BGS)		0 - 6"	0 - 6"	0 - 6"	0 - 6"				
Date Collected		4/23/2014	4/23/2014	4/23/2014	4/23/2014				
SURFACE SOIL-8260B (µg/kg)	CAS #								
Tetrachloroethylene	127-18-4	7.8	4.9 J	5.9	<5.2 U	1,300	19,000	150,000	300,000
Trichloroethylene	79-01-6	8.4	5.9	6.4	1.5 J	470	21,000	200,000	400,000

Soil Cleanup Objectives = NYSDEC 6 NYCRR Part 375-6

Bold	Sample is Above Non-Detect Value but Below Objective
Bold	Sample Exceeds Unrestricted Objective
Bold	Sample Exceeds Residential Objective
Bold	Sample Exceeds Commercial Objective
Bold	Sample Exceeds Industrial Objective
ug/kg	Micrograms per Kilogram
VOCs	Volatile Organic Compounds
ft BGS	Feet Below Ground Surface
SS	Surface Soil
J	Indicates and estimated value
U	Undetected. Analyte included in the analysis, but not detected
CAS	Chemical Abstract Servies

Table 3
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
3/31-4/15/2014 and 2/17/2015
Grab Groundwater Samples - Analyzed for EPA Method VOCs 8260 B (ug/L)
(Only detected constituents are listed)

Sample (Boring) Identification	Sample Depth (feet below ground surface)	Date Collected	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	Acetone	Benzene	Carbon Disulfide	Chlorobenzene	Chloroform	Chloromethane	Cis-1,2-Dichloroethylene	Cyclohexane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (2-Butanone)	Methylcyclohexane	Tert-Butyl Methyl Ether	Tetrachloroethylene (PCE)	Toluene	Trichloroethylene (TCE)	Xylene Total	Total BTEX	Total VOCs
SB-1(10)	10	03/31/14	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	2.9	ND<0.2	ND<0.2	ND<0.2	5.8	9.9 J	ND<0.2	0.87 J	140	ND<1.3	17.8	ND<0.35	15.8	0.35 J	5.2	ND<0.4	1.22	198.62
SB-1(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	2.3	ND<1.3	0.86 J	ND<0.35	1.6	ND<0.2	ND<0.2	ND<0.4	<BRL	4.76
SB-1(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.63 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	1.4	ND<1.3	ND<0.2	ND<0.35	1.2	ND<0.2	ND<0.2	ND<0.4	<BRL	3.23
SB-1(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.7 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	2.1	ND<1.3	ND<0.2	ND<0.35	1.2	ND<0.2	ND<0.2	ND<0.4	<BRL	4
SB-1(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.48 J	ND<0.2	1	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	4	ND<1.3	1.5	ND<0.35	1.6	ND<0.2	ND<0.2	ND<0.4	<BRL	8.58
SB-1(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1	ND<0.2	0.79 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	28.3	ND<1.3	3.3	ND<0.35	2.6	0.28 J	ND<0.2	ND<0.4	0.28	36.27
SB-1(70)	70		ND<0.2	ND<0.2	ND<0.2	27.4 J	0.75 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	1.5 J	0.5 J	58.3 J	6 J	2.1 J	ND<0.35	3.2 J	1.2 J	ND<0.2	ND<0.4	2.45	100.95
SB-1(70)D	70		ND<0.2	ND<0.2	ND<0.2	19.3 J	0.39 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.85 J	0.26 J	34.2 J	3.8 J	1.1 J	ND<0.35	1.6 J	0.6 J	ND<0.2	ND<0.4	1.25	62.1
SB-2(10)	10	04/01/14	ND<0.2	ND<0.2	ND<0.2	ND<0.5	0.8 J	0.3 J	ND<0.2	ND<0.2	ND<0.2	0.7 J	14.3	ND<0.2	23.4	5.1	ND<1.3	32.8	ND<0.35	0.97 J	ND<0.2	0.4 J	2.57 J	26.77	81.34
SB-2(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.33 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.63 J	ND<0.2	ND<1.3	1.9	ND<0.35	0.65 J	ND<0.2	ND<0.2	ND<0.4	0.63	3.51
SB-2(30)	30		ND<0.2	ND<0.2	ND<0.2	5.8	ND<0.2	ND<0.2	ND<0.2	1.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.41 J	ND<0.2	ND<1.3	0.92 J	ND<0.35	1	ND<0.2	ND<0.2	ND<0.4	0.41	9.33
SB-2(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.77 J	ND<0.2	1.1	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.64 J	ND<0.2	ND<1.3	1.5	ND<0.35	0.77 J	ND<0.2	ND<0.2	ND<0.4	0.64	4.78
SB-2(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.4	ND<0.2	1.1	ND<0.2	ND<0.2	1.9 J	ND<0.2	1.8	0.52 J	ND<1.3	4.2	ND<0.35	1	ND<0.2	ND<0.2	0.46 J	2.26	12.38
SB-2(60)	60		ND<0.2	ND<0.2	ND<0.2	8.8	0.38 J	3.8	ND<0.2	0.85 J	ND<0.2	ND<0.2	4.3 J	1.6	5.1	1.4	ND<1.3	8.9	ND<0.35	1.5	0.32 J	0.37 J	1.68 J	7.48	38.15
SB-2(70)	70		ND<0.2	ND<0.2	ND<0.2	9.2	0.4 J	4.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	4.3 J	6.9	6.3	1.7	ND<1.3	9.7	ND<0.35	1.2	0.35 J	ND<0.2	1.77 J	8.82	46.32
SB-3(10)	10	4/2/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	1.2	0.74 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	170 J	ND<0.2	150 J	19.1	ND<1.3	710 E	ND<0.35	3	0.49 J	0.7 J	101.2 J	252.89	1156.43
SB-3(10)D	10		ND<2	ND<2	ND<2	ND<5	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	140 JD	ND<2	120 JD	15.9 D	ND<13.2	590 D	ND<3.5	2.8 JD	ND<2	ND<2	78.1 JD	198.1	946.8
SB-3(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.77 J	ND<0.2	24.2 J	ND<0.2	8 J	1.7	ND<1.3	93.4	ND<0.35	ND<0.2	ND<0.2	ND<0.2	6.06 J	14.06	134.13
SB-3(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	1.7	ND<0.2	ND<0.2	10.5 J	ND<0.2	2.1 J	0.55 J	ND<1.3	28.7	ND<0.35	ND<0.2	ND<0.2	ND<0.2	1.5 J	3.6	45.05
SB-3(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	23.1 J	ND<0.2	5.3 J	1.2	ND<1.3	68.9	ND<0.35	ND<0.2	ND<0.2	ND<0.2	3 J	8.3	101.5
SB-3(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.54 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	53.9 J	ND<0.2	12 J	3	ND<1.3	200 E	ND<0.35	0.55 J	ND<0.2	ND<0.2	8.36 J	20.36	278.35
SB-3(50)D	50		ND<1	ND<1	ND<1	ND<2.5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	40.9 JD	ND<1	11.5 JD	3.1 JD	ND<6.6	170 D	ND<1.8	ND<1	ND<1	ND<1	7.6 JD	19.1	233.1
SB-3(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.64 J	0.43 J	ND<0.2	ND<0.2	ND<0.2	110 J	1.8	62.9 J	13.9	ND<1.3	510 E	ND<0.35	2.3	0.44 J	1.5	50.9 J	114.24	754.81
SB-3(60)D	60		ND<2	ND<2	ND<2	ND<5	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	73.3 JD	ND<2	41.8 JD	10.8 D	ND<13.2	370 D	ND<3.5	2.6 JD	ND<2	ND<2	32.3 JD	74.1	530.8
SB-3(70)	70		ND<0.2	ND<0.2	ND<0.2	23.8 UJ	1.4	0.92 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	180 J	8.5	220 E	33.9	ND<1.3	830 E	ND<0.35	0.88 J	1.2	ND<0.2	204.3	426.9	1504.9
SB-3(70)D	70		ND<2	ND<2	ND<2	ND<5	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	150 JD	ND<2	200 JD	33.5 D	ND<13.2	610 D	ND<3.5	ND<2	ND<2	ND<2	180 JD	380	1173.5
SB-4(10)	10	4/3/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.1	ND<0.2	4.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.36 J	0.7 J	ND<1.3	23.2	ND<0.35	0.34 J	ND<0.2	ND<0.2	ND<0.4	0.36	30.2
SB-4(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.74 J	ND<0.2	0.47 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	1.21
SB-4(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.2	ND<0.2	0.91 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	0.41 J	ND<0.2	ND<0.2	ND<0.4	<BRL	2.52
SB-4(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.83 J	ND<0.2	1.4	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	2.23
SB-4(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.56 J	ND<0.2	0.88 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	1.44
SB-4(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.52 J	ND<0.2	1.1	ND<0.2	ND<0.2	ND<0.2	3.7	ND<0.2	ND<0.2	ND<1.3	0.36 J	ND<0.35	0.23 J	ND<0.2	ND<0.2	ND<0.4	<BRL	5.91
SB-4(70)	70		3.2	ND<0.2	ND<0.2	4.2 J	ND<0.2	0.47 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	21.8	ND<0.2	ND<0.2	ND<1.3	0.37 J	0.62 J	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	30.66
SB-5(10)	10	4/7/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.24 J	1.6	9.1 J	ND<0.2	31.1	8.7	ND<1.3	27	ND<0.35	3.1	ND<0.2	1.5	5.82 J	36.92	88.16
SB-5(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.45 J	0.23 J	ND<1.3	1.3	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	0.45	1.98
SB-5(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.55 J	0.31 J	ND<0.2	ND<0.2	ND<0.2	0.6 J	0.33 J	ND<1.3	1.3	ND<0.35	ND<0.2	ND<0.2	ND<0.2	0.8 J	1.4	3.89
SB-5(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.26 J	ND<0.2	0.55 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.96 J	0.45 J	ND<1.3	2.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	0.47 J	1.43	4.89
SB-5(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.28 J	ND<0.2	0.59 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	2	0.99 J	ND<1.3	4.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	0.79 J	2.79	8.85
SB-5(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.39 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.34 J	3.7	1.6	ND<1.3	7	ND<0.35	2.5	ND<0.2	1.2	1.3 J	5	18.03
SB-5(70)	70		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.49 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	3.6	4.3	1.6	ND<1.3	6.3	ND<0.35	ND<0.2	ND<0.2	ND<0.2	0.98 J	5.28	17.27
SB-6(10)	10	4/8/2014	ND<0.2	ND<0.2	ND<0.2	3.2 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.35	1.7	ND<0.2	ND<0.2	ND<0.4	<BRL	4.9
SB-6(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.22 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	0.28 J	ND<0.2	ND<0.2	ND<0.4	<BRL	0.5
SB-6(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.65 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	0.65
SB-6(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	0.42 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	0.42
SB-6(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.27 J	ND<0.2	0.33 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	ND<0.2	ND<0.2	ND<0.2	ND<0.4	<BRL	0.6
SB-6(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.55 J	ND<0.2	ND<0.2	0.26 J	ND<0.2	ND<0.2	0.58 J	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	0.81 J	ND<0.2	0.35 J	ND<0.4	<BRL	2.55
SB-6(70)	70		1.8	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.45 J	ND<0.2	ND<0.2	ND<0.2	0.51 J	ND<0.2	5.4	ND<0.2	ND<0.2	ND<1.3	ND<0.2	ND<0.35	2.6	ND<0.2	1.5	ND<0.4	<BRL	12.26
SB-7(10)	10	4/9/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	1.6	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	170 J	ND<0.2	1200 E	65.9	ND<1.3	480 E	ND<0.35	1.2	380 E	ND<0.2	5700 E	7281.6	7998.7
SB-7(10) D	10		ND<8	ND<8	ND<8	ND<20	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	210 DJ	ND<8	1300 D	82.8 D	ND<52.8	420 JD	ND<14	ND<8	480 D	ND<8	8400 JD	10180	10892.8
SB-7(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	4.1	0.54 J	ND<1.3	12.9 J	ND<0.35	ND<0.2	1.3	ND<0.2	19.1	24.5	37.94
SB-7(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	4.9	0.54 J	ND<1.3	7.3 J	ND<0.35	ND<0.2	1.7	ND<0.2	24.7	31.3	39.14
SB-7(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.21 J	ND<0.2	0.51 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	6.6	0.74 J	ND<1.3	9.2 J	ND<0.35	ND<0.2	2.1	ND<0.2	24.5	33.2	43.86

Table 3
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340 West Hoffman Avenue
Lindenhurst, New York 11757
3/31-4/15/2014 and 2/17/2015
Grab Groundwater Samples - Analyzed for EPA Method VOCs 8260 B (ug/L)
(Only detected constituents are listed)

SB-7(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.22 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	9	0.93 J	ND<1.3	11.9 J	ND<0.35	ND<0.2	2.6	ND<0.2	27.9	39.5	52.55
SB-7(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.42 J	0.77 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.51 J	29.5	2.9	ND<1.3	25 J	ND<0.35	2.7	8.2	1.4	128.3	166	199.7
SB-7(70)	70		0.47 J	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.74 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	7.1 J	62.3	5.8	ND<1.3	57.4 J	ND<0.35	ND<0.2	14.1	ND<0.2	415.8	492.2	563.71
SB-8(10)	10		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.7	ND<0.2	ND<0.2	ND<0.2	ND<0.2	44.5	ND<0.2	3.9	240 E	ND<1.3	55.8	ND<0.35	ND<0.2	0.34 J	ND<0.2	31.9	36.14	378.14
SB-8(10)D	10		ND<2	ND<2	ND<2	ND<5	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	ND<2	260 D	ND<13.2	55.9 D	ND<3.5	ND<2	ND<2	ND<2	ND<4	<BRL	315.9
SB-8(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.96 J	ND<0.2	0.32 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.47 J	5.3	ND<1.3	4.3	ND<0.35	ND<0.2	ND<0.2	ND<0.2	2.19	2.66	13.54
SB-8(30)	30	4/10/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.71 J	ND<0.2	0.68 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.34 J	0.61 J	ND<1.3	1.8	ND<0.35	ND<0.2	ND<0.2	ND<0.2	1.24 J	1.58	5.38
SB-8(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.1	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.58 J	0.64 J	1.3	ND<1.3	3.7	ND<0.35	ND<0.2	ND<0.2	ND<0.2	3.78 J	4.42	11.1
SB-8(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	1.2	0.85 J	1.6	ND<1.3	4	ND<0.35	ND<0.2	ND<0.2	ND<0.2	4.8	5.65	13.45
SB-8(60)	60		0.98 J	ND<0.2	ND<0.2	ND<0.5	ND<0.2	1.7	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	4.6	1.4	2.5	ND<1.3	4.5	ND<0.35	ND<0.2	0.52 J	ND<0.2	7.9	9.82	24.1
SB-8(70)	70		1.8	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.53 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	8.8	1.5	2.2	ND<1.3	4.6	ND<0.35	ND<0.2	0.4 J	ND<0.2	8.7	10.6	28.53
SB-9(10)	10		ND<0.2	ND<0.2	1.2	ND<0.5	ND<0.2	0.46 J	ND<0.2	ND<0.2	ND<0.2	8.2	110 J	ND<0.2	1000 E	490 E	ND<1.3	380 E	ND<0.35	0.66 J	1.5	0.67 J	5000	6001.5	6992.69
SB-9(10) D	10		ND<8	ND<8	ND<8	ND<20	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	930 D	490 D	ND<52.8	310 JD	ND<14	ND<8	ND<8	ND<8	5400	6330	7130
SB-9(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	26.2 J	ND<0.2	16.8	79.9	ND<1.3	99.4 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	92.2	109	314.5
SB-9(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	3.8	10	ND<1.3	26.6 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	19.7	23.5	60.1
SB-9(40)	40	4/11/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	2.9	7	ND<1.3	19.6 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	13.9	16.8	43.4
SB-9(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.24 J	ND<0.2	0.4 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	3.1	6.7	ND<1.3	17.4 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	9.7	12.8	37.54
SB-9(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.3 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.63 J	8.1	16.4	ND<1.3	37.1 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	34	42.1	96.53
SB-9(70)	70		1.3	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.69 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	10.3 J	14.6	29	ND<1.3	64.8 J	ND<0.35	ND<0.2	ND<0.2	ND<0.2	82	96.6	202.69
SB-10(10)	10		ND<0.2	ND<0.2	3	ND<0.5	ND<0.2	0.96 J	ND<0.2	ND<0.2	ND<0.2	0.45 J	180 J	ND<0.2	770 E	520 E	ND<1.3	530 E	ND<0.35	0.87 J	ND<0.2	1.7	3440	4210	5446.98
SB-10(10)D	10		ND<8	ND<8	ND<8	ND<20	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	220 DJ	ND<8	710 D	570 D	ND<52.8	550 D	ND<14	ND<8	ND<8	ND<8	3530	4240	5580
SB-10(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.41 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	33 J	ND<0.2	9.7	140	ND<1.3	200	ND<0.35	ND<0.2	ND<0.2	ND<0.2	46.7	56.4	429.81
SB-10(30)	30	4/14/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.34 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	16.4 J	ND<0.2	6.9	37.3	ND<1.3	120	ND<0.35	ND<0.2	ND<0.2	ND<0.2	31.6	38.5	212.54
SB-10(40)	40		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.52 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	20.5 J	ND<0.2	13.1	61.8	ND<1.3	150	ND<0.35	ND<0.2	ND<0.2	ND<0.2	64	77.1	309.92
SB-10(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.49 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	21.3 J	ND<0.2	15.6	69	ND<1.3	160	ND<0.35	ND<0.2	ND<0.2	ND<0.2	71.9	87.5	338.29
SB-10(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.5 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	19.9 J	0.6 J	18.3	67.9	ND<1.3	130	ND<0.35	0.74 J	ND<0.2	ND<0.2	88.8	107.1	326.74
SB-10(70)	70		1.8	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.45 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	14 J	7	12.7	49	ND<1.3	87.3	ND<0.35	1.3	ND<0.2	0.78 J	59.9	72.6	234.23
SB-11(10)	10		ND<4	ND<4	ND<4	ND<10	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	230	160	ND<26.4	290	ND<7	ND<4	ND<4	ND<4	1070	1300	1750
SB-11(20)	20		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.24 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	25.7 J	ND<0.2	9.6	58.1	ND<1.3	140	ND<0.35	0.4 J	ND<0.2	ND<0.2	45.9	55.5	279.94
SB-11(30)	30		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.32 J	ND<0.2	0.54 J	ND<0.2	ND<0.2	ND<0.2	ND<0.2	13.1	20.2	ND<1.3	91.8	ND<0.35	ND<0.2	ND<0.2	ND<0.2	59.6	72.7	185.56
SB-11(40)	40	4/15/2014	ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.32 J	ND<0.2	0.48 J	0.23 J	ND<0.2	10 J	ND<0.2	12.9	17.5	ND<1.3	70.5	ND<0.35	0.33 J	ND<0.2	ND<0.2	57.3	70.2	169.56
SB-11(50)	50		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	0.28 J	ND<0.2	0.35 J	0.22 J	ND<0.2	ND<0.2	0.21 J	7.7	9.1	ND<1.3	34.6	ND<0.35	0.59 J	ND<0.2	ND<0.2	21.9	29.6	74.95
SB-11(60)	60		ND<0.2	ND<0.2	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	0.5 J	7.9	8	ND<1.3	19.8	ND<0.35	0.63 J	ND<0.2	ND<0.2	31	38.9	67.83
SB-11(70)	70		2.5	1	ND<0.2	ND<0.5	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	1.4	ND<0.2	6.7	7.9	7.4	ND<1.3	13.8	ND<0.35	2.1	ND<0.2	1.6	30.5	38.4	74.9
SB-12(10)	10		ND<1	ND<1	7.5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.5	33.6	ND<1	16.4	96	ND<1	170	ND<1	0.9	ND<1	1.3	61.5	77.9	389.7
SB-12(20)	20		ND<1	ND<1	12.6	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	0.66	17.4	ND<1	20.1	100	ND<1	96.2	ND<1	1.3	ND<1	4.4	75	#VALUE!	327.66
SB-12(30)	30		ND<1	ND<1	2.9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	19	ND<1	5.7	52.6	ND<1	120	ND<1	ND<1	ND<1	ND<1	20.3	#VALUE!	220.5
SB-12(40)	40	2/17/2015	ND<1	ND<1	6.9	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	28.6	ND<1	16.2	110	ND<1	170	ND<1	0.43	ND<1	ND<1	59.5	#VALUE!	391.63
SB-12(50)	50		ND<1	ND<1	2.7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	17.6	ND<1	7.2	46.6	ND<1	120	ND<1	0.31	ND<1	ND<1	25.1	#VALUE!	219.51
SB-12(60)	60		ND<1	ND<1	5.4	ND<1	ND<1	0.34	ND<1	ND<1	ND<1	ND<1	24.2	ND<1	14.7	84.8	ND<1	170	ND<1	0.53 J	ND<1	ND<1	54.7	#VALUE!	354.14
SB-12(70)	70		ND<1	ND<1	9.9	ND<1	ND<1	0.48	ND<1	ND<1	ND<1	ND<1	28.7	ND<1	26.9	130	ND<1	180	ND<1	0.76	ND<1	ND<1	104.2	#VALUE!	480.94
NYSDEC Class GA Criteria			5	5	3.0	50	1	60	5	7	5	5	NE	5	5	5	50	NE	10	5	5	5	5	NE	NE

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold Sample Exceeds NYSDEC Class GA Criteria
Bold Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
ND<### Sample is Non-Detect at Laboratory
SB Soil Boring
NA Not Analyzed
NE Not Established

ug/l micrograms per liter
VOCs Volatile Organic Compounds
J Detected but below the Reporting Limit or Method Detection Limit (lowest calibration standard): therefore, result is an estimated concentration (CLP J-Flag).
D indicates all compounds identified in an analysis at a secondary dilution factor.
<BRL below recording level

Table 4
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
April 23, 2014
NYSDEC Class GA Criteria
Groundwater Samples Analytical Results: SVOCs 8270 C
(Only detected constituents are listed)

WATER-8270C (ug/L)	PZ-1	PZ-2	PZ-3	NYSDEC Class GA Criteria
Date Collected	04/23/14	04/23/14	04/23/14	
Bis(2-ethylhexyl)phthalate	**5.2 J**	(<11.1) U	(<10.3) U	5
Dimethyl phthalate	**5.3 J**	3.9 J	11.4	50
1,1-Biphenyl, 3,4-dimethyl-	**4.4 J**	NA	NA	NE
Decane, 5-propyl-	**4.3 J**	NA	NA	NE
Hexadecane, 2,6,10-trimethyl-	**8.5 J**	NA	NA	NE
Hexane, 3,3,4-trimethyl-	**4.6 J**	NA	NA	NE
Hexanoic acid, 4-methyl-	**5.3 J**	NA	NA	NE
Naphthalene, 1-(2-propenyl)-	**6.1 J**	NA	NA	NE
Naphthalene, 2,3,6-trimethyl-	**5.8 J**	NA	NA	NE
Pentadecane, 2,6,10,14-tetramethyl	**5.2 J**	NA	NA	NE
Undecane, 6-ethyl-	**4.3 J**	NA	NA	NE
unknown10.16	**4.3 J**	NA	NA	NE
unknown4.90	**91.3 J**	NA	NA	NE
Hexanedioic acid, bis(2-ethylhexyl	NA	**2.4 J**	NA	NE
unknown4.94	NA	**100 J**	**91.7 J**	NE
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	**2.2 J**	NE
Phthalic acid, 2-hexyl ester	NA	NA	**3.2 J**	NE
Tetradecanoic acid	NA	NA	**10.5 J**	NE
Tridecanoic acid	NA	NA	**7.9 J**	NE

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
( )	Indicates the stated minimum detectable level exceeds an RSR criteria.
PZ	Piezometer
NE	Not Established
NA	Not analyzed
ug/l	micrograms per liter
SVOCs	Semi Volatile Organic Compounds
J	Indicates and estimated value
U	Undetected. Analyte included in the analysis, but not detected

Table 5
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
April 23, 2014
NYSDEC Class GA Criteria
Groundwater Samples - Analyzed for Target Analyte List (TAL) Metals
(Only detected constituents are listed)

WATER-Metals (mg/L)	PZ-1	PZ-2	PZ-3	NYSDEC Class GA Criteria
Date Collected	04/23/14	04/23/14	04/23/14	
Aluminum, Total	**0.279**	**0.605**	**5.65**	**NE**
Barium	**0.0235 J**	**0.0179 J**	**0.034 J**	**1**
Calcium	**24.10**	**15.40**	**17.30**	**NE**
Chromium, Total	**0.00314 J**	**0.00258 J**	**0.0226**	**0.05**
Copper	**0.00398 J**	<0.010 U	**0.0119**	**0.2**
Iron	**2.050**	**0.866**	**9.530**	**0.3**
Lead	<0.006 U	<0.006 U	**0.00804**	**0.025**
Magnesium	**3.71**	**2.60**	**3.53**	**35**
Manganese	**0.0926**	**0.0164**	**0.159**	**0.3**
Nickel	<0.020 U	<0.020 U	**0.00528 J**	**0.1**
Potassium, Total	**2.34**	**2.14**	**2.31**	**NE**
Sodium, Total	**26.40**	**18.30**	**21.40**	**20**
Vanadium	<0.020 U	<0.020 U	**0.00954 J**	**NE**
Zinc	0.00802 J	<0.020 U	**0.0304**	**2**

NYSDEC class GA criteria are from NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1), Ambient water quality, class GA standards/guidance values from Table 1.

Bold	Sample Exceeds NYSDEC Class GA Criteria
Bold	Sample is above Non-Detect Value but Below NYSDEC Class GA Criteria
( )	Indicates the stated minimum detectable level exceeds an RSR criteria.
PZ	Piezometer
NE	Not Established
mg/l	milligrams per liter
J	Indicates and estimated value
U	Undetected. Analyte included in the analysis, but not detected

Table 6
FORMER ELKA CHEMICAL COMPANY - SITE NUMBER 152239
340 West Hoffman Avenue
Lindenhurst, New York 11757
19-Feb-15
Soil Vapor Samples Analytical Results: TO-15
(Only detected constituents are listed)

Vapor Sample ID		NYSDOH	AA-1	AA-2	DUP	SVP-1	SVP-2	SVP-3	SVP-4	SVP-5	SVP-6
Date Collected		Guidance	2/19/2015	2/19/2015	2/19/2015	2/19/2015	2/19/2015	2/19/2015	2/19/2015	2/19/2015	2/19/2015
AIR-TO15 (µg/m3)	CAS #	Values									
1,1,1-Trichloroethane	71-55-6	100	<0.19 UD	<0.19 UD	<0.19 UD	<82 UD	**1.3 D**	**1.5 D**	**4.8 D**	<0.55 UD	<0.55 UD
1,1,2-Trichloroethane	79-00-5	NE	<0.19 UD	<0.19 UD	<0.19 UD	**1400 D**	<0.55 UD	<0.55 UD	<0.55 UD	<0.55 UD	<0.55 UD
1,1-Dichloroethane	75-34-3	NE	<0.14 UD	<0.14 UD	<0.14 UD	**120 D**	<0.4 UD	<0.4 UD	<0.4 UD	<0.4 UD	<0.4 UD
1,2,4-Trimethylbenzene	95-63-6	NE	**0.24 D**	**0.26 D**	**0.3 D**	<74 UD	<0.49 UD	<0.49 UD	**0.66 D**	<0.49 UD	<0.49 UD
2-Butanone (MEK)	78-93-3	NE	<4.1 U	<4.1 U	<4.1 U	**81000 D**	<12 U	<12 U	<12 U	<12 U	<12 U
2-Hexanone (Methyl butyl ketone/MBK)	591-78-6	NE	**0.16 D**	**0.2 D**	**0.24 D**	<61 UD	<0.41 UD	<0.41 UD	<0.41 UD	<0.41 UD	**0.42 D**
Acetone	67-64-1	NE	**17 D, L-05, V-06**	**15 D, L-05, V-06**	**20 D, L-05, V-06**	<1400 U	79 D, L-05, V-06	76 D, L-05, V-06	99 D, L-05, V-06	50 D, L-05, V-06	66 D, L-05, V-06
Benzene	71-43-2	NE	**0.91 D**	**1.1 D**	**1.3 D**	**1100 D**	**1.9 D**	**1.9 D**	**1.4 D**	**2 D**	**1.8 D**
Carbon disulfide	75-15-0	NE	<1.1 UD	<1.1 UD	<1.1 UD	<470 U	<3.1 U	<3.1 U	5.2 D	<3.1 U	<3.1 U
Carbon tetrachloride	56-23-5	NE	**0.43 D**	**0.43 D**	**0.41 D**	<94 UD	<0.63 UD	<0.63 UD	<0.63 UD	<0.63 UD	<0.63 UD
Chloroethane	75-00-3	NE	<0.092 UD	<0.092 UD	<0.092 UD	**150 D**	<0.26 UD	<0.26 UD	<0.26 UD	<0.26 UD	<0.26 UD
Chloromethane	74-87-3	NE	**0.86 D**	**0.89 D**	**0.88 D**	<62 UD	**0.43 D**	<0.41 U	**0.44 D**	**0.46 D**	**0.75 D**
Cyclohexane	110-82-7	NE	**0.21 D**	**14 D**	**9.5 D**	**96000 D**	**3.3 D**	**0.39 D**	**0.5 D**	**4.4 D**	**0.83 D**
Dichlorodifluoromethane	75-71-8	NE	**1.6 D**	**1.6 D**	**1.6 D**	<74 UD, L-03	**2.8 D**	**2.3 D**	**2.1 D**	**2.2 D**	**2.2 D**
Ethanol	64-17-5	NE	**6.1 D**	**5.6 D**	**7.6 D**	<1100 UD, L-03, V-05	**76 D**	**100 D**	**75 D**	**95 D**	**120 D**
Ethyl Acetate	141-78-6	NE	**0.72 D**	<0.13 UD	<0.13 UD	**120 D**	**2.1 D**	**1.1 D**	**1.6 D**	**1 D**	**1.2 D**
Ethylbenzene	100-41-4	NE	**0.3 D**	**0.29 D**	**0.3 D**	<65 UD	<0.43 UD	<0.43 UD	<0.43 UD	<0.43 UD	<0.43 UD
Heptane	142-82-5	NE	**0.35 D**	**1.8 D**	**1.3 D**	**14000 D**	**1.4 D**	**0.98 D**	**1.1 D**	**1.4 D**	**1 D**
Hexane	110-54-3	NE	<4.9 U	**16 D**	**11 D**	**83000 D**	<14 U	<14 U	<14 U	<14 U	<14 U
m/p-Xylenes	179601-23-1	NE	**1 D**	**1 D**	**1.1 D**	<130 UD	<0.87 U	**0.89 D**	**1.1 D**	**0.96 D**	**1.1 D**
Methylene chloride (Dichloromethane)	75-09-2	60	<1.2 U	**1.9 D**	<1.2 U	(<520) U	<3.5 U	<3.5 U	<3.5 U	<3.5 U	<3.5 U
o-Xylene	95-47-6	NE	**0.32 D**	**0.34 D**	**0.34 D**	<65 UD	<0.43 UD	<0.43 UD	<0.43 UD	<0.43 UD	<0.43 UD
Propene	115-07-1	NE	<2.4 UD	<2.4 UD	<2.4 UD	<1000 U	**100 D**	**19 D**	**20 D**	<6.9 U	<6.9 U
Tetrachloroethylene (PCE)	127-18-4	30	**0.41 D**	**0.47 D**	**0.4 D**	**130 D**	**0.9 D**	<0.68 UD	<0.68 UD	<0.68 UD	<0.68 UD
Tetrahydrofuran	109-99-9	NE	<0.1 UD	<0.1 UD	<0.1 UD	<44 UD	**0.77 D**	**0.63 D**	**0.65 D**	**0.57 D**	**0.63 D**
Toluene	108-88-3	NE	**3 D**	**2.4 D**	**2.9 D**	<57 UD	**2.9 D**	**3.2 D**	**3.5 D**	**3.3 D**	**4 D**
Trichloroethylene (TCE)	79-01-6	5	<0.19 UD	<0.19 UD	<0.19 UD	(<81) UD	**1.3 D**	<0.54 UD	<0.54 UD	<0.54 UD	<0.54 UD
Trichlorofluoromethane	75-69-4	NE	**1.5 D**	**1.6 D**	**1.4 D**	<340 UD	<2.2 U	<2.2 U	<2.2 U	<2.2 U	<2.2 U
Vinyl acetate	108-05-4	NE	<2.5 UD	<2.5 UD	<2.5 UD	**29000 D**	<7 UD	<7 UD	<7 UD	<7 UD	<7 UD
Vinyl chloride	75-01-4	NE	<0.089 UD	<0.089 UD	<0.089 UD	**120 D**	<0.26 UD	<0.26 UD	<0.26 UD	<0.26 UD	<0.26 UD
Xylene-Total		NE	**1.32 D**	**1.34 D**	**1.44 D**	<BRL	<BRL	**0.89 D UD**	**1.1 D UD**	**0.96 D UD**	**1.1 D UD**

Legend

1	Parameter reported at a concentration greater than applicable regulatory standard/criterion
( )	Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria
BRL	Parameter consists of multiple isomers and were not detected above the laboratory reporting limit
1	Bold indicates parameter detected above reporting limit

µg/m3 = micrograms per cubic meter
NE = None Established
D = Data reported from a dilution
U = Undetected. Analyte included in the analysis, but not detected.
UD = Undetected at a dilution

CAS # = Chemical Abstract Service Number
L-05 = Laboratory fortified blank / laboratory control sample recovery is outside of control limits.
Reported value for this compound is likely to be biased on the high side.
V-06 = Continuing calibration did not meet method specifications and was biased on the high side for this compound.
Increased uncertainty is assocaited with the reported value which is likely to be biased on the high side.