

**TOWN OF OYSTER BAY
BETHPAGE COMMUNITY PARK
INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA**

SUPPLEMENTAL INVESTIGATION REPORT



DECEMBER 2005

Prepared For:

**Town of Oyster Bay
Department of Public Works**

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SITE HISTORY AND DESCRIPTION.....	2
3.0	DESCRIPTION OF WORK COMPLETED	3
3.1	Geophysical Survey.....	4
3.2	Soil Sampling Program	4
3.3	Soil Vapor Sampling	6
3.4	Monitoring Well Installation and Sampling.....	7
3.5	Community Air Monitoring	8
4.0	NATURE AND EXTENT OF CONTAMINATION	9
4.1	Standards, Criteria and Guidelines (SCG).....	9
4.2	Soil Investigation Findings.....	10
4.3	Soil Vapor Sampling Results	12
4.4	Groundwater Sampling Results.....	13
5.0	QA/QC SAMPLING & DATA VALIDATION	15
5.1	Field Investigation QA/QC	15
5.2	Data Validation.....	17
6.0	SUMMARY & CONCLUSIONS	18
6.1	Site Investigation Summary	18
6.2	Impact of Supplemental Investigation on Proposed Remedial Strategy	20

**TOWN OF OYSTER BAY
BETHPAGE COMMUNITY PARK
INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
SUPPLEMENTAL INVESTIGATION REPORT**

DECEMBER 2005

LIST OF FIGURES

- FIGURE 1 Site Location Map
- FIGURE 2 Site Plan Depicting Soil Sampling & Monitoring Well Locations
- FIGURE 3 Site Plan with Soil Sampling Results
- FIGURE 4 Supplemental IRM Investigation Potentiometric Groundwater Surface Map
- FIGURE 5 Remedial Action Excavation Plan

LIST OF TABLES

- TABLE 4.2.1 Soil Sampling Results for PCBs
- TABLE 4.2.2 Soil Sampling Results for Metals
- TABLE 4.2.3 Soil Sampling Results for VOCs
- TABLE 4.2.4 Soil Sampling Results for SVOCs
- TABLE 4.3.1 Soil Vapor Sampling Results for VOCs
- TABLE 4.4.1 Groundwater Sampling Results for PCBs
- TABLE 4.4.2 Groundwater Sampling Results for Metals
- TABLE 4.4.3 Groundwater Sampling Results for VOCs
- TABLE 4.4.4 Groundwater Sampling Results for SVOCs
- TABLE 5.1.1 QA/QC Trip Blank Sampling Results for VOCs



TOWN OF OYSTER BAY
BETHPAGE COMMUNITY PARK
INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
SUPPLEMENTAL INVESTIGATION REPORT

DECEMBER 2005

APPENDICES

- APPENDIX A Soil Boring Logs
- APPENDIX B Monitoring Well Construction Log (CAMW-5)
- APPENDIX C Data Usability Summary Report



TOWN OF OYSTER BAY
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INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
SUPPLEMENTAL INVESTIGATION REPORT

DECEMBER 2005

1.0 INTRODUCTION

This Supplemental Investigation Report summarizes results of additional field investigation activities conducted at the Bethpage Community Park in Bethpage, New York (site) as part of the New York State Department of Environmental Conservation (NYSDEC) approved Interim Remedial Measure (IRM) investigation for a designated construction area (Construction Area). The supplemental investigation was performed in accordance with the NYSDEC approved IRM Work Plan, prepared by Holzmacher, McLendon & Murrell, P.C. (H2M) dated May 2005, as well as the terms of an Order on Consent between the Town of Oyster Bay and the NYSDEC.

The purpose of the supplemental investigation was to characterize the nature and extent of contamination in select areas not addressed during the initial IRM investigation. The investigated areas included the current ice skating rink, a concourse area between the ice rink and the bathhouse/pool, and a perimeter boundary area outside and around the playground to the south of the Construction Area. Part of the concourse area and the area around the playground are not within the established Construction Area. These areas were investigated and included in the IRM, however, because planned site redevelopment may necessitate excavation in these areas to facilitate installation of drainage and/or utilities. Results of this environmental investigation supplement but do not alter the proposed remedial strategy identified in the previously prepared Investigation Report & Remedial Action Plan, dated November 2005.

The initial remedial investigation was completed in support of an Interim Remedial Measure (IRM) at the Bethpage Community Park. The site is currently owned by the Town of Oyster Bay, but was formerly owned and operated by Grumman Aircraft Engineering Corporation, a predecessor to Northrop Grumman Systems Corporation (Northrop Grumman). Prior site investigation reports, prepared on behalf of Northrop Grumman, have indicated that the site had

been utilized by Northrop Grumman for waste disposal activities including industrial wastewater treatment sludge disposal, spent paint booth rag disposal, possible used oil disposal, and fire training activity that included ignition of waste oil and jet fuel. Previous site investigations documented significant impacts to site soils from these activities including the presence of elevated concentrations of metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs). In addition, prior investigation reports documented volatile organic compound impacts to groundwater at the site.

The Bethpage Community Park totals approximately 18-acres. In an effort to expedite remediation of an approximately 7-acre portion of the Park for redevelopment, designated as the Construction Area, the Town of Oyster Bay entered into an Order on Consent with the NYSDEC. It is understood that the NYSDEC has negotiated an Order on Consent with Northrop Grumman relating to further investigation and remediation of the subject property and off-site impacts.

2.0 SITE HISTORY AND DESCRIPTION

The Bethpage Community Park is located in Bethpage, New York, on the west side of the intersection of Stewart Avenue and Cherry Avenue. The site is located within the Town of Oyster Bay in Nassau County. A site location map is presented in Figure 1. The park includes a pool, skating rink, baseball field, tennis courts, children's play areas and parking. The entire site is approximately 18 acres in size and is currently owned by the Town of Oyster Bay.

Prior to being donated to the Town of Oyster Bay, the subject site was owned by Grumman Aircraft Engineering Corporation, a predecessor to Northrop Grumman Systems Corporation. According to reports prepared on behalf of Northrop Grumman Systems Corporation¹, Northrop Grumman utilized the property for waste disposal purposes including industrial wastewater treatment sludge, spent paint booth rag disposal, and possible used oil disposal. In addition, it

¹ Dvirka and Bartilucci, December 2003, Town of Oyster Bay Bethpage Community Park Investigation Sampling Program – Field Report.



has been reported that Northrop Grumman utilized the site for fire training, which included ignition of waste oil and jet fuel.

Ownership of the site was transferred to the Town of Oyster Bay in 1962, after which, the Town constructed the present-day Park. The community actively utilized the site until 2002, when the Park was partially closed due to the identification of PCB and metals impacts above state guideline concentrations in surface soils. Portions of the site remain closed to this day, pending remediation.

A number of environmental investigations have been conducted relative to the Park. Recent site investigations have been conducted by Dvirka and Bartilucci Consulting Engineers, on behalf of Northrop Grumman. Two significant soil sampling programs were implemented by Northrop Grumman in recent years, a March/May 2002 soil sampling event and a May/June 2003 sampling event. Northrop Grumman also conducted groundwater sampling in June, September and November 2003. These events were documented in two reports dated June 2002 and December 2003.

The Town of Oyster Bay intends to improve the Park grounds through construction of new facilities including an indoor ice-skating rink. The anticipated redevelopment activities will impact approximately 7 acres of the site. The Construction Area, as it is referred to, extends from the north border of the property in a southerly direction approximately central to the site. Although redevelopment activities have not been finalized, the construction of a new building measuring approximately 30,000-50,000 square feet is anticipated as well as upgrading of surrounding parking areas. The proposed redevelopment will require site excavation.

3.0 DESCRIPTION OF WORK COMPLETED

The purpose of the supplemental IRM field investigation was to characterize the nature and extent of contamination in both soil and shallow groundwater in areas not addressed during the initial field investigation and augment information obtained during the initial IRM field investigation.

The supplemental investigation was performed in conformance with the methodology of the initial IRM field investigation. Investigation activities were based on the NYSDEC approved IRM Work Plan dated May 2005. The methodologies and procedures utilized during the supplemental investigation were identified in a NYSDEC approved Quality Assurance Project Plan (QAPP), which was included as part of the IRM Work Plan. Potential contaminants for investigation included PCBs, VOCs, SVOCs, and metals (including hexavalent chromium and cyanide).

3.1 Geophysical Survey

A geophysical survey was conducted by NAEVA Geophysics Inc. (NAEVA) under the direction of H2M on September 20, 2005 to delineate detectable buried utilities and significant subsurface anomalies in areas planned for subsurface investigation. The geophysical survey was limited to areas not previously surveyed by NAEVA during the initial IRM field investigation.

3.2 Soil Sampling Program

The soil investigation component of the supplemental field investigation included the advancement of 19 soil borings. Most soil borings were positioned on a grid format with approximately 50-foot on-center node spacing. The grid correlated with the initial field investigation but was expanded to include the additional soil boring locations. As during the initial IRM field investigation, each grid node was identified with an alpha-numeric code representing a letter for each row transect and a number for each column transect. Numeric columns were in an approximate north-south orientation. The boring locations are shown on Figure 2.

The areas investigated during the supplemental soil sampling program included the current ice rink area, the concourse area between the ice rink and bathhouse/pool, as well as the perimeter area surrounding the playground to the south of the Construction Area. Six borings were advanced within the ice rink area, identified as R1 through R6. Of these, three were advanced to 60 feet below grade and three were advanced to 10 feet below grade. These boring locations do

not correlate with the sampling grid format. Drilling in the area of the current ice rink was planned for inclusion in the initial IRM field investigation. However, considering that the short-term fate of the existing rink had not been determined at the time of the initial IRM field investigation, drilling was not performed due to the possibility of damaging refrigerant coils from invasive drilling. Subsequent to the initial field investigation, it was determined that drilling could be performed in a manner that was protective of the refrigerant coils. This was the primary impetus for the supplemental field investigation.

The soil investigation included three soil borings in the concourse area to the south of the existing rink and north of the bathhouse and swimming pool. These boring locations were identified as I13, I14 and J11, and were each completed to a depth of 10 feet below grade. Although these borings are not within the designated Construction Area, they were included in the IRM to characterize the soils which may require excavation to facilitate installation of drainage piping and/or utilities.

Ten soil borings were advanced to a maximum depth of 10 feet below grade at the south end of the Park in the general vicinity of the playground. This area was investigated as part of the IRM to characterize the soils which may require excavation to facilitate the installation of new drainage piping. The actual boring locations were outside the inner fence surrounding the playground. The investigated area surrounding the playground is also enclosed by fencing, and the area between the two fences is not accessible to the public. Investigation activities were not performed as part of the IRM within the playground itself, which remains open to the public. The playground area had been previously investigated by Northrop Grumman Corporation^{1,2}. Surface and near surface soils were remediated in the playground area during a remodeling of the playground in 2004.

The supplemental soil investigation was conducted under the direction of H2M during the period of September 21, 2005 through September 29, 2005, excluding weekends. In a manner similar to the initial IRM field investigation, the supplemental soil investigation included shallow borings, advanced to a maximum depth of 10 feet below grade utilizing direct-push drilling

² Dvirka and Bartilucci, March 2002, Town of Oyster Bay Bethpage Community Park Soil Sampling Program.

methods, and deep borings, advanced to a maximum depth of 60 feet below grade utilizing hollow stem auger drilling methods. As specified in the IRM Work Plan, sampling was typically performed continuously in two-foot intervals from grade to 10 feet below grade. From 10 feet below grade to 60 feet below grade, sampling was performed in two-foot cores at 10 foot intervals, i.e. 18-20, 28-30, 38-40, etc. Drilling services were provided by Universal Testing & Inspection Services (Universal) of West Babylon, New York.

Shallow soil probes were advanced as 2-inch diameter by 4-foot long “macro-core” barrels fitted with a cutting shoe and disposable acetate liner. Soil samples from deep borings were retained using 2-foot split spoon samplers. Between sampling intervals, all non-disposable sampling equipment was decontaminated in accordance with the IRM Quality Assurance Project Plan. Non-disposable drilling equipment was decontaminated between boring locations. All collected soil samples were visually inspected, characterized and screened with a portable photoionization detector (PID) for evidence of contamination. Copies of soil boring logs are provided in Appendix A. All retained soil samples were analyzed for PCBs and RCRA metals. At least one sample from each boring location was also analyzed for an expanded list of parameters including Target Analyte List (TAL) metals (including hexavalent chromium and cyanide), Target Compound List (TCL) VOCs and TCL SVOCs. During the deep soil borings in the ice rink area, three additional samples from increasing depths were also analyzed for VOCs to serve as a vertical profile of potential contamination. Blind duplicate, matrix/matrix spike duplicates, field blank and trip blank samples were also collected and analyzed in accordance with standard QA/QC procedures. Analytical services were provided by H2M Labs following Contract Laboratory Protocols (CLP) for NYSDEC ASP Category B deliverables.

3.3 Soil Vapor Sampling

A supplemental soil vapor sampling program was implemented in the area of the current ice rink to better characterize VOCs that were identified during the initial IRM field investigation. Soil vapor samples were collected in three locations within the ice rink, i.e., R1, R3 and R6, and at three depths to serve as vertical profiles. The soil vapor sampling program also included the collection and analysis of an ambient sample for each field day that soil vapor samples were collected.

Soil vapor borings samples were collected with a post run tubing system using Summa canisters fitted with flow restrictors to provide a sampling flow of not greater than 0.2 liters per minute. The tubing systems were discarded after each use. Each collected sample was submitted to Severn Trent Laboratories, Inc. (STL Burlington) in Colchester, VT and analyzed for Target Compound List VOCs via EPA Method TO-15.

3.4 Monitoring Well Installation and Sampling

A new groundwater monitoring well was installed as part of the supplemental IRM field investigation under the direction of H2M. The monitoring well, identified as CAMW-5, was completed on September 22, 2005. The monitoring well was installed in the northeast portion of the Construction Area to serve as an additional upgradient well and permit increased precision in the generation of a potentiometric groundwater surface map in the Construction Area. The monitoring well location is shown on Figure 2.

The monitoring well installation work was conducted utilizing a hollow stem auger drill rig provided by Universal. Each well was constructed of 4" diameter Schedule 40 PVC piping with 20-feet of 0.01-inch slot screen in accordance with the Work Plan and utilizing generally accepted NYSDEC protocols for monitoring well installations. The well was finished with a locking cap and flush mounted road box. Upon completion of the monitoring well installation, the well was properly developed using a Grundfos® submersible pump in accordance with the Work Plan and generally accepted NYSDEC protocols. A copy of the well construction diagram is provided in Appendix B.

A groundwater sample was collected from monitoring well CAMW-5 on October 4, 2005 by H2M. The groundwater sampling was performed in accordance with US EPA 540/S-95/504 Low-Flow (Minimal Drawdown) Groundwater Sampling Procedure. The groundwater sample was analyzed for PCBs, metals including hexavalent chromium, VOCs, SVOCs and cyanide. In addition, a blind duplicate, matrix/matrix spike duplicate, field blank and trip blank were collected and analyzed in accordance with standard QA/QC procedures.

3.5 Community Air Monitoring

In accordance with the Work Plan, a community air monitoring program (CAMP) was implemented for the duration of the supplemental IRM field investigation during all ground intrusive activities. The CAMP was based on the New York State Department of Health Generic Community Air Monitoring Plan as referenced in the approved project Work Plan and included regular monitoring of VOCs and particulates. Equipment utilized as part of the CAMP included portable photoionization detectors (Photovac Pro 2020) for VOCs and TSI Dust Traks for particulates. The TSI Dust Traks were fitted with environmental enclosures and visual alarm indicators.

Monitoring was performed at upwind and downwind locations from each drilling or sampling area, which were typically 30-50 feet away. The upwind or background measurements were recorded prior to the initiation of intrusive activity. All measurements were logged on pre-printed forms. Downwind measurements were recorded hourly. As recommended by the NYSDOH, a threshold of 5 parts per million (ppm) over background was utilized for VOC measurements. At no point during the duration of the IRM field investigation activities did the VOC monitoring detect any airborne concentration of VOCs.

Particulates were monitored continuously during the field investigation although documented hourly on the pre-printed log forms. The NYSDOH recommends an initial airborne dust threshold of 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for comparison of downwind to upwind airborne dust levels. The visual alarm indicators on the particulate monitors were programmed to alarm at $100 \mu\text{g}/\text{m}^3$ to provide an early indication of possible dust migration. At no point during the IRM field investigation did the downwind airborne dust concentration exceed the upwind level by $100 \mu\text{g}/\text{m}^3$. For the duration of the IRM field investigation, dust measurements in both upwind and downwind locations were typically between 10 and $50 \mu\text{g}/\text{m}^3$.

In consideration of the community air monitoring results, it is H2M's opinion that no off-site receptors were adversely impacted by elevated airborne VOC or dust contaminants related to the IRM field work activities.

4.0 NATURE AND EXTENT OF CONTAMINATION

The supplemental IRM field investigation included soil, soil vapor and groundwater sampling. The findings of the sampling program are provided within this section.

4.1 Standards, Criteria and Guidelines (SCG)

To assess the soil sampling analytical data, the laboratory results were compared to the Recommended Soil Cleanup Objectives (RSCOs), as presented in New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) #4046 entitled “Determination of Soil Cleanup Objectives and Cleanup Levels,” April 1995. With regards to metals, the TAGM RSCOs identify a specific cleanup objective concentration for mercury, cadmium and chromium. All other metal contaminants are identified with “site background” or given “site background” as an option for the RSCO. In these cases, the upper range of the TAGM-identified Eastern USA Regional Background Concentration was used as the cleanup objective.

For assessment of groundwater sampling analytical data, the laboratory results were compared to the applicable NYSDEC Class GA groundwater and effluent standards as presented in 6 NYCRR Part 703; Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations, amended August 1999.

With regards to soil vapor sampling and subsurface vapors, the State of New York has not promulgated specific standards, criteria or guidance values for concentrations of compounds in subsurface vapors, as reported in the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, February 2005 Public Comment Draft. However, the NYSDOH guidance document offers decision making matrices to serve as risk management tools for evaluating soil vapor entering buildings. Although the matrices were developed for trichloroethylene (TCE) and tetrachloroethylene (PCE), these matrices were considered when evaluating the soil vapor data collected as part of this investigation. As recommended within the NYSDOH guidance document, soil vapor sampling

results were also evaluated individually, compared with background outdoor air levels and reviewed “as a whole” to identify trends and special variations in the data.

4.2 Soil Investigation Findings

The supplemental IRM soil investigation in the Bethpage Community Park Construction Area included 16 shallow soil borings advanced to a maximum of 10 feet below grade and three soil borings advanced to 60 feet below grade. All collected samples were analyzed for PCBs and RCRA metals. Additionally, at least one set of samples from each boring were analyzed for an expanded list of parameters comprising TAL metals (including cyanide and hexavalent chromium), TCL VOCs, and TCL SVOCs. Three samples from each of the three deep borings within the rink area were also analyzed for VOCs.

Analytical services were provided by H2M Labs, Inc., a New York ELAP approved and ASP certified laboratory. Analytical results were presented as a NYSDEC ASP Category B data package that documented the quality of the analytical work. As part of the soil sampling program, Quality Assurance/Quality Control (QA/QC) samples were collected including trip blanks, field blanks, blind duplicates, and matrix spike/matrix spike duplicates (MS/MSDs).

Soil sampling results from the supplemental IRM field investigation are summarized in Tables 4.2.1, 4.2.2, 4.2.3 and 4.2.4 for PCBs, metals (including cyanide and hexavalent chromium), VOCs and SVOCs, respectively. In Table 4.2.1, all sampling results with a PCB concentration greater than 1 mg/kg are identified in bold. The NYSDEC TAGM 4046 Recommended Soil Cleanup Objective (RSCO) is 1 mg/kg for surface soils and 10 mg/kg for subsurface soil samples. As with the initial IRM investigation, the RSCO of 1 mg/kg for surface soils was used as the cleanup objective for all soils to a depth of 10 feet below grade. PCBs were identified above a concentration of 1 mg/kg in six of the 19 soil borings conducted as part of the supplemental investigation, and were detected in the vicinity of the playground only. No PCBs were detected in the general vicinity of the existing ice rink. The highest PCB concentration was detected at soil boring O4 at a depth of 2-4 feet below ground at a concentration of 100 mg/kg. The vertical extent of contamination in this location could not be properly delineated due to drill rig refusal at 4 feet below grade. The O4 boring location had already been moved

two feet west due to refusal, which was encountered in the initial location at a depth of 2 feet below ground. The other PCB concentrations in the vicinity of the play ground ranged from 1.06 at Q4 (4-6) to 34.3 mg/kg at Q9 (0-2). A site plan showing all PCBs detected at concentrations above 1 mg/kg is provided as Figure 3.

Soil sampling results for metals are summarized in Table 4.2.2. Metal concentrations exceeding the NYSDEC RSCOs are identified in bold and included arsenic, cadmium, chromium (both total and hexavalent), mercury, and zinc. All metals detected at concentrations above their respective RSCOs are shown in Figure 3. The highest concentration of mercury was detected at boring location O9 (2-4) at 3.4 mg/kg. For reference, the NYSDEC RSCO for mercury is 0.1 mg/kg. Hexavalent chromium was detected in two locations at concentrations of 65 mg/kg (Q4 (8-10)) and 140 mg/kg (P9 (8-10)). The RSCO for total chromium is 50 mg/kg.

Cyanide soil sampling results are provided in Table 4.2.2 with the metals results. The NYSDEC TAGM 4046 does not identify a RSCO for cyanide considering the stability of cyanide is dependent on the chemical form. Cyanide was detected in one location (P9 (8-10)) at a concentration of 1.5 mg/kg.

Soil sampling results for VOCs are summarized in Table 4.2.3. VOCs were either non-detectable or less than the NYSDEC RSCOs in all samples collected as part of the supplemental IRM site investigation.

Semi-volatile organic compound soil sampling results are summarized in Table 4.2.4. Semi-volatile organics were detected in three of the 19 boring locations at concentrations above the RSCOs. The semi-volatile contaminants that exceeded their individual RSCOs were predominantly polycyclic aromatic hydrocarbons and included benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. However, not all of these contaminants were detected at each location. The NYSDEC TAGM 4046 recommends a comparison of individual compounds with their respective RSCOs. A cumulative total SVOC concentration maximum of 500 mg/kg is also recommended, when individual contaminant concentrations are

not known. The cumulative total of SVOC concentrations did not exceed 500 mg/kg in any boring location or sample. A summary of the SVOC impacts detected above the RSCOs is shown on the site plan provided as Figure 3.

4.3 Soil Vapor Sampling Results

The supplemental IRM field investigation included soil vapor sampling in three boring locations, i.e., R1, R3 and R6, and at three depths within each boring, i.e., 8-10 feet or 10-12 feet, 28-30 feet and 48-50 feet. The soil vapor samples were all analyzed for TCL VOCs. The sampling locations were selected based on the results of the initial IRM field investigation which identified select VOCs including dichlorodifluoromethane (Freon-12) in soil vapor samples collected in the vicinity of the existing ice rink. Furthermore, information was obtained indicating that there were two historical failures in the integrity of the refrigerant coils beneath the ice rink surface. These failures had been repaired by Town personnel, however, their locations were investigated as part of this effort (via borings R1 and R3). The soil vapor sampling results are summarized in Table 4.3.1.

As discussed in Section 4.1, the State of New York has not promulgated any standards, criteria or guidance values with regards to soil vapor concentrations. The soil vapor sampling results shown in Table 4.3.1 are compared with ambient/background outdoor air levels, which were collected on each day of soil gas sampling. As shown, soil vapor concentrations exceeded ambient volatile organic compound conditions in all locations. Detected organics were predominantly 2,2,4-trimethylpentane, carbon disulfide, dichlorodifluoromethane, methyl ethyl ketone (2-butanone), isopropyl alcohol, and toluene. It should be noted that none of the detected organics were identified in the soil samples.

No vertical profile trends are discernable in the soil vapor data provided in Table 4.3.1 for borings R1, R3 and R6. For example, in location R1, the concentration of dichlorodifluoromethane decreases with increasing depth. At R1, the concentration of dichlorodifluoromethane is 590,000 $\mu\text{g}/\text{m}^3$ at 10-12 feet below grade compared with 44,000 $\mu\text{g}/\text{m}^3$ at a depth of 48-50 feet below grade. At R3, the concentration of dichlorodifluoromethane increases from 48,000 $\mu\text{g}/\text{m}^3$ at 8-10 feet below grade to 190,000

$\mu\text{g}/\text{m}^3$ at 28-30 feet, then decreases to 110,000 at 48-50 feet below grade. At R6, the concentrations for dichlorodifluoromethane are 64,000 $\mu\text{g}/\text{m}^3$, 10,000 $\mu\text{g}/\text{m}^3$ and 28,000 $\mu\text{g}/\text{m}^3$ for sampling depths comparable with R3. Similar variations are noted for the other detected VOCs. Based on the soil vapor sampling results, there does not appear to be a current “source area” for the detected soil vapors considering 1) there are no current refrigerant leaks at the ice rink, 2) the soil vapor concentrations vary with depth with no apparent trend, and 3) no VOCs were detected in the soil samples.

During the initial IRM field investigation, the compound chlorodifluoromethane (freon-22) was detected at a concentration of 200 $\mu\text{g}/\text{L}$ in the groundwater at monitoring well CAMW-4, located on the south side of the existing skating rink. Chlorodifluoromethane was not detected in the soil or soil vapor samples collected beneath the ice rink during this supplemental IRM investigation. It should be noted that chlorodifluoromethane was included as an analyte for analysis during the supplemental soil investigation. As previously mentioned, the soil vapor analytical services were provided by Severn Trent (STL). The STL analyte list for analytical method TO-15 for TCL VOCs does not include chlorodifluoromethane. However, according to STL, chlorodifluoromethane would be specifically identified as a TIC (tentatively identified compound) during the analysis, if present.

4.4 Groundwater Sampling Results

The supplemental IRM field investigation at the Bethpage Community Park included the installation and sampling of one monitoring well. The well is identified as CAMW-5. Well installation and sampling details were provided in Section 3.4. The well was sampled for PCBs, TAL metals (including cyanide and hexavalent chromium), VOCs and SVOCs. A summary of the analytical results for these analyses are provided in Tables 4.4.1 through 4.4.4. For comparison purposes, the sampling results from the initial IRM field investigation for monitoring wells CAMW-1 through CAMW-4 are included in the tables.

No PCBs were detected in the groundwater sample collected from monitoring well CAMW-5, as shown in Table 4.4.1. Groundwater sampling for metals are shown in Table 4.4.2. Only sodium was detected at a concentration above the NYSDEC Class GA Groundwater Quality Standards.

Sodium was detected at a concentration of 44,300 µg/L, which exceeds the Class GA Standard of 20,000 µg/L. Sodium was detected at comparable concentrations in monitoring wells CAMW-1 through CAMW-4 during the initial IRM investigation. Due to its relatively benign nature, sodium impacts are not considered significant to this IRM program.

Volatile organic compound groundwater sampling results are presented in Table 4.4.3. As shown, no VOCs were identified at monitoring well CAMW-5. As summarized in Table 4.4.4, analytical results for SVOCs indicate that all compounds were present at concentrations below their respective method detection limits.

Utilizing the new monitoring well, an updated monitoring well survey was conducted to define the site specific groundwater flow direction. Results of the well survey and associated groundwater contours are depicted on Figure 4 (Supplemental IRM Investigation Potentiometric Groundwater Surface Map).

The shallow groundwater in the vicinity of the Bethpage Community Park flows in a south-southeasterly direction. An assessment of potential impacts to the shallow groundwater underlying the Construction Area from possible on-site contaminant source areas was performed and previously reported in the IRM Investigation Report & Remedial Action Plan based on monitoring wells CAMW-1 through CAMW-4. However, due to the monitoring well locations and the groundwater flow direction, monitoring well CAMW-4 was not well positioned for comparison with upgradient well CAMW-1. Based on the groundwater contours in Figure 4, CAMW-5 may be considered an upgradient well with respect to CAMW-4.

As discussed earlier in this section, no PCBs, VOCs or SVOCs were detected at monitoring well CAMW-5. With regards to metals, only sodium was detected above NYSDEC Class GA Groundwater Standards. The concentrations of sodium at CAMW-5 and downgradient at CAMW-4 were nearly identical, i.e., 44,300 µg/L at CAMW-5 compared with 44,200 µg/L at CAMW-4. Sodium, however, is not typically considered a significant environmental concern.

The volatile organic compounds 1,2-dichloroethene and trans-1,3 dichloropropene were detected at low concentrations in monitoring well CAMW-4. Chlorodifluoromethane was also detected at a concentration of 200 µg/L. These compounds were not detected in upgradient well CAMW-5 indicating a possible on-site source or historical on-site source. The soil and soil vapor investigation components of the initial and supplemental IRM investigations did not identify any existing on-site source areas for these compounds.

5.0 QA/QC SAMPLING & DATA VALIDATION

This section summarizes the quality assurance/quality control (QA/QC) procedures used during the field investigation, data validation results and data usability.

5.1 Field Investigation QA/QC

QA/QC procedures for the supplemental field investigation activities as well as all laboratory work were consistent with the procedures identified in the NYSDEC approved Work Plan for the initial IRM investigation. The purpose of establishing and following strict field and laboratory specific procedures was to ensure that the data collected was precise, accurate, representative, complete and comparable.

The field QA/QC procedures included the use of specially developed forms and logs for the collection of repetitive data such as soil and groundwater sampling, and community air monitoring. In addition, QA/QC procedures stipulated in the Work Plan such as Chain-of-Custody procedures, field measurement requirements, QA/QC sample collection, etc., were followed.

In order to meet project-specific Data Quality Objectives (DQOs), various types of QA/QC blank and duplicated samples were collected and analyzed. These QA/QC samples included trip blanks, field blanks and blind duplicate samples.

Trip Blanks

Trip blanks containing distilled and de-ionized water from the analytical laboratory were transported to the site and returned without opening. Trip blanks serve as a check for potential contamination from volatile organic compounds that may originate from sample transport, shipping and/or from site conditions. Trip blanks were collected during the supplemental field investigation at the rate of one per day. All trip blanks were analyzed for VOCs. The analytical results are summarized in Table 5.1.1. As shown, no VOCs were detected in any trip blank. Therefore, it is unlikely that any of the samples collected during the field investigation were impacted by sample transport and shipping.

Field Blanks

Field blanks, also identified as equipment blanks, were used to determine if field sampling or sampling equipment decontamination procedures resulted in cross-contamination of site samples. Field blanks were collected at a rate of one per sample delivery group (SDG, i.e., up to 20 samples) by pouring distilled and deionized water through or over the sampling equipment following cleaning. Field blank samples were analyzed for PCBs, TAL metals including hexavalent chromium and cyanide, TCL VOCs and TCL SVOCs. The field blanks were collected during soil sampling, which was performed by split-spoon sampling or direct-push drilling core barrel sampling, and during groundwater sampling.

The analytical results for field blanks were reviewed by the independent data validator and are reported in the Data Usability Summary Report. As reported in the data validation report, methylene chloride was detected in the method blank and field blanks at low concentrations similar to those detected in the project samples. Accordingly, the detection of methylene chloride was recommended to be disregarded.

Blind Duplicates

Blind duplicate samples were utilized as an additional QA/QC measure to assess the accuracy and repeatability of field procedures and laboratory analytical procedures. Duplicate samples were collected and labeled with a fictitious identifier known only to the samplers and those responsible for data interpretation. The analytical laboratory was not aware of the precise

sampling location. Field blanks were submitted to the analytical laboratory in an identical manner as all other samples, and were documented on the chains of custody. Sample collection times were not provided on the chains of custody for the blind duplicate samples.

Blind duplicate samples were analyzed for PCBs and RCRA metals. Analysis of the blind duplicate samples did not include the expanded list of metals (i.e., TAL metals), cyanide, hexavalent chromium, VOCs or SVOCs, as specified in the NYSDEC approved Work Plan. All soil samples collected during the supplemental field investigation were analyzed for PCBs and RCRA metals. The expanded list of analytical parameters was reserved to a minimum of one sample per boring location based on field screening results. Analysis of the blind duplicates for the expanded list of parameters would have reduced the effective “blind” nature of these duplicate samples.

According to the Data Usability Summary Report, all results for blind field duplicate correlation were within acceptable limits.

5.2 Data Validation

All of the CLP analytical data packages and results generated as part of this supplemental IRM investigation underwent independent data validation. A total of 6 analytical data packages or sample delivery groups (SDGs) were generated as part of the supplemental soil investigation, and one sample delivery group (SDG #46) was generated during groundwater sampling. Analytical services for soil and groundwater samples were provided by H2M Labs, Inc., a New York ELAP approved and ASP certified laboratory. Soil vapor sampling results were provided as one data package by Severn Trent Laboratories (STL Burlington).

Independent data validation was provided by Data Validation Services of North Creek, New York. Methodologies utilized were those of the 1995 NYSDEC ASP. The Data Usability Summary Report is included in Appendix C.

As per NYSDEC CLP procedures, the concentrations and data qualifiers shown on the summary analytical tables referenced in Section 4.0 have been edited to reflect minor recommendations

made during the validation process. The analytical results presented in the data summary tables report validated data, which are applicable for use in health-based risk assessments. The data validation was performed following NYSDEC Analytical Services Protocol (ASP) guidelines.

6.0 SUMMARY & CONCLUSIONS

6.1 Site Investigation Summary

The supplemental IRM site investigation, which consisted of soil, groundwater and soil vapor sampling, served to further characterize the nature and extent of contamination within the Construction Area at the Bethpage Community Park. Areas investigated during the supplemental field investigation included the current ice rink area, the concourse area to the south of the rink but north of the bath house/swimming pool, and a perimeter area surrounding the playground to the south of the Construction Area.

The data obtained during the supplemental investigation, as summarized within this section, has been used to revise the proposed Remedial Action Plan, which was previously prepared (Investigation Report & Remedial Action Plan, November 2005), so as to include additional areas that likely require excavation to facilitate site redevelopment. The results of the supplemental site investigation were presented in Section 4.0.

Contaminants including PCBs, metals and select SVOCs were identified at levels exceeding NYSDEC Recommended Soil Cleanup Objectives. No VOCs were identified above NYSDEC RSCOs in all areas investigated. PCBs were detected in some of the borings locations surrounding the playground. The predominant metals identified during the supplemental site investigation included chromium, mercury and zinc. SVOCs identified above NYSDEC guidance values were limited to polynuclear aromatic hydrocarbons (PAHs) and primarily included benzo(a)anthracene, benzo(a)pyrene and chrysene.

PCB contamination, as summarized in Table 4.2.1, was identified in some boring locations surrounding the playground in the southern portion of the Park. The highest PCB concentration

was detected at soil boring O4 at a depth of 2-4 feet below ground at a concentration of 100 mg/kg. Due to subsurface refusal at four feet below grade in this location, the vertical extent of contamination could not be properly delineated. The remaining PCB concentrations in the vicinity of the playground ranged from 1.06 at Q4 (4-6) to 34.3 mg/kg at Q9 (0-2). All PCBs detected at concentrations above 1 mg/kg were shown in Figure 3.

Sampling results for metals are summarized in Table 4.2.2. All metals detected at concentrations above their respective RSCOs are shown in Figure 3. The highest concentration of mercury was detected at boring location O9 (2-4) at 3.4 mg/kg. For reference, the NYSDEC RSCO for mercury is 0.1 mg/kg. Hexavalent chromium was detected in two locations at concentrations of 65 mg/kg (Q4 (8-10)) and 140 mg/kg (P9 (8-10)). The RSCO for total chromium is 50 mg/kg.

Cyanide soil sampling results are also provided in Table 4.2.2 with the metals results. The NYSDEC TAGM 4046 does not identify a RSCO for cyanide considering the stability of cyanide is dependent on the chemical form. Cyanide was detected in one location (P9 (8-10)) at a concentration of 1.5 mg/kg.

Semi-volatile organic compound soil sampling results are summarized in Table 4.2.4. Semi-volatile organics were detected in three of the 19 boring locations at concentrations above the RSCOs. The semi-volatile contaminants that exceeded their individual RSCOs included benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. However, not all of these contaminants were detected at each location. A summary of the SVOC impacts detected above the RSCOs is shown on the site plan provided as Figure 3.

Soil vapor sampling was performed as three vertical profile borings through the existing ice skating rink. Soil vapor data is provided in Table 4.3.1. Two of the profile borings were positioned in areas where refrigerant coils had been repaired. Detected organics were predominantly 2,2,4-trimethylpentane, carbon disulfide, dichlorodifluoromethane, methyl ethyl ketone (2-butanone), isopropyl alcohol, and toluene. Of these contaminants,

dichlorodifluoromethane was detected in all three borings. No discernable trends were noted in the concentrations of dichlorodifluoromethane and other organics with depth. It should also be noted that none of the detected organics were identified in the soil samples.

6.2 Impact of Supplemental Investigation on Proposed Remedial Strategy

The remedial action plan proposed in the Interim Remedial Measure Investigation Report & Remedial Action Plan (November 2005) was developed to be protective of human health, protective of the environment, and to facilitate redevelopment of a portion of the Bethpage Community Park by the Town of Oyster Bay. Past environmental investigations conducted at the Bethpage Community Park, on behalf of Northrop Grumman, documented contamination within the designated Construction Area. Investigative results documented in the Investigation Report & Remedial Action Plan and herein provide significantly greater detail relative to the impacts to the subject area. As previously reported, near-term plans for redevelopment at the site include the construction of a new indoor ice skating rink in the vicinity of the existing outdoor rink. Associated with the redevelopment will be reconfiguration of the site access and parking areas. In developing the remedial strategy, the near-term future use and potential future use of the subject area were considered.

As reported in the Investigation Report & Remedial Action Plan, a set of remedial strategy criteria were applied to the IRM investigation results to develop a remedial action plan. The remedial action plan provided for remediation of all contaminated surface and near surface soils to a depth of ten feet, remediation of contaminated fill areas identified from historical records, such as aerial photographs or site records and identified from soil classification information obtained during the IRM field investigation, and remediation of all source areas (impacted soils) affecting or having the potential to affect groundwater or soil vapor quality to NYSDEC recommended soil cleanup objective concentrations for subsurface soils.

Applying the results of the supplemental IRM investigation to the previously proposed remedial strategy criteria, a revised remedial excavation plan was developed and is shown as Figure 5. The revised remedial excavation plan does not alter the initial excavation plan, but only proposes the excavation of approximately 5,000 additional cubic yards of contaminated soil.

The additional excavation areas include a portion of the ice rink area, a portion of the concourse and a perimeter boundary area outside and around the playground to the south of the Construction Area. The area around the playground is not accessible to the public and outside the perimeter fence surrounding the playground. Investigation activities were not performed as part of the IRM within the playground itself, which remains open to the public. As previously reported, the playground area had been investigated by Northrop Grumman Corporation. Surface and near surface soils were remediated in the playground area during a remodeling of the playground in 2004.

All impacted soils that are excavated as part of the remediation effort will be transported off-site and disposed at a facility permitted to accept the contaminant concentrations identified during the IRM field investigations. All excavated soils will be replaced with clean fill and top soil, as necessary. All remedial excavation and backfilling will be coordinated with the site redevelopment and construction plan to minimize duplication of effort.

With regards to soil vapor, the proposed Remedial Action Plan recommended that any enclosed spaces contemplated as part of the proposed development activity include provision for soil vapor mitigation (i.e., prevention of soil vapor intrusion) as a design consideration. There are no changes to this recommendation based on the results of the supplemental IRM investigation given that no specific source for the soil vapor concentrations was identified.

Through the application of the remedial strategy criteria to the results of the supplemental IRM investigation, the recommendations of this supplemental investigation for additional remedial excavation are compliant with the conclusions of the Human Exposure Assessment presented within the November 2005 Interim Remedial Measure Investigation Report & Remedial Action Plan.

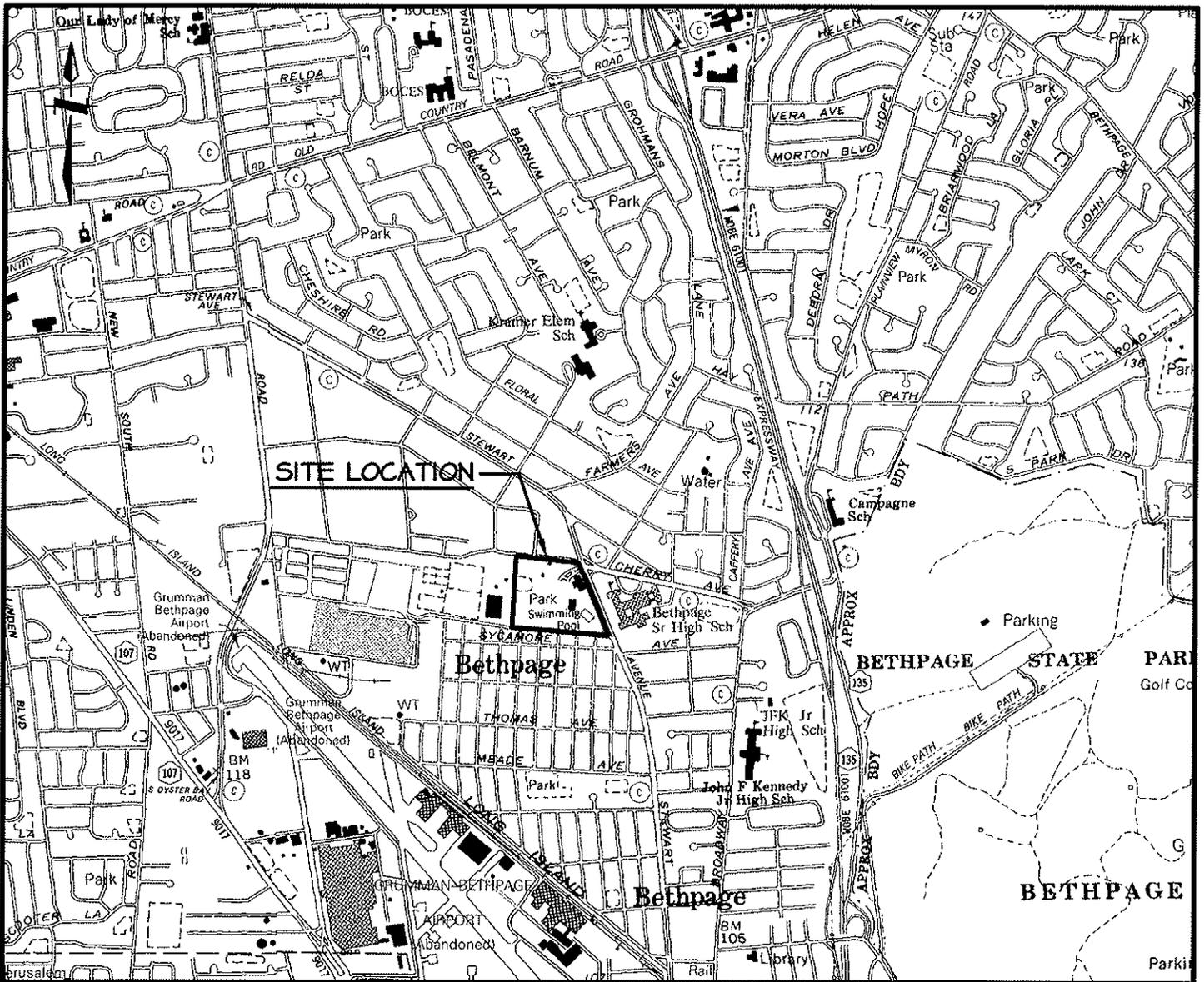


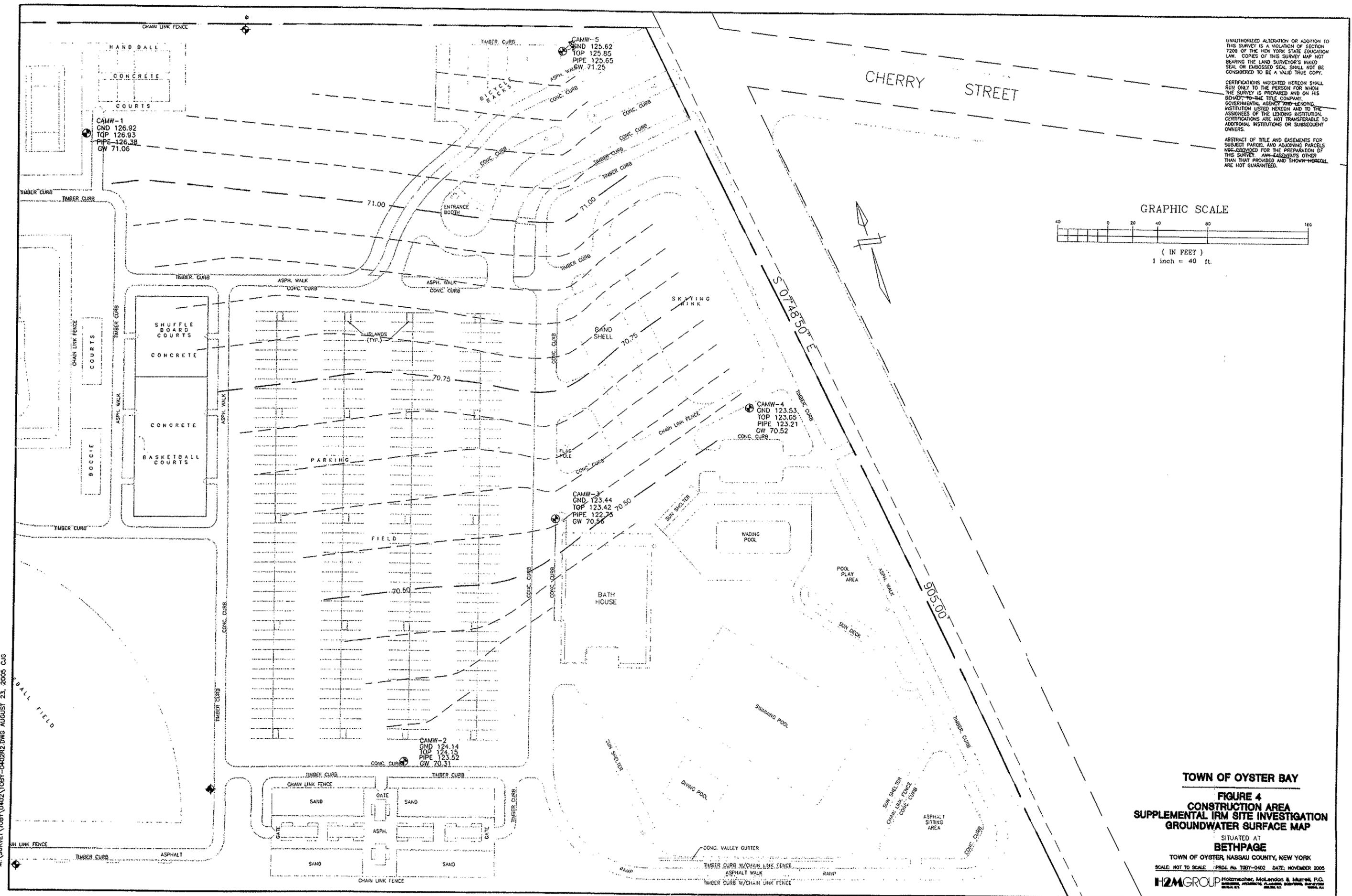
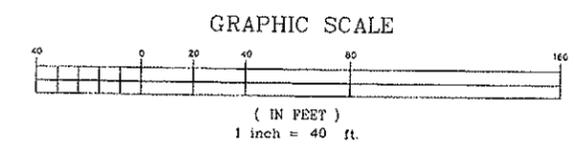
FIGURE I. SITE LOCATION

SCALE: 1" = 2000'

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TOWN OF OYSTER BAY

FIGURE 4
CONSTRUCTION AREA
SUPPLEMENTAL IRM SITE INVESTIGATION
GROUNDWATER SURFACE MAP

SITUATED AT
BETHPAGE
TOWN OF OYSTER, HASSAU COUNTY, NEW YORK

SCALE: NOT TO SCALE / PROJ. NO. T08Y-0402 / DATE: NOVEMBER 2005

H2M GROUP Holzmecher, McLendon & Murray, P.C.
REGISTERED PROFESSIONAL ENGINEERS, ARCHITECTS, PLANNERS, SURVEYORS, LANDSCAPE ARCHITECTS
NEW YORK, NY

M:\SURVE\T08Y\0402\T08Y-0402R2.DWG AUGUST 23, 2005 CUG

TABLE 4.2.1. SOIL SAMPLING RESULTS FOR PCBs

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	Boring R-1						Boring R-2							
		0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	6-8 (µg/kg)	8-10 (µg/kg)	18-20 (µg/kg)	28-30 (µg/kg)	38-40 (µg/kg)	48-50 (µg/kg)	58-60 (µg/kg)	0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	8-10 (µg/kg)
Aroclor 1016		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242		U	31 J	U	U	57	U	U	U	U	U	U	62	U	U
Aroclor 1248		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1254		U	U	U	U	U	U	U	U	U	U	U	U	34	U
Aroclor 1260		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total	1000/10000	U	31	U	U	57	U	U	U	U	U	U	23	96	U

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives. 1 mg/kg for surface soils. 10 mg/kg for subsurface soils.

D - Compound detected in an analysis at a secondary dilution factor.

J - Estimated Value.

P - Greater than 25% difference detected between concentrations on two Gas Chromatograph columns.

U - Compound not detected.

X - Aroclor compound may be partially masked by the presence of another Aroclor.

Z - Indicates compound may be biased high due to presence of another Aroclor.

TABLE 4.2.1 (continued). SOIL SAMPLING RESULTS FOR PCBs

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	Boring R-3						Boring R-4							
		0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	8-10 (µg/kg)	18-20 (µg/kg)	30-32 (µg/kg)	38-40 (µg/kg)	48-50 (µg/kg)	58-60 (µg/kg)	0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	6-8 (µg/kg)	8-10 (µg/kg)
Aroclor 1016		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242		U	U	U	U	U	U	U	U	U	U	U	U	U	30 J
Aroclor 1248		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1254		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1260		U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total	1000/10000	U	130	U	U	U	U	U	U	U	U	U	U	U	30

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives. 1 mg/kg for surface soils. 10 mg/kg for subsurface soils.

D - Compound detected in an analysis at a secondary dilution factor.

J - Estimated Value.

P - Greater than 25% difference detected between concentrations on two Gas Chromatograph columns.

U - Compound not detected.

X - Aroclor compound may be partially masked by the presence of another Aroclor.

Z - Indicates compound may be biased high due to presence of another Aroclor.

TABLE 4.2.1 (continued). SOIL SAMPLING RESULTS FOR PCBs

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	Boring O-4				Boring O-9				Boring P-4				Boring P-9			
		0-2	2-4	0-2	4-6	2-4	4-6	8-10	0-2	2-4	4-6	8-10	0-2	2-4	4-6	8-10	
Aroclor 1016		UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	
Aroclor 1221		U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Aroclor 1232		UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	
Aroclor 1242		220 P	100000 D	1800 D	320	220	300 P	300 P	180 JP	6500 D	200	74 P	3700 D	900 D	120	120	
Aroclor 1248		UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	UJX	
Aroclor 1254		230 JPZ	UJX	540 JZ	D	90 JZ	120 JZ	120 JZ	210 JP	1300 DJZ	U	63 JZ	510 JZ	210 JPZ	120	120	
Aroclor 1260		48	UJX	UJX	31 J	220	55	55	45	UX	U	47	30 J	67	75	75	
Total	1000/10000	498	100000	2340	540	341	475	475	435	7800	U	310	224	4210	1177	315	

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives. 1 mg/kg for surface soils. 10 mg/kg for subsurface soils.
 D - Compound detected in an analysis at a secondary dilution factor.
 J - Estimated Value.
 P - Greater than 25% difference detected between concentrations on two Gas Chromatograph columns.
 U - Compound not detected.
 X - Aroclor compound may be partially masked by the presence of another Aroclor.
 Z - Indicates compound may be biased high due to presence of another Aroclor.

TABLE 4.2.1 (continued). SOIL SAMPLING RESULTS FOR PCBs

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	Boring O-4				Boring O-5				Boring O-6			
		0-2	2-4	4-6	8-10	0-2	2-4	4-6	8-10	0-2	2-4	4-6	8-10
Aroclor 1016		UJX	UJX	UJX	UJX	U	U	U	U	UJX	U	U	U
Aroclor 1221		U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232		UJX	UJX	UJX	UJX	U	U	U	U	UJX	U	U	U
Aroclor 1242		190 JP	190	470	72	U	U	U	U	140 P	22 J	48	48
Aroclor 1248		UJX	UJX	UJX	UJX	U	U	U	U	UJX	U	U	U
Aroclor 1254		170 JPZ	500 P	350 JPZ	69 JPZ	23 J	17 PJ	17 PJ	U	110 JPZ	U	U	41 JZ
Aroclor 1260		82 P	400 P	240 P	80 P	61 P	29 PJ	29 PJ	41 P	69	U	U	21 PJ
Total	1000/10000	442	1090	1080	149	84	46	46	41	319	21	22	110

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives. 1 mg/kg for surface soils. 10 mg/kg for subsurface soils.
 D - Compound detected in an analysis at a secondary dilution factor.
 J - Estimated Value.
 P - Greater than 25% difference detected between concentrations on two Gas Chromatograph columns.
 U - Compound not detected.
 X - Aroclor compound may be partially masked by the presence of another Aroclor.
 Z - Indicates compound may be biased high due to presence of another Aroclor.

TABLE 4.2.1 (continued). SOIL SAMPLING RESULTS FOR PCBs

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	Boring Q-7				Boring O-8				Boring Q-9			
		0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	8-10 (µg/kg)	0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	8-10 (µg/kg)	0-2 (µg/kg)	2-4 (µg/kg)	4-6 (µg/kg)	8-10 (µg/kg)
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	83	230 JP	72	50 P	1100 D	440	440	240 P	U	28000 DP	1900 DP	5200 D	U
Aroclor 1248	U	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1254	300	200 P	67 P	50 P	450 JPZ	330 JPZ	170 JZ	U	U	6300 DJPZ	370 JPZ	1500 DJZ	U
Aroclor 1260	44 P	47	17 PJ	31 PJ	430	160	92	U	U	U	U	U	U
Total	1000/10000	427	477	156	131	1980	930	502	U	34300	6500	2270	6830

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046, Recommended Soil Cleanup Objectives. 1 mg/kg for surface soils. 10 mg/kg for subsurface soils.

D - Compound detected in an analysis at a secondary dilution factor.

J - Estimated Value.

P - Greater than 25% difference detected between concentrations on two Gas Chromatograph columns.

U - Compound not detected.

X - Aroclor compound may be partially masked by the presence of another Aroclor.

Z - Indicates compound may be biased high due to presence of another Aroclor.

**TOWN OF OYSTER BAY, B.L. HPAGE COMMUNITY PARK
INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
SUPPLEMENTAL SOIL INVESTIGATION**

TABLE 4.2.2. SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring R-1										Boring R-2					
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	6-8 (mg/kg)	8-10 (mg/kg)	18-20 (mg/kg)	28-30 (mg/kg)	38-40 (mg/kg)	48-50 (mg/kg)	58-60 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)		
Mercury	0.1	0.001 - 0.2	0.054	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Aluminum	SB	33,000				1590												
Antimony	SB	N/A				U												
Arsenic	7.5 or SB	3 - 12	0.61	0.61 B	U	U	U	0.63 B	U	0.63 B	U	1.2*	U	U	U	U	U	1.2
Barium	300 or SB	15 - 600	6.4	8.5 B	5.2 B	3.9 B	3.3 B	5.7 B	U	5.7 B	14.9 B	3.5 B	4.0 B	4.0 B	4.0 B	4.0 B	5.5 B	5.9 B
Beryllium	0.16 or SB	0 - 1.75				0.13 B												
Calcium	SB	130 - 35,000				43.8 B												
Cadmium	10	0.1 - 1	0.040	0.065 B	U	U	U	0.066 B	U	0.066 B	0.15 B	U	U	U	U	0.058 B	0.069 B	0.075 B
Chromium	50	1.5 - 40	3.6	7.4*	5.1*	2.5*	2.0*	7.2*	U	7.2*	19.1*	2.6*	2.0*	4.0*	4.0*	2.0*	8.5*	17.3*
Cobalt	30 or SB	2.5 - 60				1.3 B												
Copper	25 or SB	1 - 50				2.5 B												
Lead	2,000 or SB	2,000 - 950,000	1.3	1.9	1.2	4420*	0.81	0.99	0.81	0.99	4.5*	1.2*	0.66	2.9*	2.9*	0.66	0.83	0.73
Magnesium	400	200 - 500				179 B												
Manganese	SB	100 - 5,000				116 JN												
Nickel	SB	50 - 5,000				2.0 B												
Potassium	13 or SB	0.5 - 25				154 B												
Selenium	SB	8,500 - 43,000				U												
Silver	2 or SB	0.1 - 3.9	0.58	U	U	U	U	U	U	U	UJN	UJN	U	UJN	UJN	U	U	U
Sodium	SB	N/A	0.39	U	U	19.5 B												
Thallium	SB	6,000 - 8,000				U												
Vanadium	150 or SB	1 - 300				2.7 B												
Zinc	20 or SB	9 - 50				7.5 J*												
Chromium, hexavalent						U												
Cyanide						U												

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Parameter detected less than the Contract Required Detection Limit (CRDL) but greater than Instrumentation Detection Limit (IDL).

E - Reported value is estimated due to the presence of interference.

N - Matrix spike sample recovery not within control limits.

U - Parameter was analyzed for but not detected, i.e., less than IDL.

* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring R-3						Boring R-4						
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	18-20 (mg/kg)	30-32 (mg/kg)	38-40 (mg/kg)	48-50 (mg/kg)	58-60 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	6-8 (mg/kg)
Mercury	0.1	0.001 - 0.2	U	U	0.071 B	0.12	0.083 B	0.088 B	0.10 B	0.068 B	U	U	U	U	U
Aluminum	SB	33,000	2020	U	U	U	U	U	U	U	U	U	U	U	U
Antimony	SB	N/A	U	U	U	U	U	U	U	U	U	U	U	U	U
Arsenic	7.5 or SB	3 - 12	U	0.77 B	U	1.6*	10.9*	3.4*	UJN	5.5*	4.0	0.88 B	0.97 B	U	1.3
Barium	300 or SB	15 - 600	8.1 B	7.1 B	4.4 B	20.1 B	4.7 B	4.3 B	6.3 B	5.4 B	6.3 B	6.4 B	8.0 B	3.1 B	7.7 B
Beryllium	0.16 or SB	0 - 1.75	U	0.16 B	U	U	U	U	U	U	U	U	U	U	U
Calcium	SB	130 - 35,000	75.8 B	75.8 B	U	U	U	U	U	U	U	U	U	U	U
Cadmium	10	0.1 - 1	0.092 B	0.074 B	0.094 B	U	0.15 B	0.18 B	98.2 B	UJ	0.13 B	0.12 B	0.071 B	37.1 BEJ	0.092 B
Chromium	50	1.5 - 40	4.7*	8.7*	4.0*	6.2*	15.0*	35.2*	6.8*	4.1*	17.5*	8.3*	17.3*	1.2*	11.8*
Cobalt	30 or SB	2.5 - 60	U	1.2 B	U	U	U	U	0.44 B	U	U	U	U	U	U
Copper	25 or SB	1 - 50	U	2.4 B	U	U	U	U	2.9	U	U	U	U	U	U
Iron	2,000 or SB	2,000 - 550,000	1.6	3620*	1.3	1.5*	0.96*	0.35*	5360*	3.6*	1.6	1.2	1.0	1.2	1.1
Lead	400	200 - 500	U	2.5	U	U	U	U	2.0*	U	U	U	U	U	U
Magnesium	SB	100 - 5,000	340 B	340 B	U	U	U	U	31.0 B	U	U	U	U	U	U
Manganese	SB	50 - 5,000	54.1 JN	54.1 JN	U	U	U	U	18.1	U	U	U	U	U	U
Nickel	13 or SB	0.5 - 25	2.0 B	2.0 B	U	U	U	U	0.88 B	U	U	U	U	U	U
Potassium	SB	8,500 - 43,000	176 B	176 B	U	U	U	U	126 JBE	UJN	1.8	U	U	U	U
Selenium	2 or SB	0.1 - 3.9	U	U	U	U	U	U	UJN	U	U	U	U	U	U
Silver	SB	N/A	U	U	U	U	U	U	U	U	U	U	U	U	U
Sodium	SB	6,000 - 8,000	19.9 B	19.9 B	U	U	U	U	U	U	U	U	U	U	U
Thallium	SB	N/A	U	U	U	U	U	U	U	U	U	U	U	U	U
Vanadium	150 or SB	1 - 300	4.1 B	4.1 B	U	U	U	U	5.9	U	U	U	U	U	U
Zinc	20 or SB	9 - 50	9.1 J*	9.1 J*	U	U	U	U	5.0 JE*	U	U	U	U	U	U
Chromium, hexavalent			U	U	U	U	U	U	U	U	U	U	U	U	U
Cyanide			U	U	U	U	U	U	U	U	U	U	U	U	U

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

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E -- Reported value is estimated due to the presence of interference.

N -- Matrix spike sample recovery not within control limits.

U -- Parameter was analyzed for but not detected, i.e., less than IDL.

* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring R-5				
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	6-8 (mg/kg)	8-10 (mg/kg)
Mercury	0.1	0.001 - 0.2	U	0.060 B	U	0.081 B	0.072 B
Aluminum	SB	33,000		1620	1810	U	
Antimony	SB	N/A		U	U	U	
Arsenic	7.5 or SB	3 - 12	U	2.4	0.84 B	0.58 B	0.76 B
Barium	300 or SB	15 - 600	6.9 B	6.2 B	4.9 B	8.1 B	10.6 B
Beryllium	0.16 or SB	0 - 1.75			0.12 B	0.13 B	
Calcium	SB	130 - 35,000			170 B	452 B	
Cadmium	10	0.1 - 1	0.054 B	0.039 B	0.068 B	0.087 B	0.21 B
Chromium	50	1.5 - 40	3.8 *	3.5 *	6.3 *	11.5 *	15.4 *
Cobalt	30 or SB	2.5 - 60			2.0 B	2.0 B	
Copper	25 or SB	1 - 50			1.8 B	2.7	
Iron	2,000 or SB	2,000 - 550,000			4660 *	4690 *	
Lead	400	200 - 500	1.3	1.7	1.0	1.5	1.7
Magnesium	SB	100 - 5,000			215 B	328 B	
Manganese	SB	50 - 5,000			55.7 JN	48.5 JN	
Nickel	13 or SB	0.5 - 25			4.1 B	3.4 B	
Potassium	SB	8,500 - 43,000			185 B	257 B	
Selenium	2 or SB	0.1 - 3.9	U	U	U	U	U
Silver	SB	N/A	0.85 B	U	U	U	U
Sodium	SB	6,000 - 8,000			37.2 B	40.1 B	
Thallium	SB	N/A			U	U	
Vanadium	150 or SB	1 - 300			4.5 B	3.7 B	
Zinc	20 or SB	9 - 50			8.5 J*	9.2 J*	
Chromium, hexavalent					U	U	
Cyanide					U	U	

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Parameter detected less than the Contract Required Detection Limit (CRDL) but greater than Instrumentation Detection Limit (IDL).

E - Reported value is estimated due to the presence of interference.

N - Matrix spike sample recovery not within control limits.

U - Parameter was analyzed for but not detected, i.e., less than IDL.

* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring R-6											
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	6-8 (mg/kg)	8-10 (mg/kg)	20-22 (mg/kg)	28-30 (mg/kg)	38-40 (mg/kg)	48-50 (mg/kg)	58-60 (mg/kg)		
Mercury	0.1	0.001 - 0.2	U	U	U	0.073 B	0.077 B	0.074 B	0.075 B	0.074 B	0.075 B	0.074 B	0.086 B	0.083 B
Aluminum	SB	33,000				1430 EJ*								
Antimony	SB	N/A				0.34 UJN								
Arsenic	7.5 or SB	3 - 12	1.7	U	U	0.74 B*	0.78 B*	1.1*	1.0*	3.4*	1.0*	3.4*	7.9*	1.6*
Barium	300 or SB	15 - 600	5.8 B	6.4 B	5.6 B	4.5 B	4.8 B	7.7 B	5.1 B	4.6 B	5.1 B	4.6 B	6.1 B	5.5 B
Beryllium	0.16 or SB	0 - 1.75				0.10 B								
Calcium	SB	130 - 35,000				466 B								
Cadmium	10	0.1 - 1	0.070 B	0.080 B	0.052 B	0.040 B	0.042 B	UJ	U	0.15 B	U	0.15 B	0.19 B	U
Chromium	50	1.5 - 40	11.5*	5.8*	7.8*	3.6*	5.3*	9.6*	3.1*	19.7*	3.1*	19.7*	10.2*	5.4*
Cobalt	30 or SB	2.5 - 60				1.1 B								
Copper	25 or SB	1 - 50				1.9 B								
Iron	2,000 or SB	2,000 - 550,000				4760*								
Lead	400	200 - 500	1.2	1.3	1.0	1.6*	0.99*	0.78*	0.62*	1.4*	0.62*	1.4*	1.5*	1.9*
Magnesium	SB	100 - 5,000				215 B								
Manganese	SB	50 - 5,000				55.7								
Nickel	13 or SB	0.5 - 25				1.4 B								
Potassium	SB	8,500 - 43,000				144 JBE								
Selenium	2 or SB	0.1 - 3.9	U	U	U	0.55 UJN	UJN	UJN	UJN	UJN	UJN	UJN	UJN	UJN
Silver	SB	N/A	1.5	U	U	U	U	U	U	U	U	U	U	U
Sodium	SB	6,000 - 8,000				18.5 B								
Thallium	SB	N/A				4.2 B								
Vanadium	150 or SB	1 - 300				7.1 JE*								
Zinc	20 or SB	9 - 50				U								
Chromium, hexavalent						U								
Cyanide						U								

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

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E - Reported value is estimated due to the presence of interference.

N - Matrix spike sample recovery not within control limits.

U - Parameter was analyzed for but not detected, i.e., less than IDL.

* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring I-13				Boring I-14				Boring J-11			
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)
Mercury	0.1	0.001 - 0.2	U	U	U	U	U	U	U	U	U	U	U	U
Aluminum	SB	33,000												
Antimony	SB	N/A												
Arsenic	7.5 or SB	3 - 12	16.8 JN	0.47 BJN	0.82 BJN	0.58 BJN	0.58 BJN	0.96 B	U	U	0.40 BJN	2.6 JN	1.9 JN	1.3 JN
Barium	300 or SB	15 - 600	3.6 B*	5.4 B*	4.4 B*	4.2 B*	4.2 B*	3.1 B	U	U	4.0 B*	8.5 B*	9.4 B*	6.8 B*
Beryllium	0.16 or SB	0 - 1.75												
Calcium	SB	130 - 35,000												
Cadmium	10	0.1 - 1	JUN*	0.27 JBN*	JUN*	62.4 B*	62.4 B*	0.11 B	108 BEJ	107 JB*	3.1 JN*	UJN*	UJN*	0.12 BJN*
Chromium	50	1.5 - 40	35.4 JN*	41.0 JN*	2.7 JN*	1.6 JN*	1.6 JN*	0.13 B	16.8*	0.71 B	17.5*	17.6 JN*	18.2 JN*	22.2 JN*
Chromium	25 or SB	2.5 - 60												
Cobalt	25 or SB	1 - 50												
Copper	2,000 or SB	2,000 - 550,000												
Iron	400	200 - 500	1.1*	1.7*	1.3*	2710	2710	0.81	2670	2020	0.62	4.4*	5.6*	1.6*
Lead	SB	100 - 5,000												
Magnesium	SB	50 - 5,000												
Manganese	SB	50 - 5,000												
Nickel	13 or SB	0.5 - 25												
Potassium	SB	8,500 - 43,000												
Selenium	2 or SB	0.1 - 3.9	0.51	U	U	93.0 B	93.0 B	155 B	155 B	88.1 B	88.1 B	0.61	0.57	0.56
Silver	SB	N/A												
Sodium	SB	6,000 - 8,000												
Thallium	SB	N/A												
Vanadium	150 or SB	1 - 300												
Zinc	20 or SB	9 - 50												
Chromium, hexavalent														
Cyanide														

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Parameter detected less than the Contract Required Detection Limit (CRDL) but greater than Instrumentation Detection Limit (IDL).

E - Reported value is estimated due to the presence of interference.

N - Matrix spike sample recovery not within control limits.

U - Parameter was analyzed for but not detected, i.e., less than IDL.

* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring O-4				Boring Q-5				Boring Q-6			
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)
Mercury	0.1	0.001 - 0.2	0.077 B	0.094 B	0.13	U	0.11	0.12	U	0.057 B	0.12	0.063 B	0.12	0.064 B
Aluminum	SB	33,000				1320			UJN	5930				4430
Antimony	SB	N/A				UJN			UJN	UJN				UJN
Arsenic	7.5 or SB	3 - 12	3.6	2.0	2.9	0.43 B	2.1	4.0	1.3	2.9	3.1	0.59 B	3.8	2.6
Barium	300 or SB	15 - 600	40.4	71.1	53.9	16.1 B	21.9	28.9	12.4 B	23.9	23.0	26.8	26.8	22.3
Beryllium	0.16 or SB	0 - 1.75				UJ				0.16 B				0.12 B
Calcium	SB	130 - 35,000				170 B				305 B				482 B
Cadmium	10	0.1 - 1	2.9	0.62	1.2	0.12 B	0.12 B	0.38 B	UJ	0.28 B	0.71	0.49 B	U	0.37 B
Chromium	50	1.5 - 40	348 JN*	315 JN*	431 JN*	70.6 JN*	57.3 JN*	46.6 JN*	11.0 JN*	49.4 JN*	41.4 JN*	34.2 JN*	3.1 JN*	31.2 JN*
Cobalt	30 or SB	2.5 - 60				1.8 B				2.8 B				2.6 B
Copper	25 or SB	1 - 50				3.0 E*J				9.5 E*J				11.8 E*J
Iron	2,000 or SB	2,000 - 550,000				2880				8830				7260
Lead	400	200 - 500	32.2	22.6	29.5	6.1	11.3	36.4	5.1	13.6	21.4	22.0	2.3	16.3
Magnesium	SB	100 - 5,000				215 B				728				616
Manganese	SB	50 - 5,000				26.6 JN				75.9 JN				161 JN
Nickel	13 or SB	0.5 - 25				1.3 B				4.2				4.9
Potassium	SB	8,500 - 43,000				133 BEJ				268 BEJ				313 BEJ
Selenium	2 or SB	0.1 - 3.9	0.60	1.3	0.61	U	U	0.86	0.74	0.54	U	0.71	U	U
Silver	SB	N/A	2.3	0.59 B	0.75 B	U	U	U	U	0.27 B	2.7	1.8	U	1.4
Sodium	SB	6,000 - 8,000				15.7 B				21.9 B				24.4 B
Thallium	SB	N/A				U				0.66 B				0.42 B
Vanadium	150 or SB	1 - 300				3.3 B				11.3				8.9
Zinc	20 or SB	9 - 50				190				34.9				36.6
Chromium, hexavalent						65				1.5				U
Cyanide						U				U				U

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

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E - Reported value is estimated due to the presence of interference.

N - Matrix spike sample recovery not within control limits.

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* - Duplicate analysis is not within control limits.

TABLE 4.2.2 (continued). SOIL SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (mg/kg)	NYSDEC Eastern USA Background ⁽¹⁾ (mg/kg)	Boring O-7			Boring O-8			Boring O-9				
			0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)	8-10 (mg/kg)	0-2 (mg/kg)	2-4 (mg/kg)	4-6 (mg/kg)
Mercury	0.1	0.001 - 0.2	0.21	0.085 B	0.069 B	0.14	0.43	0.16	0.18	0.27	0.24	0.79	U
Aluminum	SB	33,000				4500							2180
Antimony	SB	N/A				UJN							UJN
Arsenic	7.5 or SB	3 - 12	5.3	2.2	1.4	4.0	5.2	7.8	10.6	6.5	6.0	4.9	1.6
Barium	300 or SB	15 - 600	28.7	31.2	13.3 B	23.0	29.7	35.8	60.4	24.2	20.8	21.0	15.9 B
Beryllium	0.16 or SB	0 - 1.75				0.14 B							0.17 B
Calcium	SB	130 - 35,000				1070							591
Cadmium	10	0.1 - 1	0.62	1.8	0.85	0.84	1.8	2.3	0.72	1.5	1.5	0.64	0.19 B
Chromium	50	1.5 - 40	44.6	12.9	7.6	19.8	54.7	78.1	25.1	32.5	38.5	21.0	8.3
Cobalt	30 or SB	2.5 - 60				2.4 B							2.5 B
Copper	25 or SB	1 - 50				21.7							5.6
Iron	2,000 or SB	2,000 - 550,000				8350							4880
Lead	400	200 - 500	17.1	11.4	6.2	24.0	29.8	30.4	34.0	22.1	19.6	35.3	5.4
Magnesium	SB	100 - 5,000				749							378 B
Manganese	SB	50 - 5,000				97.2 JN							192 JN
Nickel	13 or SB	0.5 - 25				4.2							2.5 B
Potassium	SB	8,500 - 43,000				197 BEJ							213 BEJ
Selenium	2 or SB	0.1 - 3.9	UN	UN	UN	UN	UN	UN	UN	0.63 JN	UN	UN	UN
Silver	SB	N/A	2.9	3.2	3.5	4.6	2.4	1.1	0.50 B	3.1	1.8	1.2	U
Sodium	SB	6,000 - 8,000				40.0 B							22.6 B
Thallium	SB	N/A				11.1							4.9 B
Vanadium	150 or SB	1 - 300				49.9							53.4
Zinc	20 or SB	9 - 50				U							U
Chromium, hexavalent						U							U
Cyanide						U							U

⁽¹⁾ New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

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TABLE 4.2.3. SOIL SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	R-1					R-2		R-3		
		2-4 ft (µg/kg)	6-8 ft (µg/kg)	8-10 ft (µg/kg)	28-30 ft (µg/kg)	48-50 ft (µg/kg)	2-4 ft (µg/kg)	8-10 ft (µg/kg)	2-4 ft (µg/kg)	30-32 ft (µg/kg)	48-50 ft (µg/kg)
1,1,1 Trichloroethane	800	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	600	U	U	U	U	U	U	U	U	U	U
1,1,2 Trichloroethane	600	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	200	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	400	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	100	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	300	U	U	U	U	U	U	U	U	U	U
1,2 Dichloropropane	300	U	U	U	U	U	U	U	U	U	U
2-Butanone	300	U	U	U	U	U	U	U	U	U	U
2-Hexanone	1000	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-Pentanone	200	U	U	U	4	U	U	U	U	U	U
Acetone	60	U	U	U	U	U	U	U	U	U	U
Bromochloromethane		U	U	U	U	U	U	U	U	U	U
Bromoforn		U	U	U	U	U	U	U	U	U	U
Bromomethane		U	U	U	U	U	U	U	U	U	U
Carbon Disulfide	2700	U	U	U	U	U	U	U	U	U	U
Carbon Tetrachloride	600	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	1700	U	U	U	U	U	U	U	U	U	U
Chlorodifluoromethane		U	U	U	U	U	U	U	U	U	U
Chloroethane	1900	U	U	U	U	U	U	U	U	U	U
Chloroform	300	U	U	U	U	U	U	U	U	U	U
Chloromethane		U	U	U	U	U	U	U	U	U	U
cis-1,3 Dichloropropene		U	U	U	U	U	U	U	U	U	U
Dibromochloromethane		U	U	U	U	U	U	U	U	U	U
Dibromodifluoromethane		JU	JU	JU	U	U	U	JU	U	U	U
Dichlorodifluoromethane	5500	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	100	10	10	10	10	10	10	10	10	10	10
Methylene chloride		U	U	U	U	U	U	U	U	U	U
Styrene	1400	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	1500	U	U	U	U	U	U	U	U	U	U
Toluene		U	U	U	U	U	U	U	U	U	U
trans-1,3 Dichloropropene	700	U	U	U	U	U	U	U	U	U	U
Trichloroethene	200	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	1200	U	U	U	U	U	U	U	U	U	U
Xylenes		10	10	10	14	10	10	12	10	10	10
Total	10000	10	10	10	14	10	10	12	10	10	10

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Analyte found in associated blank as well as sample and may indicate blank contamination.

D - Analyte detected in an analysis at a secondary dilution factor.

J - Estimated value.

U - Parameter was analyzed but was not detected.

TABLE 4.2.3 (continued). SOIL SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	R-4		R-5		R-6				
		6-8 ft (µg/kg)	4-6 ft (µg/kg)	4-6 ft (µg/kg)	6-8 ft (µg/kg)	2-4 ft (µg/kg)	6-8 ft (µg/kg)	8-10 ft (µg/kg)	28-30 ft (µg/kg)	48-50 ft (µg/kg)
1,1,1-Trichloroethane	800	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	600	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	200	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	400	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	100	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene	300	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	300	U	U	U	U	U	U	U	U	U
2-Butanone	1000	U	U	U	U	U	U	U	U	U
4-Methyl-2-Pentanone	200	U	U	U	U	U	U	U	U	U
Acetone	60	U	U	U	U	U	5	U	U	U
Benzene	2700	U	U	U	U	U	U	U	U	U
Bromodichloromethane	600	U	U	U	U	U	U	U	U	U
Bromoform	1700	U	U	U	U	U	U	U	U	U
Bromomethane	1900	U	U	U	U	U	U	U	U	U
Carbon Disulfide	300	U	U	U	U	U	U	U	U	U
Carbon Tetrachloride	2700	U	U	U	U	U	U	U	U	U
Chlorobenzene	600	U	U	U	U	U	U	U	U	U
Chlorodifluoromethane	1700	U	U	U	U	U	U	U	U	U
Chloroethane	1900	U	U	U	U	U	U	U	U	U
Chloroform	300	U	U	U	U	U	U	U	U	U
Chloromethane	2700	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	600	U	U	U	U	U	U	U	U	U
Dibromochloromethane	1700	U	U	U	U	U	U	U	U	U
Dichlorodifluoromethane	1900	U	U	U	U	U	U	U	U	U
Ethylbenzene	5500	U	U	U	U	U	U	U	U	U
Methylene chloride	100	U	U	U	U	U	U	U	U	U
Styrene	1400	U	U	U	U	U	U	U	U	U
Tetrachloroethene	1500	U	U	U	U	U	U	U	U	U
Toluene	700	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	200	U	U	U	U	U	U	U	U	U
Trichloroethene	1200	U	U	U	U	U	U	U	U	U
Vinyl chloride	10000	U	U	U	U	U	U	U	U	U
Xylenes	10000	U	U	U	U	U	U	U	U	U
Total		10	10	10	10	4	10	10	10	11

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #40-46.

B - Analyte found in associated blank as well as sample and may indicate blank contamination.

D - Analyte detected in an analysis at a secondary dilution factor.

J - Estimated value.

U - Parameter was analyzed but was not detected.

TABLE 4.2.3 (continued). SOIL SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	I-13	I-14	J-11	C-9	P-4	P-3	Q-4	O-5	Q-6	Q-7
		8-10 ft (µg/kg)	0-2 ft (µg/kg)	0-2 ft (µg/kg)	2-4 ft (µg/kg)	8-10 ft (µg/kg)					
1,1,1 Trichloroethane	800	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	600	U	U	U	U	U	U	U	U	U	U
1,1,2 Trichloroethane	200	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	400	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	100	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene	300	U	U	U	U	U	U	U	U	U	U
1,2 Dichloropropane	300	U	U	U	U	U	U	U	U	U	U
2-Butanone	1000	U	U	U	U	U	U	U	U	U	U
2-Hexanone	200	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-Pentanone	60	U	U	U	U	U	U	U	U	U	U
Acetone	2700	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	600	U	U	U	U	U	U	U	U	U	U
Bromoform	1700	U	U	U	U	U	U	U	U	U	U
Bromomethane	1900	U	U	U	U	U	U	U	U	U	U
Carbon Disulfide	300	U	U	U	U	U	U	U	U	U	U
Carbon Tetrachloride	2700	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	600	U	U	U	U	U	U	U	U	U	U
Chlorodifluoromethane	1700	U	U	U	U	U	U	U	U	U	U
Chloroethane	1900	U	U	U	U	U	U	U	U	U	U
Chloroform	300	U	U	U	U	U	U	U	U	U	U
Chloromethane	5500	U	U	U	U	U	U	U	U	U	U
cis-1,3 Dichloropropene	100	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	1400	U	U	U	U	U	U	U	U	U	U
Dichlorodifluoromethane	1500	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U
Methylene chloride	200	U	U	U	U	U	U	U	U	U	U
Styrene	1200	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	10000	U	U	U	U	U	U	U	U	U	U
Toluene	1400	U	U	U	U	U	U	U	U	U	U
trans-1,3 Dichloropropene	1500	U	U	U	U	U	U	U	U	U	U
Trichloroethene	700	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	200	U	U	U	U	U	U	U	U	U	U
Xylenes	1200	U	U	U	U	U	U	U	U	U	U
Total		10	10	10	20	11	45	10	29	20	12

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Analyte found in associated blank as well as sample and may indicate blank contamination.

D - Analyte detected in an analysis at a secondary dilution factor.

J - Estimated value.

U - Parameter was analyzed but was not detected.

TABLE 4.2.3 (continued). SOIL SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCS)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	O-8		O-9	
		8-10 (µg/kg)		8-10 (µg/kg)	
1,1,1 Trichloroethane	800	U	U	U	U
1,1,2,2-Tetrachloroethane	600	U	U	U	U
1,1,2 Trichloroethane	200	U	U	U	U
1,1-Dichloroethane	400	U	U	U	U
1,1-Dichloroethane	100	U	U	U	U
1,2-Dichloroethane	300	U	U	U	U
1,2-Dichloropropane	300	U	U	U	U
2-Butanone	1000	U	U	U	U
2-Hexanone	200	U	U	U	U
4-Methyl-2-Pentanone	60	U	U	U	U
Acetone	2700	U	U	U	U
Benzene	600	U	U	U	U
Bromodichloromethane	1700	U	U	U	U
Bromoform	1900	U	U	U	U
Bromomethane	300	U	U	U	U
Carbon Disulfide	2700	U	U	U	U
Carbon Tetrachloride	600	U	U	U	U
Chlorobenzene	1700	U	U	U	U
Chlorodifluoromethane	1900	U	U	U	U
Chloroethane	300	U	U	U	U
Chloroform	5500	U	U	U	U
Chloromethane	100	U	10	U	10
cis-1,3 Dichloropropene	1400	U	U	U	U
Dibromochloromethane	1500	U	U	U	U
Dichlorodifluoromethane	700	U	U	U	U
Ethylbenzene	200	U	U	U	U
Methylene chloride	1200	U	U	U	U
Styrene	10000	U	10	U	10
Tetrachloroethene	1400	U	U	U	U
Toluene	1500	U	U	U	U
trans-1,3 Dichloropropene	700	U	U	U	U
Trichloroethene	200	U	U	U	U
Vinyl chloride	1200	U	U	U	U
Xylenes	10000	U	10	U	10
Total					

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

B - Analyte found in associated blank as well as sample and may indicate blank contamination.

D - Analyte detected in an analysis at a secondary dilution factor.

J - Estimated value.

U - Parameter was analyzed but was not detected.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIATION MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL SOIL INVESTIGATION

TABLE 4.2.4. SOIL SAMPLING RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾ (µg/kg)	R-1	R-2	R-3	R-3	R-4	R-5
		6-8 ft	2-4 ft	2-4 ft	48-50 ft	6-8 ft	4-6 ft
		(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
1,2,4-Trichlorobenzene	3400	U	U	U	U	U	U
1,2-Dichlorobenzene		U	U	U	U	U	U
1,3-Dichlorobenzene	1600	U	U	U	U	U	U
1,4-Dichlorobenzene	8500	U	U	U	U	U	U
2,2'-oxybis(1-chloropropane)		U	U	U	U	U	U
2,4,5-Trichlorophenol	100	U	U	U	U	U	U
2,4,6-Trichlorophenol		U	U	U	U	U	U
2,4-Dichlorophenol	400	U	U	U	U	U	U
2,4-Dimethylphenol		U	U	U	U	U	U
2,4-Dinitrophenol	200 or MDL	U	U	U	U	U	U
2,4-Dinitrotoluene		U	U	U	U	U	U
2,6-Dinitrotoluene	1000	U	U	U	U	U	U
2-Chloronaphthalene		U	U	U	U	U	U
2-Chlorophenol	800	U	U	U	U	U	U
2-Methylnaphthalene	36400	U	U	U	U	U	U
2-Methylphenol	100 or MDL	U	U	U	U	U	U
2-Nitroaniline	430 or MDL	U	U	U	U	U	U
2-Nitrophenol	330 or MDL	U	U	U	U	U	U
3,3'-Dichlorobenzidine		U	U	U	U	U	U
3-Nitroaniline	500 or MDL	U	U	U	U	U	U
4,6-Dinitro-2-methylphenol		U	U	U	U	U	U
4-Bromophenyl-phenylether		U	U	U	U	U	U
4-Chloro-3-methylphenol	240 or MDL	U	U	U	U	U	U
4-Chloroaniline	220 or MDL	U	U	U	U	U	U
4-Chlorophenyl-phenylether		U	U	U	U	U	U
4-Methylphenol	900	U	U	U	U	U	U
4-Nitroaniline		U	U	U	U	U	U
4-Nitrophenol	100 or MDL	U	U	U	U	U	U
Acenaphthene	50000	U	U	U	U	U	U
Acenaphthylene	41000	U	U	U	U	U	U
Anthracene	50000	U	U	U	U	U	U
Benzo(a)anthracene	224 or MDL	U	U	U	U	U	U
Benzo(a)pyrene	61 or MDL	U	U	U	U	U	U
Benzo(b)fluoranthene	1100	U	U	U	U	U	U
Benzo(g,h,i)perylene	50000	U	U	U	U	U	U
Benzo(k)fluoranthene	1100	U	U	U	U	U	U
Bis(2-chloroethoxy)methane		U	U	U	U	U	U
Bis(2-chloroethyl)ether		U	U	U	U	U	U
Bis(2-ethylhexyl)phthalate		U	U	U	J	U	U
Butyl benzyl phthalate	50000	U	U	U	310	U	82
Carbazole		U	U	U	U	U	U
Chrysene	400	U	U	U	U	U	U
Dibenzo(a,h)anthracene	14 or MDL	U	U	U	U	U	U
Dibenzofuran	6200	U	U	U	U	U	U
Diethylphthalate	7100	U	U	U	J	140	U
Dimethylphthalate	2000	U	U	U	U	U	U
Di-n-butyl phthalate	8100	U	U	U	U	U	U
Di-n-octyl phthalate	50000	U	U	U	U	U	U
Fluoranthene	50000	U	U	U	U	U	U
Fluorene	50000	U	U	U	U	U	U
Hexachlorobenzene	410	U	U	U	U	U	U
Hexachlorobutadiene		U	U	U	U	U	U
Hexachlorocyclopentadiene		UJ	UJ	UJ	UJ	UJ	UJ
Hexachloroethane		U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	3200	U	U	U	U	U	U
Isophorone	4400	U	U	U	U	U	U
Naphthalene	13000	U	U	U	U	U	U
Nitrobenzene	200 or MDL	U	U	U	U	U	U
N-Nitroso-di-n-propylamine		U	U	U	U	U	U
N-Nitrosodiphenylamine		U	U	U	U	U	U
Pentachlorophenol	1000 or MDL	UJ	UJ	UJ	UJ	UJ	UJ
Phenanthrene	50000	U	U	U	U	U	U
Phenol	30 or MDL	U	U	U	U	U	U
Pyrene	50000	U	U	U	U	U	U
Total	500000	U	U	U	450	140	82

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

U – Parameter was analyzed but was not detected.

J – Estimated value.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL SOIL INVESTIGATION

TABLE 4.2.4 (continued). SOIL SAMPLING RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS (SVDCS)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾	R-5	R-6	I-13	I-14	J-11	O-9
		6-8 ft	6-8 ft	8-10 ft	0-2 ft	0-2 ft	2-4 ft
		(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
1,2,4-Trichlorobenzene	3400	U	U	U	U	U	U
1,2-Dichlorobenzene		U	U	U	U	U	U
1,3-Dichlorobenzene	1600	U	U	U	U	U	U
1,4-Dichlorobenzene	8500	U	U	U	U	U	U
2,2'-oxybis(1-chloropropane)		U	U	U	U	U	U
2,4,5-Trichlorophenol	100	U	U	U	U	U	U
2,4,6-Trichlorophenol		U	U	U	U	U	U
2,4-Dichlorophenol	400	U	U	U	U	U	U
2,4-Dimethylphenol		U	U	U	U	U	U
2,4-Dinitrophenol	200 or MDL	U	U	U	U	U	U
2,4-Dinitrotoluene		U	U	U	U	U	U
2,6-Dinitrotoluene	1000	U	U	U	U	U	U
2-Chloronaphthalene		U	U	U	U	U	U
2-Chlorophenol	800	U	U	U	U	U	U
2-Methylnaphthalene	36400	U	U	U	U	U	870
2-Methylphenol	100 or MDL	U	U	U	U	U	110
2-Nitroaniline	430 or MDL	U	U	U	U	U	U
2-Nitrophenol	330 or MDL	U	U	U	U	U	U
3,3'-Dichlorobenzidine		U	U	U	U	U	U
3-Nitroaniline	500 or MDL	U	U	U	U	U	U
4,6-Dinitro-2-methylphenol		U	U	U	U	U	U
4-Bromophenyl-phenylether		U	U	U	U	U	U
4-Chloro-3-methylphenol	240 or MDL	U	U	U	U	U	U
4-Chloroaniline	220 or MDL	U	U	U	U	U	U
4-Chlorophenyl-phenylether		U	U	U	U	U	U
4-Methylphenol	900	U	U	U	U	U	410
4-Nitroaniline		U	U	U	U	U	U
4-Nitrophenol	100 or MDL	U	U	U	U	U	U
Acenaphthene	50000	U	U	U	U	U	4700
Acenaphthylene	41000	U	U	U	U	U	1500
Anthracene	50000	U	U	U	U	U	8500
Benzo(a)anthracene	224 or MDL	U	U	U	U	U	17000
Benzo(a)pyrene	61 or MDL	U	U	U	U	U	16000
Benzo(b)fluoranthene	1100	U	U	U	U	U	21000
Benzo(g,h,i)perylene	50000	U	U	U	U	U	2900
Benzo(k)fluoranthene	1100	U	U	U	U	U	6500
Bis(2-chloroethoxy)methane		U	U	U	U	U	U
Bis(2-chloroethyl)ether		U	U	U	U	U	U
Bis(2-ethylhexyl)phthalate		U	U	140	U	U	1600
Butyl benzyl phthalate	50000	U	U	U	U	U	U
Carbazole		U	U	U	U	U	4700
Chrysene	400	U	U	U	U	U	17000
Dibenzo(a,h)anthracene	14 or MDL	U	U	U	U	U	1700
Dibenzofuran	6200	U	U	U	U	U	5100
Diethylphthalate	7100	U	83	1600	160	2600	1800
Dimethylphthalate	2000	U	U	U	U	U	U
Di-n-butyl phthalate	8100	U	U	U	U	U	U
Di-n-octyl phthalate	50000	U	U	U	U	U	U
Fluoranthene	50000	U	U	U	U	U	41000
Fluorene	50000	U	U	U	U	U	10000
Hexachlorobenzene	410	U	U	U	U	U	U
Hexachlorobutadiene		U	U	U	U	U	U
Hexachlorocyclopentadiene		U	U	U	U	U	U
Hexachloroethane		U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	3200	U	U	U	U	U	4400
Isophorone	4400	U	U	U	U	U	U
Naphthalene	13000	U	U	U	U	U	2300
Nitrobenzene	200 or MDL	U	U	U	U	U	U
N-Nitroso-di-n-propylamine		U	U	U	U	U	U
N-Nitrosodiphenylamine		U	U	U	U	U	U
Pentachlorophenol	1000 or MDL	U	U	U	U	U	U
Phenanthrene	50000	U	U	U	U	U	35000
Phenol	30 or MDL	U	U	U	U	U	280
Pyrene	50000	U	U	U	U	U	35000
Total	500000	U	83	1740	160	2600	239,370

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

U – Parameter was analyzed but was not detected.

J – Estimated value.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL SOIL INVESTIGATION

TABLE 4.2.4 (continued). SOIL SAMPLING RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾	P-4	P-9	Q-4	Q-5	Q-6	Q-7
		8-10 ft					
		(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
1,2,4-Trichlorobenzene	3400	U	U	U	U	U	U
1,2-Dichlorobenzene		U	U	U	U	U	U
1,3-Dichlorobenzene	1600	U	U	U	U	U	U
1,4-Dichlorobenzene	8500	U	U	U	U	U	U
2,2'-oxybis(1-chloropropane)		U	U	U	U	U	U
2,4,5-Trichlorophenol	100	U	U	U	U	U	U
2,4,6-Trichlorophenol		U	U	U	U	U	U
2,4-Dichlorophenol	400	U	U	U	U	U	U
2,4-Dimethylphenol		U	U	U	U	U	U
2,4-Dinitrophenol	200 or MDL	U	U	U	U	U	U
2,4-Dinitrotoluene		U	U	U	U	U	U
2,6-Dinitrotoluene	1000	U	U	U	U	U	U
2-Chloronaphthalene		U	U	U	U	U	U
2-Chlorophenol	800	U	U	U	U	U	U
2-Methylnaphthalene	36400	U	U	U	U	U	U
2-Methylphenol	100 or MDL	U	U	U	U	U	U
2-Nitroaniline	430 or MDL	U	U	U	U	U	U
2-Nitrophenol	330 or MDL	U	U	U	U	U	U
3,3'-Dichlorobenzidine		U	U	U	U	U	U
3-Nitroaniline	500 or MDL	U	U	U	U	U	U
4,6-Dinitro-2-methylphenol		U	U	U	U	U	U
4-Bromophenyl-phenylether		U	U	U	U	U	U
4-Chloro-3-methylphenol	240 or MDL	U	U	U	U	U	U
4-Chloroaniline	220 or MDL	U	U	U	U	U	U
4-Chlorophenyl-phenylether		U	U	U	U	U	U
4-Methylphenol	900	U	U	U	U	U	U
4-Nitroaniline		U	U	U	U	U	U
4-Nitrophenol	100 or MDL	U	U	U	U	U	U
Acenaphthene	50000	160 J	U	U	U	130 J	U
Acenaphthylene	41000	U	U	U	U	U	U
Anthracene	50000	390	U	U	U	220 J	U
Benzo(a)anthracene	224 or MDL	1400	260 J	170 J	U	600	240 J
Benzo(a)pyrene	61 or MDL	1200	230 J	160 J	U	400	170 J
Benzo(b)fluoranthene	1100	1500	390	230 J	U	560	260 J
Benzo(g,h,i)perylene	50000	640	140 J	78 J	U	180 J	100 J
Benzo(k)fluoranthene	1100	730	130 J	86 J	U	250 J	86 J
bis(2-Chloroethoxy)methane		U	U	U	U	U	U
bis(2-chloroethyl)ether		U	U	U	U	U	U
bis(2-ethylhexyl)phthalate		130 J	230 J	200 J	120 J	110 J	U
Butyl benzyl phthlate	50000	U	U	U	U	U	U
Carbazole		150 J	U	U	U	140 J	U
Chrysene	400	1400	230 J	180 J	U	450	200 J
Dibenz(a,h)anthracene	14 or MDL	210 J	U	U	U	73 J	U
Dibenzofuran	6200	U	U	U	U	U	U
Diethylphthlate	7100	1800	1700	2200	2100	2000	1200
Dimethylphthlate	2000	U	U	U	U	340 U	U
Di-n-butyl phthalate	8100	U	U	140 J	100 J	94 J	U
Di-n-octyl phthiate	50000	U	U	U	U	U	U
Fluoranthene	50000	3100	440	300 J	70 J	1200	390
Fluorene	50000	170 J	U	U	U	100 J	U
Hexachlorobenzene	410	U	U	U	U	U	U
Hexachlorobutadiene		U	U	U	U	U	U
Hexachlorocyclopentadiene		UJ	UJ	UJ	UJ	UJ	UJ
Hexachloroethane		U	U	U	U	U	U
Indeno (1,2,3-cd)pyrene	3200	740	170 J	100 J	U	240 J	110 J
Isophorone	4400	U	U	U	U	U	U
Naphthalene	13000	U	U	U	U	88 J	U
Nitrobenzene	200 or MDL	U	U	U	U	U	U
N-Nitroso-di-n-propylamine		U	U	U	U	U	U
N-Nitrosodiphenylamine		U	U	U	U	U	U
Pentachlorophenol	1000 or MDL	UJ	UJ	UJ	UJ	UJ	UJ
Phenanthrene	50000	1800	340 J	170 J	U	910	210 J
Phenol	30 or MDL	U	U	U	U	U	U
Pyrene	50000	2500	420	300 J	72 J	830	370
Total	500000	18020	4680	4314	2462	8915	3336

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

U – Parameter was analyzed but was not detected.

J – Estimated value.

TABLE 4.2.4 (continued). SOIL SAMPLING RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

Parameter	NYSDEC Recommended Soil Cleanup Objective ⁽¹⁾	Q-8	Q-9
		8-10 ft	8-10 ft
	(µg/kg)	(µg/kg)	(µg/kg)
1,2,4-Trichlorobenzene	3400	U	U
1,2-Dichlorobenzene		U	U
1,3-Dichlorobenzene	1600	U	U
1,4-Dichlorobenzene	8500	U	U
2,2'-oxybis(1-chloropropane)		U	U
2,4,5-Trichlorophenol	100	U	U
2,4,6-Trichlorophenol		U	U
2,4-Dichlorophenol	400	U	U
2,4-Dimethylphenol		U	U
2,4-Dinitrophenol	200 or MDL	U	U
2,4-Dinitrotoluene		U	U
2,6 Dinitrotoluene	1000	U	U
2-Chloronaphthalene		U	U
2-Chlorophenol	800	U	U
2-Methylnaphthalene	36400	U	U
2-Methylphenol	100 or MDL	U	U
2-Nitroaniline	430 or MDL	U	U
2-Nitrophenol	330 or MDL	U	U
3,3'-Dichlorobenzidine		U	U
3-Nitroaniline	500 or MDL	U	U
4,6-Dinitro-2-methylphenol		U	U
4-Bromophenyl-phenylether		U	U
4-Chloro-3-methylphenol	240 or MDL	U	U
4-Chloroaniline	220 or MDL	U	U
4-Chlorophenyl-phenylether		U	U
4-Methylphenol	900	U	U
4-Nitroaniline		U	U
4-Nitrophenol	100 or MDL	U	U
Acenaphthene	50000	U	U
Acenaphthylene	41000	U	U
Anthracene	50000	U	U
Benzo(a)anthracene	224 or MDL	U	U
Benzo(a)pyrene	61 or MDL	U	U
Benzo(b)fluoranthene	1100	U	U
Benzo(g,h,i)perylene	50000	U	U
Benzo(k)fluoranthene	1100	U	U
bis(2-Chloroethoxy)methane		U	U
bis(2-chloroethyl)ether		U	U
bis(2-ethylhexyl)phthalate			93 J
Butyl benzyl phthlate	50000	U	U
Carbazole		U	U
Chrysene	400	U	U
Dibenz(a,h)anthracene	14 or MDL	U	U
Dibenzofuran	6200	U	U
Diethylphthlate	7100	1400	1300
Dimethylphthlate	2000	U	U
Di-n-butyl phthalate	8100	U	U
Di-n-octyl phthlate	50000	U	U
Fluoranthene	50000	U	150 J
Fluorene	50000	U	U
Hexachlorobenzene	410	U	U
Hexachlorobutadiene		U	U
Hexachlorocyclopentadiene		JU	JU
Hexachloroethane		U	U
Indeno (1,2,3-cd)pyrene	3200	U	U
Isophorone	4400	U	U
Naphthalene	13000	U	U
Nitrobenzene	200 or MDL	U	U
N-Nitroso-di-n-propylamine		U	U
N-Nitrosodiphenylamine		U	U
Pentachlorophenol	1000 or MDL	JU	JU
Phenanthrene	50000	U	100 J
Phenol	30 or MDL	U	U
Pyrene	50000	U	130 J
Total	500000	1400	1773

(1): New York State Department of Environmental Conservation (NYSDEC) Technical & Administrative Guidance Memorandum (TAGM) #4046.

U – Parameter was analyzed but was not detected.

J – Estimated value.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL SOIL VAPOR INVESTIGATION

TABLE 4.3.1. SOIL VAPOR SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Parameter	Samples Collected on 9-27-2005	R1	R1	R1
	Ambient 9-27-2005	10-12 ft	28-30 ft	48-50 ft
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)
1,1,1-Trichloroethane	U	U	U	U
1,1,2,2-Tetrachloroethane	U	U	U	U
1,1,2-Trichloroethane	U	U	U	U
1,1-Dichloroethane	U	U	U	U
1,1-Dichloroethene	U	U	U	U
1,2,4-Trichlorobenzene	U	U	U	U
1,2,4-Trimethylbenzene	U	U	U	U
1,2-Dibromoethane	U	U	U	U
1,2-Dichlorobenzene	U	U	U	U
1,2-Dichloroethane	U	U	U	U
1,2-Dichloroethene (total)	U	U	U	U
1,2-Dichloropropane	U	U	U	U
1,2-Dichlorotetrafluoroethane	U	U	U	U
1,3,5-Trimethylbenzene	U	U	U	U
1,3-Butadiene	U	U	U	U
1,3-Dichlorobenzene	U	U	U	U
1,4-Dichlorobenzene	U	U	U	U
1,4-Dioxane	U	U	U	U
2,2,4-Trimethylpentane	U	U	2800	4200
2-Chlorotoluene	U	U	U	U
3-Chloropropene	U	U	U	U
4-Ethyltoluene	U	U	U	U
Acetone	U	U	U	U
Benzene	U	U	U	U
Bromodichloromethane	U	U	U	U
Bromoethene	U	U	U	U
Bromoform	U	U	U	U
Bromomethane	U	U	U	U
Carbon Disulfide	U	U	U	690
Carbon Tetrachloride	U	U	U	U
Chlorobenzene	U	U	U	U
Chloroethane	U	U	U	U
Chloroform	U	U	U	U
Chloromethane	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U
cis-1,3-Dichloropropene	U	U	U	U
Cyclohexane	U	U	U	U
Dibromochloromethane	U	U	U	U
Dichlorodifluoromethane	3.1	590000	280000	44000
Ethylbenzene	U	U	U	U
Freon TF	U	U	U	U
Hexachlorobutadiene	U	U	U	U
Isopropyl Alcohol	U	U	U	U
Methyl Butyl Ketone	U	U	U	U
Methyl Ethyl Ketone	U	26000	U	1700
Methyl Isobutyl Ketone	U	U	U	U
Methyl tert-Butyl Ether	U	U	U	U
Methylene Chloride	U	U	U	U
n-Heptane	U	U	U	U
n-Hexane	U	19000	U	U
Styrene	U	U	U	U
tert-Butyl Alcohol	U	U	U	U
Tetrachloroethene	U	U	U	U
Tetrahydrofuran	U	U	U	U
Toluene	U	U	U	490
trans-1,2-Dichloroethene	U	U	U	U
trans-1,3-Dichloropropene	U	U	U	U
Trichloroethene	U	U	U	U
Trichlorofluoromethane	1.5	U	U	U
Vinyl Chloride	U	U	U	U
Xylene (m,p)	U	U	U	U
Xylene (o)	U	U	U	U
Xylene (total)	U	U	U	U

E – Parameter detected above the upper calibration range limit.
 U – Parameter was analyzed but was not detected above the reporting limit.
 J – Estimated value.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL SOIL VAPOR INVESTIGATION

TABLE 4.3.1 (continued). SOIL VAPOR SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Parameter	Samples Collected on 9-28-2005	R3	R3	R3	R6	R6	R6
	Ambient 9-28-2005	8-10 ft	28-30 ft	48-50 ft	8-10 ft	28-30 ft	48-50 ft
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)
1,1,1-Trichloroethane	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U
1,1,2-Trichloroethane	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U
1,1-Dichloroethene	U	U	U	U	U	U	U
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U
1,2-Dibromoethane	U	U	U	U	U	U	U
1,2-Dichlorobenzene	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	U	U	U	U	U	U	U
1,2-Dichloropropane	U	U	U	U	U	U	U
1,2-Dichlorotetrafluoroethane	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U
1,3-Butadiene	U	U	U	U	U	U	U
1,3-Dichlorobenzene	U	U	U	U	U	U	U
1,4-Dichlorobenzene	U	U	U	U	U	U	U
1,4-Dioxane	U	U	U	U	U	U	U
2,2,4-Trimethylpentane	0.98	1400	2800	3600	1300	2600	3900
2-Chlorotoluene	U	U	U	U	U	U	U
3-Chloropropene	U	U	U	U	U	U	U
4-Ethyltoluene	U	U	U	U	U	U	U
Acetone	U	U	U	U	U	U	U
Benzene	0.77	U	U	U	7600	3100	3100
Bromodichloromethane	U	U	U	U	U	U	U
Bromoethene	U	U	U	U	U	U	U
Bromoforn	U	U	U	U	U	U	U
Bromomethane	U	U	U	U	U	U	U
Carbon Disulfide	U	1500	4000	4400	3700	1400	1300
Carbon Tetrachloride	U	U	U	U	U	U	U
Chlorobenzene	U	U	U	U	U	U	U
Chloroethane	U	U	U	U	U	U	U
Chloroform	U	U	U	U	U	U	U
Chloromethane	1.6	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	U	U	U	U	U	U	U
Cyclohexane	U	U	U	U	U	U	180
Dibromochloromethane	U	U	U	U	U	U	U
Dichlorodifluoromethane	19	48000	190000	110000	64000	10000	28000
Ethylbenzene	U	U	U	U	U	110	U
Freon TF	15	U	U	U	U	U	U
Hexachlorobutadiene	U	U	U	U	U	U	U
Isopropyl Alcohol	U	9800	21000	17000	17000	6900	7100
Methyl Butyl Ketone	U	U	U	U	U	U	U
Methyl Ethyl Ketone	U	830	6200	1800	1500	590	5900
Methyl Isobutyl Ketone	U	U	U	U	U	U	U
Methyl tert-Butyl Ether	U	U	U	U	U	U	U
Methylene Chloride	1.9	U	U	U	U	190	420
n-Heptane	U	U	U	U	U	U	U
n-Hexane	0.92	U	U	U	U	160	170
Styrene	U	U	U	U	U	100	U
tert-Butyl Alcohol	U	U	U	U	U	U	U
Tetrachloroethene	U	U	U	U	U	U	U
Tetrahydrofuran	U	U	U	U	U	U	U
Toluene	2.3	1100	2000	2000	2100	870	830
trans-1,2-Dichloroethene	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	U	U	U	U	U	U	U
Trichloroethene	U	U	U	U	U	U	U
Trichlorofluoromethane	4.2	U	U	U	U	U	U
Vinyl Chloride	U	U	U	U	U	U	U
Xylene (m,p)	U	U	U	U	520	290	280
Xylene (o)	U	U	U	U	U	91	U
Xylene (total)	U	U	U	U	520	380	270

E – Parameter detected above the upper calibration range limit.
 U – Parameter was analyzed but was not detected above the reporting limit.
 J – Estimated value.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL GROUNDWATER INVESTIGATION

TABLE 4.4.1. GROUNDWATER SAMPLING RESULTS FOR PCBS

Parameter	NYSDEC Class GA Groundwater Standard ⁽¹⁾	CAMW-1	CAMW-2	CAMW-3		CAMW-4	CAMW-5
	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)
Aroclor 1016		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Aroclor 1221		2.0 U	2.0 U	2.0	U	2.0 U	2.0 U
Aroclor 1232		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Aroclor 1242		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Aroclor 1248		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Aroclor 1254		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Aroclor 1260		1.0 U	1.0 U	1.0	U	1.0 U	1.0 U
Total	0.09	U	U		U	U	U

⁽¹⁾ 6 NYCRR Part 703

U – Compound was analyzed for but not detected, i.e., less than the IDL.

* Data for wells CAMW-1 through CAMW-4 reported from initial IRM field investigation.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL GROUNDWATER INVESTIGATION

TABLE 4.4.2. GROUNDWATER SAMPLING RESULTS FOR METALS

Parameter	NYSDEC Class GA Groundwater Standard ⁽¹⁾	CAMW-1	CAMW-2	CAMW-3	CAMW-4	CAMW-5
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
Mercury	0.7	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Aluminum	2000 ⁽²⁾	74.6 BU	48.8 BU	56.8 BU	55.4 BU	350 JE
Antimony	3	3.3 U	3.3 U	3.3 U	3.3 U	2.1 U
Arsenic	25	5.6 U	5.6 U	5.6 U	5.6 U	1.7 U
Barium	1000	19.0 B	69.4 B	62.5 B	79.5 B	89.4 B
Beryllium		17.1 U	17.1 U	17.1 U	17.1 U	0.10 U
Calcium		15600	49200	95300	61400	18400
Cadmium	5	0.37 U	0.37 U	0.52 B	0.37 U	0.26 U
Chromium	50	4.5 BU	2.5 BU	2.8 BU	4.0 BU	0.70 B
Cobalt		1.1 U	4.5 B	1.1 U	3.8 B	4.3 B
Copper	200	2.1 B	0.98 U	2.3 B	1.4 B	1.6 B
Iron	300	76.9 BU	44.7 BU	59.1 BU	62.1 BU	299
Lead	25	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U
Magnesium		1290 B	7880	5680	7620	4290 B
Manganese	300	12.7 B	16.3	11.3 B	77.1	152
Nickel	100	2.0 U	2.0 U	2.0 U	3.7 B	2.1 B
Potassium		10100 EJ	7280 EJ	8640 EJ	15400 EJ	3280 B
Selenium	10	5.4 U	5.4 U	5.4 U	5.4 U	2.0 U
Silver	50	3.6 U	3.6 U	3.6 U	3.6 U	0.60 U
Sodium	20000	30500	59800	105000	44200 E	44300 E
Thallium		5.0 U	5.0 U	5.0 U	5.0 U	1.7 U
Vanadium		5.4 U	5.4 U	5.4 U	5.4 U	1.3 U
Zinc	5000	18.2 BU	17.5 BU	51.1 U	54.1 U	8.8 B
Chromium, hexavalent (mg/l)		1.1 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		0.57 U	10.0 U	10.0 U	10.0 U	10.0 U

⁽¹⁾ 6 NYCRR Part 703

⁽²⁾ Effluent Limitation

B – Reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).

E – Reported value is estimated due to the presence of interference.

U – Compound was analyzed for but not detected, i.e., less than the IDL.

* Data for wells CAMW-1 through CAMW-4 reported from initial IRM field investigation.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL GROUNDWATER INVESTIGATION

TABLE 4.4.3. GROUNDWATER SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCS)

Parameter	NYSDEC Class GA Groundwater Standard ⁽¹⁾	CAMW-1	CAMW-2	CAMW-3	CAMW-4	CAMW-5
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
1,1,1 Trichloroethane	5.0	10 U	8 J	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5.0	10 U	10 U	10 U	10 U	10 U
1,1,2 Trichloroethane	1.0	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5.0	10 U	11	4 J	10 U	10 U
1,1-Dichloroethene	5.0	10 U	10	2 J	10 U	10 U
1,2-Dichloroethane	0.6	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene	5.0	20	590	1400	32	10 U
1,2 Dichloropropane	1.0	10 U	10 U	10 U	10 U	10 U
2-Butanone	50	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone		10 U	10 U	10 U	10 U	10 U
Acetone	50	10 U	10 U	10 U	10 U	10 U
Benzene	1.0	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	50	10 U	10 U	10 U	10 U	10 U
Bromoform	50	10 U	10 U	10 U	10 U	10 U
Bromomethane	5.0	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide		10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	5.0	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	5.0	10 U	10 U	10 U	10 U	10 U
Chloroethane	5.0	10 U	10 U	10 U	10 U	10 U
Chloroform	7.0	1 J	10 U	2 J	1 J	10 U
Chloromethane		10 U	10 U	10 U	10 U	10 U
cis-1,3 Dichloropropene	0.4	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	50	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5.0	10 U	10 U	10 U	10 U	10 U
Methyl-t-butyl ether	5.0	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5.0	10 U	10 U	10 U	10 U	10 U
Styrene	5.0	10 U	2 J	3 J	10 U	10 U
Tetrachloroethene	5.0	10 U	10 U	10 U	10 U	10 U
Toluene	5.0	10 U	10 U	10 U	10 U	10 U
trans-1,3 Dichloropropene	0.4	11	170	54	5 J	10 U
Trichloroethene	5.0	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	2.0	10 U	10 U	10 U	10 U	10 U
Xylenes	5.0	10 U	8 J	10 U	10 U	10 U
Chlorodifluoromethane ⁽²⁾	5.0	--	--	--	200 J N	10 U

⁽¹⁾ 6 NYCRR Part 703.

⁽²⁾ Tentatively Identified Compound (TIC).

D – Compound identified in an analysis at a secondary dilution factor.

J – Estimated value.

N – Indicates presumptive evidence of a TIC.

U – Compound analyzed for but not detected.

* Data for wells CAMW-1 through CAMW-4 reported from initial IRM field investigation.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL GROUNDWATER INVESTIGATION

TABLE 4.4.4. GROUNDWATER SAMPLING RESULTS SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

Parameter	NYSDEC Class GA Groundwater Standard ⁽¹⁾	CAMW-1		CAMW-2		CAMW-3		CAMW-4		CAMW-5	
	(µg/l)	(µg/l)									
1,2,4-Trichlorobenzene	5	10	U								
1,2-Dichlorobenzene	3	10	U								
1,3-Dichlorobenzene	3	10	U								
1,4-Dichlorobenzene	3	10	U								
2,2'-oxybis(1-chloropropane)	--	10	U								
2,4,5-Trichlorophenol	--	25	U								
2,4,6-Trichlorophenol	--	10	U								
2,4-Dichlorophenol	5	10	U								
2,4-Dimethylphenol	50	10	U								
2,4-Dinitrophenol	10	25	U								
2,4-Dinitrotoluene	50	10	U								
2,6-Dinitrotoluene	5	10	U								
2-Chloronaphthalene	10	10	U								
2-Chlorophenol	--	10	U								
2-Methylnaphthalene	--	10	U								
2-Methylphenol	--	10	U								
2-Nitroaniline	5	25	U								
2-Nitrophenol	--	10	U								
3,3'-Dichlorobenzidine	5	10	U								
3-Nitroaniline	5	25	U								
4,6-Dinitro-2-methylphenol	--	25	U								
4-Bromophenyl-phenylether	--	10	U								
4-Chloro-3-methylphenol	--	10	U								
4-Chloroaniline	5	10	U								
4-Chlorophenyl-phenylether	--	10	U								
4-Methylphenol	--	10	U								
4-Nitroaniline	5	25	U								
4-Nitrophenol	--	25	U								
Acenaphthene	20	10	U								
Acenaphthylene	--	10	U								
Anthracene	50	10	U								
Benzo(a)anthracene	0.002	10	U								
Benzo(a)pyrene	--	10	U								
Benzo(b)fluoranthene	0.002	10	U								
Benzo(g,h,i)perylene	--	10	U								
Benzo(k)fluoranthene	0.002	10	U								
bis(2-Chloroethoxy)methane	5	10	U								
bis(2-chloroethyl)ether	5	10	U								
bis(2-ethylhexyl)phthalate	5	10	U								
Butyl benzyl phthlate	50	10	U								
Carbazole	--	10	U								
Chrysene	0.002	10	U								
Dibenz(a,h)anthracene	--	10	U								
Dibenzofuran	--	10	U								
Diethylphthiate	50	10	U								
Dimethylphthiate	50	10	U								
Di-n-butyl phthalate	--	10	U								
Di-n-octyl phthlate	50	10	U								
Fluoranthene	50	10	U								
Fluorene	50	10	U								
Hexachlorobenzene	0.04	10	U								
Hexachlorobutadiene	0.5	10	U								
Hexachlorocyclopentadiene	5	10	U								
Hexachloroethane	5	10	U								
Indeno (1,2,3-cd)pyrene	0.002	10	U								
Isophorone	50	10	U								
Naphthalene	10	10	U								
Nitrobenzene	0.4	10	U								
N-Nitroso-di-n-propylamine	50	10	U								
N-Nitrosodiphenylamine	50	10	U								
Pentachlorophenol	5	25	U								
Phenanthrene	50	10	U								
Phenol	1.0	10	U								
Pyrene	50	10	U								

⁽¹⁾ 6 NYCRR Part 703.

U – Compound analyzed for but not detected.

* Data for wells CAMW-1 through CAMW-4 reported from initial IRM field investigation.

TOWN OF OYSTER BAY, BETHPAGE COMMUNITY PARK
 INTERIM REMEDIAL MEASURE - CONSTRUCTION AREA
 SUPPLEMENTAL INVESTIGATION

Table 5.1.1. QA/QC TRIP BLANK SAMPLING RESULTS FOR VOLATILE ORGANIC COMPOUNDS

Parameter	TB-47	TB-51	TB-52	TB-53
	(µg/L)	(µg/L)	(µg/L)	(µg/L)
1,1,1 Trichloroethane	U	U	U	U
1,1,2,2-Tetrachloroethane	U	U	U	U
1,1,2 Trichloroethane	U	U	U	U
1,1-Dichloroethane	U	U	U	U
1,1-Dichloroethene	U	U	U	U
1,2-Dichloroethane	U	U	U	U
1,2-Dichloroethene	U	U	U	U
1,2 Dichloropropane	U	U	U	U
2-Butanone	U	U	U	U
2-Hexanone	U	U	U	U
4-Methyl-2-Pentanone	U	U	U	U
Acetone	U	U	U	U
Benzene	U	U	U	U
Bromodichloromethane	U	U	U	U
Bromotorm	U	U	U	U
Bromomethane	U	U	U	U
Carbon Disulfide	U	U	U	U
Carbon Tetrachloride	U	U	U	U
Chlorobenzene	U	U	U	U
Chlorodifluoromethane	U	U	U	U
Chloroethane	U	U	U	U
Chloroform	U	U	U	U
Chloromethane	U	U	U	U
cis-1,3 Dichloropropene	U	U	U	U
Dibromochloromethane	U	U	U	U
Dichlorodifluoromethane	U	U	U	U
Ethylbenzene	U	U	U	U
Methylene chloride	U	U	U	U
Styrene	U	U	U	U
Tetrachloroethene	U	U	U	U
Toluene	U	U	U	U
trans-1,3 Dichloropropene	U	U	U	U
Trichloroethene	U	U	U	U
Vinyl chloride	U	U	U	U
Xylenes	U	U	U	U
Total	U	U	U	U

⁽¹⁾ 6 NYCRR Part 703.

U – Compound analyzed for but not detected.