250 Delaware Avenue Site

ERIE COUNTY, NEW YORK

Remedial Investigation / Remedial Alternatives / Final Engineering Report

NYSDEC Site Number: C915271

Prepared for:

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CERTIFICATIONS

I, Peter M. McKee, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Interim Remedial Measure was implemented and that all construction activities were completed in substantial conformance with the Department-approved Interim Remedial Measure Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Interim Remedial Measure Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Peter M. McKee, of Lender Consulting Services, Inc., am certifying as Owner's Designated Site Representative for the site.

59924	12/5/14	Peter M. McKee
NYS Professional Engineer #	Date	Signature

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AOC	Area of Concern
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BH	Borehole
BNIA	Buffalo-Niagara International Airport
CAMP	Community Air Monitoring Program
C&D	Construction and Demolition
COC	Certificate of Completion
COPC	Constituent of Potential Concern
CP-51	Commissioner Policy-51
DUSR	Data Usability Summary Report
EB	Equipment Blank
eV	Electron Volt
Ft. bgs	Feet Below Ground Surface
GC/MS	Gas Chromatography/Mass Spectrometry
GWQS	Ground Water Quality Standards
HASP	Health and Safety Plan
ID	Inner Diameter
IRM	Interim Remedial Measure
Lb.	Pound
LCS	Lender Consulting Services, Inc.
LNAPL	Light Non Aqueous Phase Liquid
mg/kg	Milligrams Per Kilogram
mg/l	Milligrams per Liter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MTBE	Methyl Tert Butyl Ether
MW	Monitoring Well
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OD	Outer Diameter
Oz.	Ounce
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PPB	Parts Per Billion
PPE	Personal Protective Equipment
PPM	Parts Per Million
PVC	Polyvinyl Chloride

QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objective
Ref.	Reference
RI	Remedial Investigation
SCOs	Site Cleanup Objectives
STARS	Spill Technology and Remediation Series
SVOC	Semi-Volatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
TSD	Technical Support Document
TPMW	Temporary Monitoring Well
µg/kg	Micrograms Per Kilogram
µg/l	Micrograms Per Liter
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

REMEDIAL INVESTIGATION / REMEDIAL ALTERNATIVES / FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

DNC 250, Inc. entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in April 2013, to investigate and remediate a 1.96-acre property located in the City of Buffalo, Erie County, New York (Figure 1), addressed at 250 Delaware Avenue (formerly addressed as 233 South Elmwood Avenue and 234 Delaware Avenue). The property was remediated to unrestricted use, and will be used for *a multi-tenant commercial building and parking garage*.

The Site is located in the County of Erie, New York and is identified as the entirety of Block 3 and Lot 5.11 on the City of Buffalo Tax Map # 111.37. The Site is situated on an approximately 1.96-acre area bounded by 243 South Elmwood Avenue and 262 Delaware Avenue to the north, West Chippewa Street to the south, Delaware Avenue to the east, and South Elmwood Avenue to the west (Figure 2). The boundaries of the site are fully described in Appendix A: Survey Map, Metes and Bounds.

An electronic copy of this FER with all supporting documentation is included as Appendix B.

Lender Consulting Services, Inc. (LCS) conducted initial remedial investigation (RI) activities at the Site between June and July 2013 to better assess the significance of the known petroleum impact to site soil and groundwater, to identify any additional chemical impacts present in site soil, groundwater, and soil vapor, and to characterize the general hydrogeological framework of the Site. LCS conducted additional RI activities between September and November 2013 at the request of the NYSDEC to assess the environmental quality of the historic fill materials present at the Site, and the environmental quality of the underlying soils based on the presence of the historic fill materials. The RI activities were performed on behalf of DNC 250, Inc. under the NYSDEC Brownfield Cleanup Program (BCP ID C915271). The Site is currently being developed with a multi-tenant commercial building and parking garage.

Based on the results of previous soil and groundwater investigations conducted at the Site and the results of the RI, it was determined that remedial measures would be required to address petroleum-impacted soil and groundwater at the Site prior to the anticipated redevelopment. Specifically, an Interim Remedial Measure (IRM) consisting of soil excavation was recommended proximate to the historic on-site gasoline station and automotive repair operations. In addition, based on the results of the additional RI work performed pertaining to the historic fill materials on-site, the NYSDEC required that historic fill materials be removed from the Site. It was determined that remediation of the petroleum impacts to levels below the NYSDEC Part 375 Soil Cleanup Objectives (SCOs) for unrestricted site use and removal of historic fill materials present on-site would be a necessary predicate to the construction project.

IRM activities began in July 2013 with demolition of the most recent gasoline station and associated convenience store; and were substantially completed on June 5, 2014 with removal of remaining petroleum-impacted soils and historic fill materials on the northwestern portion of the Site. Groundwater samples were collected on May 29, 2014, from three permanent wells installed in the backfilled area of the petroleum-related soil excavation. The results of this sampling confirmed that groundwater quality in this area had improved significantly, but that benzene was still present at levels above the NYSDEC Class GA Groundwater Quality Standards (GWQS) in the two wells installed on the southwestern portion of the Site. Lastly, a de-minimis volume of soil with concentrations of petroleum-related volatile organic compounds (VOCs) above the SCOs for unrestricted site use remains on-site; this includes a maximum 625 square foot area (25 feet by 25 feet) of the petroleum-related excavation against the sheet pile on West Chippewa Street (grid square 15), approximately 1.0 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along West Chippewa Street, and approximately 7.4 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along South Elmwood Avenue (soil was removed up to the sheet piles and the sheet piles were scraped). According to the NYSDEC (Appendix K – NYSDEC Response to Interim Data Report 1; and Appendix E –NYSDEC email dated June 11, 2014), no further action regarding the de-minimis petroleum-impacted soil remaining on-site is required in pursuit of the unrestricted use status. As discussed in Section 11.0, the ventilation and dewatering systems that will be installed as part of the redevelopment will mitigate migration of and exposure to the residually impacted groundwater.

The purpose of this Remedial Investigation / Remedial Alternatives / Final Engineering Report is to (1) describe and present the findings of the RI; (2) describe and document the IRM work; and (3) evaluate the IRM as the final remedial alternative for the Site.

1.1 SITE DESCRIPTION

1.1.1 Site Area

The Site is located at 250 Delaware Avenue, Buffalo, New York, and measures approximately 1.96 acres (Figure 2). Historic addresses for the Site and portions of the Site include 233-241 South Elmwood Avenue, 230-260 Delaware Avenue, and 101-143 West Chippewa Street. The Site consists of tax parcel 111.37-3-5.11 in its entirety, the boundaries of which are generally depicted on Figure 2. The Site is currently being developed with a commercial building and parking garage. Prior to the IRM and current redevelopment, the Site was developed with one retail gasoline station and associated single story, approximately 1,840-square foot convenience store; one two-story, approximately 51,344 square foot multi-tenant commercial building known as the Delaware Court Building; and one small guard shack. These structures have since been demolished.

Prior to initiation of the IRM, the Site was generally level at grade at an elevation of approximately 611 feet above sea level, with limited distinguishable features other than the on-site structures. The remainder of the Site was covered by asphalt. Precipitation (i.e., rain and melting snow), moved to the storm drains present in the asphalt parking lot and roadways via overland flow. Surface and shallow groundwater flow were likely historically impacted by various cycles of development and filling, utility lines, and foundations.

The Site is located in a predominantly commercial, highly developed urban area within the City of Buffalo. Properties within a 1,000-foot radius of the Site include a mix of residential, commercial, and industrial uses. The Site is generally bounded to the north by the Buffalo Small Animal Hospital (243 South Elmwood Avenue) and an apartment building (262 Delaware Avenue), to the east by Delaware Avenue, to the south by West Chippewa Street, and to the west by South Elmwood Avenue (Figure 2). East adjacent properties include a television network studio (259 Delaware Avenue), an office building (249 Delaware Avenue), and Starbucks Coffee (235 Delaware Avenue). The Hampton Inn & Suites (220 Delaware Avenue) and Hutchinson Technical High School (165 West

Chippewa Street, also addressed at 256 South Elmwood Avenue) are located south and west adjacent to the Site, respectively.

1.1.2 Site Geology and Hydrogeology

Geologic mapping indicates that the bedrock at the Site and surrounding area consists of the Middle Devonian Onondaga and Bois Blanc Limestones (Ref. 1). During completion of a geotechnical study by Empire GeoServices, Inc. (Empire) at the Site in 2012, hollow stem auger equipment refusal was encountered in test borings at depths ranging between approximately 41.9 and 46.3 feet below the ground surface (ft. bgs), presumed to be due to the bedrock surface (Ref. 2). Bedrock fragments recovered from two of the test borings completed were described as gray, medium hard to hard, thinly bedded to bedded limestone. A copy of the geotechnical study is located in Appendix C.

Prior to implementation of the IRM, the surficial geology of the Site consisted primarily of fine-grained silty sand and sand with some clay lens(es) underlying asphalt and approximately one to five feet of historic fill materials. Geologic mapping indicates that the surficial geology of the immediate area of the Site generally consists of outwash sand and gravel and lacustrine silt and clay (Ref. 3). Outwash sand and gravel is characterized by coarse- to fine- grained, well-rounded and stratified deposits that were deposited in a proglacial fluvial environment; thickness generally ranges between two and twenty meters (~6-66 feet) (Ref. 3). Lacustrine silt and clay sediments were deposited in proglacial lakes, and are characterized by calcareous, laminated silt and clays that range in thickness up to 100 meters (~328 feet) (Ref. 3). Based on intrusive investigations completed at the Site, prior to implementation of the IRM, the historic fill materials underlying asphalt rested directly on top of an apparent laterally continuous silty clay/clay lens which was approximately five to seven feet thick on the northern and central portions of the Site, and which generally thinned to a thickness of approximately three- to four- feet on the south-central portion of the Site (Figures 9 and 10; Refs. 19, 21, and 23; and Appendix D). According to borehole data, this clay lens was generally absent over much of the southwestern and west-central portions of the Site proximate to the pump island and known USTs (Figure 11; Refs. 19 and 21; and Appendix D), and beneath and adjacent to the Delaware Court Building on the eastern portion of the Site. Beneath the clay lens (or the fill, where the clay was absent) was sand and silty sand with intermittent silt; these overburden materials appeared to generally extend to depths of between approximately 40 and 45 ft. bgs over most of the Site, beneath which limestone bedrock was present (Ref. 2).

Prior to implementation of the IRM, groundwater in the shallow overburden (~0-20 ft. bgs) at the Site appeared to have existed primarily under unconfined conditions. During previous investigations conducted at the Site, groundwater was encountered at depths ranging between approximately 7 and 9.5 ft. bgs within boreholes completed to the immediate north, northeast, and southeast of the most recent retail gasoline station structure on the southwestern portion of the Site. Groundwater was generally encountered at depths ranging between approximately 6 and 12 ft. bgs in wells completed to the southwest of the most recent retail gasoline station structure and on the central and eastern portions of the Site during previous investigations and during the RI.

Recharge of the overburden aquifer results predominantly from precipitation by direct infiltration of rain and snowmelt through the overburden. Regional groundwater flow is generally towards the southwest into Lake Erie. Groundwater flow in the shallow overburden at the Site is also generally towards the southwest. The sheet piles that were installed along South Elmwood Avenue and West Chippewa Street during the IRM likely act as a partial barrier to off-site groundwater migration in the shallow overburden.

Surface soils at the Site prior to implementation of the IRM were characterized by the Soil Survey of Erie County (Refs. 4 and 5) as Urban Land, described as dominantly nearly level urbanized areas and areas of well drained to poorly drained soils and disturbed soils, on lowland plains. The presence of historic fill materials is widespread and common throughout the City of Buffalo. Prior to the IRM, the Site contained historic fill materials beneath the surficial asphalt to depths ranging between approximately 1 and 5 ft. bgs.

1.1.3 Climate

Western New York has a cold continental climate, with moisture from Lake Erie and Lake Ontario causing increased precipitation. For the years 2002 through 2012, average annual precipitation was reported as 40.39 inches and snowfall was reported as 87.88 inches at the Buffalo-Niagara International Airport (BNIA) in Cheektowaga, New York (Ref. 6). Average monthly temperatures for the years 2002 through 2012 at the BNIA were reported as ranging between 25.33 degrees Fahrenheit in January and 72.10 degrees Fahrenheit in July (Ref. 6). The ground and lakes typically remain frozen from December to March. Winds are generally from the west to southwest (180 to 225 degrees) with a mean speed of 12 miles per hour (Ref. 7).

1.1.4 Population and Land Use

The City of Buffalo, encompassing approximately 40 square miles, had a population of 261,310 persons at the time of the 2010 U. S. Census, a decrease of 31,338 persons from the 2000 U. S. Census (Ref. 8). The population density in the city was 6,470.6 people per square mile at the time of the 2010 U. S. Census (Ref. 9). The City of Buffalo is primarily zoned as residential with commercial use mixed in along major roads and in the downtown commercial district, and industrial use located in the southern portion of the city along the Buffalo River (Ref. 10). The Site, which is currently being redeveloped with a commercial building and parking garage, is located in an area of the city zoned as the Downtown Opportunity District. According to the City of Buffalo Office of Strategic Planning (Ref. 11), permitted property uses in this district include residential, retail, eating and drinking establishments, hotel, and entertainment operations. There are regulations pertaining to the size and form of buildings constructed within this zone.

1.1.5 Utilities and Groundwater Use

The Site has access to major public and private utilities, including water (Erie County Water Authority), sanitary and storm sewers (City of Buffalo), electric (National Grid), and natural gas (National Fuel). Groundwater at the Site is classified as "GA" (potable use). Currently, there are no deed restrictions on the use of groundwater at the site, and there are no groundwater supply wells present at the Site. Groundwater in the City of Buffalo has not been developed for agricultural or public supply purposes.

1.1.6 Wetlands and Floodplains

According to the New York State freshwater wetland maps (Ref. 12) and U. S. Department of the Interior wetland maps (Ref. 13), there are no State or Federal wetlands at the Site. State and Federal wetlands are located approximately one mile southwest of the Site along the shore of Lake Erie in the Outer Harbor and approximately three miles southeast of the Site in the Tifft Nature Preserve along Route 5. There is a 100-year floodplain located approximately 0.7 miles southwest of the Site along the shore of Lake Erie (Ref. 14).

1.2 SITE HISTORY

1.2.1 Historic Site Operations

The Site and surrounding area were historically utilized for commercial and residential purposes. The site was previously developed as summarized below (Refs. 15-17).

- Southwestern Portion of Site: The southwestern portion of the Site, historically addressed at 233 and 239 South Elmwood Avenue, was developed with a filling station from at least 1925 to 2013. The most recent filling station was demolished in 2013 as part of the IRM. Although the exact dates are unclear, this area of the Site also historically included automotive repair operations.
- Northwestern Portion of Site: The northwestern portion of the Site, historically addressed at 241 South Elmwood Avenue, was developed with a tire service from at least 1931 to 1936 and various commercial businesses/retail shops from at least 1941 to 1996.
- Eastern Portion of Site: The eastern portion of the Site, historically addressed at 109-141 West Chippewa Street and 232-260 Delaware Avenue, was utilized residentially in the late 1800s and was constructed with a multi-tenant commercial building (Delaware Court Building) in 1926. The Delaware Court Building included various commercial operations from 1926 to 2014, at which time it was demolished. In addition, a greenhouse was present on the northeastern portion of the Site in at least 1925.

1.2.2 Previous Investigations

Investigation into the environmental quality of site soil and groundwater began with completion of a Phase I Environmental Site Assessment report for the Site in October 2001, and subsequently included limited and focused subsurface soil and groundwater investigations in 2002 and 2003. As a result of the petroleum-impacted soil and groundwater identified at the Site, including the presence of light non-aqueous phase liquid (LNAPL), the NYSDEC was notified and Spill # 0175554 was assigned to the Site. Based on the success of a high vacuum extraction pilot test performed on-site, LNAPL, water containing dissolved phase hydrocarbons, and soil vapor were removed from groundwater proximate to the most recent retail gasoline station structure on the southwestern portion of the Site via high vacuum extraction from June 2003 to October 2004. In 2005 and 2006, an oxygen injection system with hydrocarbon degrading

bacteria was utilized on-site to attempt to further remediate the remaining dissolved phase groundwater plume.

Results of groundwater sampling conducted in 2006 and 2007 indicated that volatile organic compounds (VOCs) in site groundwater still exceeded NYSDEC standards following remediation activities, prompting the NYSDEC to require additional remediation at the Site. Additional groundwater samples were collected in 2009, which indicated that VOCs in groundwater still exceeded the NYSDEC standards. In July 2012, LCS began preparations for entering the Site into the Brownfield Cleanup Program to address the remaining groundwater contamination and the petroleum-impacted soils, which had not yet been removed.

Additional details regarding the previous investigations performed at the Site are provided below (Refs. 18-47). Copies of the previous investigations conducted at the Site and relevant correspondence are located in Appendix C. Refer to Figure 3 for sample locations described below.

October 17, 2001 – Phase I Environmental Site Assessment (ASTM E 1527-00)

LCS prepared "LCS Project #01B1032.21: Phase I Environmental Site Assessment Report for the Subject Property identified as Delaware Court Building, Best Mart Gasoline Station and AAA Safe & Lock, 230-260 Delaware Avenue, 239-241 South Elmwood Avenue and 101-143 West Chippewa Street, Buffalo, New York," dated October 17, 2001, for Delaware Court Partnership (Ref. 18). At the time of this assessment, the Site was developed with the Delaware Court Building and a gasoline station with one active 4,000-gallon underground storage tank (UST) and one active 8,000-gallon UST. These tanks were installed in 1970. According to this report, the history of the Site included the following:

- The Delaware Court Building was identified as having been utilized as a mixed-use commercial building since its construction in 1925; this area had previously been utilized residentially. Minor staining was noted to the concrete floor within this structure near a compressor. No other concerns were noted in this area of the site.
- An area of petroleum-type staining was noted to the concrete floor within a locksmith building north of the gasoline station.
- The Site west of the Delaware Court Building was identified as having included gasoline stations in different locations on-site from at least 1925 to at least 1986.

In addition, a tire service operation was present on-site in at least 1931 and 1936 (241 South Elmwood Avenue), and a service station was present on-site in at least 1982 and 1987 (239 South Elmwood Avenue); such suggested historic on-site automotive repair operations. Furthermore, a paint shop was located at 241 South Elmwood Avenue in at least 1925.

- Municipal records indicated that two 4,000-gallon USTs, one 2,000-gallon UST, one 1,000-gallon UST, and one 550-gallon UST were installed at 141 West Chippewa Street in 1954, two 4,000-gallon USTs were installed at 239 South Elmwood Avenue in 1970, and one 4,000-gallon UST and one 6,000-gallon UST were installed at 239 South Elmwood Avenue in 1989.
- Municipal records indicated that two 4,000-gallon USTs and one 550-gallon UST were removed from 239 South Elmwood Avenue in 1970 and 1987, respectively. Documentation indicating the proper closure and removal of these USTs and the other USTs that had been installed at the Site had not been submitted to LCS for review.
- The area of the Site proximate to the gasoline station at that time was identified as a NYSDEC listed spills site. Spill No. 8900269 involved a tank closure in 1989 and was classified as "closed"; however, the potential for the presence of residual contamination on-site was noted in the associated database listing.

April 22, 2002 – Limited and Focused Subsurface Investigation

LCS prepared "LCS Project #01B1032.22: Limited and Focused Subsurface Investigation for 239-241 South Elmwood Avenue & 101-143 West Chippewa Street, Buffalo, New York," dated April 22, 2002, for Delaware Court Partnership (Ref. 19). Based on the concerns reported in the October 2001 Phase I report, three areas of concern (AOCs) were identified at the Site, each in the area of a current/historic gasoline station (Figure 3). Twenty-one boreholes (BH1 through BH21) were drilled to depths ranging between approximately 12 and 20 ft. bgs. and three temporary groundwater monitoring wells (TPMW1 through TPMW3) were installed to depths of approximately 12 ft. bgs. in the three AOCs (Figure 3). Groundwater was encountered within all of the boreholes completed at depths ranging between approximately 3 and 9 ft. bgs. The major findings of this investigation are discussed below.

- Photo-ionization detector (PID) measurements ranging between 0.1 and 1,982 parts per million (ppm) were present in all but one of the 127 soil samples collected for geologic description from the twenty-one boreholes completed. In addition, suspected petroleum-type odors were detected in soil samples collected from twelve of the boreholes.
- LNAPL was observed within four of the boreholes and two of the monitoring wells; product thickness measured approximately 0.25 inches or less.
- Select soil samples were analyzed for Spill Technology and Remediation Series (STARS)-list VOCs and STARS-list semi-volatile organic compounds (SVOCs). Groundwater samples from all three monitoring wells were sampled for STARS-list VOCs only. According to the analytical results, VOC concentrations in six of the nine soil samples analyzed for VOCs exceeded the NYSDEC Division Technical and Administrative Guidance Memorandum No. 4046 (TAGM) Guidance Values. SVOC concentrations in two of the five soil samples analyzed for SVOCs also exceeded the TAGM Guidance Values. VOC concentrations in groundwater sampled from the three monitoring wells and the pre-existing tank pit monitoring well exceeded the NYSDEC Class GA GWQS. Based on these results and required by law, NYSDEC Spill No. 0175554 was assigned to the Site.
- According to field observations and analytical results, the area of the existing gasoline station at that time (AOC #3) exhibited the most significant petroleum impact. Petroleum impact was also identified over a relatively small area on the central portion of the Site in AOC #1.

On May 24, 2002, the NYSDEC notified the property owner that additional investigation and remediation was necessary to address Spill No. 0175554 (Ref. 20).

June 26, 2002 – Supplemental Limited and Focused Subsurface Investigation

LCS prepared "LCS Project #01B1032.22: Supplemental Limited and Focused Subsurface Investigation for 141 West Chippewa Street, Buffalo, New York," dated June 26, 2002, for Delaware Court Partnership (Ref. 21). Thirteen additional boreholes (BH 22 through BH34) and thirteen additional temporary groundwater monitoring wells (TPMW4 through TPMW16) were installed on-site; most were completed proximate to AOC #3 in order to better define the extent of petroleum-impacted groundwater in that area (Figure 3). Groundwater and soil samples were analyzed for STARS-list VOCs. The major findings of this investigation are discussed below.

- PID measurements ranging between 0.1 and >2,000 ppm were present in all but two of the 106 soil samples collected for geologic description from the thirteen additional boreholes completed. In addition, suspected petroleum-type odors were detected within soil samples collected from all thirteen of the additional boreholes.
- Measureable LNAPL was identified within three of the sixteen monitoring wells located south and west of AOC #3, ranging in thickness from 0.05 ft. to 1.18 ft. LNAPL was also observed in soil samples collected from two of the thirteen additional boreholes.
- Select soil and groundwater samples from all thirteen of the additional boreholes and thirteen additional monitoring wells were analyzed for STARS-list VOCs. According to the analytical results, VOC concentrations in soil samples from five of the additional boreholes exceeded the TAGM Guidance Values and VOC concentrations in all thirteen of the additional monitoring wells exceeded the NYSDEC Class GA GWQS.
- The lower relative concentrations of lighter compounds (i.e., benzene) to heavier compounds (i.e. xylenes) north and east of AOC #3 suggested that impact in these areas may have resulted from historic releases.
- The higher relative concentrations of lighter compounds to heavier compounds south of AOC #3, coupled with the presence of methyl tert butyl ether (MTBE) and LNAPL in this area, suggested that impact south of the existing gasoline station resulted from more recent releases.

The NYSDEC reviewed LCS' intrusive investigations in July 2002, and determined that further on-site and off-site soil and groundwater sampling would be required to confirm the extent of the petroleum impact. This requirement was summarized in a letter from LCS to the then-property owner in July 2002 (Ref. 22).

<u>October 14, 2002 – Third Limited and Focused Subsurface Investigation</u>

LCS prepared "LCS Project #01B1032.22: Third Limited and Focused Subsurface Investigation for 141 West Chippewa Street and South Elmwood Avenue, Buffalo, New York," dated October 14, 2002, for Delaware Court Partnership (Ref. 23). The purpose of this study was to further characterize petroleum-impact in the areas east and southeast of the existing gasoline station at that time (AOC #3), and to assess the potential for contaminant migration off-site across South Elmwood Avenue. Due to the presence of

numerous underground utilities on West Chippewa Street, it was deemed unsafe to advance test borings in that area. Six additional boreholes (BH35 through BH40) and six additional temporary groundwater monitoring wells (TPMW17 through TPMW22) were completed on-site, and two additional boreholes (BH41 and BH42) and two additional temporary groundwater monitoring wells (TPMW23 and TPMW24) were completed off-site along the western side of South Elmwood Avenue (Figure 3). The major findings of this study are discussed below:

- PID measurements ranging between 0.1 and 4.2 ppm were present in all but five of the 47 soil samples collected for geologic description from the eight additional boreholes completed. No suspected petroleum-type odors were detected within any of the soil samples collected from the additional on-site and off-site boreholes.
- Select soil and groundwater samples from the eight additional boreholes and temporary monitoring wells TPMW18 through TPMW24 were analyzed for STARS-list VOCs. According to the analytical results, no petroleum-impacted soils were identified within any of the additional boreholes drilled on-site and off-site, and petroleum-impacted groundwater was identified within one of the additional monitoring wells completed on-site.

Based on this third limited and focused subsurface investigation, it was LCS' opinion that the on-site extent of petroleum-impacted soil and groundwater had been defined and no off-site impact had been identified.

November 4, 2002 – NYSDEC Spill Number 0175554

LCS prepared LCS Project #01B1032.26: NYSDEC Spill Number 0175554, 239 South Elmwood Avenue and 141 Delaware Avenue, Buffalo, New York, dated November 4, 2002, for the NYSDEC (Ref. 24). The purpose of this report was to inform the NYSDEC of the status of the Site and present a remedial action plan. The following was noted:

- In response to the significant LNAPL observed during LCS' first two intrusive investigations, LCS installed three high vacuum extraction points on-site, southwest of the existing gasoline station (AOC #3) (Figure 3) and recovered approximately 245 gallons of free-phase petroleum product and 3,360 gallons of water during an approximate sixteen hour extraction event. It was determined that a high vacuum extraction system (total fluids and vapor phase high vacuum

extraction system) would be capable of removing the recoverable free-phase product, contaminated groundwater, and vadose zone vapors from the Site.

- LCS would pump groundwater and/or product from a nine extraction points located in the impacted area south and east of the existing gasoline station (Figure 3), installed to a depth of approximately 20 ft. bgs and consisting of approximately 13 feet of well screen. The water and product would be separated and disposed of.
- A conservative radius of influence of the extraction points of approximately 15 to 20 feet (such was later modified to 40 feet) was planned; it was noted that such might be influenced by on-site restrictions such as buildings, USTs etc.
- The three pilot extraction points would be utilized as product observation points; these extraction points and groundwater monitoring wells would be utilized to monitor the progress of the remediation system.
- Based on conversations with the NYSDEC, no remedial action was planned for the areas north, west, northwest, or northeast of the existing gasoline station.
- Water samples would be collected from the remedial system to verify that concentrations of analytes met applicable standards for discharge to the municipal sewer system; upon confirmation of such, the remedial system would be set for continuous operation and site checks would be performed on a weekly basis.
- Additional remedial system checks would include weekly collection of system data and checking for leaks and damage to the system, monthly well gauging and system compliance monitoring and sampling, and quarterly groundwater sampling and reporting.

Extraction of contaminated soils was not planned, as it would have interfered with on-site business operations. The following outlines the progress of the on-site remediation:

- **November 6, 2002**: NYSDEC approves LCS' Remedial Action Plan, with some additional requirements (Ref. 25).
- **November 8, 2002**: LCS acknowledges NYSDEC's acceptance of Remedial Action Plan and additional requirements (Ref. 26).
- **December 2002**: High-vacuum extraction wells (Figure 3) are installed south, southwest, and east of the existing gasoline station (AOC #3) to address the high

levels of dissolved groundwater contamination observed east of the convenience store and the presence of free phase petroleum product proximate to the three pilot high vacuum extraction points south and southwest of the convenience store. Free phase petroleum product is detected in five of the new extraction wells; thickness ranges from 0.06 to 2.09 feet, and increases from east to west across the southern portion of the convenience store parking lot (Ref. 27).

- **February 2003**: NYSDEC sends a letter to the property owner to obtain a commitment to clean up and address discharges of petroleum on-site (Ref. 28).
- **May 2003**: Water table elevations are measured on-site prior to remediation activities to determine groundwater flow direction. Groundwater flow direction is confirmed to be from the northeast to the southwest (Ref. 27).
- **June 18, 2003**: The extraction system starts operating on-site (Refs. 27 and 29-30).
- **July 2004**: Paving results in loss of eleven temporary monitoring wells and one extraction well. Two of the wells are replaced for quarterly monitoring purposes (Ref. 31).
- **September 2004**: The first quarterly on-site groundwater sampling event is completed (Ref. 32).

The high vacuum extraction system was shut down in October 2004 due to a significant decrease in LNAPL observed in the recovery wells. As of November 8, 2004, LNAPL was only observed in two wells on-site, at thicknesses of 0.10 feet (Refs. 32 and 33).

- **December 2004**: The second quarterly on-site groundwater sampling event is completed (Ref. 33).
- **March 2005**: The third quarterly on-site groundwater sampling event is completed (Ref. 34).
- **June 2005**: The fourth quarterly on-site groundwater sampling event is completed (Ref. 35).
- **August 2005**: Based on analytical results from the on-site quarterly groundwater sampling events, the NYSDEC requires further remediation of the dissolved phase groundwater plume (Ref. 36).

- **September 2005**: Plans are generated for further remediation of the dissolved-phase groundwater contamination on-Site. C & W Environmental proposes use of a low-flow oxygen injection system with nutrient-enriched liquid injection biodegradation (Refs. 35 and 36).
- **September 2005**: NYSDEC approves use of oxygen injection coupled with hydrocarbon degrading bacteria applications for further remediation of the dissolved-phase contamination at the Site. Ten oxygen injection wells are installed on-site (Ref. 35).
- **October 26 and 28, 2005**: A total of 1,000 gallons of brewed bacteria are injected on-site (Ref. 35).
- **January to March 2006**: Two 1,000-gallon batches of Waste Stream bio-blend (gasoline specific) bacteria are injected on-site (Refs. 37 and 38).
- **July 2006**: 1,000 gallons of Waste Stream bio-blend bacteria are injected on-site (Ref. 39).

The oxygen injection system was shut down on September 29, 2006, in accordance with the initial plan to operate the system for one year (Ref. 39). Quarterly groundwater monitoring continued.

- **September 2006 to July 2007**: Quarterly groundwater sampling indicates that VOC concentrations in on-site groundwater still exceed NYSDEC Class GA GWQS (Refs. 39-42).
- **April 2009**: An additional round of groundwater samples is collected on-site. Results indicate that VOC concentrations in groundwater still exceed NYSDEC Class GA GWQS (Ref. 43).
- **January 7, 2010**: The NYSDEC informs the property owner that a remedial plan has not yet been received for the Site, as originally promised by the property owner (Ref. 44).
- **July 8, 2011**: Environmental Products and Services (EPS) of Vermont submits a Corrective Action Plan for the Site to the NYSDEC to address the dissolved phase groundwater contamination. EPS of Vermont recommends use of a chemical oxidizing agent (Ref. 45).
- **June 2012**: LCS coordinates a geophysical survey on-site (Ref. 46). Based on the results of the geophysical survey, two major anomalies and a group of three

smaller anomalies were identified on the southern portion of the Site (Figure 4). Based on reflection rates, these anomalies may represent USTs. In addition, the USTs associated with the existing gasoline station were identified near the southwestern corner of the Site. Lastly, scattered anomalies were identified throughout area surveyed; such were suspected to be associated with leftover pipes and former utility lines.

- **July 2012**: LCS begins preparation of the Brownfield Cleanup Program Application for the Site.

August 8, 2003 – Limited Subsurface Investigation

LCS reviewed "Limited Subsurface Investigation for Best Mart CITGO Gasoline Station, 239 South Elmwood Avenue, Buffalo, New York," dated August 8, 2003, prepared by C & W Environmental for the NYSDEC (Ref. 47). The purpose of this study was to verify the southern extent of the on-site contamination along West Chippewa Street. Two boreholes were drilled in the center lane of West Chippewa Street (Figure 3). Select soil samples from both boreholes were submitted for laboratory analysis for STARS-list VOCs and MTBE. Impact was not found; therefore, it was C & W's opinion that contamination had not migrated into West Chippewa Street near the center turning lane, and that the extent of contamination as depicted in the previous LCS studies could be considered to be correct.

1.2.3 Site Conditions Prior to the Remedial Investigation

Table 1 displays the maximum known contaminant concentrations measured in site soil samples prior to initiation of the RI, for VOC and SVOC analytes which were detected at concentrations above the TAGM 4046 Guidance Values utilized at the time of the previous investigations. Table 2 displays the results of the April 9, 2009 groundwater sampling event completed on-site, which was the last sampling event completed for VOCs prior to initiation of the RI. Analytes not detected are not shown.

1.2.4 Remedial Investigation Findings

From June to July 2013, LCS completed a Remedial Investigation at the Site in order to assess current contaminant levels in site soil, groundwater, and soil vapor in the known areas of petroleum impact, proximate to the suspected boundaries of the petroleum-impacted area, and over the remainder of the Site; and to characterize the general hydrogeologic framework of the site. To assess petroleum as well as any non-petroleum chemical impacts, analytical testing of soil and groundwater consisted of

Target Compound List (TCL) and Final Commissioner Policy-51 (CP-51) list volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide, polychlorinated biphenyls (PCBs), and pesticides, via United States Environmental Protection Agency (EPA) SW-846 Test Methods 8260, 8270, 6010/7471, 9012, 8082, and 8081, respectively. Analytical testing of soil vapor consisted of TCL VOCs via TO-15.

As part of the RI, soil samples were collected from three locations within the basement of the Delaware Court Building (Figure 5, BH9 through BH11). Soil, groundwater, and soil vapor samples were collected from the shallow overburden at two locations west exterior to the Delaware Court Building (MW1, MW2, SV1, SV2) and three locations proximate to the northwestern, eastern, and southeastern boundaries of the presumed area of most significant (i.e., highest concentrations of VOCs) petroleum impact (MW3 through MW5 and SV3 through SV5) (Figure 5). Additional groundwater samples were collected from the shallow overburden at three locations on the southwestern portion of the Site (TPMW5, TPMW6, and TPWM16), within the presumed area of most significant petroleum impact (Figure 5).

The results of this investigation indicated that numerous VOCs and SVOCs, most of which were associated with petroleum, were detected at concentrations above the NYSDEC Class GA GWQS in the three groundwater samples collected from the overburden within the presumed area of most significant petroleum impact on the southwestern portion of the Site (TPMW5, TPMW6, and TPMW16). No VOCs or SVOCs were detected at concentrations above these criteria in the groundwater samples collected from the two locations west exterior to the Delaware Court Building or the three locations proximate to the northwestern, eastern, and southeastern boundaries of the known petroleum-impacted area. With the exception of several metals of no significant concern detected within all of the groundwater samples analyzed, no other analytes tested for were detected at concentrations above the NYSDEC Class GA GWQS or Part 375 SCOs for unrestricted site use in the soil and groundwater samples collected and submitted for analysis. Lastly, no VOCs were detected at concentrations of obvious concern in the soil vapor samples collected and submitted for analysis.

At the request of the NYSDEC, LCS conducted additional RI activities between September and November 2013 concurrent with the excavation of petroleum-impacted soils to assess the environmental quality of historic fill materials present within the upper ~4-5 feet of the subsurface at the Site, and to assess the environmental quality of the underlying native soils based on the presence of these historic fill materials. These

historic fill materials were exposed on the north and east sidewalls during excavation of the petroleum-impacted soils. In order of increasing depth, the historic fill materials encountered on a former (i.e., re-excavated) north wall of the petroleum-related excavation consisted of multiple layers of asphalt and black soils (Figure 6), and the fill encountered on the former east wall of the petroleum-related excavation consisted of multiple layers of asphalt, black soils, and construction and demolition (C & D) debris (Figure 7).

Four samples were collected from these fill layers (BCP-Fill #1, BCP-Fill #2, BCP-Fill #3, and BCP-Fill #4) (Figure 12). In addition, four composite soil samples were collected from the current/former north, east, and west sidewalls of the petroleum-related excavation in the soil layer directly beneath the fill materials, above the smear zone (BCP-North Wall Composite, BCP-East Wall Composite #1, BCP-North Wall Composite 2, and BCP West Wall Composite 1) (Figure 12). These eight samples were analyzed for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. The analytical results indicated that the historic fill materials collectively contained concentrations of SVOCs above the Part 375 SCOs for industrial site use, metals above the Part 375 SCOs for commercial site use, and pesticides above the Part 375 SCOs for unrestricted site use. No analytes were detected at concentrations exceeding the Part 375 SCOs for unrestricted site use in the composite soil samples collected in the soil layer directly beneath the historic fill materials.

In summary, based on the results of the RI, the most significant (i.e., highest concentrations of VOCs) petroleum impact to site soil and groundwater was presumed to exist on the southwestern portion of the Site, with the petroleum-impacted area in its entirety primarily existing within the suspected bounds derived from previous investigation results (Figure 3). During the IRM, an additional area of petroleum impact was discovered west of the known area of impact, along South Elmwood Avenue. Lastly, it was confirmed that although historic fill materials on-site contained SVOCs, metals, and pesticides at concentrations above the Part 375 SCOs for unrestricted site use, the underlying native soils had not been chemically impacted by the presence of these historic fill materials. Refer to Sections 4.1 through 4.6 for a discussion of these results.

1.2.5 Constituents of Primary Concern

Based on the investigations completed on-site, the constituents of primary concern (COPCs) in soil and groundwater were identified as petroleum-related VOCs and SVOCs. The COPCs in the historic fill materials overlying the native soils were identified as SVOCs, metals, and pesticides. The IRM approach, described in the

RI/IRM Work Plan (Ref. 48), focused on these COPCs as well as TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides.

1.2.6 Interim Remedial Measure Findings

In total, approximately 35,168.09 tons of soil (petroleum-impacted) and historic fill materials were removed from the Site during the IRM. A de-minimis volume of soil with concentrations of petroleum-related VOCs above the Part 375 SCOs remains on-site; this includes a maximum 625 square foot area (25 feet by 25 feet) of the petroleum-related excavation against the sheet pile on West Chippewa Street (grid square 15), approximately 1.0 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along West Chippewa Street, and approximately 7.4 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along South Elmwood Avenue (soil was removed up to the sheet piles and the sheet piles were scraped).

In addition, four underground storage tanks (USTs) were excavated from the vicinity of the most recent gasoline station building. The USTs consisted of the two known 4,000- and 8,000- gallon gasoline tanks as well as one 1,000-gallon tank and one 4,000-gallon tank that had not been previously identified. The unknown tanks were located beneath the former remediation shed south adjacent to the convenience store structure, which had not been accessible during the June 2012 geophysical survey. The two known tanks were pitted; however, no holes were observed. Dime-sized holes were observed in the two unknown tanks. In addition, two hydraulic lifts and an associated hydraulic oil reservoir were also removed. Lastly, an approximate 50-gallon suspected fuel oil UST was removed from the northern portion of the Site; such was empty with no evidence of prior usage, and in good condition.

During the final stages of the excavation of historic fill materials and petroleum-impacted soil, three groundwater monitoring wells in the backfilled petroleum-related excavation were sampled for TCL and CP-51 list VOCs and TCL SVOCs. Based on the analytical results, groundwater quality in this area had improved significantly, but benzene was still present at levels above the NYSDEC Class GA GWQS in the two wells installed on the southwestern portion of the Site.

2.0 REMEDIAL INVESTIGATION APPROACH

The purpose of the RI field activities was to more fully characterize overburden soils, soil vapor, groundwater, and historic fill materials at the site. RI field activities included: direct-push (Geoprobe®) soil sampling; rotary auger borehole development; monitoring well installation and groundwater sampling of newly installed and existing monitoring wells; soil vapor sampling; collection of hydraulic conductivity and other groundwater flow data; and completion of a site survey. The location of the boreholes, soil vapor points, and monitoring wells (Figure 5) were outlined in the Remedial Investigation and IRM Work Plan dated May 2013 and approved by the NYSDEC and New York State Department of Health (NYSDOH). The Final RI/IRM Work Plan is on file with the NYSDEC.

2.1 SOIL AND HISTORIC FILL INVESTIGATION

2.1.1 Overburden Drilling

Five permanent groundwater monitoring wells were installed on-site during the RI; such included two wells west exterior to the Delaware Court Building, designated as BCP MW1 and BCP MW2; and three wells proximate to the northwestern, eastern, and southeastern boundaries of the presumed area of most significant (i.e., highest VOC concentrations) petroleum impact, designated as BCP MW3, BCP MW4, and BCP MW5 (Figure 5). Each of the five associated test borings was advanced into the overburden using a split spoon sampler with a hollow stem auger drill rig. Specifically, soil samples were obtained by driving an approximate 2-inch outside diameter (OD) by 24-inch long steel split spoon sampler directly into the soil. The split spoon sampler was driven its entire length with a 140 lb. hammer falling 30 inches. Each 2-foot section of borehole was then sampled by opening the split spoon, bisecting the core (if intact), and scooping sufficient sample from the long axis of the split core with a decontaminated stainless steel spoon or spatula. This process was repeated for each boring until the bottom of the split spoon sampler reached the target depth of 18 ft. bgs for BCP MW1 through BCP MW3 and BCP MW5, and 20 ft. bgs for BCP MW4. Target depths were chosen such that upon installation of the well screen, the screen would straddle the water table.

Following completion of soil sampling, a well with a 10-foot screened interval and 2-inch inner diameter (ID) was constructed within each boring. The total depths of BCP-MW1 through BCP-MW5 were 17.1, 18.0, 17.9, 19.5, and 18.0 ft. below top of

casing (BTOC), respectively. Refer to Section 2.2.1 for additional details regarding the well constructions and Appendix D for the well construction diagrams.

Three test borings, designated as BCP BH9, BCP BH10, and BCP BH11, were completed at locations in the northern, central, and southern portions of the Delaware Court Building (Figure 5). Each boring was completed in the basement with a portable (dolly rig) percussion and hydraulically driven drive system equipped with an approximate 2-inch diameter, approximate 48-inch long macro-core sampler. Soil samples were obtained by pushing the macro-core sampler, fitted with a dedicated and disposable plastic liner, its entire 4-foot length directly into the soil. Each 4-foot section of borehole was then sampled by cutting open the plastic liner, bisecting the core (if intact), and scooping sufficient sample from the long axis of the split core with a decontaminated stainless steel spoon or spatula. This process was repeated for each boring until the bottom of the macro-core sampler reached the target depth of 6 ft. below the top of the basement floor. The basement floor was approximately 10 feet below ground surface.

2.1.2 Soil Sampling

Soil samples were collected from within each of the eight borings (BCP BH1/MW1 through BCP BH5/MW5 and BCP BH9 through BCP BH11) continuously from the ground surface until the target depth for each boring was reached. Any downhole equipment was decontaminated with an Alconox and tap water wash and tap water rinse between boreholes. The cutting shoes were decontaminated in a similar manner between collections of each sample.

Soil samples were described by a geologist. The overburden soil was described as consisting primarily of sand, silty sand, and clay. A representative portion of each 2-foot interval within each 24-inch long split spoon sampler or 48-inch long macro-core liner was immediately containerized upon core recovery to minimize loss of VOC constituents present in the soil sample. These samples were immediately placed into two 2-oz. wide mouth glass jars in a manner limiting headspace by compacting the soil into the containers, prior to preserving the samples with sodium bisulfate and methanol. The remainder of each 2-foot sample interval was placed into a sealable polyvinyl chloride (PVC) bag and allowed to equilibrate to ambient temperature. Soil screening was performed by screening the headspace within each PVC bag utilizing a photoionization detector (PID) equipped with a 10.6 eV lamp, and by noting any visual and/or olfactory observations. Each PVC bag was opened slightly and the PID probe placed within the headspace of the container to allow for a reading of the organic vapors present. Soil

descriptions, PID measurements, and visual/olfactory observations recorded during soil sampling are located in Appendix D.

PID measurements ranged from 0.8 to 2.4 parts per million (ppm) in the soil samples collected from the test borings completed within the basement of the Delaware Court Building (BCP BH9 through BCP BH11). No solvent- or petroleum- type odors were detected and no solvent- or petroleum- type staining was observed in any of the soil samples collected from these borings. PID measurements ranged from 0.0 to 178 ppm in the soil samples collected from the five test borings completed on the exterior portions of the Site (BCP BH1/MW1 through BCP BH5/MW5). All of the elevated PID measurements occurred in the soil samples collected from BCP BH5/MW5 between approximately 8 and 12 ft. bgs, in which PID measurements of 178 ppm and 121 ppm were noted and petroleum-type odors were detected. Very slight petroleum-type odors were detected in the soil samples collected from BCP BH3/MW3 (at approximately 10 ft. bgs) and BCP BH4/MW4 (at approximately 8-9 ft. bgs). No solvent-type odors were detected and no petroleum- or solvent- type staining was observed in any of the soil samples collected from these borings.

As noted above, samples for VOCs were collected and transferred to sample containers immediately after opening and bisecting each soil core. One soil sample was collected from each of the eight borings completed at the Site for VOC analysis. One additional soil sample was collected from each of the eight borings completed for analyses for TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. Soil samples collected for the non-VOC analyses were homogenized prior to containerizing the samples. The homogenization was completed by removing the soil from the sampling equipment, transferring it to a clean surface (steel pan, bowl, etc.), and mixing to provide a more homogeneous sample. The soil was scraped from the sides, corners, and bottom of the clean surface; rolled to the middle; and thoroughly mixed until the material appeared homogenous. An aliquot of this mixture was then transferred to the required sample containers, slightly tamped-down, filled to near the top of the container, and sealed with the appropriate cap. Any soil on the threads of the container was wiped off with a clean paper towel or equivalent before placing the cap on the sample container. Analysis was performed using USEPA SW-846 methods and Category B deliverables.

2.1.3 Historic Fill Sampling

During excavation of the petroleum-impacted soils at the Site, historic fill materials were exposed to depths of approximately 4-5 ft. bgs on the former north and east sidewalls of the excavation. In order of increasing depth, the historic fill materials

encountered on the north wall of the petroleum-related excavation consisted of multiple layers of asphalt and black soils (Figure 6), and the historic fill materials encountered on the east wall of the petroleum-related excavation consisted of multiple layers of asphalt, black soils, and construction and demolition (C & D) debris (Figure 7). Upon exposure of the historic fill materials, the NYSDEC requested that four samples of the historic fill materials, with each distinct type of fill represented, be collected and analyzed for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. Correspondence from the NYSDEC indicating these additional sampling requirements is included in Appendix E in an email dated September 16, 2013. Analysis was performed using USEPA SW-846 and Category B deliverables. The historic fill samples collected and submitted for analysis (Figure 12) consisted of the following:

- BCP-Fill #1 – Black soils underlying asphalt; collected from the northern section of the former east wall
- BCP-Fill #2 – Black soils underlying asphalt; collected from the southern section of the former east wall
- BCP-Fill #3 – Construction and demolition debris underlying the black soils; collected from the former east wall
- BCP-Fill #4 – Black soils underlying asphalt; collected from the former north wall

During subsequent waste characterization drilling activities to facilitate proper disposal of the historic fill materials, it was determined that historic fill materials of the types exposed on the north and east sidewalls existed over the entire Site. The boundary between the historic fill materials and native soils in the waste characterization boreholes was generally observed at ~4 ft. bgs; however, in some areas the boundary was observed as deep as ~6 ft. bgs and as shallow as ~2 ft. bgs.

2.1.4 Sampling of Native Soils Directly Underlying Historic Fill Materials

To determine if native soils located beneath the historic fill materials had been impacted due to the presence of the historic fill materials, the NYSDEC also requested that four composite soil samples be collected from the final sidewalls of the petroleum-related soil excavation, in the soil layer directly beneath the historic fill materials but above the smear zone. This requirement is summarized in an email from the NYSDEC dated September 16, 2013, located in Appendix E. The four composite soil samples, designated BCP-North Wall Composite, BCP-North Wall Composite #2, BCP-East Wall

Composite #1, and BCP-West Wall Composite 1, were collected from this soil layer on the north, east, and west sidewalls of the petroleum-related excavation at the time of collection (Figure 12). These samples were collected from the final sidewalls of the petroleum-related excavation, with the exceptions of BCP West Wall Composite 1 and BCP- North Wall Composite 2. Although the confirmatory samples collected from these portions of west and north sidewalls met the Part 375 SCOs for unrestricted site use for VOCs and SVOCs (Section 4.3), these portions of "clean" sidewall were subsequently removed to more easily facilitate additional excavation of petroleum-impacted soils.

2.2 GROUNDWATER INVESTIGATION

As described in Section 2.1.1, five overburden groundwater monitoring wells were installed within the test borings completed on the exterior portions of the Site; such included two wells west exterior to the Delaware Court Building, designated as BCP MW1 and BCP MW2, and three wells proximate to the northwestern, eastern, and southeastern boundaries of the presumed area of most significant petroleum impact (i.e., highest concentrations of VOCs), designated as BCP MW3, BCP MW4, and BCP MW5 (Figure 5). These five wells were developed and sampled to document the condition of on-site groundwater prior to initiation of the IRM. In addition, at the request of the NYSDEC, three existing one-inch diameter wells on the southwestern portion of the site, installed in June 2002 and designated as TPMW5, TPMW6, and TPMW16, were redeveloped and sampled to document the condition of on-site groundwater within the presumed most significant area of petroleum impact (Figure 5). This requirement is summarized in emails between LCS and the NYSDEC dated September 18 and 19, 2013, located in Appendix E. The well construction diagrams for the existing and newly installed monitoring wells are located in Appendix D.

2.2.1 Overburden Monitoring Well Construction

Overburden monitoring wells BCP MW1 through BCP MW5 were each constructed of 2-inch ID flush jointed Schedule 40 PVC riser and screen. Overburden monitoring wells TPMW5, TPMW6, and TPMW16, installed in June 2002, were each constructed of 1-inch ID flush jointed Schedule 40 PVC riser and screen. The installation depth of the screen in each well was selected to straddle the water table, in order to monitor groundwater in the uppermost water bearing zone. The screen consisted of a 10-foot long section of 0.010-inch factory slotted PVC.

Following determination of the monitoring zone and placement of the assembled screen and riser, the annular space of each borehole was backfilled. Generally, this included the placement of a sand filter pack consisting of Morie #00 sand around the well screen such that the sand extended above the top of the screen. A layer of bentonite pellets was placed above the sand filter, and tap water was poured over the pellets and they were allowed time to hydrate. Concrete was installed above the bentonite seal to the surface, and a steel protective casing was placed over the riser. Monitoring well construction details are located in Appendix D.

2.2.2 Groundwater Sampling

The five newly installed overburden monitoring wells and existing overburden monitoring wells TPMW6 and TPMW16 were developed / redeveloped prior to sampling to remove residual sediments and ensure good hydraulic connection with the water-bearing zone. Due to a field error, existing well TPMW5 was not redeveloped prior to sampling. The newly installed monitoring wells were developed a minimum of two days after installation to allow the grout used in well construction to set. During development, each well was purged utilizing dedicated and disposable PVC and silicone tubing and a pump until there was no visible sediment observed in the purged groundwater. During development of BCP MW5, the well went dry prior to realization of the desired turbidity level. The wells were purged and then sampled a minimum of two weeks after development.

During well sampling, each of the five newly installed and three existing overburden monitoring wells was purged utilizing low flow sampling techniques with a pump and dedicated and disposable PVC and silicone tubing until turbidity in the purged groundwater was less than 50 NTU and pH, temperature, and conductivity in the purged groundwater had stabilized over at least three well volumes, but not more than five well volumes. When these criteria had been met, groundwater samples were collected utilizing dedicated and disposable PVC bailers, each equipped with a bottom check-valve, and dedicated polyethylene or polypropylene line.

2.2.3 Hydraulic Assessment

Hydraulic assessment included completion of hydraulic conductivity testing on newly installed overburden wells BCP MW1 through BCP MW5, and measurement of water levels in these five newly installed wells and in existing wells TPMW4, TPMW6, and TPMW16. These eight monitoring wells were surveyed on July 19, 2013. Water level measurements were recorded on June 27, 2013 (Table 3A) for the purpose of

developing an overburden isopotential map (Figure 8). Based on the survey data, groundwater in the shallow overburden was determined to be generally flowing to the south- southwest. The well survey data is located in Appendix F.

Hydraulic conductivity testing was completed on BCP MW1 through BCP MW5 using rising head methods by displacing water with a slug in each well. After the water level in the well equilibrated, the slug was rapidly removed. The rate of rise of the water level to the initial water level was measured with respect to time. Data obtained using these test procedures was evaluated using procedures presented in Bouwer and Rice 1976 and Bouwer 1989 (Refs. 49 and 50). Data generated during the slug tests and hydraulic conductivity calculations are included in Appendix F.

The calculations presented in Appendix F suggest that the hydraulic conductivity in the overburden sandy units was on the order of 10^0 – 10^1 feet per day, and the hydraulic conductivity in the overburden clay was on the order of a maximum of 10^{-1} feet per day.

2.3 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Quality Assurance/Quality Control (QA/QC) samples were collected during the remedial investigation in order to provide control over the collection of environmental measurements and subsequent validation, review, and interpretation of generated analytical data.

2.3.1 Equipment (Rinsate) Blanks

Three equipment (rinsate) blanks were collected. The purpose of the equipment (rinsate blank) samples was to assure proper decontamination of the soil and groundwater sampling equipment. The performance of rinsate blanks required two sets of identical bottles: one set filled with demonstrated analyte-free water provided by the laboratory and one empty set of bottles. At an area known or suspected to be contaminated at the site, LCS passed all of the laboratory-provided analyte-free water through the decontaminated sampling devices (split spoon sampler or disposable bailer) into the empty bottles. The bottles were then submitted for laboratory analysis to be analyzed for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. The following equipment blanks were collected:

- BCP-EB1, collected on June 5, 2013 (collected over split spoon sampler)
- EB-2, collected on June 25, 2013 (collected over split spoon sampler)

- EB-3, collected on July 1, 2013 (collected over new, dedicated, disposable bailer)

2.3.2 Trip Blanks

Two trip blanks were collected. The purpose of the trip blanks was to determine whether groundwater sample vials and/or groundwater samples had been impacted by contaminants throughout their use. Trip blanks consisted of sets of sample bottles filled at the laboratory with demonstrated analyte-free water, and accompanied the sample bottles that were prepared at the laboratory into the field and back to the laboratory with the collected groundwater samples to be analyzed for TCL and CP-51 list VOCs. The following trip blanks were collected:

- Trip Blank, accompanied groundwater samples shipped on June 28, 2013
- Trip Blank, accompanied another set of groundwater samples shipped on June 28, 2013

A trip blank was not submitted with the groundwater sample collected on July 1, 2013. This is not anticipated to have impacted the results of the remedial investigation.

2.3.3 Blind Duplicate Samples

Two blind duplicate soil samples were collected, one blind duplicate groundwater sample was collected, and one blind duplicate soil vapor sample was collected. The purpose of the duplicate samples was to assess the quality of the laboratory analyses. Blind duplicate samples were analyzed for TCL and CP-51 list VOCs, TCL SVOCs with phenols, TAL metals, cyanide, PCBs, and pesticides. The following duplicate samples were collected:

- BCP MW4 Duplicate, 8-10 ft. bgs (soil), collected on June 5, 2013 (named BCP-MW6-8-10 on chain of custody)
- BCP MW4 Duplicate, 6-18 ft. bgs (soil), collected on June 5, 2013 (named BCP-MW6-4-14 on chain of custody)
- BCP SV4 Duplicate (soil vapor), collected on June 26, 2013 (named BCP-SV-6 on chain of custody)
- BCP-MW5 Duplicate (groundwater), collected on June 28, 2013 (named BCP MW-09 on chain of custody)

2.3.4 Laboratory Duplicate Samples

Two duplicate soil samples were collected and one duplicate groundwater sample was collected and analyzed as Matrix Spikes and Matrix Spike Duplicates (MS/MS). The purpose of MS/MSD samples was to assess the precision or reproducibility of the analytical method on a sample of a particular matrix. MS/MSD samples were submitted for laboratory analysis for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. The following samples were submitted to the laboratory for MS/MSD assessment:

- BCP-MW3-8-10 (soil), collected on June 5, 2013
- BCP-MW3-6-16 (soil), collected on June 5, 2013
- BCP-MW2 (groundwater), collected on June 27, 2013

3.0 SITE PHYSICAL CHARACTERISTICS

The physical characteristics of the Site observed during the RI are described in the following sections.

3.0.1 Surface Features

At the time of the RI, the Site was generally level at grade with limited distinguishable features other than the on-site structures. The on-site structures included one retail gasoline station and associated single story, approximately 1,840-square foot convenience store; one two-story, approximately 51,344 square foot multi-tenant commercial building known as the Delaware Court Building; and one small guard shack. The gasoline station, convenience store, and guard shack were demolished as part of the IRM. The Delaware Court Building was demolished as part of the redevelopment project. The remainder of the site was covered by asphalt. The site is currently under redevelopment with a commercial building and parking garage.

3.0.2 Geology

Fill materials were encountered in all exterior borings (BCP BH1/MW1 through BCP BH5/MW5) to a depth of between approximately 2 and 5 ft. bgs. Fill materials were encountered in the three borings completed in the northern, central, and southern portions of the Delaware Court Building (Figure 5) to a depth of approximately 2 feet below the top of the basement floor. The fill materials consisted of asphalt, concrete, red brick, gravel, sand, silty sand, gravelly sandy silt, sandy silt, and clay.

Exposure of historic fill materials on the north and east sidewalls during excavation of petroleum-impacted soils during IRM activities indicated that historic fill materials were present in distinct layers over at least this portion of the Site. In order of increasing depth, historic fill materials exposed on the former north wall of the petroleum-related excavation consisted of asphalt and black soils (Figure 6), and historic fill materials exposed on the former east wall of the petroleum-related excavation consisted of asphalt, black soils, and construction and demolition (C & D) debris (Figure 7). During subsequent waste characterization drilling activities to facilitate proper disposal of the historic fill materials, it was determined that historic fill materials of the types exposed on the north and east sidewalls existed over the entire Site. The boundary between the historic fill materials and native soils in the waste characterization boreholes was generally observed at approximately 4 ft. bgs; however, in some areas the boundary was observed as deep as approximately 6 ft. bgs and as shallow as approximately 2 ft. bgs.

The fill materials were generally underlain by native soils consisting primarily of fine-grained silty sand and sand with some clay lenses. Refer to Figures 9, 10, and 11 for general geologic cross-sections of the shallow overburden at the Site.

3.0.3 Hydrogeology

Based on observations during well drilling, groundwater in the shallow overburden (approximately 0-20 ft. bgs) at the Site appeared to have existed primarily under unconfined conditions prior to implementation of the IRM. During previous investigations conducted at the Site, groundwater was encountered at depths ranging between approximately 7 and 9.5 ft. bgs within boreholes completed to the immediate north, northeast, and southeast of the most recent retail gasoline station structure located on the southwestern portion of the Site. These depths generally corresponded to the observed contact between an upper silt and clay unit and a lower sand unit in several of these boreholes. Groundwater was generally encountered within the sand-silty sand unit at depths ranging between approximately 6 and 12 ft. bgs. in wells completed to the southwest of the most recent retail gasoline station structure and on the central and eastern portions of the Site during previous investigations and during the RI.

Hydraulic conductivity testing performed during the RI and groundwater elevation data indicate an overburden groundwater transport rate on the order of $10^{0} – 10^{1}$ feet per day in the overburden sandy units and a maximum of 10^{-1} feet per day in the overburden clay unit. Groundwater flow in the shallow overburden was determined to be to the south-southwest (Figure 8).

4.0 INVESTIGATION RESULTS BY MEDIA

The following sections discuss the analytical results of the Remedial Investigation. Tables 4 through 11 summarize the soil, groundwater, historic fill materials, and soil vapor analytical data. The analytical laboratory reports for the soil, groundwater, and soil vapor sampling are included in Appendix G. The analytical reports for the historic fill materials and native soils directly underneath the historic fill materials are included in Appendix H. Figure 5 presents the soil, groundwater, and soil vapor sampling locations. Figure 12 presents the sampling locations for the historic fill materials and native soil samples directly underlying the historic fill materials, above the smear zone.

4.1 SOIL

Tables 4 and 5 present a comparison of the analyzed parameters in the soil samples submitted for analysis from the interior and exterior borings to the Part 375 Soil Cleanup Objectives (SCOs) for unrestricted site use. Sample results are described below according to contaminant class.

4.1.1 Volatile Organic Compounds

VOCs were reported as below the SCOs for unrestricted site use in the soil samples collected and submitted for analysis from the exterior borings (Table 4A, BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5A, BCP BH9 through BCP BH11) (Figure 5).

As indicated on the subsurface logs in Appendix D, PID measurements ranged from 0.8 to 2.4 parts per million (ppm) in the soil samples collected from the test borings completed within the basement of the Delaware Court Building (BCP BH9 through BCP BH11). No solvent- or petroleum- type odors were detected and no solvent- or petroleum- type staining was observed in any of the soil samples collected from these borings. PID measurements ranged from 0.0 to 178 ppm in the soil samples collected from the five test borings completed on the exterior portions of the Site (BCP MW1 through BCP MW5). All of the significantly elevated PID readings occurred in the soil samples collected from BCP MW5 between approximately 8 and 12 ft. bgs, in which PID measurements of 178 ppm and 121 ppm were noted and petroleum-type odors were detected. Very slight petroleum-type odors were detected in the soil samples collected from BCP MW3 (at approximately 10 ft. bgs) and BCP MW4 (at approximately 8-9 ft.

bgs). No solvent-type odors were detected and no petroleum- or solvent- type staining was observed in any of the soil samples collected from these borings.

Based on these results, it was presumed that the most significant petroleum impact on-site generally resided within the bounds derived during previous site investigations (Figures 3 and 5). During implementation of the IRM, large quantities of petroleum-impacted soils were removed from the Site. Refer to Section 9.0 for additional details regarding the IRM activities.

4.1.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the SCOs for unrestricted site use in the soil samples collected and submitted for analysis from the exterior borings (Table 4B, BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5B, BCP BH9 through BCP BH11) (Figure 5).

4.1.3 Metals

Metals were reported within the range of Eastern USA Background Concentrations or SCOs for unrestricted site use in the soil samples collected and submitted for analysis from the exterior borings (Table 4C, BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5C, BCP BH9 through BCP BH11) (Figure 5).

4.1.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis from the exterior borings (Table 4D, BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5D, BCP BH9 through BCP BH11) (Figure 5).

4.1.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis from the exterior borings (Table 4E, BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5E, BCP BH9 through BCP BH11) (Figure 5).

4.1.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis from the exterior borings (Table 4F,

BCP MW1 through BCP MW5) and the borings located within the Delaware Court Building (Table 5F, BCP BH9 through BCP BH11) (Figure 5).

4.1.7 Summary

Analytical data generated during the RI for the overburden soil indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis.

4.2 HISTORIC FILL MATERIALS

Table 6 presents a comparison of the analyzed parameters in the samples of historic fill materials submitted for analysis from the former northern and eastern walls of the petroleum-related excavation to the Part 375 Soil Cleanup Objectives (SCOs) for unrestricted site use. Sample results are described below according to `contaminant class.

4.2.1 Volatile Organic Compounds

VOCs were reported as below the SCOs for unrestricted site use in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation (Table 6A) (Figure 12). No solvent- or petroleum- type odors were detected and no solvent- or petroleum- type staining was observed in any of the historic fill samples collected.

During implementation of the IRM, historic fill materials exterior to the Delaware Court Building were removed from the Site. Refer to Section 9.0 for additional details regarding the IRM activities.

4.2.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the SCOs for unrestricted site use in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation with the following exceptions (Table 6B):

- In the samples of the black materials beneath the asphalt on the southern section of the former east wall (BCP-Fill #2) and on the former north wall (BCP-Fill #4) (Figure 12):
    - Benzo(a)anthracene - above restricted residential SCOs
    - Benzo(b)fluoranthene - above restricted residential SCOs
    - Indeno(1,2,3-cd)pyrene- above restricted residential SCOs

- Benzo(a)pyrene – above industrial SCOs

- In the sample of the black materials beneath the asphalt on the southern section of the former east wall (BCP-Fill #2) (Figure 12):
  - Benzo(k)fluoranthene – above restricted residential SCOs
  - Chrysene – above restricted residential SCOs
  - Dibenzo(a,h)anthracene – above industrial SCOs
- In the sample of the black materials beneath the asphalt on the former north wall (BCP-Fill #4) (Figure 12):
  - Benzo(k)fluoranthene – above unrestricted SCOs
  - Chrysene – above residential SCOs

4.2.3 Metals

Metals were reported as below the SCOs for unrestricted site use and/or within the range of Eastern USA Background Concentrations in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation with the following exceptions (Table 6C):

- In the samples of the black materials beneath the asphalt on the southern section of the former east wall (BCP-Fill #2) and on the former north wall (BCP-Fill #4), and of the C & D debris on the former east wall (Figure 12):
  - Zinc – above unrestricted SCOs
- In the sample of the black materials beneath the asphalt on the southern section of the former east wall (BCP-Fill #2) (Figure 12):
  - Chromium – potentially above restricted residential SCOs, depending on speciation
  - Manganese – above restricted residential SCOs
- In the sample of the black materials beneath the asphalt on the former north wall (BCP-Fill #4) (Figure 12):
  - Cadmium – above residential SCOs
  - Copper – above unrestricted SCOs
  - Lead – above commercial SCOs

- Mercury – above unrestricted SCOs

4.2.4 Cyanide

Cyanide was reported as below the SCOs for unrestricted site use in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation (Table 6D) (Figure 12).

4.2.5 PCBs

PCBs were reported as below the SCOs for unrestricted site use in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation (Table 6E) (Figure 12).

4.2.6 Pesticides

Pesticides were reported as below the SCOs for unrestricted site use in the four samples of historic fill materials collected from the former northern and eastern walls of the petroleum-related excavation with the following exceptions (Table 6F):

- In the samples of the black materials beneath the asphalt on the southern section of the former east wall (BCP-Fill #2) and of the C & D debris on the former east wall (Figure 12):
  - 4,4'-DDT – above unrestricted SCOs

4.2.7 Summary

Analytical data generated during the RI for the four samples of historic fill materials collected and submitted for analysis from the former northern and eastern walls of the petroleum-related excavation indicates that VOCs, cyanide, and PCBs met the Part 375 SCOs for unrestricted site use, pesticides collectively met the Part 375 SCOs for residential site use, metals collectively met the Part 375 SCOs for industrial site use, and SVOCs were collectively above Part 375 SCOs for industrial site use in the samples collected and submitted for analysis.

During implementation of the IRM, historic fill materials were removed from the Site. Refer to Section 9.0 for additional details regarding the IRM activities.

4.3 NATIVE SOILS DIRECTLY UNDERLYING THE HISTORIC FILL MATERIALS

Table 7 presents a comparison of the analyzed parameters in the soil samples submitted for analysis from the native soils directly underlying the historic fill materials (above the smear zone) on the current/former northern, eastern, and western sidewalls of the petroleum-related excavation to the Part 375 Soil Cleanup Objectives (SCOs) for unrestricted site use. Sample results are described below according to contaminant class.

4.3.1 Volatile Organic Compounds

VOCs were reported as below the SCOs for unrestricted site use in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7A) (Figure 12).

4.3.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the SCOs for unrestricted site use in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7B) (Figure 12).

4.3.3 Metals

Metals were reported within the range of Eastern USA Background Concentrations or SCOs for unrestricted site use in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7C) (Figure 12).

4.3.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7D) (Figure 12).

4.3.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7E) (Figure 12).

4.3.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the soil samples collected and submitted for analysis directly beneath the historic fill materials, above the smear zone (Table 7F) (Figure 12).

4.3.7 Summary

Analytical data generated during the RI for the native soils directly underlying the historic fill materials (above the smear zone) on the current/former northern, eastern, and western walls of the petroleum-related excavation indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis.

4.4 GROUNDWATER EXTERIOR TO THE AREA OF KNOWN PETROLEUM IMPACT

Table 8 presents a comparison of the analyzed parameters in the groundwater samples submitted for analysis from the two wells west exterior to the Delaware Court Building (BCP MW1 and BCP MW2) and three wells proximate to the northwestern, eastern, and southeastern boundaries of the presumed most significant (i.e., highest VOC concentrations) petroleum-impacted soil and groundwater area (BCP MW3, BCP MW4, and BCP MW5) to the NYSDEC Class GA Groundwater Quality Standards (GWQS) per NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1988, Revised April 2000). Sample results are described below according to contaminant class.

4.4.1 Volatile Organic Compounds

VOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 (Table 8A) (Figure 5).

4.4.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 (Table 8B) (Figure 5).

4.4.3 Metals

Metals were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 with the following exceptions (Table 8C) (Figure 5):

- Iron and Manganese (sum) – above Class GA GWQS in BCP MW1, BCP MW3, and BCP MW5

- Magnesium – above Class GA GWQS in BCP MW3 through BCP MW5
- Sodium – above Class GA GWQS in BCP MW1 through BCP MW5

4.4.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 (Table 8D) (Figure 5).

4.4.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 (Table 8E) (Figure 5).

4.4.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from BCP MW1 through BCP MW5 (Table 8F) (Figure 5).

4.4.7 Summary

Analytical data generated during the RI for the five groundwater samples collected and submitted for analysis from the area exterior to the known area of petroleum impact indicates that VOCs, SVOCs, cyanide, PCBs, and pesticides met the Class GA GWQS and metals did not meet the Class GA GWQS in the samples collected and submitted for analysis.

4.5 GROUNDWATER WITHIN THE AREA OF KNOWN PETROLEUM IMPACT

Table 9 presents a comparison of the analyzed parameters in the groundwater samples submitted for analysis from the three existing wells on the southwestern portion of the Site (TPMW5, TPMW6, and TPMW16), within the area of known petroleum impact, to the NYSDEC Class GA Groundwater Quality Standards (GWQS) per NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1988, Revised April 2000). Sample results are described below according to contaminant class.

4.5.1 Volatile Organic Compounds

VOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 with the following exceptions (Table 9A) (Figure 5):

- Benzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- N-Butylbenzene – above Class GA GWQS in TPMW6 and TPMW16
- Sec-Butylbenzene – above Class GA GWQS in TPMW16
- Tert-Butylbenzene – above Class GA GWQS in TPMW5
- Chloroform – above Class GA GWQS in TPMW5
- 1,2-Dichloroethane – above Class GA GWQS in TPMW5
- Ethylbenzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- Isopropylbenzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- P-Isopropyltoluene – above Class GA GWQS in TPMW16
- Naphthalene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- N-Propylbenzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- Toluene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- 1,2,4-Trimethylbenzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- 1,3,5-Trimethylbenzene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- M,p-xylene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- O-xylene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16

4.5.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 with the following exceptions (Table 9B) (Figure 5):

- 2,4-Dimethylphenol – above Class GA GWQS in TPMW5
- 2-Methylphenol – above Class GA GWQS in TPMW5

- 3&4-Methylphenol – above Class GA GWQS in TPMW5
- Phenol – above Class GA GWQS in TPMW5, TPMW6, and TPMW16
- Benzo(a)anthracene – above Class GA GWQS in TPMW5
- Benzo(a)pyrene – above Class GA GWQS in TPMW5
- Benzo(b)fluoranthene – above Class GA GWQS in TPMW5 and TPMW6
- Benzo(k)fluoranthene – above Class GA GWQS in TPMW5
- Chrysene – above Class GA GWQS in TPMW5 and TPMW6
- Bis (2-ethylhexyl) phthalate – above Class GA GWQS in TPMW5
- Indeno (1,2,3-cd) pyrene – above Class GA GWQS in TPMW5
- Naphthalene – above Class GA GWQS in TPMW5, TPMW6, and TPMW16

4.5.3 Metals

Metals were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 with the following exceptions (Table 9C) (Figure 5):

- Antimony – above Class GA GWQS in TPMW5
- Iron and Manganese (sum) – above Class GA GWQS in TPMW5 and TPMW16
- Iron – above Class GA GWQS in TPMW6
- Lead – above Class GA GWQS in TPMW5
- Sodium – above Class GA GWQS in TPMW5 and TPMW16

4.5.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 (Table 9D) (Figure 5).

4.5.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 (Table 9E) (Figure 5).

4.5.6 Pesticides

PCBs were reported as below the laboratory's method detection limits in the groundwater samples collected and submitted for analysis from TPMW5, TPMW6, and TPMW16 (Table 9F) (Figure 5).

4.5.7 Summary

Analytical data generated during the RI for the three groundwater samples collected and submitted for analysis from within the area of known petroleum impact indicates that cyanide, PCBs, and pesticides met the Class GA GWQS; and VOCs, SVOCs, and metals did not meet the Class GA GWQS in the samples collected and submitted for analysis.

4.6 SOIL VAPOR

Table 10 presents the results of the analyzed parameters in the soil vapor samples submitted for analysis from the overburden at two locations west exterior to the Delaware Court Building and three locations proximate to the northwestern, eastern, and southeastern boundaries of the presumed most significant (i.e., highest VOC concentrations) petroleum-impacted soil and groundwater area (BCP SV1 through BCP SV5) (Figure 5). No VOCs were detected at concentrations of obvious concern in the soil vapor samples collected and submitted for analysis. Tetrachloroethylene was detected in soil vapor points BCP SV1 through BCP SV3; however, when brought to the attention of the NYSDEC during the weekly progress meeting on August 20, 2013, the NYSDEC indicated that there is a site on Franklin Street that is heavily contaminated with tetrachloroethylene, and that the vapors from that site may have migrated through the sandy soils to the subject Site. The NYSDEC indicated that these detections of tetrachloroethylene would not impact pursuit of the unrestricted use status for the Site.

4.7 DATA USABILITY SUMMARIES FOR THE REMEDIAL INVESTIGATION

In accordance with the Section 10.0 of the RI/IRM Work Plan (Ref. 48), the laboratory analytical data from the Remedial Investigation was independently assessed and, as required, submitted for independent review. Environmental Data Services, Inc. (EDS) located in Williamsburg, Virginia, performed the data usability summary

assessment, which involved a review of the summary form information and sample raw data, and a limited review of associated quality control (QC) raw data. Appendix I includes the Data Usability Summaries (DUSRs) for the soil, groundwater, and soil vapor samples collected during the Remedial Investigation, as well as responses from Accutest Laboratories and EDS pertaining to the results of the data validation. The DUSRs for the samples of historic fill materials and native soils collected directly beneath the historic fill materials (above the smear zone) are located in Appendix J. The DUSRs were prepared in accordance with Appendix 2B of NYSDEC's Final DER-10 Guidance for Site Investigation and Remediation guidance (Ref. 51).

According to EDS, each DUSR for soil and water samples was conducted using guidance from the United States Environmental Protection Agency (USEPA) Region 2 Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-24, Revision 2, August 2008: Validating Volatile Organic Compounds by SW-846 Method 8260B;
- SOP Number HW-22, Revision 4, August 2008: Validating Semivolatile Organic Compounds by SW-846 Method 8270D;
- SOP Number HW-44, Revision 1, October 2006: Validating Pesticide Compounds by SW-846 Method 8081B;
- SOP Number HW-45, Revision 1, October 2006, Validating PCB Compounds by SW-846 Method 8082A;
- SOP Number HW-2, Revision 13, September 2006: Evaluation of Metals Data for the CLP Program based on ILMO5.3;

as well as professional judgment.

According to EDS, the DUSR for the air samples was conducted using guidance from the USEPA Region 2 SOP Number HW-31, Revision 4, October 2006: Validating Air Samples – Volatile Organic Analysis of Ambient Air in Canister, as well as professional judgment.

4.7.1 Organics in Soil and Water

According to EDS, the following items and criteria were reviewed for the organics in soil and water analyses:

- Data completeness
- Holding times

- Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Gas Chromatography (GC)/Mass Spectrometry (MS) tuning
- Initial and continuing calibration verifications
- Compound quantitation
- Internal standard area and retention time performance
- Field duplicate sample precision

4.7.2 Pesticides and PCBs in Soil and Water

According to EDS, the following items and criteria were reviewed for the pesticides and PCBs in soil and water analyses:

- Data completeness
- Holding times
- Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Initial and continuing calibration verifications
- Compound quantitation
- Field duplicate sample precision
- Gas Chromatography (GC) column difference results

4.7.3 Metals and Cyanide in Soil and Water

According to EDS, the following items and criteria were reviewed for the metals and cyanide in soil and water analyses:

- Data completeness
- Holding times

- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Initial and continuing calibration verifications
- Compound quantitation
- ICP serial dilution
- Field duplicate sample precision

4.7.4 Organics in Air

According to EDS, the following items and criteria were reviewed for the organics in air analyses:

- Data completeness
- Cover letter, narrative, and data reporting forms
- Canister certification blanks
- Canister certification pressure differences
- Chains-of-Custody and traffic reports
- Holding times
- Laboratory Control Samples
- Gas Chromatography (GC)/Mass Spectrometry (MS) tuning
- Method, Field Blank, and Trip Blank Contamination
- Initial and continuing calibration verifications
- Compound quantitation
- Internal standard area performance
- Field duplicate sample precision

4.7.5 Results of Data Review and Validation

In general, sample processing was conducted in compliance with protocol requirements. Sample results are usable as reported; usable with minor edit or qualification; or reported as estimated values. The following data was rejected:

- Acetone in BCP-EB1 (aqueous equipment blank): This analysis was rejected due to a low initial calibration RRF value. Acetone is a common laboratory reagent and is short-lived in the environment; therefore, there is no concern associated with this data rejection.
- 2,4-Dinitrophenol in BCP-MW3-6-16 (soil): This analysis was rejected due to a low MSD recovery. This analyte was not detected at concentrations above the laboratory's method detection limits in the four confirmatory samples collected from the petroleum-related excavation required by the NYSDEC to be analyzed for TCL SVOCs (Refer to Section 10.4); therefore, there is no concern associated with this data rejection.
- 2-Chlorophenol, 4-Chloro-3-methyl phenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol, 2-Methylphenol, 3&4-Methylphenol, 2-Nitrophenol, 4-Nitrophenol, Pentachlorophenol, Phenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol in BCP-EB1 (aqueous equipment blank): These analyses were rejected due to low surrogate recoveries. According to a response from Accutest (Appendix I), the request to analyze this sample for these acid compounds was submitted after the hold time for this sample had expired. None of these acids were reported at concentrations above the laboratory's method detection limits in the soil samples submitted with BCP-EB1; therefore, there is no concern associated with this data rejection.
- Acetone in Trip Blank (aqueous): This analysis was rejected due to low continuing calibration RRF values. Acetone is a common laboratory reagent and is short-lived in the environment; therefore, there is no concern associated with this data rejection.
- Acetone in BCP MW1, BCP MW3, BCP MW3, BCP MW4, BCP MW5 and BCP MW9 (aqueous): This analysis was rejected due to low continuing calibration RRF values. Acetone is a common laboratory reagent and its detection is likely associated with laboratory contamination; therefore, there is no concern associated with this data rejection.
- 2-Butanone (MEK) in BCP TPMW6, Trip Blank (aqueous), BCP MW1, BCP MW2, BCP MW3, BCP MW4, BCP MW5 and BCP MW9: This analysis was rejected due to low continuing calibration RRF values. 2-Butanone was not detected at concentrations above the laboratory's method detection limits in the three confirmatory groundwater samples collected and submitted for analysis

from the backfilled petroleum-related excavation (Refer to Section 10.4.5); MEK has not been identified on-site previously, as such, there is no concern associated with this data rejection.

Samples collected for QA/QC purposes were assessed for their designated purpose. Refer to the DUSRs in Appendices I and J for information regarding validation of blind duplicate and laboratory duplicate samples. Table 11 presents the results of the laboratory analyses for equipment blanks BCP-EB1 (collected over split-spoon sampler), EB-2 (collected over split-spoon sampler), and EB-3 (collected over new, dedicated, disposable bailer), and both sets of trip blanks. No analytes were detected at concentrations above the laboratory's method detection limits in these samples with the following exceptions:

- Methylene chloride in EB-2
- Calcium in BCP-EB1, EB-2, and EB-3
- Chromium in EB-3
- Iron in EB-3
- Manganese in EB-3
- Sodium in BCP-EB1, EB-2, and EB-3
- Zinc in EB-2 and EB-3

None of the analytes listed above were detected at concentrations above the Part 375 SCOs for unrestricted site use in the soil samples collected and submitted for analysis during the remedial investigation. With the exception of iron, manganese, and sodium, which were not demonstrated to be COPCs, none of the analytes listed above were detected at concentrations above the NYSDEC Class GA GWQS in the groundwater samples collected and submitted for analysis during the remedial investigation. Although several of these analytes were listed as non-detect due to the contamination identified in the equipment blank, none of these analytes were detected at concentrations above the Part 375 SCOs for unrestricted site use in the confirmatory soil and groundwater samples collected and submitted for analysis (Refer to Section 10.4).

Internal laboratory quality control (QC) samples and site-specific QC samples indicate satisfactory analytical accuracy, precision, and completeness. Sample shipping coolers were received in good condition and at an appropriate temperature. Data quality comments are further described in the DUSRs (Appendices I and J).

5.0 FATE AND TRANSPORT OF CONSTITUENTS OF POTENTIAL CONCERN

The analytical results for the soil, groundwater, soil vapor, and historic fill materials were incorporated with the physical characterization of the Site to evaluate the fate and transport of COPCs in site media. The mechanisms by which the COPCs can migrate to other areas or media are briefly outlined below.

5.1 AIRBORNE TRANSPORT

Volatilization of chemicals (i.e., petroleum) present in soil, historic fill materials, and groundwater and generation of fugitive dust were potential migration mechanisms for airborne transport of COPCs. As the historic fill materials and impacted soils have been removed and the Site is being redeveloped, fugitive dust and migration of vapors do not pose concerns.

5.1.1 Fugitive Dust Generation

Non-volatile chemicals (i.e., metals) present in soil and historic fill materials can be released to ambient air as a result of fugitive dust generation. Since the Site was primarily characterized as flat lying with limited distinguishable features other than the on-site structures and was covered by asphalt, suspension due to wind erosion or physical disturbance of surface soil particles prior to the IRM was unlikely. Under the planned future unrestricted land use, the majority of the Site would be covered by a parking garage and a multitenant commercial structure, concrete sidewalks and asphalt paving with remaining areas covered by grass and/or ornamental landscaping. Therefore, this migration pathway was deemed relevant.

During removal of the historic fill materials and petroleum-impacted soils, mitigation of fugitive dust generation was through the application of water when deemed necessary. In addition, particulate levels were monitored during excavation activities to ensure that dust concentrations downwind of the excavation in exceedance of the acceptable limit defined in the RI/IRM Work Plans would be immediately mitigated (Refer to Section 10.2.4).

Since historic fill materials and petroleum-impacted soils have been removed from the Site, future suspension of contaminants in these media due to wind erosion of physical disturbance has been mitigated. The de-minimis quantity of petroleum-impacted soil present at the Site in the pile corrugations between the property line and sheet piling along a portion of South Elmwood Avenue and a portion of West Chippewa Street does

not pose a concern relative to fugitive dust generation, as these areas will be covered by asphalt, concrete, or topsoil as part of the site redevelopment. The installation of the sheet pile largely off-site aided in the successful removal of contaminated soils that otherwise would have remained on-site.

5.1.2 Migration of Vapors

Petroleum-related volatile chemicals present in soil, groundwater, and historic fill materials may be released to ambient or indoor air through volatilization either from or through the soil underlying building structures. Volatile chemicals typically have a low organic-carbon partition coefficient (Koc), low molecular weight, and a high Henry's Law constant.

During the previous investigations conducted on-site (Refs. 18-47), numerous VOCs and one SVOC (naphthalene) were detected in the overburden soil at the Site at concentrations above the NYSDEC TAGM 4046 SCOs; and numerous petroleum-related VOCs and SVOCs were detected in the overburden groundwater at the Site at concentrations above the NYSDEC Class GA GWQS during the previous investigations and during the RI. With the exception of a relatively small area of petroleum impact on the central portion of the Site, the known impact was limited to the southwestern portion of the Site (Figure 3). During excavation of the petroleum-impacted soils during the IRM, it was discovered that the petroleum impact extended northwards, comprising more of the western portion of the Site than had been evident in the data from previous investigations. During excavation activities, VOC concentrations were monitored so that VOC concentrations in the work zone and downwind of the excavation that were in exceedance of the acceptable limits defined in the RI/IRM Work Plans could be mitigated (Refer to Section 10.2.4).

The western portion of the Site is being redeveloped with a parking garage. Therefore, the groundwater-to-air and soil-to-air modes of contaminant transport posed the greatest risk of those contaminants entering the indoor air within the parking garage. This concern has been addressed through removal of petroleum-impacted soils during the IRM. The de-minimis quantity of petroleum-impacted soil present at the Site in the pile corrugations between the property line and sheet piling along South Elmwood Avenue and West Chippewa Street (behind the sheet piling), and residual concentrations of benzene in groundwater proximate to the southwestern corner of the Site, do not pose a concern relative to migration of vapors. According to the Applicant, the following components of the redevelopment will mitigate the vapor migration concern as the residual impacts naturally attenuate over time:

- The concrete slab that will form the base of the parking garage and commercial building will be located at a depth of approximately 13 feet below grade (i.e., Appendix X, Drawing A401) and will be constructed with a 10 mil polyethylene vapor retarder (Appendix X, Drawing S205, #9).
- Approximately one foot beneath the concrete slab that will form the base of the parking garage and commercial building, there will be a series of 6" perforated pipe that will drain into sumps and discharge into the combined municipal storm / sanitary sewer system. This system will continuously dewater the Site and therefore continue to remove groundwater with residual VOC impacts (Appendix X, Drawing P-100UF).
- The base levels of the parking garage and commercial building will be ventilated via fresh air intakes that will deliver air into the structures from the exterior when CO_2 in air reaches predetermined levels within these basal spaces (Appendix X, Drawing MH-100). The commercial building and parking garage will each have one fresh air intake. In addition, at least 50% of the upper floors of the parking garage will be open to the ambient air.
- Groundwater is continuously being pumped from the Site during construction activities, and therefore groundwater with residual VOC impacts is being continuously removed.

Therefore, migration of petroleum vapors to indoor air within the parking garage is unlikely.

At the request of the NYSDEC, samples of historic fill materials exposed on the northern and eastern sidewalls of the petroleum-related soil excavation during the IRM were collected and submitted for analysis. Numerous SVOCs were detected at concentrations above the NYSDEC Part 375 SCOs for unrestricted through industrial site use in these samples. The concern associated with groundwater-to-air and soil-to-air modes of contaminant transport associated with the historic fill materials has been addressed through removal of historic fill materials from the Site during the IRM.

Petroleum-impacted soils and groundwater were not encountered over the remainder of the Site, to the east of the known area of impact (Figure 3), during the RI or IRM. This area is under development with a commercial building. During the RI, soil vapor samples were collected from the overburden at two locations west exterior to the (now former) Delaware Court Building on the eastern portion of the Site and three locations proximate to the northwestern, eastern, and southeastern boundaries of the

presumed most significant (i.e., highest VOC concentrations) petroleum-impacted soil and groundwater area and submitted for analysis for TCL VOCs. No VOCs were detected at concentrations of obvious concern in the soil vapor samples collected and submitted for analysis. Based on this and the removal of historic fill materials from the Site, along with the ventilation and dewatering systems described above, migration of petroleum vapors to indoor air within the commercial building is unlikely.

5.2 WATERBORNE TRANSPORT

COPCs in subsurface soils and historic fill materials could potentially have been transported via storm water runoff during excavation or construction activities, or leaching to groundwater. This mode of contaminant transport at the Site was addressed through removal of historic fill materials and petroleum-impacted soils during the IRM.

5.2.1 Surface Water Runoff

Erosion and transport of surface soils and historic fill materials and associated sorbed chemicals in surface water runoff is a potential contaminant transport mode. The potential for soil/fill particle transport with surface water runoff prior to the IRM was deemed low, as the Site was covered by asphalt and surface water at the Site was (and currently is) collected by the surrounding combined storm water / sanitary sewer collection system. The storm water system provides a mechanism for controlled surface water transport but will ultimately result in sediment capture in the Buffalo Sewer Authority's grit chambers followed by disposal at a permitted sanitary landfill. Historic fill materials and petroleum-impacted soils have been removed from the Site. In addition, the Site will be redeveloped with minimal exposed surface soils. Therefore, erosion and transport of any residual surface soils/fill and associated sorbed chemicals in surface water runoff at the site is unlikely. The de-minimis quantity of petroleum-impacted soil present at the Site in the pile corrugations between the property line and sheet piling along South Elmwood Avenue and West Chippewa Street does not pose a concern relative to erosion and surface water runoff because these soils will be covered with asphalt, concrete, or topsoil upon redevelopment.

5.2.2 Leaching

COPCs present in soil/fill may migrate downward to groundwater as a result of infiltration of precipitation; such can contribute to vapor migration concerns as discussed in Section 5.1.2. As groundwater had been impacted by petroleum and there is evidence of migration of petroleum impact beyond the boundaries of the Site (Refer to Section 10.8.3), there is the potential for off-site impact resulting from groundwater that had

migrated off-site prior to the IRM. The extent of the off-site petroleum impact is unknown, however, studies completed by LCS and C&W Environmental in 2002 and 2003, respectively, did not identify off-site impact within South Elmwood Avenue or West Chippewa proximate to the southwestern corner of the site. As the source of the petroleum impact to groundwater (i.e., impacted soils underlying the Site) was removed through implementation of the IRM, the potential for further impact by this transport mechanism has been addressed. The de-minimis quantity of petroleum-impacted soil present at the Site in the pile corrugations between the property line and sheet piling along South Elmwood Avenue and West Chippewa Street (behind the sheet piling) does not pose a concern relative to leaching because the sheet piles act as a barrier to groundwater from becoming recontaminated and flowing back onto the majority of the Site. Approximately 60 feet of sheet pile on South Elmwood Avenue and approximately 125 feet of sheet pile on West Chippewa Street (both measured from the corner of South Elmwood and West Chippewa) will be left on-site.

5.3 OFF-SITE IMPACTS

Based on the analysis of chemical fate and transport provided above, the modes through which Site COPCs could have formerly reached off-site receptors at significant exposure point concentrations have been impaired. In addition, historic fill materials and petroleum-impacted soils have been removed from the Site. However, there is evidence that the petroleum impact has migrated off-site (Refer to Section 10.8.3). There are also historic fill materials with contaminant concentrations above the Part 375 SCOs off-site, immediately adjacent to the Site (Refer to Section 10.4.4). Addressing these off-site impacts would not involve additional remediation at the Site.

6.0 QUALITATIVE RISK ASSESSMENT

6.0.1 Potential Human Health Risks

The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the probable future land uses. The Site was previously developed with a gasoline station and associated convenience store, multi-tenant commercial building, and guard shack. According to the September 2006 document entitled "New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document" (a.k.a., "Technical Support Document" or TSD), under commercial site use conditions, human contact with site soil may have been represented primarily by two types of receptors: adult worker and child visitor (Ref. 52). The site is serviced by municipal (supplied) water. Therefore, groundwater exposure would have been limited to direct contact by adult workers during excavation work (i.e., construction workers, maintenance workers, landscapers/groundskeepers).

The current site owner (DNC 250, Inc.) is redeveloping the Site with a commercial building and parking garage. While such use could be compared to commercial use, it is LCS' understanding that remediation to unrestricted site use was desired to minimize potential exposures to the building occupants, visitors, and site groundskeepers or construction workers. According to the TSD, human contact with site soil under unrestricted site use conditions may be represented primarily by two types of receptors: child resident and adult resident (Ref. 52).

The chemicals present in the site soil, groundwater, and/or historic fill materials prior to remediation at concentrations exceeding the Part 375 SCOs for unrestricted site use collectively consisted of petroleum-based VOCs and SVOCs, metals, and pesticides. As discussed in Section 5.0, VOCs could have been released to the ambient and/or indoor air as a result of volatilization either from or through the soil. Both volatile and non-volatile chemicals may have also been transported by groundwater by leaching from the soil. Although not as likely, non-volatile chemicals present in the soil may have been released to ambient and/or indoor air as a result of fugitive dust generation, and both volatile and non-volatile chemicals may have been transported by surface water runoff.

Under the unremediated (commercial site use) condition, potential exposure pathways included soil ingestion, inhalation (particulate and vapor), and dermal contact, for both the adult worker and child visitor exposure scenarios. Under the remediated (unrestricted site use) condition, for all possible future uses of the Site under this

condition, potential exposure pathways include soil ingestion, inhalation (particulate and vapor), dermal contact, home-grown vegetable ingestion, and home-produced animal product consumption, for both the adult resident and child resident exposure scenarios.

Utilizing the results of various studies and incorporating various assumptions, the NYSDEC published final human health-based SCOs for unrestricted site use in the TSD (TSD Table 5.6-1). The final health-based SCO for each chemical is the lowest of all the SCOs calculated for the chemical considering chronic exposure, acute soil ingestion, and irritant contact dermatitis (Ref 52). Table 12 displays these SCOs compared with the maximum known contaminant concentrations measured in site soil samples prior to initiation of the IRM, for analytes which were detected at concentrations above the TAGM 4046 guidance values utilized at the time that the samples were collected; as well as the maximum known contaminant concentrations measured in site historic fill materials, for analytes which were detected at concentrations above the NYSDEC SCOs for unrestricted site use. As depicted in Table 12, petroleum-based VOCs, SVOCs, and metals were collectively present in site soils and historic fill materials at concentrations above the Final Human Health-based SCOs for unrestricted site use prior to removal of the petroleum-impacted soil and historic fill materials during the IRM. Therefore, potential health risks did exist for a property with a desired status of unrestricted site use. The health-based criteria described above are for individual constituents; cumulative or synergistic effects among chemicals may yield greater risks.

6.0.2 Potential Ecological Risks

The Site is located in a predominantly commercial area in a developed, urban area in the City of Buffalo. Prior to implementation of the IRM, the site was developed with a gasoline station, commercial building, guard shack, and paved areas. There were no areas of exposed soil and there were no grass areas prior to redevelopment. The Site provided little or no wildlife habitat or food value. No natural waterways are present on or adjacent to the Site. The Site is currently being redeveloped with a parking garage, commercial building, landscaping, and/or paved areas. As such, no unacceptable ecological risks are anticipated under the current or reasonably anticipated future use scenario.

7.0 SUMMARY AND CONCLUSIONS OF REMEDIAL INVESTIGATION

Based on the information and analyses presented in the preceding sections, prior to implementation of the IRM, constituents of primary concern (COPCs) at the Site included petroleum-based VOCs, SVOCs, pesticides, and metals. These COPCs were collectively detected in subsurface soil, historic fill materials, and/or groundwater at the Site. Some of these COPCs are common at sites with similar historical usage and locations in highly developed urban areas. The contaminant concentrations in site soil, groundwater, and historic fill materials were higher than would be deemed acceptable for reasonably anticipated future uses. Such risks, as well as any impact to the environment, were addressed through implementation of the IRM. A discussion of the IRM is presented in the following sections.

8.0 SUMMARY OF SITE REMEDY

8.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this Site.

8.1.1 Groundwater RAOs

RAOs for Public Health Protection

- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
- Remove the source of ground water contamination.

8.1.2 Soil RAOs

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil and historic fill materials.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil and historic fill materials.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater contamination.

8.2 DESCRIPTION OF SELECTED REMEDY

The Site was remediated in accordance with the remedy approved by the NYSDEC, described in the Remedial Investigation/Interim Remedial Measures Work Plan dated May 2013 (Ref. 48) and approved in July 2013, amended in Interim Data

Report 2, dated December 19, 2013, and Interim Data Report 3, dated January 6, 2014. Interim data reports and the NYSDEC's responses to the interim data reports are located in Appendix K.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Excavation and disposal of soil exceeding unrestricted SCOs listed in Table 13, down to the bedrock surface if necessary;

2. Excavation and disposal of historic fill materials from the Site, until native soils are encountered which do not exceed the unrestricted SCOs listed in Table 13 for TCL VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides; and

3. Removal and disposal of all underground storage tanks from the Site.

9.0 INTERIM REMEDIAL MEASURE

An IRM was implemented at the Site following completion of the RI tasks outlined in the May 2013 RI/IRM Work Plan, which was approved in July 2013. Remediation was initiated on August 13, 2013 and was substantially completed on June 5, 2014, with removal of the remaining petroleum-impacted soils and historic fill materials from the Site. Details of the IRM approach for removal of the petroleum-impacted soils are described in the RI/IRM Work Plan. Based on the nature and extent of petroleum contamination as indicated by prior investigations and the planned redevelopment of the Site, the RI/IRM Work Plan involved source removal via soil excavation, with dewatering of the site and off-site disposal of impacted soil. At the request of the NYSDEC, the RI and IRM were subsequently expanded during removal of the petroleum-impacted soil to include the characterization, removal, and off-site disposal of the historic fill materials present on-site. The sampling requirements pertaining to the investigation and removal of the historic fill materials were approved by the NYSDEC, and are outlined in an email from the NYSDEC dated September 16, 2013 (Appendix E) and Interim Data Reports 2 and 3 (Appendix K).

Following removal of historic fill materials and petroleum-impacted soil above the Part 375 SCOs for unrestricted site use, three permanent wells were sampled within the backfilled petroleum-related excavation in order to assess groundwater quality post-remediation. The results of this sampling confirmed that groundwater quality in this area had improved significantly, but that benzene was still present at levels above the NYSDEC Class GA GWQS in the two wells installed on the southwestern portion of the Site (Section 10.4.5). Elements of the planned redevelopment will prevent migration of the residually impacted groundwater and will prevent exposures to residually impacted groundwater and/or soil vapor (Sections 5.1, 5.2, and 11.1.1). Lastly, a de minimis volume of soil with concentrations of petroleum-related VOCs above the Part 375 SCOs for unrestricted site use remains on-site; this includes a maximum 625 square foot area (25 feet by 25 feet) of the petroleum-related excavation against the sheet pile on West Chippewa Street (Refer to Section 10.4.1.1), approximately 1.0 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along West Chippewa Street (Section 10.4.2.1), and approximately 7.4 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and sheet pile along South Elmwood Avenue (behind the sheet piling) (Section 10.4.2.1). According to the NYSDEC (Appendix K – NYSDEC Response to Interim Data Report 1; and Appendix E

– NYSDEC email dated June 11, 2014), no further action regarding the de minimis volume of petroleum-impacted soil remaining on-site is required in pursuit of the unrestricted use cleanup status.

Specific elements of the IRM included:

- Securing all associated permits, including sidewalk closure, demolition, UST removal, and groundwater discharge permits (Section 10.2).
- Surveying and marking the Site boundaries and active utility lines (Section 10.2).
- Rerouting/cutting off of existing on-site subsurface and overhead utilities (Section 10.2).
- Demolition of the existing gasoline station, convenience store, guard shack, and storage garage (Section 10.2).
- Installation of concrete barriers and 6-foot tall chain-link permanent fencing with black privacy netting around the outer perimeter of the Site (Section 10.2).
- Installation of sheet piling along portions of the Site along West Chippewa Street and South Elmwood Avenue to allow for excavation of impacted soils (Section 10.2).
- Installation of a whaler system to brace the sheet piling at the southwestern corner of the Site to allow for excavation of impacted soils to greater depths adjacent to the sheet piling (Section 10.2).
- Establishing a square grid across the work area to determine excavation grades (Section 10.2).
- Excavation of surficial asphalt and concrete. Surficial asphalt and concrete was transported to Swift River Associates in Buffalo, New York.
- Excavation of petroleum-impacted soil. Excavation extended vertically until soil that did not exhibit visual or olfactory evidence of petroleum impact was encountered, generally to depths ranging between approximately 12 and 26 ft. bgs (pre-excavation ground surface was at an elevation of approximately 611 ft. [Figure 1]). Excavation extended horizontally until either soil that did not exhibit visual or olfactory evidence of petroleum impact was encountered or the property boundaries or sheet piles were reached, whichever occurred first. Approximately 24,871.62 tons of soil (including both petroleum-impacted soil and overlying fill) were removed for off-site disposal (Section 10.3.2).
- Excavation of historic fill materials overlying native soils. Excavation extended vertically until native soils were encountered and then continued approximately one foot vertically into the native soils, generally to depths ranging between

approximately 1 and 7 ft. bgs (pre-excavation ground surface was at an elevation of approximately 611 ft. [Figure 1]). Excavation extended horizontally until the property boundaries were encountered or passed or building foundations were encountered, which were scraped with the excavator bucket. Approximately 10,296.47 tons of historic fill materials were removed for off-site disposal (Section 10.3.3).

- Implementation of dust suppression measures to assist in keeping particulate levels downwind of the excavation below action levels (Section 10.2).
- Implementation of vapor and odor suppression measures to assist in keeping VOC concentrations in air downwind of the excavation and in the work zone below action levels (Section 10.2).
- Dewatering during removal of petroleum-impacted soils. Groundwater and precipitation that collected in the excavation was pumped to a fractioning (frac) tank, within which it was filtered and passed through granular activated carbon and then discharged to the City of Buffalo municipal sewer system via a storm drain located on-site (Section 10.2).
- Verification sampling of the sidewalls and bottom of the excavation. LCS personnel collected 51 bottom and 37 sidewall verification samples within the final limits of the petroleum-related excavation and ten bottom and five sidewall verification samples within the final limits of the historic fill-related excavation. Samples were submitted under chain of custody to Accutest Laboratories for laboratory analysis to verify that the excavation up to and past the Site boundaries met the Part 375 SCOs for unrestricted site use. If a verification sample did not meet the Part 375 SCOs for unrestricted site use, additional soil and/or historic fill was removed and a new verification sample was collected and submitted for analysis (Section 10.4).
- Collection of QA/QC samples for laboratory analysis (Section 10.5).
- Surveying post-excavation elevations at sample points, and surveying the positions and elevations of sample locations (Section 10.2).
- Off-site transportation and disposal of impacted soil and historic fill materials to the Tonawanda Terminals Corporation (NYSDEC ID 9-1464-00132) in Tonawanda, New York; Waste Management (NYSDEC ID 9-1462-00001) in Chaffee, New York; and the Chautauqua County Landfill (NYSDEC ID 9-0636-00006) in Jamestown, New York, depending on the characteristics of the waste soil and fill materials (Section 10.3). In total, approximately 35,168.09 tons of soil and historic fill materials were excavated and transported off-site for disposal.

- Permanent closure of the two known USTs associated with the most recent gasoline station operation (one 4,000-gallon gasoline tank and one 8,000-gallon gasoline tank) and associated piping and dispensers, and two unknown USTs discovered in the vicinity of the most recent gasoline station operation during the excavation work (one 1,000-gallon suspected waste oil tank and one 4,000-gallon tank with unknown former contents). The four USTs were removed, cleaned, and transported to Twin Village Recycling in Depew, New York for recycling (Section 10.3.4).
- Notification of the NYSDEC Petroleum Bulk Storage Department of tank system abandonment, and registration and closure of the two unknown USTs (Section 10.3.4).
- Backfilling and compaction of the excavation with non-impacted, Part 375 Unrestricted Use compliant backfill from off-site sources. Backfill consisted of 2" crusher run limestone that originated from the Buffalo Crushed Stone quarry in Lancaster, New York (NYSDOT Source #5-3R) (approximately 22,685.76 tons utilized), and from County Line Stone in Akron, New York (NYSDOT Source #5-7RS) (approximately 6,907.69 tons utilized) (Section 10.7). Geotextile fabric was placed at the bottom of the excavation prior to backfilling.
- Installation, development, and sampling of two permanent 2-inch ID overburden groundwater monitoring wells in the petroleum-related excavation; and development and sampling of one additional permanent 2-inch ID overburden groundwater monitoring well in the petroleum-related excavation that had been installed by SJB Services, Inc. Groundwater samples were submitted under chain of custody to Accutest Laboratories for analysis for TCL and CP-51 VOCs and TCL SVOCs to document groundwater quality subsequent to removal of petroleum-impacted soils (Sections 10.3.5 and 10.4.5).

Elements of the IRM are discussed in greater detail in the following sections.

10.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Interim Remedial Measures Work Plan for the 250 Delaware Avenue site (dated May 2013, amended in Interim Data Report 2, dated December 19, 2013; and Interim Data Report 3, dated January 6, 2014). All deviations from the Interim Remedial Measures Work Plan are noted below.

10.1 GOVERNING DOCUMENTS

10.1.1 Site Specific Health & Safety Plan (HASP)

A site-specific Health and Safety Plan (HASP) was prepared by LCS and covered all investigation and remediation activities. The HASP was prepared with the anticipation that exposure to Site contaminants would be limited to soils, vapors, and/or water encountered during site drilling, excavation, and sampling activities. At the time that the HASP was created, the only contaminants known to exist at the Site included petroleum-related VOCs and the SVOC naphthalene. Additional contaminants were encountered during the RI, including petroleum-related SVOCs, metals, and pesticides; however, the identification of these additional contaminants did not alter the procedures outlined in the HASP. Elements of the HASP included the following:

- Personal Protective Equipment: The purpose of personal protective clothing and equipment (PPE) was to shield or isolate individuals from hazards that may have been encountered at the Site when engineering and other controls were not feasible or could not provide adequate protection. The HASP included detailed descriptions of Level A through Level D PPE and guidance in selecting the appropriate level.

- Medical Surveillance: The HASP indicated that all field personnel needed to obtain appropriate medical clearance from a physician, and established the items necessary for inclusion in the physical based upon the potential exposures and activities conducted on-site.

- Worker Exposure Monitoring and Air Sampling: The HASP included monitoring requirements for air contaminants within the work zone, defined action levels, and outlined procedures to follow if action levels were exceeded. The HASP also included descriptions of sources and symptoms of heat stress and cold exposure stress.

- Community Air Monitoring Plan: The Community Air Monitoring Plan (CAMP) required real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of the work area, and was intended to provide a measure of

protection for the downwind community. The HASP included procedures for measuring VOC and particulate concentrations both upwind and downwind of the work area, defined action levels for concentrations of total organic vapors and/or particulates at the downwind perimeter, and outlined procedures to follow if action levels were exceeded. The HASP also included procedures for equipment calibration and record keeping.

- Site Control: The HASP defined the exclusion zone, contamination reduction zone, and support zone, relative to the location of the excavation, drilling equipment, contaminated soil staging, and/or soil vapor extraction system construction area. The HASP included a description of the anticipated nature of site communications and safety protocols in lieu of the "buddy system," which was deemed to be not warranted.

- Decontamination: The HASP outlined requirements for the decontamination of equipment, PPE, and field personnel.

- Emergency Action Plan: The HASP outlined procedures for handling an emergency, including ingestion, inhalation in a confined space and other types of inhalation, skin contact with non-caustic and corrosive contaminants, and eye exposure.

- Confined Space Entry: The HASP outlined the responsibilities of LCS' Site or Corporate Health and Safety Officer and the person in charge of confined space entry, should confined space entry be necessary. The HASP included criteria that needed to be met in order to allow entry into a confined space.

- Spill Containment: The HASP outlined procedures for managing spills, including equipment for cleaning and containing the spill, reporting obligations, securing safety for on-site and nearby personnel, and following up after the spill.

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

10.1.2 Quality Assurance and Quality Control (QA/QC)

The QA/QC describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

10.1.3 Construction Quality Assurance Activities

The Interim Remedial Measures Work Plan managed performance of the Remedial Action tasks through approved and documented QA/QC methodologies applied in the field and in the lab. The Interim Remedial Measures Work Plan provided a detailed description of the testing activities that were used to confirm that remedial construction was in conformance with the remediation objectives and specifications. Several QA/QC plans were created for providing control over the collection of environmental measurements and subsequent validation, review, and interpretation of generated analytical data. The QA/QC plan for collection of soil and groundwater samples in the field was included on pages 26, 27, 36, and 37 of the Interim Remedial Measures Work Plan approved by the NYSDEC; such included the collection of trip blanks and duplicate samples during the remedial fieldwork (Section 10.5). The QA/QC plan for field testing of groundwater was included on pages 37 and 38 of the Interim Remedial Measures Work Plan, and included measurement of pH, specific conductivity, turbidity, temperature, and dissolved oxygen during well development and sampling activities. The QA/QC plan for analysis performed at the laboratory was included on pages 38 and 39 of the Interim Remedial Measures Work Plan, and included analyses of method blanks, laboratory duplicates, and MS/MSD samples. Lastly, field equipment was calibrated by LCS personnel in accordance with the policies and timeframes indicated on pages 42 and 43 of the Interim Remedial Measures Work Plan. More specific details including air surveillance and headspace monitoring, equipment decontamination, sample handling and preservation, chain of custody and shipping procedures, laboratory quality assurance objectives, and data documentation, which were

implemented during remedial measures, are included in the Interim Remedial Measures Work Plan.

Soil and fill being removed from the Site was screened with a photoionization detector by LCS personnel to provide guidance as to the amount of additional soil needed to be removed in order to achieve the remedial objectives. To determine if a sufficient volume of soil had been excavated in an area to warrant collection of a verification sample, LCS personnel relied on visual and olfactory observations as well as PID readings on soil samples collected from the potential final excavation sidewalls and excavation bottom in an area. Excavation of petroleum-impacted soils was guided by a square grid system; each grid square had maximum dimensions of 25 feet by 25 feet, measured along the bottom of the excavation. Each grid square was divided into four equal quadrants, and a PID measurement for a soil sample collected from each quadrant along the bottom of the excavation was recorded. In addition, LCS recorded PID measurements for discrete soil samples collected from the smear zone along each sidewall within the petroleum-related excavation at horizontal intervals of 10 feet or less, and along each sheet pile at horizontal intervals of 5 feet or less. These PID measurements provided guidance pertaining to the need for additional excavation over areas of each grid square and over each sidewall.

Historic fill materials present on-site were excavated until native soils were encountered, and then the excavation continued vertically approximately one foot into the native soils. The native soils underlying the historic fill materials were also screened with a PID during excavation to confirm that the native soils did not exhibit visual or olfactory evidence of VOC impact. If the native soils exhibited visual or olfactory evidence of chemical impact (petroleum or non-petroleum), the excavation continued until native soils which did not exhibit visual or olfactory evidence of chemical impact were encountered. Historic fill materials were excavated past the Site boundaries and up to the foundations of the (now former) Delaware Court Building and north adjacent veterinary clinic, which were scraped with the excavator bucket and remaining fill materials removed with a hand shovel. The Part 375 Soil Cleanup Objectives for Unrestricted Site Use (Table 13) were utilized to accept or reject the data generated from the verification samples.

Beginning with the demolition of the retail gasoline station and convenience store on August 13, 2013, and ending with removal of the remainder of the petroleum-impacted soil and historic fill materials on June 5, 2014, LCS completed a daily report indicating the activities which had occurred that day (Appendix N). The daily report included a list of activities performed by the contractor, activities performed by LCS, number and type of workers on-site, visitors to the Site, number of truckloads of soil/fill removed from the Site, and samples collected. Monthly reports were not completed with permission from the NYSDEC; however, weekly progress reports were created and shared with key personnel during weekly site meetings. Weekly progress reports included a summary of work performed the previous week, the work plan for the new week, results of sampling, disposal locations of soil/fill excavated the previous week, any health and safety issues, temporary controls utilized, any public relations issues, and the results of regulator inspections (Appendix N). The applicant and its representatives, construction manager, excavation contractor, and any other subcontractors were present at these meetings, along with LCS personnel and the NYSDEC.

10.1.4 Soil/Materials Management Plan (S/MMP)

Soil and historic fill materials excavated from the Site were immediately loaded into dump trucks for transport off-site, and were handled only by LCS and contractors retained by the property owner (and managed by LCS). Soil and historic fill materials were not staged on-site. VOC concentrations and particulates in air downwind of the excavation were monitored to ensure that excavation of impacted soil and historic fill materials did not create exposure concerns for site workers and the downwind community (Section 10.2.5). Soil and historic fill materials were disposed of at NYSDEC-permitted solid waste facilities (Section 10.3). Groundwater encountered on-site was pumped to a frac tank, where it was passed through carbon treatment, and then discharged via permit to the City of Buffalo municipal sewer system (Section 10.3).

10.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

Erosion and sediment control measures were required to prevent erosion and off-site transport of contaminated sediment. Erosion and sediment control practices were implemented in accordance with the SWPPP in the IRM Work Plan; measures were implemented as necessary to control erosion and sediment migration. Due to the installation of sheet piling and the inward slope of the excavation, no sediment could leave the Site. Groundwater and any precipitation/storm water that collected in the excavation was subsequently pumped out of the excavation into a frac tank, where it was passed through a filter and granular activated carbon system, and then discharged to the City of Buffalo sewer system. Therefore, no additional storm water run-off or stormwater pollution prevention measures were necessary.

10.1.6 Community Air Monitoring Plan (CAMP)

LCS oversaw the community air monitoring program (CAMP) during the completion of the IRM activities on-site. One upwind air station and one downwind air station were setup each day the contractor performed soil removal activities on-site. The air stations were monitoring for VOCs and particulates continuously and recorded the data every 15 minutes. The MiniRAE 2000 was used for VOC monitoring and the TSI Dusttrak II Dust Monitor was used for particulate monitoring.

10.1.6.1 VOC Monitoring Action Levels and Response Measures

If during the completion of the soil removal the air concentration of total organic vapors at the downwind perimeter of the work area exceeded 5 parts per million (PPM) above background for the 15-minute average, the work activities being performed were temporarily halted and the VOCs were monitored to see if the levels would decrease below 5 ppm. Once the levels were below 5 ppm at the downwind meter station, work would resume on-site. If the level did not fall below 5 ppm with the work stoppage, Biosolve^{TM} was applied to the excavation to suppress the VOCs.

10.1.6.2 Dust Monitoring Action Levels and Response Measures

If during the completion of the soil removal the downwind dust meter recorded a particulate level over 100 milligrams per cubic meter more than background for 15

minutes or if airborne dust was observed leaving the work area, the contractor was instructed to use dust suppression methods (i.e, spraying water or halting work, etc.).

10.1.7 Contractors Site Operations Plans (SOPs)

The Remediation Engineer reviewed all plans and submittals for this remedial project (i.e. those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the Interim Remedial Measures Work Plan. All remedial documents were submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

10.1.8 Community Participation Plan

The Citizen Participation Plan (CPP) for the RI and IRM was submitted to the NYSDEC on April 12, 2013, and approved on May 8, 2013. The CPP and associated approval letter are located in Appendix E. As required by the CPP, the following citizen participation activities were performed:

- A site contact list was prepared and the Buffalo Public Library – Central Branch was established as the document repository at the time of submittal of the BCP Application and Remedial Investigation and Interim Remedial Measures Work Plan in January 2013.
- The "notice of a complete application" was mailed to all parties on the above-referenced site contact list on February 4, 2013, and the BCP Application and RI/IRM Work Plan were placed into the document repository. The NYSDEC-provided "notice of a complete application" was published in the Buffalo News on February 14, 2013. A thirty day public comment period for the application and Remedial Investigation/Interim Remedial Measures Work Plan was subsequently completed. With minor revisions, the final RI/IRM Work Plan was submitted to the NYSDEC in May 2013 and placed into the document repository.
- Following review by the NYSDEC, a copy of this report will be placed in the document repository. A letter will be mailed to the parties on the site contact list indicating the start of a public comment period for this report.

According to an email from the NYSDEC to LCS dated March 21, 2013, the NYSDEC would issue any of the required factsheets (Appendix E). LCS did not issue any

factsheets for this project. Upon issuance of the COC, LCS will mail a letter to the parties on the site contact list indicating that the COC has been issued.

10.2 REMEDIAL PROGRAM ELEMENTS

10.2.1 Contractors and Consultants

Firms contracted to perform site work included the following:

- Lender Consulting Services, Inc. (LCS): Oversaw execution of the IRM, conduct all sampling, perform community air monitoring. LCS performed the oversight from July 2013 till June 2014.
- Ferraro Pile and Shoring Inc. (FPSI): Installed the sheet pile along West Chippewa and South Elmwood Avenue. In addition, FPSI installed a waler system at the southwest corner of the excavation to brace the sheet piling, so the excavation could extend deeper adjacent to the sheet piling.
- Russo Development, Inc. (Russo): Demolished the gasoline station and convenience store; performed soil excavation of the petroleum impacted soil and arranged for transportation of soil off-site; implemented measures to control dust, VOC concentrations in air, and odors; implemented measures to keep water out of excavation; completed trenches to remove impacted soils prior to installation of the sheet piles; backfilled excavated areas; treated water removed from the excavation and discharged to sewer; installed concrete barriers and fencing. Russo completed their portion of the IRM activities between July 2013 and December 2014.
- Zoladz Construction Company, Inc. (Zoladz): Performed soil excavation and arranged for transportation of fill material soil off site; implemented measures to control dust, VOC concentrations in air, backfilled excavated areas, and installed fencing. Zoladz completed their portion of the IRM activities between February 2014 and June 2014.
- Accutest Laboratories – laboratory analysis
- Environmental Data Services, Inc. – data validation

- Earth Dimensions, Inc. (EDI): Completed the installation of monitoring wells BCP-MW01 through BCP-MW5 during the RI portion of the project. The wells were installed between June 4, 2014 and June 6, 2014. Upon completing the soil removal for the IRM portion of the work, EDI remobilized to the site on April 28, 2014 to install monitoring wells BCP-MW6 and BCP-MW08 between April 28 and April 29, 2014. It should be noted that LCS obtained prior approval from the NYSDEC on April 23, 2014 to use a geotechnical well already on-site for BCP-MW7. This is further explained in Appendix E.
- TREC Environmental, Inc. (TEI) – On June 25, 2013, TEI completed the test borings BCP-BH9 and BCP-BH10 within the (now former) Delaware Court Building basement. In addition to completing the inside test borings, TEI installed the soil vapor points BCP-SV1 through BCP-SV5 within the Delaware Court parking lot.
- Clear Creek Land Surveying, LLC (Clear Creek): Completed the final as-built drawing. Clear Creek completed their portion of the IRM activities from July 2013 until July 2014.

10.2.2 Site Preparation

- Prior to the start of the IRM soil removal, Russo oversaw the completion of utility shutoff for the natural gas service, sewer service, electrical service, and water service. All utilities were terminated either at the property boundary or in West Chippewa Street. In addition, Russo secured the necessary permits to demolish the gas station building/canopy, and to close the sidewalk down along West Chippewa Street and South Elmwood Avenue (Appendix L). Russo installed concrete barriers within West Chippewa and South Elmwood Avenue to provide pedestrian walkways. Fencing was installed around the work area prior to the removal of the gas station building/canopy.
- To prepare for excavation of petroleum-impacted soils, the retail gasoline station and convenience store were demolished by Russo on August 13, 2013, following a minor asbestos abatement within the convenience store. All concrete, scrap metal, and debris were hauled off-site and a water truck was utilized for dust control.

- Prior to demolition of the gas station and convenience store, Dig Safely New York was called to mark out the public utilities at the Site. In early November 2013, the petroleum-related excavation was approaching the northwestern portion of the Site, proximate to an electric line. The excavation was also approaching South Elmwood Avenue, proximate to a gas line. The power line and gas line were subsequently terminated, which allowed the remainder of the petroleum-impacted soils and historic fill materials to be removed from the Site.
- Trenches for the sheet pile piles were completed by Russo between August 15 and August 28, 2013. Ferraro installed the sheeting between August 20 and August 31, 2013. A waler system was installed to brace the sheet piling in the southwestern corner on November 1, 2013 and November 4, 2013 to allow the additional removal of petroleum-impacted soil in the southwestern corner adjacent to the sheet piling, and an additional sheet pile was installed in April 2014 to allow the removal of additional petroleum-impacted soil on the northwestern portion of the Site. The sheet piles were installed with the intent on being permanent.
- Russo mobilized frac tanks to the Site on August 15, 2013. The water treatment unit was mobilized to the site and discharge to the sewer began on September 9th. Numerous sumps were installed and reset as needed during the petroleum-related excavation to keep water out of the excavation and to keep water from contaminating clean backfill. Silt fabric was emplaced over the storm drain utilized for discharge to the sewer.
- Prior to excavation, Clear Creek Land Surveying completed a topographic survey of the Site.

Documentation of agency approvals required by the Interim Remedial Measures Work Plan is included in Appendix E and Appendix L. Other non-agency permits relating to the remediation project are also provided in Appendix L.

10.2.3 General Site Controls

Beginning with the demolition of the retail gasoline station and convenience store on August 13, 2013, and ending with removal of the remainder of the petroleum-impacted soil and historic fill materials on June 5, 2014, LCS completed a daily report indicating the field activities of the day. The daily report included a list of activities performed by the contractor, activities performed by LCS, number and type of workers on-site, visitors to the site, and samples collected (Section 10.2.6).

On October 11, 2013, holes measuring approximately 4 inches in diameter were discovered in the sheet piling along West Chippewa. Petroleum-impacted soil and water were observed flowing onto the site through the holes in the sheet piling. Ferraro was on-site on October 14th to weld plates over the holes in the sheet piling to correct this problem.

On August 29, 2013, sewage was noted as backing up into areas within the Delaware Court Building, suggesting that a portion of the sewer line along West Chippewa had collapsed. To alleviate this issue until the broken sewer line could be repaired, a pump with a check valve was installed in a manhole in the driveway of the Delaware Court Building, which pumped sewage through a temporary above-ground conduit to a manhole along West Chippewa Street, where it was discharged to the sewer system. This system effectively bypassed the broken segment of sewer pipe.

In addition, the stability of the signal pole and manhole near the intersection of West Chippewa and South Elmwood were visually monitored as a result of concerns that vibration of the soils during installation of the sheet piling would induce settlement of the soils and subsequent cracking in the street. In early September, concrete was noted as separating from the sidewalk by the street light post, and the sidewalk was cracked adjacent to the post. Russo indicated that the situation would be monitored visually. More significant cracking was noted along West Chippewa during the week of October 1, 2013, which suggested the loss of free-flowing sand in the sheet pile wall. The collapse of the sewer line along West Chippewa may have contributed to the settlement and loss of sandy soil beneath the pavement and sidewalk. The sewer line was excavated and the broken segment replaced on October 24th, 2013.

10.2.4 Nuisance controls

Trucks leaving the Site were tarped to prevent impacted soil from leaving the truck bed en route to the landfills. Trucks entered and exited the Site through one entrance. The trucks were carefully loaded to prevent accumulation of excavated materials on the sides or side boards of the trucks. Each truck was inspected prior to departing the Site for the intended disposal facility. The entrance and portion of adjacent street were cleaned with a street sweeper when needed to prevent migration of debris/dust picked up by the truck tires.

Dust levels upwind and downwind of the excavation area were monitored, as is further described in the next section. To aid in reducing dust concentrations downwind of the work area, the excavation was sprayed with water when needed utilizing a water

truck or water hose. Russo applied Biosolve™ onto the excavation when necessary to control odors.

Visitors who would stop by the site and inquire as to what was happening would be referred to the LCS personnel in charge of field activities that day, or to the construction superintendent when construction began. Several NFTA buses made contact with the concrete barrier and damaged their tires. The NFTA supervisor stopped at the site on August 19, 2013. LCS informed the NFTA supervisor that the concrete barriers would eventually be removed and permanent fencing attached to the sheet pile, but that the concrete barriers could not be removed because the sidewalk was closed. The NFTA removed the bus drop off sign that had previously been at the corner of South Elmwood and West Chippewa on August 20, 2013.

The Buffalo School's facility manager for Hutch Tech stopped on August 23rd and inquired about the noise. Ferraro informed him that there is no way to reduce the noise, but that the sheet pile installation would be completed within a week. Uniland met with the Principal of Hutch Tech the week of September 9th to discuss the project and address any concerns.

The City of Buffalo Inspector was on-site on August 22 to inquire about the work, and indicated that he would need documentation of the soil being removed and the backfill, and a copy of the final report. The NYSDEC indicated that they would email the inspector to let him know that the Site is going through the Brownfield Cleanup Program.

10.2.5 CAMP results

VOC EXCEEDANCE EXPLANATION

Date	Course of Action	Action Worked
9/20/2013	Fixed Alarm	Yes
9/25/2013	Work Halted	Yes
9/30/2013	Work Halted	Yes

PARTICULATE EXCEEDANCE EXPLANATION

Date	Course of Action	Action Worked
9/4/2013	Water used for dust suppression	Yes
9/25/2013	Water used for dust suppression	Yes
9/26/2013	Water used for dust suppression	Yes

10/21/2013	Water used for dust suppression	Yes
2/24/2014	Elevated readings caused by weather conditions	Yes
2/24/2014	Elevated readings caused by weather conditions	Yes
2/24/2014	Elevated readings caused by weather conditions	Yes
3/7/2014	Elevated readings caused by weather conditions	Yes

Copies of all field data sheets relating to the CAMP are provided in electronic format in Appendix M.

10.2.6 Reporting

Beginning with the demolition of the retail gasoline station and convenience store on August 13, 2013, and ending with removal of the remainder of the petroleum-impacted soil and historic fill materials on June 5, 2014, LCS completed a daily report indicating the field activities of the day. The daily report included a list of activities performed by the contractor, activities performed by LCS, number and type of workers on-site, visitors to the site, number of truckloads of soil/fill removed from the site, and samples collected (Appendix N). Monthly reports were not completed; however, weekly progress reports were created and shared with key personnel during weekly site meetings. Weekly progress reports included a summary of work performed the previous week, the work plan for the new week, results of sampling, disposal locations of soil/fill excavated the previous week, any health and safety issues, temporary controls utilized, any public relations issues, and the results of regulator inspections (Appendix N).

All daily and monthly reports are included in electronic format in Appendix N.

The digital photo log required by the Interim Remedial Measures Work Plan is included in electronic format in Appendix N.

10.3 CONTAMINATED MATERIALS REMOVAL

10.3.1 Overview

Excavation of petroleum-impacted soils and historic fill materials began on August 16, 2013, and was completed on June 5, 2014. During excavation activities, a section of asphalt was left in place on the Site and used as an on-site haul road. The purpose of the haul road was to prevent the dump-trucks from collecting potentially impacted soils/fill on their tires and transporting it to other areas on or adjoining the Site. After a sufficient volume of the excavation was backfilled and the backfill compacted, an area of backfilled excavation was used as the haul road and the original haul road was excavated.

A hydraulic excavator was used to excavate the petroleum-impacted soils and historic fill materials and load dump trucks for off-site disposal. Site soils were screened with a PID during excavation to provide guidance as to the extent of additional excavation necessary before soils which did not exhibit visual or olfactory evidence of petroleum impact would be encountered and verification samples could be collected. Soils with petroleum impact above the Part 375 SCOs for unrestricted site use (Table 13) identified through previous analytical testing or soils which exhibited visual or olfactory evidence of petroleum impact (i.e. staining, chemical odors, etc.) were removed.

Historic fill materials present on-site were excavated until native soils were encountered, and then the excavation continued vertically approximately one foot into the native soils. The native soils underlying the historic fill materials were also screened with a PID during excavation to confirm that the native soils did not exhibit evidence of visual or olfactory VOC impact. If the native soils exhibited visual or olfactory evidence of chemical impact (petroleum or non-petroleum), the excavation continued until native soils which did not exhibit visual or olfactory evidence of chemical impact were encountered. Historic fill materials were excavated up to or beyond the Site boundaries and up to the foundations of the (now former) Delaware Court Building and north adjacent veterinary clinic, which were scraped with the excavator bucket and remaining fill materials removed with a hand shovel. Historic fill materials were removed from the area beneath the driveway of the veterinary clinic until the property boundary was reached. Upon excavation, impacted soils and historic fill materials were placed directly into dump trucks and transported off-site for proper disposal.

Four underground storage tanks (USTs) were removed during excavation of the petroleum-impacted soils. These tanks included the one 4,000-gallon and one 8,000-gallon gasoline tanks associated with the most recent gasoline station operation, as well as one 1,000-gallon and one 4,000-gallon tank which had not been previously identified. A hydraulic excavator was utilized to remove the tanks and to remove the petroleum-impacted soils surrounding the tanks. As in removal of the petroleum-impacted soils over the remainder of the Site, soils proximate to the USTs were removed until soils which did not exhibit visual, olfactory, or analytical evidence of petroleum impact were encountered.

Table 14 shows the total quantities of each category of material removed from the Site, the conditions of the tanks removed from the Site, and the disposal locations for these materials. Manifests and scale tickets for the petroleum-impacted soils and historic fill materials removed from the Site are included in electronic format in Appendices [O, P, and Q]. Disposal documents for the tanks removed from the Site, as well as an updated Petroleum Bulk Storage certificate indicating the closure of all tanks removed from the Site, are included in Appendix R.

A contour map of cut and fill thicknesses for remedial activities at the site is included in Figure 13.

10.3.2 Removal of Petroleum-Impacted Soils

Russo Development, Inc. (Russo) and Zoladz Construction Co., Inc. (Zoladz) were contracted by Uniland Construction (Uniland) to provide services that included excavation, transportation, coordination, and disposal of petroleum-impacted soil. Excavation began with removal of petroleum-impacted soils in the area of known petroleum impact on the southwestern portion of the Site near the intersection of South Elmwood Avenue and West Chippewa Street (Figure 14). Upon further deliberation, this area was temporarily postponed and excavation resumed in a more north-central area (Figure 14, Bottom 3 and Bottom 4) so that excavation could progress in the direction of groundwater flow (to the southwest) to prevent re-contamination of previously excavated areas. Following excavation, the soil and any fill materials overlying the excavated soil were loaded onto dump trucks and transported off-site for proper disposal. Verification soil samples were collected daily immediately upon completion of excavation (Section 10.4).

Following receipt of the verification test results, any additional excavation that was necessary for the verification samples to meet the Part 375 SCOs for unrestricted site

use was performed prior to backfilling a particular location; however, as required by the engineering specifications provided by Ferraro, the soil excavation areas against the sheet piles on South Elmwood Avenue and West Chippewa Street (Figure 14) were only permitted to extend to a depth of 18 ft. bgs. Therefore, excavated areas against these areas of the sheet pilings were backfilled immediately before receipt of verification test results. As a result, four verification samples collected from the bottom of the excavation in these areas did not meet the Part 375 SCOs for unrestricted site use. Three of these areas were re-excavated upon installation of a whaler system to brace the sheet piling, which allowed soils to be excavated to greater depths adjacent to the sheet piling, and new verification samples collected. The fourth area was granted an exception by the NYSDEC and NYSDOH (Bottom 15, Figure 14). According to the exception letter, included in Appendix E, the residual level of xylene at this location will not affect the Track 1 cleanup goal for this project. Additional details are provided in Section 10.4.1.

Petroleum-impacted soils were excavated up to the sheet piles located along South Elmwood Avenue and West Chippewa Street (Figure 14), and the sheet piles were scraped with the excavator bucket to remove any remaining soil. Over the remainder of the petroleum-impacted area, to determine if a sufficient volume of soil had been excavated in an area to warrant collection of a verification sample, LCS personnel relied on visual and olfactory observations as well as PID readings on soil samples collected from the potential final excavation sidewalls and excavation bottom. Excavation of petroleum-impacted soils was guided by a square grid system; each grid square had maximum dimensions of 25 feet by 25 feet, measured along the bottom of the excavation (Figure 14). Each grid square was divided into four equal quadrants, and a PID measurement for a soil sample collected from each quadrant along the bottom of the excavation was recorded. In addition, LCS recorded PID measurements for discrete soil samples collected from the smear zone along each sidewall in the petroleum-related excavation area at horizontal intervals of 10 feet or less, and along each sheet pile at horizontal intervals of 5 feet or less. These PID measurements provided guidance pertaining to the need for additional excavation over areas of each grid square and over each sidewall. PID measurements in soil samples collected from the final petroleum-related excavation bottom ranged between 0.0 and 73.0 ppm (Bottom 17) (Figure 14). PID measurements in soil samples collected from the smear zone in the final petroleum-related excavation north, east, south, and west sidewalls ranged between 0.0 and 68.3 ppm (proximate to West Wall 14) (Figure 14).

Excavation continued southward until the sheet pile along West Chippewa Street was reached, and then continued westward until the sheet pile along South Elmwood

Avenue was reached. All soil was removed from these sheet piles until the bottom of the excavation at the sheet piles was reached. Then, excavation moved eastward and northward until all accessible petroleum-impacted soils had been removed. Due to the discovery of a previously unknown area of petroleum impact along the central portion of the Site along South Elmwood Avenue, which had not been identified during previous investigations, the excavation was continued to the north near the western site boundary until the presence of an on-site electric line prevented further excavation northwards, and the presence of the property boundary prevented further excavation westwards. After installation of additional sheet piles along South Elmwood Avenue and removal of the existing electric line, additional excavation was completed along the western boundary of the Site and additional verification samples were collected confirming the successful removal all soil on-site exhibiting petroleum impact above the Part 375 SCOs for unrestricted site use (with the exception of the area represented by Bottom 15, which was granted an exception, and a de-minimis volume of petroleum-impacted soil between the property line and the sheet piles [behind the sheet piles], which was allowed to remain on-site per the NYSDEC).

10.3.2.1 Disposal Details

Between August 19, 2013, and June 5, 2014, approximately 24,871.62 tons of soil (petroleum-impacted) and overlying fill was transported for off-site disposal to the Tonawanda Terminals Corporation (NYSDEC ID 9-1464-00132) in Tonawanda, New York (Appendix O); and Waste Management (NYSDEC ID 9-1462-00001) in Chaffee, New York (Appendix P). Note that the petroleum-impacted soils transported to Waste Management on June 5, 2014, also included historic fill materials (Table 14). The materials were transported to the disposal facilities by Mallare Trucking, Iroquois/Oneida Trucking, K&R Day Trucking, Russo Development, BTS Trucking, and Milhurst Trucking.

Waste characterization analyses were required for disposal facilities to accept soil presumed to be impacted. Prior to initiation of the removal of petroleum-impacted soils, LCS completed ten direct-push boreholes with a Geoprobe from which to collect soil samples for waste characterization analysis on July 1 and 2, 2013, within the anticipated petroleum-related excavation area (Figure 15). Each borehole was completed to a depth of approximately 16 ft. bgs, and all soil and fill material within each borehole beneath the layer of asphalt, including both impacted and non-impacted materials, was composited and included as a distinct sample.

LCS transported the ten composite samples under chain-of-custody procedures to Accutest Laboratories for analysis for TCL and TCLP VOCs, TCL and TCLP SVOCs, TCLP and Total Metals RCRA, Herbicides, Pesticides, PCBs, Flashpoint, Corrosivity and Reactivity, and Percent Solids in accordance with United States Environmental Protection Agency SW-846 test methods 8260, 8270, 6010/7471, 8151, 8081, 8082, 1020, CHAP7, and SM21 2540B Mod., respectively, as required by the Tonawanda Terminals Corporation in Tonawanda, New York. Three additional composite soil samples for waste characterization were collected from the walls of the petroleum-related excavation area on October 8, 2013, and also analyzed for the parameters listed above (note, these were not boreholes). A summary of the samples collected to characterize the waste, and associated analytical results are summarized on Table 15. The waste characterization results are located in Appendix S.

Following receipt of the analytical results for the waste characterization samples, LCS completed the waste characterization paperwork and submitted it to the Tonawanda Terminals Corporation. As a result of the level of contamination identified in the composite soil samples, soil removed from the petroleum-related excavation area was handled and disposed of as non-hazardous contaminated waste under approved Waste Profile #8162013. The soil was also subsequently accepted as a non-hazardous contaminated waste by Waste Management in Chaffee, New York under Waste Profile #s 111420NY and 111852NY, without requiring additional testing.

Groundwater was encountered during excavation of the petroleum-impacted soils. Russo was contracted by Uniland to pump groundwater and precipitation that collected in the excavation and manage its proper disposal. The groundwater pumped from the Site was initially stored in a frac tank, within which it was filtered and treated with carbon, and then discharged to the City of Buffalo sewer system. Prior to initiation of the excavation work, on July 18, 2013, LCS collected one composite groundwater sample from the Site utilizing wells TPMW5, TPMW6, TPMW16, and MW5 (Figure 15), which comprised both petroleum-impacted and non-impacted groundwater samples. A new, dedicated and disposable bailer was utilized for sampling each well. LCS transported the sample under standard chain-of-custody procedures to Accutest for analysis for metals (arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, titanium, and zinc), Total Cyanide, Pesticides and PCBs, VOCs, SVOCs, Total Extractable Hydrocarbons, Total Suspended Solids, Total Dissolved Solids, Total Solids, pH, and Total Phosphates in accordance with United States Environmental Protection Agency test methods 200.7, 335.4, 608, 624, 625, 1664A, SM21 2540D, SM21 2540C, SM21 2540B, SM21 4500HB/EPA 150.1, and 365.4, as

required by the City of Buffalo Sewer Authority. A summary of the sample collected to characterize the waste, and associated analytical results are summarized on Table 16.

Following receipt of the analytical results for the waste characterization sample, LCS completed the waste characterization paperwork to apply for a permit from the City of Buffalo Sewer Authority (BSA) to discharge groundwater directly to the municipal sewer system. As a result of the level of contamination identified in the composite groundwater sample, groundwater was handled and disposed of as non-hazardous contaminated waste and was permitted to be discharged directly to the City of Buffalo sewer system following filtration and carbon treatment via a BSA-approved sewer drain on-site. The permit from the BSA is included in Appendix L.

10.3.3 Removal of Historic Fill Materials

Russo and Zoladz were contracted by Uniland to provide services that included excavation, transportation, coordination, and disposal of historic fill materials present at the Site. Excavation of the historic fill materials began in the north-central area of the Site. Following excavation, the historic fill materials and approximately one foot of native soil underlying the historic fill materials were loaded onto dump trucks and transported off-site for proper disposal. Soil collected from the bottom of the excavation was scanned with a PID after historic fill materials and visible impacted underlying native soil had been removed from an area (Figure 14). PID measurements in the soil samples collected from the final fill-related excavation bottom ranged between 0.0 and 1.0 ppm. PID measurements were also recorded in the historic fill materials along the sidewalls of the fill-related excavation, which were off-site. These measurements ranged between 0.0 and 3.2 ppm (Figure 14). Verification samples were collected immediately upon completion of excavation in each area (Section 10.4).

Following receipt of the verification test results, any additional excavation that was necessary for the verification samples to meet the Part 375 SCOs for unrestricted site use was performed prior to backfilling a particular location. Historic fill materials were excavated slightly past the site boundaries (Figure 16), therefore, there is no historic fill de minimis condition at the Site. The foundation walls of the Delaware Court Building and Buffalo Small Animal Hospital were scraped and additional historic fill materials were removed with a hand shovel prior to backfilling. Historic fill materials were removed from underneath the driveway of the veterinary clinic until the property boundary was reached. Verification samples collected from the bottom of the fill-related excavation confirmed that the native soils underlying the removed historic fill materials met the Part 375 SCOs for unrestricted site use. Although verification samples collected

from the sidewalls of the fill-related excavation did not meet the Part 375 SCOs for unrestricted site use, these samples were collected off-site as historic fill materials had been removed up to and beyond the Site boundaries (Figure 16).

A contour map of cut and fill thicknesses for remedial activities at the site is included in Figure 13.

10.3.3.1 Disposal Details

Between February 20, 2014 and June 5, 2014, approximately 10,296.47 tons of historic fill materials and underlying native soils were transported for off-site disposal to the Chautauqua County Landfill (NYSDEC ID 9-0636-00006) in Jamestown, New York (Appendix Q). On June 5, 2014, approximately 829.64 tons of mixed petroleum-impacted soils and historic fill materials were transported to Waste Management in Chaffee, New York (Appendix P) (Table 14). The materials were transported to the disposal facilities by Zoladz, Mallare Trucking, Parisio Trucking, Iroquois/Oneida Trucking, and Milhurst Trucking.

Waste characterization analyses were required for disposal facilities to accept historic fill materials. Prior to initiation of the removal of the historic fill materials outside of the petroleum-related excavation area, LCS completed thirty-three direct-push boreholes with a Geoprobe from which to collect historic fill and soil samples for waste characterization analysis on October 16 and 21, 2013 over the remainder of the Site outside of the petroleum-related excavation area (Figure 15). Each borehole was completed to a depth of approximately 5-6 ft. bgs, as to include one foot of underlying native soils within each borehole. Historic fill materials and native soil within each borehole beneath the asphalt was composited with two or three adjacent boreholes to create a sample (ex., boreholes 1A, 1B, 1C, and 1D were composited to create the sample designated BCP Fill WC1).

LCS transported the nine composite samples under chain-of-custody procedures to Accutest Laboratories for analysis for TCL and CP-51 list VOCs, TCL SVOCs, TCLP Metals RCRA, Herbicides, Pesticides, and PCBs in accordance with United States Environmental Protection Agency SW-846 test methods 8260, 8270, 6010/7471, 8151, 8081, and 8082, as required by Waste Management in Chaffee, New York. A summary of the samples collected to characterize the waste, and associated analytical results are summarized in Table 17. The waste characterization results are located in Appendix S.

Following receipt of the analytical results for the waste characterization samples, LCS completed the waste characterization paperwork and submitted it to the Chautauqua

County Landfill in Jamestown, New York. As a result of the level of contamination identified in the composite samples, historic fill materials and native soils removed from the fill-related excavation area was handled and disposed of as non-hazardous contaminated waste under approved Waste Profile #CC021314S1. Documentation indicating that the NYSDEC approved the Chautauqua County Landfill's request to accept the historic fill materials is located in Appendix S. The historic fill materials and soil were also accepted by Waste Management in Chaffee, New York, under approved Waste Profile #111852NY, without requiring additional testing. Groundwater was not encountered during completion of the fill-related excavation.

10.3.4 Underground Storage Tank Removal

During excavation of the petroleum-impacted soils, the two known 4,000- and 8,000- gallon gasoline USTs (Figure 3, "USTs") which had most recently been active and two unknown USTs consisting of one 1,000-gallon tank and one 4,000-gallon tank were removed. The two unknown USTs were located underneath the remediation shed south adjacent to the convenience store (Figure 3). The 1,000-gallon tank was suspected to have previously stored waste oil, and the former contents of the unknown 4,000-gallon tank were not identified, but suspected to have contained gasoline. Pitting, but no visible holes, were observed in the two recently active tanks, and dime-sized holes were noted in the two previously unknown tanks.

The four tanks were removed and staged on the ground surface for cleaning. The ground surface upon which the USTs rested was subsequently excavated. The two known USTs and the 1,000-gallon unknown tank were empty. The 4,000-gallon unknown tank contained a liquid-sludge mixture; this tank collapsed in the excavation during removal, and the spilled liquid-sludge mixture was subsequently removed with the petroleum-impacted soil. After staging, Russo tested the internal conditions of the USTs using a Lower Explosive Limits (LEL) sensor. These tests indicated that the internal environment of each tank was non-explosive. All of the tanks were cut open and thoroughly cleaned prior to off-site disposal at Twin Village Recycling in Depew, New York for recycling on September 12, 2013. Receipts for the tank disposals are included in Appendix R.

The two unknown tanks were registered with the NYSDEC and given a status of "closed-removed." The updated Petroleum Bulk Storage (PBS) listing for these two tanks is located in Appendix R. The two known tanks were given a status of "closed-removed" based on the NYSDEC's observations of these tank removals; an updated PBS

registration was not required to be submitted for these two tanks (Appendix E, NYSDEC Email – February 18).

10.3.5 Overburden Monitoring Well Installation

Overburden monitoring wells BCP-MW6 and BCP-MW8 were installed on the southwestern portion of the Site within boreholes BCP BH6 and BCP BH8, respectively, within the backfilled petroleum-related excavation area on April 28, 2014 (Figure 14), utilizing a hollow stem auger drill rig. Each well was constructed of 2-inch ID flush jointed Schedule 40 PVC riser and screen. The installation depth of the screen in each well was selected to straddle the water table, in order to monitor groundwater in the uppermost water bearing zone. The screen consisted of a 10-foot long section of 0.010-inch factory slotted PVC. With the approval of the NYSDEC (Appendix E – NYSDEC Email dated April 23, 2014), a geotechnical well installed by SJB Services, Inc. (SJB) on April 1, 2014, was utilized as BCP MW7 (Figure 14).

Following determination of the monitoring zone and placement of the assembled screen and riser, the annular space of each associated borehole was backfilled. Generally, this included the placement of a sand filter pack consisting of Morie #00 sand around the well screen such that the sand extended above the top of the screen. A layer of bentonite pellets was placed above the sand filter, and tap water was poured over the pellets and they were allowed time to hydrate. Concrete was installed above the bentonite seal to the surface, and an above-ground steel protective casing was placed over the riser. Monitoring well construction details are located in Appendix D.

10.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

10.4.1 Bottom Verification Sampling for Petroleum-Impacted Soils

LCS personnel collected 51 verification samples from the final bottom of the petroleum-related soil excavation from September 16, 2013 to June 5, 2014 for TCL and CP-51 list VOCs and CP-51 list SVOCs (BCP Bottom 3 through BCP Bottom 19, BCP Bottom 20A, BCP Bottom 21 through BCP Bottom 30, BCP Bottom 31A, BCP Bottom 32 through BCP Bottom 41, BCP Bottom 42A, BCP Bottom 43 through 51, BCP Bottom 62, and BCP Bottom 63). The samples were collected at a minimum frequency of one per every 625 square feet (25 feet by 25 feet) of excavation bottom (Figure 14). At the request of the NYSDEC, two of the verification samples collected from the bottom of the petroleum-related excavation were submitted for analysis for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides (BCP Bottom 11 and BCP Bottom 36) (Appendix E – NYSDEC email dated September 16, 2013). The verification

sample results for the analyses for TCL and CP-51 list VOCs and CP-51 list SVOCs, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 18. The verification sample results for the additional analyses that were requested by the NYSDEC, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 19.

All exceedances of SCOs are highlighted.

Sample results are described below according to contaminant class. The analytical reports are located in Appendix T.

10.4.1.1 Volatile Organic Compounds

VOCs were reported as below the Part 375 SCOs for unrestricted site use in the 51 verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation with the following exception (Table 18A) (Figure 14):

- In the verification soil sample designated BCP Bottom 15, located north adjacent to the sheet pile along West Chippewa Street. Total xylene concentration was reported as 1,750 µg/kg. The Part 375 SCO for unrestricted site use for total xylene is 260 µg/kg. In a letter from the NYSDEC dated November 12, 2013, this sample was granted an exception from the requirement for verification samples to meet the Part 375 SCOs for unrestricted site use in order to pursue a Track 1 cleanup status. This letter is included in Appendix E.

10.4.1.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Part 375 SCOs for unrestricted site use in the 51 verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation (Tables 18B and 19B) (Figure 14).

10.4.1.3 Metals

Metals were reported as below the Part 375 SCOs for unrestricted site use and/or within the range of Eastern USA Background Concentrations in the two verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation (Tables 19C) (Figure 14).

10.4.1.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the two verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation (Table 19D) (Figure 14).

10.4.1.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the two verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation (Table 19E) (Figure 14).

10.4.1.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the two verification samples collected and submitted for analysis from the bottom of the petroleum-related excavation (Table 19F) (Figure 14).

10.4.1.7 Summary

Analytical data generated during the IRM for the overburden soil indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis from the bottom of the petroleum-related excavation (with the exception of BCP Bottom 15, which was granted an exception).

10.4.2 Sidewall Verification Sampling for Petroleum-Impacted Soils

LCS personnel collected 37 verification samples from the final sidewalls of the petroleum-related soil excavation from September 20, 2013 to June 5, 2014 for TCL and CP-51 list VOCs and CP-51 list SVOCs (BCP North Wall 1 through North Wall 8, and BCP North Wall 12; BCP East Wall 1A and 2A and BCP East Wall 3 through BCP East Wall 9; BCP South Wall 1 through BCP South Wall 8, and BCP South Wall 10; and BCP West Wall 1 through BCP West Wall 7, BCP West Wall 11, and BCP West Wall 13 and 14). The samples were collected in the smear zone at a minimum frequency of one per every 25 linear feet of excavation sidewall (Figure 14). At the request of the NYSDEC, three of the verification samples collected from the sidewalls were submitted for analysis for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides (BCP East Wall 4, BCP North Wall 4, and BCP West Wall 6) (Appendix E – NYSDEC email dated September 16, 2013). The verification sample results for the

analyses for TCL and CP-51 list VOCs and CP-51 list SVOCs, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 20. The verification sample results for the additional analyses that were requested by the NYSDEC, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 21.

All exceedances of SCOs are highlighted.

Sample results are described below according to contaminant class. The analytical reports are located in Appendix T.

10.4.2.1 Volatile Organic Compounds

VOCs were reported as below the Part 375 SCOs for unrestricted site use in the 37 verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation with the following exceptions (Table 20A) (Figure 14):

- In the verification soil sample designated BCP North Wall 8. The acetone concentration was reported as 68.6 µg/kg. The Part 375 SCO for unrestricted site use for acetone is 50 µg/kg. This is not a concern, as acetone is a common laboratory reagent and is short-lived in the environment.
- In the verification soil sample designated BCP South Wall 7. The benzene concentration was reported as 689 µg/kg. The Part 375 SCO for unrestricted site use for benzene is 60 µg/kg. This sample was collected along the sheet pile, and is part of approximately 1.0 cubic yards of de minimis petroleum-impacted soil in the pile corrugations between the property line and the sheet pile along West Chippewa Street (behind the sheet pile) (Figures 17 and 18, Appendix U) that is being allowed to remain on-site by the NYSDEC (Appendix E – NYSDEC email dated June 11, 2014).
- In the verification soil sample designated BCP West Wall 1. The benzene concentration was reported as 1,120 µg/kg. The Part 375 SCO for unrestricted site use for benzene is 60 µg/kg. This sample was collected along the sheet pile, and is part of approximately 7.4 cubic yards of de minimis petroleum-impacted soil in the pile corrugations between the property line and the sheet pile along South Elmwood Avenue (behind the sheet pile) (Figures 17 and 18, Appendix U) that is being allowed to remain on-site by the NYSDEC (Appendix E – NYSDEC email dated June 11, 2014).
- In the verification soil sample designated BCP West Wall 2. The benzene concentration was reported as 278 µg/kg. The Part 375 SCO for unrestricted site use for benzene is 60 µg/kg. This sample was collected along the sheet pile, and

is part of approximately 7.4 cubic yards of de minimis petroleum-impacted soil in the pile corrugations between the property line and the sheet pile along South Elmwood Avenue (behind the sheet pile) (Figures 17 and 18, Appendix U) that is being allowed to remain on-site by the NYSDEC (Appendix E – NYSDEC email dated June 11, 2014).

- In the verification soil sample designated BCP West Wall 7. The total xylene concentration was reported as 1,640 µg/kg. This sample was collected along the sheet pile, and is part of approximately 7.4 cubic yards of de minimis petroleum-impacted soil in the pile corrugations between the property line and the sheet pile along South Elmwood Avenue (behind the sheet pile) (Figures 17 and 18, Appendix U) that is being allowed to remain on-site by the NYSDEC (Appendix E – NYSDEC email dated June 11, 2014).

10.4.2.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Part 375 SCOs for unrestricted site use in the 37 verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation (Tables 20B and 21B) (Figure 14).

10.4.2.3 Metals

Metals were reported as below the Part 375 SCOs for unrestricted site use and/or within the range of Eastern USA Background Concentrations in the three verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation (Table 21C) (Figure 14).

10.4.2.4 Cyanide

Cyanide was reported as below the laboratory's method detection limits in the three verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation (Table 21D) (Figure 14).

10.4.2.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the three verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation (Table 21E) (Figure 14).

10.4.2.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the three verification samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation (Table 21F) (Figure 14).

10.4.2.7 Summary

Analytical data generated during the IRM for the overburden soil indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis from the sidewalls of the petroleum-related excavation, for the samples collected on-site, with the exception of the verification samples designated BCP North Wall 8, BCP South Wall 7, BCP West Wall 1, BCP West Wall 2, and BCP West Wall 7. The acetone concentration the sample designated BCP North Wall 8 exceeded the Part 375 SCO for unrestricted site use; however, acetone is a common laboratory reagent and is short-lived in the environment, and therefore does not pose a concern. The samples designated BCP South Wall 7, BCP West Wall 1, BCP West Wall 2, and BCP West Wall 7 represent approximately 8.5 cubic yards of de-minimis petroleum-impacted soil in the pile corrugations between the property line and the sheet pile (behind the sheet pile) (Figures 17 and 18, Appendix U) that is being allowed to remain on-site by the NYSDEC (Appendix E – NYSDEC email dated June 11, 2014).

10.4.3 Bottom Verification Sampling for Historic Fill Materials

LCS personnel collected ten verification samples from the final bottom of the fill-related excavation from February 21, 2014 to March 12, 2014 for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides (BCP Bottom 52 through BCP Bottom 61). The samples were collected at ten locations throughout the site (Figure 14). Sample locations were approved by the NYSDEC in Interim Data Reports 2 and 3 (Appendix K). The verification sample results for all analyses, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 22. Sample results are described below according to contaminant class. All exceedances of SCOs are highlighted.

The analytical reports are located in Appendix T.

10.4.3.1 Volatile Organic Compounds

VOCs were reported as below the Part 375 SCOs for unrestricted site use in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22A) (Figure 14).

10.4.3.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Part 375 SCOs for unrestricted site use in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22B) (Figure 14).

10.4.3.3 Metals

Metals were reported as below the Part 375 SCOs for unrestricted site use and/or within the range of Eastern USA Background Concentrations in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22C) (Figure 14).

10.4.3.4 Cyanide

Cyanide was reported as below the Part 375 SCOs for unrestricted site use in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22D) (Figure 14).

10.4.3.5 PCBs

PCBs were reported as below the laboratory's method detection limits in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22E) (Figure 14).

10.4.3.6 Pesticides

Pesticides were reported as below the laboratory's method detection limits in the ten verification samples collected and submitted for analysis from the bottom of the fill-related excavation (Table 22F) (Figure 14).

10.4.3.7 Summary

Analytical data generated during the IRM for the overburden soil indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis from the native soils comprising the bottom of the fill-related excavation.

10.4.4 Sidewall Verification Sampling for Historic Fill Materials

LCS personnel collected five verification samples from the final sidewalls of the fill-related excavation from February 21, 2014 to March 12, 2014 for TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides (BCP North Wall 9 through BCP North Wall 11; BCP South Wall 9, and BCP West Wall 12). The samples were collected at five locations slightly past the boundaries of the Site (Figure 16). Sample locations were approved by the NYSDEC in Interim Data Reports 2 and 3 (Appendix K). The verification sample results for all analyses, with a comparison to the Part 375 SCOs for unrestricted site use, are presented in Table 23. All exceedances of SCOs are highlighted.

Sample results are described below according to contaminant class. The analytical reports are located in Appendix T.

10.4.4.1 Volatile Organic Compounds

VOCs were reported as below the Part 375 SCOs for unrestricted site use in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation with the following exceptions (Table 23A) (Figures 14 and 16):

- In the verification soil sample designated BCP West Wall 12. The acetone concentration was reported as 123 µg/kg. The Part 375 SCO for unrestricted site use for acetone is 50 µg/kg. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
- In the verification soil sample designated BCP IRM 5 (duplicate for BCP West Wall 12). The acetone concentration was reported as 102 µg/kg. The Part 375 SCO for unrestricted site use for acetone is 50 µg/kg.

10.4.4.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Part 375 SCOs for unrestricted site use in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation with the following exception (Table 23B) (Figures 14 and 16):

- In the verification soil sample designated BCP North Wall 9. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
    - The benzo(a)anthracene concentration was reported as 14,600 µg/kg. The Part 375 SCO for unrestricted site use for benzo(a)anthracene is 1,000 µg/kg.
    - The benzo(a)pyrene concentration was reported as 12,600 µg/kg. The Part 375 SCO for unrestricted site use for benzo(a)pyrene is 1,000 µg/kg.
    - The benzo(b)fluoranthene concentration was reported as 11,400 µg/kg. The Part 375 SCO for unrestricted site use for benzo(b)fluoranthene is 1,000 µg/kg.
    - The benzo(k)fluoranthene concentration was reported as 10,200 µg/kg. The Part 375 SCO for unrestricted site use for benzo(k)fluoranthene is 800 µg/kg.
    - The chrysene concentration was reported as 13,600 µg/kg. The Part 375 SCO for unrestricted site use for chrysene is 1,000 µg/kg.
    - The dibenzo(a,h)anthracene concentration was reported as 2,740 µg/kg. The Part 375 SCO for unrestricted site use for dibenzo(a,h)anthracene is 330 µg/kg.
    - The indeno(1,2,3-cd)pyrene concentration was reported as 7,420 µg/kg. The Part 375 SCO for unrestricted site use for indeno(1,2,3-cd)pyrene is 500 µg/kg.

10.4.4.3 Metals

Metals were reported as below the Part 375 SCOs for unrestricted site use and/or within the range of Eastern USA Background Concentrations in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation with the following exceptions (Table 23C) (Figures 14 and 16):

- In the verification soil sample designated BCP North Wall 9. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.

- The hexavalent chromium concentration was reported as 1.7 mg/kg. The Part 375 SCO for unrestricted site use for hexavalent chromium is 1 mg/kg.
- The lead concentration was reported as 109 mg/kg. The Part 375 SCO for unrestricted site use for lead is 63 mg/kg.
- The zinc concentration was reported as 185 mg/kg. The Part 375 SCO for unrestricted site use for zinc is 109 mg/kg.

- In the verification soil sample designated BCP North Wall 10. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
  - The hexavalent chromium concentration was reported as 1 mg/kg. The Part 375 SCO for unrestricted site use for hexavalent chromium is 1 mg/kg.
  - The lead concentration was reported as 75.7 mg/kg. The Part 375 SCO for unrestricted site use for lead is 63 mg/kg.
- In the verification soil sample designated BCP South Wall 9. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
  - The lead concentration was reported as 122 mg/kg. The Part 375 SCO for unrestricted site use for lead is 63 mg/kg.
- In the verification soil sample designated BCP IRM Duplicate 5 (duplicate for BCP West Wall 12). This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
  - The lead concentration was reported as 106 mg/kg. The Part 375 SCO for unrestricted site use for lead is 63 mg/kg.

10.4.4.4 Cyanide

Cyanide was reported as below the Part 375 SCOs for unrestricted site use in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation (Table 23D) (Figures 14 and 16).

10.4.4.5 PCBs

PCBs were reported as below the Part 375 SCOs for unrestricted site use in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation (Table 23E) (Figures 14 and 16).

10.4.4.6 Pesticides

Pesticides were reported as below the Part 375 SCOs for unrestricted site use in the five verification samples collected and submitted for analysis from the sidewalls of the fill-related excavation with the following exception (Table 23F) (Figures 14 and 16):

- In the verification soil sample designated BCP North Wall 9. This sample was collected off-site (Figure 16); therefore, there is no de minimis historic fill condition represented by this sample.
    - The 4,4'-DDT concentration was reported as 12.2 µg/kg. The Part 375 SCO for unrestricted site use for 4,4'-DDT is 3.3 µg/kg.

10.4.4.7 Summary

Analytical data generated during the IRM for the overburden soil indicates that VOCs, cyanide, and PCBs collectively met the Part 375 SCOs for unrestricted site use in all soil samples collected and submitted for analysis from the sidewalls of the fill-related excavation; and that SVOCs, metals, and pesticides collectively did not meet these criteria. However, as the historic fill materials were removed from the Site, the sidewall samples were collected off-site (Figure 16). There is no further work necessary on-site.

10.4.5 Post-Excavation Groundwater Sampling

The two newly installed and one existing overburden monitoring wells in the backfilled petroleum-related excavation area (Figure 14) were developed prior to sampling to remove residual sediments and ensure good hydraulic connection with the water-bearing zone. The newly installed monitoring wells were developed a minimum of two days after installation to allow the grout used in well construction to set. During development, each well was purged utilizing dedicated and disposable PVC and silicone tubing and a pump until there was no visible sediment observed in the purged groundwater. The wells were sampled a minimum of two weeks after development.

During well sampling on May 29, 2014, each of the three overburden monitoring wells was purged utilizing low flow sampling techniques with a pump and dedicated and disposable PVC and silicone tubing until turbidity in the purged groundwater was less than 50 NTU and pH, temperature, and conductivity in the purged groundwater had stabilized over at least three well volumes, but not more than five well volumes. When these criteria had been met, a dedicated and disposable PVC bailer equipped with a bottom check-valve and dedicated polyethylene or polypropylene line was subsequently

lowered into each well with minimal water agitation to collect groundwater samples for analysis for TCL and CP-51 list VOCs and TCL SVOCs. Prior to well purging, static depths to groundwater within each of the wells were measured (Table 3B).

Table 24 presents a comparison of the analyzed parameters in the groundwater samples submitted for analysis from the three wells installed in the backfilled petroleum-related excavation area (BCP MW6, BCP MW7, and BCP MW8) to the NYSDEC Class GA GWQS. All exceedances of NYSDEC criteria are highlighted.

The analytical laboratory results are located in Appendix T. Sample results are described below according to contaminant class.

10.4.5.1 Volatile Organic Compounds

VOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from BCP MW6 through BCP MW8 with the following exceptions: (Table 24A) (Figure 14):

- In the sample designated BCP MW6. The benzene concentration was reported as 1.2 µg/L. The NYSDEC Class GA GWQS for benzene is 1 µg/L.
- In the sample designated BCP MW8. The benzene concentration was reported as 210 µg/L. The NYSDEC Class GA GWQS for benzene is 1 µg/L. Given the removal of the source area and prohibition of groundwater use within the City of Buffalo, the concentrations of benzene are expected to decrease over time and do not require targeted remediation.

10.4.5.2 Semi-Volatile Organic Compounds

SVOCs were reported as below the Class GA GWQS in the groundwater samples collected and submitted for analysis from BCP MW6 through BCP MW8 (Table 24B) (Figure 14) with the following exception:

- In the sample designated BCP MW8. The concentration of bis (2-ethylhexyl) phthalate was reported as 5.4 µg/L. The NYSDEC Class GA GWQS for bis (2-ethylhexyl) phthalate is 5 µg/L. This is not a concern, as bis (2-ethylhexyl) phthalate is a common plasticizer and likely induced as part of the sampling or laboratory analysis.

10.4.5.3 Summary

Analytical data generated during the IRM for the three groundwater samples collected and submitted for analysis from the former petroleum-related excavation area

indicates that VOCs, SVOCs, metals, cyanide, PCBs, and pesticides met the Class GA GWQS in the samples collected and submitted for analysis, with the exception of benzene in the samples collected from BCP MW6 and BCP MW8, and bis (2-ethylhexyl) phthalate collected from BCP MW8. Given the removal of the source area and prohibition of groundwater use within the City of Buffalo, the concentrations of benzene are not expected to warrant targeted remediation. Bis (2-ethylhexyl) phthalate is a common common plasticizer and likely induced as part of the sampling or laboratory analysis.

10.5 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Quality Assurance/Quality Control (QA/QC) samples were collected during the interim remedial measure in order to provide control over the collection of environmental measurements and subsequent validation, review, and interpretation of generated analytical data.

10.5.1 Trip Blanks

One trip blank was collected. The purpose of the trip blank was to determine whether groundwater sample vials and/or groundwater samples had been impacted by contaminants throughout their use. The trip blank consisted of a set of sample bottles filled at the laboratory with demonstrated analyte-free water, and accompanied the sample bottles that were prepared at the laboratory into the field and back to the laboratory with the collected groundwater samples to be analyzed for TCL and CP-51 list VOCs. The following trip blank was collected:

- Trip Blank, accompanied groundwater samples collected on May 29, 2014

10.5.2 Blind Duplicate Samples

Five blind duplicate soil samples were collected. The purpose of the duplicate samples was to assess the quality of the laboratory analyses. Blind duplicate samples were analyzed for all or part of the following list, depending on the sample that they duplicated: TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. The following duplicate samples were collected:

- BCP Bottom 12 Duplicate, collected on October 2, 2013 (named BCP IRM Duplicate 1 on chain of custody)
- BCP Bottom 24 Duplicate, collected on October 31, 2013 (named BCP IRM Duplicate 2 on chain of custody)

- BCP West Wall 4 Duplicate, collected on November 14, 2013 (named BCP IRM Duplicate 3 on chain of custody)
- BCP West Wall 12 Duplicate, collected on March 12, 2014 (named BCP IRM Duplicate 5 on chain of custody)
- BCP West Wall 14 Duplicate, collected on June 5, 2014 (named BCP IRM Duplicate 6 chain of custody)

BCP IRM Duplicate 5 was collected for a sample that was subsequently re-excavated; therefore, is not presented here.

10.5.3 Laboratory Duplicate Samples

Five duplicate soil samples were collected and analyzed as Matrix Spikes and Matrix Spike Duplicates (MS/MS). The purpose of MS/MSD samples was to assess the precision or reproducibility of the analytical method on a sample of a particular matrix. MS/MSD samples were submitted for laboratory analysis for all or part of the following list, depending on the sample that they duplicated: TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides. The following samples were utilized for MS/MSD assessment:

- BCP Bottom 14, collected on October 4, 2013
- BCP Bottom 25, collected on October 31, 2013
- BCP Bottom 35, collected on November 14, 2013
- BCP Bottom 50, collected on November 27, 2013
- BCP South Wall 9, collected on March 11, 2014

10.6 DATA USABILITY SUMMARIES FOR THE INTERIM REMEDIAL MEASURE

Data Usability Summary Reports (DUSRs) were prepared for all data generated in this remedial performance evaluation program. These DUSRs are included in Appendix V, and associated raw data is provided electronically in Appendix T.

In accordance with the Section 10.0 of the RI/IRM Work Plan (Ref. 48), the laboratory analytical data from the Interim Remedial Measure and post-excavation groundwater sampling was independently assessed and, as required, submitted for independent review. Environmental Data Services, Inc. (EDS) located in Williamsburg,

Virginia, performed the data usability summary assessment, which involved a review of the summary form information and sample raw data, and a limited review of associated quality control (QC) raw data. Appendix V includes the Data Usability Summaries (DUSRs) for the soil verification samples collected during the IRM and groundwater samples collected post-excavation. The DUSRs were prepared in accordance with Appendix 2B of NYSDEC's Final DER-10 Guidance for Site Investigation and Remediation guidance (Ref. 51).

According to EDS, each DUSR for soil and water samples was conducted using guidance from the United States Environmental Protection Agency (USEPA) Region 2 Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-24, Revision 2, August 2008: Validating Volatile Organic Compounds by SW-846 Method 8260B;
- SOP Number HW-22, Revision 4, August 2008: Validating Semi-volatile Organic Compounds by SW-846 Method 8270D;
- SOP Number HW-44, Revision 1, October 2006: Validating Pesticide Compounds by SW-846 Method 8081B;
- SOP Number HW-45, Revision 1, October 2006, Validating PCB Compounds by SW-846 Method 8082A;
- SOP Number HW-2, Revision 13, September 2006: Evaluation of Metals Data for the CLP Program based on ILMO5.3; and
- professional judgment.

10.6.1 Organics in Soil and Water

According to EDS, the following items and criteria were reviewed for the organics in soil and water analyses:

- Data completeness
- Holding times
- Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Gas Chromatography (GC)/Mass Spectrometry (MS) tuning
- Initial and continuing calibration verifications
- Compound quantitation
- Internal standard area and retention time performance

- Field duplicate sample precision

10.6.2 Pesticides and PCBs in Soil and Water

According to EDS, the following items and criteria were reviewed for the pesticides and PCBs in soil and water analyses:

- Data completeness
- Holding times
- Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Initial and continuing calibration verifications
- Compound quantitation
- Field duplicate sample precision
- Gas Chromatography (GC) column difference results

10.6.3 Metals and Cyanide in Soil and Water

According to EDS, the following items and criteria were reviewed for the metals and cyanide in soil and water analyses:

- Data completeness
- Holding times
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Initial and continuing calibration verifications
- Compound quantitation
- ICP serial dilution
- Field duplicate sample precision

10.6.4 Results of Data Review and Validation

In general, sample processing was conducted in compliance with protocol requirements. Sample results are usable as reported; usable with minor edit or qualification; or reported as estimated values. The following data was rejected:

- Acetone in BCP-West Wall 7: This analysis was rejected due to a low initial calibration RRF value. Acetone is a common laboratory reagent and is short-lived in the environment; therefore, there is no concern associated with this data rejection.
- Acetone in BCP-MW6, BCP-MW7, BCP-MW8, and Trip Blank (aqueous): This analysis was rejected due to a low initial calibration RRF value. Acetone is a common laboratory reagent and is short-lived in the environment; therefore, there is no concern associated with this data rejection.

Internal laboratory quality control (QC) samples and site-specific QC samples indicate satisfactory analytical accuracy, precision, and completeness. Sample shipping coolers were received in good condition and at an appropriate temperature. Data quality issues are further described in the DUSRs (Appendix V).

10.7 IMPORTED BACKFILL

All areas excavated were backfilled with compacted 2" crusher run limestone (NYSDOT Source #5-3R) from the Buffalo Crushed Stone quarry in Lancaster, New York, and 2" crusher run limestone (NYSDOT Source #5-7RS) from the County Line Stone Company, Inc. in Akron, New York. The petroleum-related excavation, with the exception of the area in the northwestern corner of the Site excavated in June 2014, was backfilled with the stone from the Buffalo Crushed Stone quarry, comprising approximately 22,685.76 tons of stone. The fill-related excavation and the above-referenced area in the northwestern corner of the Site was backfilled with the stone from the County Line Stone Company, comprising approximately 6,907.69 tons of stone.

A table of all sources of imported backfill with quantities for each source is shown in Table 25. A figure showing the site locations where backfill was used at the site is shown in Figure 13. During the weekly progress meeting held on September 24, 2013, the NYSDEC indicated that analytical data for the backfill material would not be needed as long as the materials originated from a permitted, NYSDEC-approved borrow source (Appendix N, Meeting Minutes #6). Documentation indicating that the above-referenced backfill materials originated from NYSDEC/NYSDOT-approved sources is located in Appendix W.

10.8 CONTAMINATION REMAINING AT THE SITE AND OFF-SITE IMPACTS

10.8.1 Contaminated Soil Remaining at the Site

Soil exhibiting petroleum impact at concentrations above the Part 375 Soil Cleanup Objectives for unrestricted site use remains on-site at the following locations:

- A maximum area of 625 square feet (25 feet by 25 feet) of excavation bottom represented by BCP Bottom 15 (Figure 14, Table 18). The concentration of total xylene in this sample was reported as 1,750 µg/kg. The excavation bottom represented by this sample is located at a depth of approximately 17 ft. bgs, and is located in sand. The depth of soil beneath the excavation bottom at which soil which does not exceed the Part 375 SCOs for unrestricted use is not known; however, based on the relatively low concentrations of VOCs detected in BCP Bottom 15 (Table 18), non-impacted soil is likely located within one or two feet of this sample. According to a letter from the NYSDEC dated November 12, 2013, the exceedance of the Part 375 SCOs for unrestricted site use in this sample would not affect pursuit of a Track 1 cleanup status (Appendix E, BCP Bottom 15 Exception Letter).
- Approximately 7.4 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and the segment of sheet pile starting at the intersection of South Elmwood Avenue and West Chippewa Street and extending north approximately 45 feet (behind the sheet pile), marked by sidewall samples BCP West Wall 1, BCP West Wall 7, and BCP West Wall 2 (Figures 14 and 17, Table 20, Appendix U). These samples were collected in the smear zone along the sheet pile. The concentrations of benzene in samples BCP West Wall 1 and West Wall 2 were reported as 1,120 µg/kg and 278 µg/kg, respectively. The concentration of total xylene in sample BCP West Wall 7 was reported as 1,640 µg/kg. The depth within this zone at which non-impacted soil is located is not known; however, is suspected to be similar to the excavation depths represented by adjacent samples BCP Bottom 29, BCP Bottom 32, and BCP Bottom 46. According to an email from the NYSDEC dated June 11, 2014, no further action is needed regarding the de minimis volume of soil in the pile corrugations (Appendix E).
- Approximately 1.0 cubic yards of petroleum-impacted soil in the pile corrugations between the property line and the segment of sheet pile starting at the intersection of South Elmwood Avenue and West Chippewa Street and extending east

approximately 15 feet (Figure 14), marked by sidewall sample BCP South Wall 7 (Figures 14 and 17, Table 20, Appendix U). This sample was collected in the smear zone along the sheet pile. The concentration of benzene reported in this sample was 689 µg/kg. The depth within this zone at which non-impacted soil is located is not known; however, is suspected to be similar to the excavation depth represented by adjacent sample BCP Bottom 29 collected along the sheet pile (Figure 14). According to an email from the NYSDEC dated June 11, 2014, no further action is needed regarding the de minimis amount of soil in the pile corrugations (Appendix E).

10.8.2 Contaminated Groundwater Remaining at the Site

Groundwater exhibiting petroleum impact at concentrations above the NYSDEC GWQS remains on-site at the following locations:

- The area represented by BCP MW6 (Figure 14, Table 24). The concentration of benzene reported in this sample was 1.2 µg/L. This well was screened in sand for approximately ten feet.
- The area represented by BCP MW8 (Figure 14, Table 24). The concentration of benzene reported in this sample was 210 µg/L. This well was screened in sand for approximately ten feet.

The extent of groundwater that exhibits residual petroleum impact at concentrations above the NYSDEC GWQS on-site is not known; however, based on the removal of the source of the impact and the general direction of groundwater flow to the south-southwest, the residual dissolved phase plume is likely limited to the southwestern portion of the Site and is expected to naturally degrade. According to an email from the NYSDEC dated June 11, 2014 (Appendix E), based on the residual impact to groundwater, an easement and Site Management Plan would likely not be required in order for the site to achieve the Track 1 cleanup status. However, the NYSDEC indicated that information regarding contaminant migration via groundwater and soil vapor migration concerns would be required. According to information provided by the Applicant, permanent elements of the construction project, including the portion of the parking garage and retail space that will be constructed over the area of residual groundwater impact, will control contaminant migration via vapor and groundwater, and therefore the residual groundwater impact on the southwestern portion of the Site are not expected to result in unacceptable exposures to site occupants and visitors (Section 11.1.1). These elements include:

- placement of a 10 mil polyethylene vapor retarder beneath the reinforced concrete slab base of the parking garage and commercial building;
- construction of a groundwater control system beneath this concrete slab that will provide continuous dewatering of the Site and discharge of groundwater to the combined municipal storm/sanitary sewer system, (the groundwater control system reduce hydrostatic forces on the basement walls and prevent seepage into basement areas);
- placement of carbon dioxide monitoring and ventilation systems within the base levels of the parking garage and commercial building;
- construction of the parking garage with at least 50% of the upper floors open to the ambient air; and
- retaining at least 60 feet of sheet piling along South Elmwood Avenue and 125 feet of sheet piling along West Chippewa, as measured from the intersection of these two streets, in order to provide a physical barrier against off-site groundwater migration in the area of residual groundwater impact.

Lastly, it should be noted that the subterranean space beneath the retail areas within the parking garage will also be parking areas with the above-listed construction elements.

Table 26 and Figure 18 summarize the results of all soil and groundwater samples remaining at the Site after completion of Remedial Action that exceed the Track 1 (unrestricted) SCOs or the NYSDEC Class GA GWQS.

Figure 18 also summarizes the results of all soil and groundwater samples remaining at the Site after completion of the remedial action that meet the SCOs for unrestricted use of the Site.

10.8.3 Off-Site Impacts

Based on the petroleum-impacted soils remaining in the pile corrugations between the property line and portion of the sheet piling along South Elmwood Avenue and West Chippewa Street (behind the sheet piling), it is likely that some petroleum impact exists beyond the southern and western property boundaries, off-site. On October 24 and 25, 2013, during repair of the sewer line along a portion of the utility area immediately south adjacent to the Site, along West Chippewa Street, two soil samples were collected from the smear zone and submitted for analysis for TCL and CP-51 list VOCs and CP-51 list VOCs (Table 27). According to the results, six VOCs (n-butylbenzene, ethylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes) were

detected at concentrations above the Part 375 SCOs for unrestricted site use in one of the samples (Sewer Bottom 1), further indicating that some site-related impact is located off-site.

In 2002 and 2003, two boreholes were drilled proximate the center lane of West Chippewa Street to depths of approximately 8 and 10 ft. bgs, and two boreholes with associated monitoring wells were installed along the western side of South Elmwood Avenue to depths of approximately 12 ft. bgs (Section 1.2.2, Figure 3). Soil samples from the boreholes completed on West Chippewa Street were submitted for analysis for STARS VOCs and MTBE. Soil and groundwater samples from the boreholes completed on South Elmwood Avenue were submitted for analysis for STARS VOCs. According to the laboratory results, no analytes were detected at concentrations above the NYSDEC regulatory criteria in any of the samples collected. It is possible that in the twelve years since these samples were collected, the groundwater plume has migrated onto West Chippewa Street and South Elmwood Avenue; however, remediation of such would not require additional remediation at the Site, as the source of the petroleum impact has been removed.

The verifications samples collected from the final sidewalls of the historic fill-related excavation were collected from historic fill materials located off-site, just past the site boundaries (Figure 16), as historic fill materials up to and beyond the Site boundaries had been removed. Historic fill that contains SVOCs, metals, and pesticides above the Part 375 SCOs for unrestricted site use is present off-site (Table 23). However, there is no indication that the presence of these materials off-site is related to the placement of these materials at the project site. Rather, many areas within the City of Buffalo were similarly filled with such materials during various cycles of development. Removal of the historic fill materials off-site would not require additional remediation on-site.

10.8.4 Engineering and Institutional Controls

Although only a nominal amount of contaminated soil remains beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are not required to protect human health and the environment. Elements of the planned redevelopment will control contaminant migration via vapor and groundwater, and therefore the residual groundwater impact on the southwestern portion of the Site are not expected to result in unacceptable exposures to site occupants and visitors (Section 11.1.1).

Exposure to the remaining contaminated soil represented by BCP Bottom 15 is currently prevented by approximately 16.5 feet of overlying backfill (Figure 13). Exposure to the contaminated soil during construction of the parking garage is not anticipated, as the slab will reportedly be located at a depth of 13 feet below grade. Exposure to the remaining contaminated soil between the sheet piling and the property line will be prevented by asphalt, concrete, or topsoil that will cover the sheet piling as part of the redevelopment. Permanent components of the planned development will control migration of contaminants on-site and potential soil vapor exposure routes, as described in Section 11.1.1. The remedy for the Site did not require the construction of any engineering control systems.

10.9 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

Deviations from the Remedial Action Work Plan are summarized in the correspondence with and approvals from the NYSDEC located in Appendix E, and Interim Data Reports located in Appendix K. Specifically, the following was changed:

- Historic fill materials were discovered during the early stages of the IRM. As a result, four samples of historic fill materials were collected and submitted for laboratory analysis for the RI parameters (TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides). Numerous analytes (metals, SVOCs, and pesticides) were collectively detected at concentrations above the Part 375 SCOs for unrestricted site use within these four samples; therefore, removal of the historic fill materials was required in order for the Site to achieve a Track 1 cleanup status. Historic fill was subsequently removed from the Site (approximately 10,296.47 tons) and verification samples were collected from the fill-related excavation.
- Verification samples from the petroleum-related excavation were collected at a minimum frequency of one sample per 625 square feet (25 feet by 25 feet) of excavation bottom and one sample per 25 linear feet of sidewall. The approved Work Plan only required collection of one bottom sample per every 900 square feet of excavation bottom and one sample per every 30 linear feet of sidewall.

- Two of the verification samples collected from the bottom of the petroleum-related excavation, three of the verification samples collected from the sidewalls of the petroleum-related excavation, and four composite soil samples collected from the sidewalls of the petroleum-related excavation directly beneath the fill but above the smear zone were analyzed for all of the RI parameters (TCL and CP-51 list VOCs, TCL SVOCs, TAL metals, cyanide, PCBs, and pesticides). This requirement was not in the approved Work Plan.

11.0 REMEDIAL ALTERNATIVES FOR RESIDUAL GROUNDWATER IMPACT

As discussed above, no further action is required pertaining to the residual soil impacts represented by BCP Bottom 15 and in the pile corrugations. Based on the post-excavation groundwater samples collected from the backfilled petroleum-related excavation area, groundwater which contains petroleum-related analytes above the NYSDEC Class GA GWQS exists proximate to the southwestern corner of the Site (BCP MW6 and BCP MW8, Figure 14). Three alternatives have been developed to address this residual groundwater impact in order to attain a Track 1 cleanup status for the Site and mitigate potential exposures to the residual contamination as a result of the impacted groundwater.

11.1.1 Alternative No. 1 – No Action

Prior to removal of the petroleum-impacted soil, benzene concentrations in monitoring wells TPMW5 and TPMW6 in the southwestern corner of the Site were reported as 4,480 µg/L and 279 µg/L, respectively (Table 9, Figure 5) for the sampling events conducted on July 1 and June 28, 2013. Benzene concentrations in BCP MW6 and BCP MW8 in the southwestern corner of the Site were reported as 1.2 µg/L and 210 µg/L (Table 24) for the sampling event conducted on April 29, 2014, and most other VOCs were below the laboratory's method detection limits. This represents a significant decrease in VOC concentrations in groundwater compared with the concentrations prior to remedial actions. Based on this and the removal of the petroleum-impacted soils, the NYSDEC indicated in an email on June 11, 2014, that an easement and Site Management Plan (SMP) may not be necessary to achieve a Track 1 cleanup status, as the City of Buffalo currently has a restriction on the use of groundwater for potable purposes (Appendix E). Furthermore, contaminant concentrations are expected to continue to decrease as the source of the contamination on-site has been successfully removed.

According to the Applicant, the following components of the redevelopment will further mitigate the contaminant transport (via vapor and groundwater) concern as the residual impacts naturally attenuate over time:

- The concrete slab that will form the base of the parking garage and commercial building will be located at a depth of approximately 13 feet below grade (i.e., Appendix X, Drawing A401) and will be constructed with a 10 mil polyethylene vapor retarder (Appendix X, Drawing S205, #9).

- Approximately one foot beneath the concrete slab that will form the base of the parking garage and commercial building, there will be a series of 6" perforated pipe that will drain into sumps and discharge into the combined municipal storm / sanitary sewer system. This system will continuously dewater the Site and therefore continue to remove any groundwater with residual VOC impacts (Appendix X, Drawing P-100UF).
- The base levels of the parking garage and commercial building will be ventilated via fresh air intakes that will deliver air into the structures from the exterior when CO_2 in air reaches predetermined levels within these basal spaces (Appendix X, Drawing MH-100). The commercial building and parking garage will each have one fresh air intake. In addition, at least 50% of the upper floors of the parking garage will be open to the ambient air.
- Groundwater is continuously being pumped from the Site during construction activities, and therefore groundwater with residual VOC impacts is being continuously removed.

In addition, the sheet piling left in-place located along South Elmwood Avenue and West Chippewa Street is expected to act as a physical barrier to the impacted overburden groundwater from flowing off-site. Approximately 60 feet of sheet pile along South Elmwood Avenue and 125 feet of sheet pile along West Chippewa Street will permanently remain on-site. As concentrations of most VOCs in on-site groundwater have decreased to levels beneath the laboratory's method detection limits, and the residual benzene will degrade over time, an environmental easement and SMP are not required to achieve an unconditional Track 1 cleanup status. In addition, exposure to the residual VOC impact is not expected and a restriction on the use of groundwater in the City of Buffalo currently exists.

11.1.2 Alternative No. 2 – No Action with Groundwater Monitoring

Should the NYSDEC and NYSDOH determine that further decrease in VOC concentrations in on-site groundwater is necessary to achieve a Track 1 cleanup status, groundwater in the southwestern corner of the Site will be monitored on a quarterly basis until the desired VOC concentrations are achieved. This would involve monitoring of BCP MW8 on a quarterly basis for one year after issuance of the conditional Track 1 COC. Monitoring frequency after the one year would be specified by the NYSDEC based on the VOC results at the end of the year. A Site Management Plan would be created with additional details.

11.1.3 Alternative No. 3 – Injection of Degradation Agent

Should the NYSDEC and NYSDOH determine that further decrease in VOC concentrations in on-site groundwater is necessary to achieve a Track 1 cleanup status, groundwater in the southwestern corner of the Site will be treated with a biodegradation agent via injection wells. This would involve design and installation of a series of injection wells, followed by quarterly monitoring as discussed in Alternative No. 2. As the ventilation and dewatering systems will prevent exposure to the residually contaminated groundwater, the cost associated with this alternative is expected to be substantial relative to the benefit gained.

11.2 EVALUATION OF REMEDIAL ALTERNATIVES

11.2.1 Overview

The final remedial measure for the Site must satisfy the RAOs stated in Section 8.1, which were as follows:

No. 1: Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

No. 2: Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.

No. 3: Remove the source of ground water contamination.

No. 4: Prevent ingestion/direct contact with contaminated soil and historic fill materials.

No. 5: Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil and historic fill materials.

No. 6: Prevent migration of contaminants that would result in groundwater contamination.

As discussed in Section 10.4, Part 375 SCOs for unrestricted site use were employed as soil cleanup goals to provide a measure of performance against these RAOs. The SCOs are soil concentration limits protective of human health, the environment, and groundwater quality. Achievement of the SCOs for the petroleum- and historic fill-related excavations was confirmed through verification sampling.

NYSDEC's Brownfield Cleanup Program requires remedy evaluation in accordance with the DER-10 (Ref 51). According to the DER-10, the following baseline

considerations must be evaluated when evaluating remedial alternatives:

- **Overall Protection of Public Health and the Environment**. This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced, or controlled through removal, treatment, engineering controls, or institutional controls.

- **Compliance with Standards, Criteria, and Guidance (SCGs)**. Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance.

- **Long-Term Effectiveness and Permanence**. This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-Site after the selected remedy has been implemented, the following items are evaluated: (i) the magnitude of the remaining risks (i.e., will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals), (ii) the adequacy of the engineering and institutional controls intended to limit the risk, (iii) the reliability of these controls, and (iv) the ability of the remedy to continue to meet RAOs in the future.

- **Reduction of Toxicity, Mobility or Volume with Treatment**. This criterion evaluates the remedy's ability to reduce the toxicity, mobility, or volume of Site contamination. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the Site.

- **Short-Term Effectiveness**. Short-term effectiveness is an evaluation of the potential short-term adverse impacts and risks of the remedy upon the community, the workers, and the environment during construction and/or implementation. This includes a discussion of how the identified adverse impacts and health risks to the community or workers at the Site will be controlled, and the effectiveness of the controls. This criterion also includes a discussion of engineering controls that will be used to mitigate short term impacts (i.e., dust control measures), and an estimate of the length of time needed to achieve the remedial objectives.

- **Implementability**. The implementability criterion evaluates the technical and administrative feasibility of implementing the remedy. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

- **Cost**. Capital, operation, maintenance, and monitoring costs are estimated for the remedy and presented on a present worth basis.

- **Land Use**. This criterion evaluates the current, intended, and reasonably anticipated future use of the Site and its surroundings, as it relates to an alternative or remedy, when unrestricted levels would not be achieved.

Evaluation of the IRM and, where necessary, remedial alternatives, against these criteria is presented below.

11.2.2 Overall Protection of Public Health and the Environment

Since the IRM achieved removal of petroleum-impacted soils within the Site boundaries, with the exception of the de mimimis volume of soil summarized in Section 10.8, and removed the historic fill materials from the Site, RAOs 3 through 5 (remove the source of groundwater contamination, prevent ingestion/direct contact with contaminated soil and historic fill materials, and prevent inhalation of or exposure to contaminants volatilizing from contaminated soils or historic fill materials) were fulfilled. Elements of the planned redevelopment will meet RAOs 1 and 6 in the following ways:

RAO No. 1: Contact with impacted groundwater will be prevented via continuous dewatering via a series of 6" perforated pipe beneath the concrete slabs of the building and parking garage that will drain into sumps and discharge into the combined municipal storm / sanitary sewer system. (Section 11.1.1). The concrete slabs will be at a depth of 13 feet below grade. Inhalation of volatiles emanating from impacted groundwater will be prevented via the continued dewatering systems, and via fresh air intakes that will deliver air into the commercial building and parking garage from the exterior when CO_2 in air reaches predetermined levels within these basal spaces (Section 11.1.1). The commercial building and parking garage will each have one fresh air intake. In addition, at least 50% of the upper floors of the parking garage will be open to the ambient air, and the building and parking garage will be constructed with a 10 mil polyethylene vapor retarder.

RAO No. 6: Contaminant migration via groundwater will be prevented via the above-referenced dewatering system. In addition, the sheet piles located along South Elmwood

Avenue and West Chippewa Street are expected to act as a barrier to the impacted overburden groundwater from flowing off-site. Approximately 60 feet of sheet pile along South Elmwood Avenue and 125 feet of sheet pile along West Chippewa Street will permanently remain on-site.

RAO No. 2: Most of the VOCs analyzed for in the groundwater samples collected from BCP MW6 through BCP MW8 were not detected at concentrations above the laboratory's method detection limits. The residual levels of benzene in groundwater in the southwestern corner of the Site will degrade naturally over time; in addition, continued dewatering at the Site (during construction and upon redevelopment) will continue to remove residually impacted groundwater. Alternative No. 3, utilization of a degradation agent injected into the area of residual groundwater impact, is not guaranteed to decrease the concentration of benzene in groundwater in the southwestern corner of the Site beyond the decrease that will occur naturally over time.

11.2.3 Compliance with Standards, Criteria, and Guidance

The IRM was performed in accordance with and otherwise achieved with applicable, relevant, and appropriate standards, guidance, and criteria.

11.2.4 Long Term Effectiveness and Permanence

Since the IRM achieved removal of petroleum-impacted soils and historic fill materials within the boundaries of the Site, with the exception of the de minimis volume of petroleum-impacted soil summarized in Section 10.8, the IRM provides long-term effectiveness and permanence. As indicated in Section 11.1, the dewatering and ventilation systems and vapor retarder that are part of the redevelopment will prevent exposures to and migration of the residual contaminated groundwater/vapors until the residual benzene degrades, which is expected to occur over a shorter time period than the anticipated life of the redevelopment.

11.2.5 Reduction in Toxicity, Mobility, or Volume with Treatment

Through removal of petroleum-impacted soils and historic fill materials from the Site, with the exception of the de minimis volume of petroleum-impacted soil

summarized in Section 10.8, the IRM permanently and significantly reduced the toxicity, mobility, and volume of site contamination. As indicated in Section 11.1.1, the dewatering and ventilation systems and vapor retarder that are part of the redevelopment will prevent exposures to and migration of the residual contaminated groundwater/vapors until the residual benzene degrades, which is expected to occur over a shorter time period than the anticipated life of the redevelopment.

11.2.6 Short-Term Effectiveness

The short-term adverse impacts and risks to the community, workers, and environment during implementation of the IRM were effectively controlled. Permanent safety construction fencing was placed around the outer perimeter of the Site to distinguish the work zone and discourage trespassing. During soil excavation and loading activities, dust and VOC monitoring was performed (Section 10.2) to assure conformance with NYSDOH-approved community air monitoring action levels. The potential for chemical exposures and physical injuries were reduced through safe work practices, proper personal protection, environmental monitoring, establishment of work zones and site controls, and appropriate decontamination procedures. The IRM achieved the RAOs for the site approximately ten months after initiation of the IRM.

11.2.7 Implementability

No technical or action-specific administrative implementability issues were associated with implementation of the IRM.

11.2.8 Cost

The capital cost of the IRM was approximately 3 million dollars. Post-remedial groundwater monitoring will be undertaken if required by the NSYDEC. Accordingly, long term operation and maintenance costs have not been separately allocated for this Site as such are not believed to be necessary.

11.2.9 Community Acceptance

The IRM Work Plan was advertised and made available for comment with the BCP application. No comments opposing the work were received.

Based on the preceding evaluation, the IRM satisfies the criteria necessary for these measures and is the final remedy for the Site.

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14. Internet Mapper, Office of Geographic Information Services, Erie County, New York, http://gis2.erie.gov/gc/eriecountyny/PublicLaunchPage.aspx.
15. Certified Sanborn Map Report – 232 Delaware Avenue, Buffalo, New York, prepared by Environmental Data Resources Inc.
16. Polk City Directories, Buffalo and Erie County Public Library, Buffalo, New York.
17. Uniland Development, personal communication.
18. Phase I Environmental Site Assessment Report for the Subject Property identified as Delaware Court Building, Best Mart Gasoline Station, and AAA Safe & Lock, 230-260 Delaware Avenue, 239-241 South Elmwood Avenue, and 101-143 West Chippewa Street, Buffalo, New York, dated October 17, 2001, prepared by Lender Consulting Services, Inc.
19. Limited and Focused Subsurface Investigation, 239-241 South Elmwood Avenue & 101-143 West Chippewa Street, Buffalo, New York, dated April 22, 2002, prepared by Lender Consulting Services, Inc.
20. Letter to Delaware Court Partnership from the New York State Department of Environmental Conservation, dated May 24, 2002.
21. Supplemental Limited and Focused Subsurface Investigation, 141 West Chippewa Street, Buffalo, New York, dated June 26, 2002, prepared by Lender Consulting Services, Inc.
22. Letter to Delaware Court Partnership from Lender Consulting Services, Inc., dated July 15, 2002.
23. Third Limited and Focused Subsurface Investigation, 141 West Chippewa Street and South Elmwood Avenue, Buffalo, New York, dated October 14, 2002, prepared by Lender Consulting Services, Inc.
24. Remedial Action Plan, 239 South Elmwood Avenue and 141 Delaware Avenue, Buffalo, New York, dated November 4, 2002, prepared by Lender Consulting Services, Inc.
25. Letter to Lender Consulting Services, Inc. from the New York State Department of Environmental Conservation, dated November 6, 2002.
26. Letter to the New York State Department of Environmental Conservation from Lender Consulting Services, Inc., dated November 8, 2002.
27. Executive Summary/Quarterly Site Status Report (June 18, 2003 – August 2003), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated January 16, 2004, prepared by C & W Environmental, LLC.

28. Letter to Delaware Court Partnership from the New York State Department of Environmental Conservation, dated February 14, 2003.

29. Executive Summary/Quarterly Site Status Report (September 2003 – November 2003), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated February 16, 2004, prepared by C & W Environmental, LLC.

30. Executive Summary/Quarterly Site Status Report (December 2003 – February 2004), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated July 7, 2004, prepared by C & W Environmental, LLC.

31. Executive Summary/Quarterly Site Status Report (June 2004 – August 2004), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated December 3, 2004, prepared by C & W Environmental, LLC.

32. Executive Summary/Quarterly Site Status Report (September 2004 – November 2004), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated April 12, 2005, prepared by C & W Environmental, LLC.

33. Executive Summary/Quarterly Site Status Report (December 2004 – February 2005), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated May 16, 2005, prepared by C & W Environmental, LLC.

34. Analytical Report (March 2005), Best Mart CITGO, Buffalo, New York, NYSDEC Spill #01-75554, dated June 8, 2005, prepared by C & W Environmental, LLC.

35. Executive Summary/Quarterly Site Status Report (October 2005 – December 2005), Best Mart Valero, Buffalo, New York, NYSDEC Spill #01-75554, dated March 29, 2006, prepared by Environmental Products & Services of Vermont, Inc.

36. Dissolved Phase Plume Clean-up Work Plan, "Best Mart" Citgo Gasoline Station, 239 South Elmwood Avenue, Buffalo, New York, NYSDEC Spill No. 0175554, dated September 21, 2005, prepared by C & W Environmental, LLC.

37. Quarterly Site Status Report, First Quarter 2006: January to March, Best Mart/Valero, Buffalo, New York, NYSDEC Spill No. 0175554, dated April 21, 2006, prepared by Environmental Products & Services of Vermont, Inc.

38. Quarterly Site Status Report, Second Quarter 2006: April to June, Delaware Court Partnership, Best Mart/Valero, 239 South Elmwood Avenue, Buffalo, New York, NYSDEC Spill No. 0175554, dated August 31, 2006, prepared by Environmental Products & Services of Vermont, Inc.

39. Quarterly Site Status Report, Third Quarter 2006: July to September, Delaware Court Partnership, Best Mart/Valero, 239 South Elmwood Avenue, Buffalo,

New York, NYSDEC Spill No. 0175554, dated October 10, 2006, prepared by Environmental Products & Services of Vermont, Inc.

40. Quarterly Site Status Report, Fourth Quarter 2006: October to December, Best Mart/Valero, Buffalo, New York, NYSDEC Spill No. 0175554, dated April 25, 2007, prepared by Environmental Products & Services of Vermont, Inc.
41. Quarterly Site Status Report, First Quarter 2007: January to March, Best Mart/Valero, Buffalo, New York, NYSDEC Spill No. 0175554, dated April 25, 2007, prepared by Environmental Products & Services of Vermont, Inc.
42. Quarterly Site Status Report, Second Quarter 2007: April to June, Best Mart/Valero, Buffalo, New York, NYSDEC Spill No. 0175554, dated August 31, 2007, prepared by Environmental Products & Services of Vermont, Inc.
43. Letter to the New York State Department of Environmental Conservation from Environmental Products & Services of Vermont, Inc., dated June 22, 2009.
44. Letter to 4269 Incorporated from the New York State Department of Environmental Conservation, dated January 7, 2010.
45. Corrective Action Work Plan, Bestmart/Valero, 239 South Elmwood Avenue, Buffalo, New York, NYSDEC Spill No. 0175554, dated July 8, 2011, prepared by Environmental Products & Services of Vermont, Inc.
46. Geophysical Survey Report, Commercial Property, 232 Delaware Avenue, Buffalo, New York, dated June 27, 2012, prepared by NOVA Geophysical Services.
47. Limited Subsurface Investigation, Best Mart CITGO Gasoline Station, 239 South Elmwood Avenue, Buffalo, New York, dated August 8, 2003, prepared by C & W Environmental, LLC.
48. Remedial Investigation and Interim Remedial Measures Work Plan for Brownfield Cleanup Program, 233 South Elmwood Avenue and 234 Delaware Avenue, Buffalo, New York, dated May 2013, prepared by Lender Consulting Services, Inc.
49. Bouwer, Herman and R.C. Rice, A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, Water Resources Research, Volume 12, No. 3, June 1976.
50. Bouwer, Herman, The Bouwer and Rice Slug Test – An Update, Ground Water, Volume 27, No. 3, May-June 1989.
51. DER-10/Technical Guidance for Site Investigation and Remediation, New York State Department of Environmental Conservation, issued May 3, 2010.

52. Development of Soil Cleanup Objectives Technical Support Document, New York State Brownfield Cleanup Program, New York State Department of Environmental Conservation and New York State Department of Health, September 2006.

Table 1

250 Delaware Avenue
Buffalo, New York

Maximum Known Contaminant Concentrations in Site Soil Prior to the Interim Remedial Measure

Analyte	Maximum Concentration (µg/kg)	Sample ID	NYSDEC Guidance Value (µg/kg)
VOCs by USEPA 8021			
Benzene	25,400[1]	BH21 (8-10 ft. bgs)	60 or MDL
n-Butylbenzene	293,000[1]	BH21 (8-10 ft. bgs)	10,000
Ethylbenzene	184,000[1]	BH21 (8-10 ft. bgs)	5,500
Methyl tert butyl ether	1,140[2]	BH25 (12-16 ft. bgs)	120
Naphthalene	382,000[1]	BH21 (8-10 ft. bgs)	13,000
n-Propylbenzene	225,000[1]	BH21 (8-10 ft. bgs)	3,700
Toluene	368,000[1]	BH21 (8-10 ft. bgs)	1,500
1,2,4- Trimethylbenzene	920,000[1]	BH21 (8-10 ft. bgs)	10,000
1,3,5- Trimethylbenzene	225,000[1]	BH21 (8-10 ft. bgs)	3,300
m,p- Xylene	714,000[1]	BH21 (8-10 ft. bgs)	1,200*
o-Xylene	511,000[1]	BH21 (8-10 ft. bgs)	1,200*
SVOCs by USEPA 8270			
Naphthalene	62,700[1]	BH19	13,000

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
MDL = Method Detection Limit
* NYSDEC Guidance Value is the sum of m,p-xylene and o-xylene
NYSDEC Guidance Values = Division Technical and Administrative Guidance Memorandum No. 4046 (TAGM 4046):
Determination of Soil Cleanup Objectives and Cleanup Levels and Addendum (August, 2001)
[1] = LCS April 2002 Study (Ref. 19)
[2] = LCS June 2002 Study (Ref. 21)

Table 2

250 Delaware Avenue
Buffalo, New York

Volatile Organic Compounds Detected in Site Overburden Groundwater on April 9, 2009

Sample ID	TPMW4	TPMW5	TPMW6	TPMW16	TPMW10R	TPMW11R	NYSDEC Class GA Groundwater Criteria
Units	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**
Benzene	2,600	13,000	9,200	2,400	44	ND	1
n-Butylbenzene	ND	ND	ND	310	ND	ND	5
Ethylbenzene	1,600	1,400	820	1,000	ND	ND	5
Isopropylbenzene	ND	ND	ND	ND	ND	ND	5
p- Isopropyltoluene	ND	ND	ND	ND	ND	ND	5
Methyl tert butyl ether	ND	ND	ND	ND	ND	ND	10
Naphthalene	ND	ND	ND	1,300	36	ND	10
n-Propylbenzene	ND	ND	ND	ND	ND	ND	5
Toluene	6,000	8,200	1,300	1,600	ND	ND	5
1,2,4- Trimethylbenzene	1,700	1,300	840	5,700	290	ND	5
1,3,5- Trimethylbenzene	ND	ND	ND	1,100	ND	ND	5
m,p- Xylene	5,400	4,900	3,000	5,800	61	ND	5
o-Xylene	2,100	1,800	ND	3,300	33	ND	5
Xylene (total)	7,500	6,700	3,000	9,100	94	ND	5

µg/l = micrograms per liter
ND = Not Detected
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
= Analyte detected above the NYSDEC Groundwater Criteria.

Table 3A

250 Delaware Avenue
Buffalo, New York

Groundwater Depths in Site Overburden
Monitoring Wells Measured on June 27, 2013

Well Location	Depth to Groundwater (feet below top of casing)
BCP MW1	10.29
BCP MW2	11.73
BCP MW3	10.32
BCP MW4	11.63
BCP MW5	9.47
TPMW4	9.25
TPMW6	8.89
TPMW16	8.66

Table 3B

250 Delaware Avenue
Buffalo, New York

Groundwater Depths in Site Overburden
Monitoring Wells Measured on May 29, 2014

Well Location	Depth to Groundwater (feet below top of casing)
BCP MW6	18.85
BCP MW7	15.15
BCP MW8	17.40

Table 4

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Soil Samples Collected Exterior to Site Buildings

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/4/2013	6/4/2013	6/5/2013	6/5/2013	6/5/2013	6/6/2013	
Sample Depth	8-10 ft. bgs	10-12 ft. bgs	8-10 ft. bgs	8-10 ft. bgs	8-10 ft. bgs	8-10 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<1.2	<1.1	<0.81	<1.1	<1.2	<360	50
Benzene	11	9.9	2.7	8.8	9	<85	60
Bromodichloromethane	<0.19	<0.19	<0.14	<0.19	<0.21	<61	NL
Bromoform	<1.8	<1.8	<1.3	<1.8	<2.0	<580	NL
Bromomethane	<0.48	<0.46	<0.33	<0.47	<0.51	<150	NL
2- Butanone	<1.2	<1.1	<0.80	<1.1	<1.2	<360	120
n-Butylbenzene	<0.17	<0.16	<0.12	<0.17	<0.18	656 J	12,000[b]
sec- Butylbenzene	<0.21	<0.20	<0.15	0.72 J	0.61 J	1100 J	11,000[b]
tert- Butylbenzene	<0.81	<0.79	<0.56	<0.80	<0.86	<250	5,900[b]
Carbon Disulfide	0.38 J	<0.15	0.20 J	0.35 J	0.30 J	<47	NL
Carbon Tetrachloride	<0.67	<0.65	<0.47	<0.66	<0.71	<210	760[b]
Chlorobenzene	<0.25	<0.25	<0.18	<0.25	<0.27	<79	1,100
Chloroethane	<1.2	<1.1	<0.81	<1.1	<1.2	<360	NL
Chloroform	0.80 J	<0.46	<0.33	<0.47	<0.50	<150	370
Chloromethane	<0.43	<0.41	<0.30	<0.42	<0.45	<130	NL
Dibromochloromethane	<0.27	<0.26	<0.19	<0.27	<0.29	<85	NL
1,1- Dichloroethane	<0.25	<0.24	<0.17	<0.25	<0.26	<78	270[b]
1,2- Dichloroethane	<0.26	<0.26	<0.18	<0.26	<0.28	<83	20[a]
1,1- Dichloroethene	<0.34	<0.33	<0.24	<0.33	<0.36	<110	330[b]
Cis-1,2- Dichloroethene	<0.28	<0.27	<0.19	<0.27	<0.29	<87	250[b]
trans-1,2-Dichloroethene	<0.26	<0.26	<0.18	<0.26	<0.28	<83	190[b]
1,2- Dichloroethene (total)	<0.26	<0.26	<0.18	<0.26	<0.28	<83	NL
1,2- Dichloropropane	<0.34	<0.33	<0.24	<0.34	<0.36	<110	NL
cis-1,3- Dichloropropene	<0.16	<0.15	<0.11	<0.16	<0.17	<49	NL
trans-1,3-Dichloropropene	<0.46	<0.44	<0.32	<0.45	<0.49	<140	NL
Ethylbenzene	2.9	2.3	0.68 J	2.2	2.2	<70	1,000[b]
2- Hexanone	<1.2	<1.1	<0.80	<1.1	<1.2	<360	NL
Isopropylbenzene	0.42 J	0.35 J	<0.15	0.35 J	0.34 J	959 J	NL
p- Isopropyltoluene	<0.16	<0.16	<0.11	<0.16	<0.17	<51	NL
Methyl tert butyl ether	<0.27	<0.26	<0.18	<0.26	<0.28	<83	930[b]
4- Methyl-2-pentanone	<0.46	<0.45	<0.32	<0.45	<0.49	<140	NL
Methylene chloride	<1.1	<1.0	<0.74	<1.1	<1.1	<330	50
Naphthalene	<1.2	<1.1	<0.80	<1.1	<1.2	361 J	12,000
n-Propylbenzene	<0.94	<0.91	<0.65	<0.92	<0.99	1550	3,900[b]
Styrene	<0.22	<0.21	<0.15	<0.21	<0.23	<67	NL
1,1,2,2-Tetrachloroethane	<0.39	<0.38	<0.27	<0.39	<0.42	<120	NL
Tetrachloroethene	<0.21	<0.20	<0.15	<0.21	<0.22	<66	1,300
Toluene	22.5	19	5.6	17.1	17.6	<240	700
1,1,1- Trichloroethane	<0.29	<0.28	<0.20	<0.29	<0.31	<91	680[b]
1,1,2- Trichloroethane	<0.68	<0.65	<0.47	<0.67	<0.72	<210	NL
Trichloroethene	<0.19	<0.19	<0.14	<0.19	<0.21	<61	470
1,2,4- Trimethylbenzene	6.4	5.1	1.5 J	4.6	4.6 J	2700	3,600[b]
1,3,5- Trimethylbenzene	2.9 J	2.3 J	0.72 J	2.0 J	2.1 J	544 J	8,400[b]
Vinyl chloride	<0.25	<0.24	<0.17	<0.25	<0.27	<79	20[b]
m,p- Xylene	17.9	13.9	3.8	13.3	12.9	<230	260*
o-Xylene	5.5	4.3	1.2 J	3.9	4	<69	260*
Xylene (total)	23.4	18.2	5.1	17.3	16.9	<69	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
** = Duplicate sample named BCP-MW6-8-10 on chain of custody

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/4/2013	6/4/2013	6/5/2013	6/5/2013	6/5/2013	6/6/2013	
Sample Depth	4-16 ft. bgs	8-16 ft. bgs	6-16 ft. bgs	6-18 ft. bgs	6-18 ft. bgs	8-18 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<13	<13	<110	<13	<13	<12	NL
4-Chloro-3-methyl phenol	<14	<14	<110	<14	<14	<14	NL
2,4-Dichlorophenol	<16	<16	<110	<16	<16	<16	NL
2,4-Dimethylphenol	<93	<93	<99	<91	<93	<90	NL
2,4-Dinitrophenol	<140	<140	<140	<140	<140	<140	NL
4,6-Dinitro-o-cresol	<71	<71	<93	<70	<71	<69	NL
2-Methylphenol	<23	<23	<94	<22	<23	<22	330[b]
3&4-Methylphenol	<28	<28	<190	<27	<28	<27	(330[b]/330[b])[1]
2-Nitrophenol	<15	<15	<110	<15	<15	<15	NL
4-Nitrophenol	<110	<110	<200	<100	<110	<100	NL
Pentachlorophenol	<40	<40	<110	<39	<40	<39	800[b]
Phenol	<16	<16	<67	<16	<16	<16	330[b]
2,4,5-Trichlorophenol	<14	<14	<91	<14	<14	<14	NL
2,4,6-Trichlorophenol	<14	<14	<73	<14	<14	<14	NL
Acenaphthene	<15	<15	<44	<15	<15	<15	20,000
Acenaphthylene	<11	<11	<32	<11	<11	<11	100,000[a,d]
Anthracene	<14	<14	<39	<13	<14	<13	100,000[a,d]
Benzo(a)anthracene	27.8 J	<15	<44	<14	<15	<14	1,000[c,d]
Benzo(a)pyrene	21.0 J	<12	<26	<12	<12	<12	1,000[c]
Benzo(b)fluoranthene	23.9 J	<14	<27	<14	<14	<14	1,000[c,d]
Benzo(g,h,i)perylene	12.6 J	<11	<51	<11	<11	<11	100,000[d]
Benzo(k)fluoranthene	<17	<17	<64	<17	<17	<17	800[c,d]
4-Bromophenyl phenyl ether	<14	<14	<37	<14	<14	<14	NL
Butyl benzyl phthalate	<12	<12	<41	<11	<12	<11	NL
2-Chloronaphthalene	<15	<15	<47	<15	<15	<15	NL
4-Chloroaniline	<14	<14	<50	<14	<14	<14	NL
Carbazole	<13	<13	<48	<13	<13	<13	NL
Chrysene	28.2 J	<14	<46	<14	<14	<14	1,000[c,d]
Bis (2-chloroethoxy) methane	<13	<13	<54	<13	<13	<13	NL
Bis (2-chloroethyl) ether	<17	<17	<59	<17	<17	<17	NL
Bis (2-chloroisopropyl) ether	<20	<20	<80	<20	<20	<20	NL
4-Chlorophenyl phenyl ether	<17	<17	<47	<17	<17	<17	NL
1,2-Dichlorobenzene	<15	<15	<59	<14	<15	<14	1,100
1,3-Dichlorobenzene	<16	<16	<59	<16	<16	<16	2,400
1,4-Dichlorobenzene	<15	<15	<59	<15	<15	<15	1,800
2,4-Dinitrotoluene	<38	<38	<44	<37	<38	<37	NL
2,6-Dinitrotoluene	<10	<10	<29	<10	<10	<10	NL
3,3'-Dichlorobenzidine	<14	<14	<29	<14	<14	<14	NL
Dibenzo(a,h)anthracene	<14	<14	<46	<13	<14	<13	330[b,d]
Dibenzofuran	<16	<16	<55	<15	<16	<15	7,000[d]
Di-n-butyl phthalate	<30	<30	<33	<30	<30	<29	NL
Di-n-octyl phthalate	<8.9	<8.9	<31	<8.7	<8.9	<8.6	NL
Diethyl phthalate	<14	<14	<42	<14	<14	<14	NL
Dimethyl phthalate	<17	<16	<47	<16	<16	<16	NL
Bis (2-ethylhexyl) phthalate	26.8 J	27.4 J	<51	16.5 J	<10	48.2 J	NL
Fluoranthene	58.4 J	<16	<35	<15	<16	<15	100,000[a,d]
Fluorene	<15	<15	<40	<15	<15	<15	30,000
Hexachlorobenzene	<18	<18	<50	<17	<18	<17	330[b]
Hexachlorobutadiene	<17	<17	<61	<16	<16	<16	NL
Hexachlorocyclopentadiene	<140	<140	<140	<140	<140	<140	NL
Hexachloroethane	<14	<14	<76	<13	<14	<13	NL
Indeno (1,2,3-cd) pyrene	<13	<13	<36	<12	<13	<12	500[c,d]
Isophorone	<13	<13	<47	<13	<13	<13	NL
2-Methylnaphthalene	<14	<14	<59	<14	<14	<14	NL
2-Nitroaniline	<14	<14	<42	<13	<14	<13	NL
3-Nitroaniline	<31	<31	<63	<30	<31	<30	NL
4-Nitroaniline	<14	<14	<57	<14	<14	<14	NL
Naphthalene	<18	<18	<44	<18	<18	<18	12,000[d]
Nitrobenzene	<15	<15	<55	<15	<15	<15	NL
N-Nitroso-Di-n-propylamine	<16	<16	<70	<16	<16	<16	NL
N-Nitrosodiphenylamine	<17	<17	<33	<17	<17	<17	NL
Phenanthrene	41.1 J	<15	<34	<15	<15	<15	100,000[d]
Pyrene	46.0 J	19.1 J	<35	<13	<13	<13	100,000[d]
1,2,4-Trichlorobenzene	<16	<16	<55	<15	<16	<15	NL

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
** = Duplicate sample named BCP-MW6-4-14 on chain of custody

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Eastern USA Background Concentrations	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**6/4/2013**	**6/4/2013**	**6/5/2013**	**6/5/2013**	**6/5/2013**	**6/6/2013**		
Sample Depth	**4-16 ft. bgs**	**8-16 ft. bgs**	**6-16 ft. bgs**	**6-18 ft. bgs**	**6-18 ft. bgs**	**8-18 ft. bgs**		
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	1,820	1,910	1,820	1,880	3,400	5,940	33,000	NL
Antimony	<0.16	<0.16	<0.16	<0.16	<0.16	<0.15	NA	NL
Arsenic	1.1	1	0.94 B	1.2	0.94 B	2.5	3-12*	13[a]
Barium	13.6	21.4	10.2	22.3	24.4	52.5	15-600	350[a]
Beryllium	0.095 B	0.10 B	0.13 B	0.096 B	0.15 B	0.35 B	0-1.75	7.2
Cadmium	0.20 B	0.26 B	0.19 B	0.20 B	0.17 B	0.14 B	0.1-1	2.5[a]
Calcium	44,700	43,800	28,000	43,200	50,700	55,500	130-35,000*	NL
Chromium	3.9	4.6	3.1	3.9	5.8	9	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	1.6 B	1.7 B	1.5 B	1.6 B	2.7 B	6.1	2.5-60*	NL
Copper	5.3	4.8	6.4	5.3	7.4	10.9	1-50	50
Iron	5,220	4,990	4,120	4,850	6,490	14,100	2,000-550,000	NL
Lead	6.5	6	6.3	6.3	8.1	11.2	***	63[a]
Magnesium	18,100	18,700	13,200	18,400	23,200	23,600	100-5,000	NL
Manganese	184	185	181	187	294	330	50-5,000	1,600[a]
Mercury	0.035 B	0.024 B	<0.010	0.021 B	0.017 B	0.020 B	0.001-0.2	0.18[a]
Nickel	3.2 B	3.3 B	3.0 B	3.3 B	4.8	11	0.5-25	30
Potassium	400 B	466 B	342 B	483 B	830	1,430	8,500-43,000*	NL
Selenium	<0.37	<0.36	<0.37	<0.37	<0.37	<0.35	0.1-3.9	3.9[a]
Silver	<0.13	<0.13	<0.13	<0.13	<0.13	<0.12	NA	2.0
Sodium	204 B	183 B	197 B	156 B	207 B	317 B	6,000-8,000	NL
Thallium	<0.14	<0.14	<0.14	<0.14	<0.14	<0.13	NA	NL
Vanadium	7.4	7.2	6.5	7.2	9.3	14.1	1-300	NL
Zinc	54.2	64.1	61.9	62.3	43.4	52.6	9-50	109[a]

mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.
** = Duplicate sample named BCP-MW6-4-14 on chain of custody

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**6/4/2013**	**6/4/2013**	**6/5/2013**	**6/5/2013**	**6/5/2013**	**6/6/2013**	
Sample Depth	**4-16 ft. bgs**	**8-16 ft. bgs**	**6-16 ft. bgs**	**6-18 ft. bgs**	**6-18 ft. bgs**	**8-18 ft. bgs**	
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Cyanide	<0.14	<0.13	<0.14	<0.14	<0.14	<0.14	27[a,b]

mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with “NS.” Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
** = Duplicate sample named BCP-MW6-4-14 on chain of custody

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**6/4/2013**	**6/4/2013**	**6/5/2013**	**6/5/2013**	**6/5/2013**	**6/6/2013**	
Sample Depth	**4-16 ft. bgs**	**8-16 ft. bgs**	**6-16 ft. bgs**	**6-18 ft. bgs**	**6-18 ft. bgs**	**8-18 ft. bgs**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Aroclor 1016	<13	<13	<13	<13	<13	<13	-
Aroclor 1221	<17	<17	<18	<17	<17	<17	-
Aroclor 1232	<13	<13	<14	<13	<14	<13	-
Aroclor 1242	<14	<14	<15	<14	<14	<14	-
Aroclor 1248	<12	<13	<13	<12	<13	<12	-
Aroclor 1254	<21	<21	<22	<20	<21	<21	-
Aroclor 1260	<14	<14	<15	<14	<15	<14	-
Total Aroclor	ND	ND	ND	ND	ND	ND	100

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
** = Duplicate sample named BCP-MW6-4-14 on chain of custody

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP MW1	BCP MW2	BCP MW3	BCP MW4	BCP MW4 Duplicate**	BCP MW5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/4/2013	6/4/2013	6/5/2013	6/5/2013	6/5/2013	6/6/2013	
Sample Depth	4-16 ft. bgs	8-16 ft. bgs	6-16 ft. bgs	6-18 ft. bgs	6-18 ft. bgs	8-18 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.7	<1.7	<1.8	<1.7	<1.8	<1.7	5[a]
Alpha-BHC	<1.4	<1.4	<1.4	<1.3	<1.4	<1.4	20
Beta-BHC	<1.9	<1.9	<1.9	<1.8	<1.9	<1.9	36
Delta-BHC	<1.1	<1.1	<1.1	<1.0	<1.1	<1.1	40
Gamma-BHC (Lindane)	<1.7	<1.7	<1.8	<1.7	<1.8	<1.7	100
Alpha-Chlordane	<2.1	<2.1	<2.2	<2.1	<2.2	<2.1	94
Gamma-Chlordane	<1.7	<1.7	<1.8	<1.7	<1.8	<1.7	NL
Dieldrin	<1.8	<1.8	<1.9	<1.8	<1.8	<1.8	5[a]
4,4'-DDD	<1.8	<1.9	<1.9	<1.8	<1.9	<1.8	3.3[b]
4,4'-DDE	<2.3	<2.3	<2.4	<2.3	<2.4	<2.3	3.3[b]
4,4'-DDT	<1.8	<1.8	<1.8	<1.7	<1.8	<1.8	3.3[b]
Endrin	<2.2	<2.3	<2.3	<2.2	<2.3	<2.2	14
Endosulfan sulfate	<1.9	<1.9	<2.0	<1.9	<2.0	<1.9	2,400*,[c]
Endrin aldehyde	<1.7	<1.8	<1.8	<1.7	<1.8	<1.7	NL
Endosulfan-I	<2.2	<2.2	<2.3	<2.2	<2.3	<2.2	2,400*,[c]
Endosulfan-II	<1.8	<1.8	<1.9	<1.8	<1.9	<1.8	2,400*,[c]
Heptachlor	<1.7	<1.7	<1.7	<1.6	<1.7	<1.7	42
Heptachlor epoxide	<1.7	<1.8	<1.8	<1.7	<1.8	<1.7	NL
Methoxychlor	<2.2	<2.3	<2.4	<2.2	<2.3	<2.2	NL
Endrin ketone	<2.0	<2.1	<2.1	<2.0	<2.1	<2.0	NL
Toxaphene	<29	<30	<31	<29	<30	<29	NL

µg/kg = micrograms per kilogram

ft. bgs = feet below ground surface

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

** = Duplicate sample named BCP-MW6-4-14 on chain of custody

Table 5

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Soil Samples Collected Within the Delaware Court Building

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP BH9	BCP BH10	BCP BH11	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013	
Sample Depth	2-4 ft. bgs	4-6 ft. bgs	4-6 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<1.3	<1.3	<1.2	50
Benzene	6.1	10.1	7.3	60
Bromodichloromethane	<0.21	<0.22	<0.19	NL
Bromoform	<2.0	<2.1	<1.8	NL
Bromomethane	<0.52	<0.55	<0.48	NL
2- Butanone	<1.3	<1.3	<1.1	120
n-Butylbenzene	<0.18	<0.20	<0.17	12,000[b]
sec- Butylbenzene	<0.23	0.28 J	<0.21	11,000[b]
tert- Butylbenzene	<0.88	<0.94	<0.81	5,900[b]
Carbon Disulfide	<0.16	<0.17	2.4 J	NL
Carbon Tetrachloride	<0.73	<0.77	<0.66	760[b]
Chlorobenzene	<0.28	<0.29	<0.25	1,100
Chloroethane	<1.3	<1.3	<1.2	NL
Chloroform	<0.52	<0.55	<0.47	370
Chloromethane	<0.47	<0.49	<0.42	NL
Dibromochloromethane	<0.30	<0.31	<0.27	NL
1,1- Dichloroethane	<0.27	<0.29	<0.25	270[b]
1,2- Dichloroethane	<0.29	<0.31	<0.26	20[a]
1,1- Dichloroethene	<0.37	<0.39	<0.34	330[b]
Cis-1,2- Dichloroethene	<0.30	<0.32	<0.28	250[b]
trans-1,2-Dichloroethene	<0.29	<0.30	<0.26	190[b]
1,2- Dichloroethene (total)	<0.29	<0.30	<0.26	NL
1,2- Dichloropropane	<0.37	<0.40	<0.34	NL
cis-1,3- Dichloropropene	<0.17	<0.18	<0.16	NL
trans-1,3-Dichloropropene	<0.50	<0.53	<0.45	NL
Ethylbenzene	2	3	1.9	1,000[b]
2- Hexanone	<1.3	<1.3	<1.1	NL
Isopropylbenzene	0.37 J	0.43 J	0.39 J	NL
p- Isopropyltoluene	<0.18	<0.19	<0.16	NL
Methyl tert butyl ether	<0.29	<0.31	<0.26	930[b]
4- Methyl-2-pentanone	<0.50	<0.53	<0.46	NL
Methylene chloride	<1.2	<1.2	<1.1	50
Naphthalene	<1.3	<1.3	<1.1	12,000
n-Propylbenzene	<1.0	<1.1	<0.93	3,900[b]
Styrene	<0.23	<0.25	<0.21	NL
1,1,2,2- Tetrachloroethane	<0.43	<0.45	<0.39	NL
Tetrachloroethene	<0.23	<0.24	<0.21	1,300
Toluene	14.3	22.5	14.9	700
1,1,1- Trichloroethane	<0.32	<0.33	<0.29	680[b]
1,1,2- Trichloroethane	<0.74	<0.78	<0.67	NL
Trichloroethene	<0.21	<0.22	<0.19	470
1,2,4- Trimethylbenzene	4.6 J	6.6	4.4 J	3,600[b]
1,3,5- Trimethylbenzene	2.1 J	2.9 J	2.1 J	8,400[b]
Vinyl chloride	<0.27	<0.29	<0.25	20[b]
m,p- Xylene	10.8	16.7	10.9	260*
o-Xylene	3.5	5.5	3.6	260*
Xylene (total)	14.3	22.1	14.4	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP BH9	BCP BH10	BCP BH11	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013	
Sample Depth	0-6 ft. bgs	0-6 ft. bgs	0-6 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<13	<13	<13	NL
4-Chloro-3-methyl phenol	<15	<15	<15	NL
2,4-Dichlorophenol	<17	<17	<17	NL
2,4-Dimethylphenol	<97	<96	<95	NL
2,4-Dinitrophenol	<150	<150	<150	NL
4,6-Dinitro-o-cresol	<74	<74	<73	NL
2-Methylphenol	<24	<23	<23	330
3&4-Methylphenol	<29	<29	<28	(330[b]/330[b])[1]
2-Nitrophenol	<16	<16	<16	NL
4-Nitrophenol	<110	<110	<110	NL
Pentachlorophenol	<42	<42	<41	800[b]
Phenol	<17	<17	<17	330[b]
2,4,5-Trichlorophenol	<15	<15	<15	NL
2,4,6-Trichlorophenol	<15	<15	<14	NL
Acenaphthene	49.3 J	<16	<16	20,000
Acenaphthylene	<12	<12	<12	100,000[a,d]
Anthracene	75.7 J	<14	<14	100,000[a,d]
Benzo(a)anthracene	90.5 J	<15	16.7 J	1,000[c,d]
Benzo(a)pyrene	62.7 J	<13	<13	1,000[c]
Benzo(b)fluoranthene	48.7 J	<15	<15	1,000[c,d]
Benzo(g,h,i)perylene	27.7 J	<12	<12	100,000[d]
Benzo(k)fluoranthene	51.4 J	<18	<18	800[c,d]
4-Bromophenyl phenyl ether	<15	<15	<15	NL
Butyl benzyl phthalate	<12	<12	<12	NL
2-Chloronaphthalene	<16	<16	<16	NL
4-Chloroaniline	<15	<15	<15	NL
Carbazole	21.1 J	<14	<14	NL
Chrysene	102 J	<15	<14	1,000[c,d]
Bis (2-chloroethoxy) methane	<14	<14	<14	NL
Bis (2-chloroethyl) ether	<18	<18	<18	NL
Bis (2-chloroisopropyl) ether	<21	<21	<21	NL
4-Chlorophenyl phenyl ether	<18	<18	<18	NL
1,2-Dichlorobenzene	<15	<15	<15	1,100
1,3-Dichlorobenzene	<17	<17	<17	2,400
1,4-Dichlorobenzene	<16	<16	<15	1,800
2,4-Dinitrotoluene	<40	<40	<39	NL
2,6-Dinitrotoluene	<15	<15	<15	NL
3,3'-Dichlorobenzidine	<30	<30	<29	NL
Dibenzo(a,h)anthracene	<14	<14	<14	330[b,d]
Dibenzofuran	27.6 J	<16	<16	7,000[d]
Di-n-butyl phthalate	<31	<31	<31	NL
Di-n-octyl phthalate	<9.3	<9.2	<9.1	NL
Diethyl phthalate	<15	<15	<15	NL
Dimethyl phthalate	<17	<17	<17	NL
Bis (2-ethylhexyl) phthalate	62.1 JB	156 J	150 J	NL
Fluoranthene	185	<16	<16	100,000[a,d]
Fluorene	46.7 J	<16	<15	30,000
Hexachlorobenzene	<19	<19	<18	330[b]
Hexachlorobutadiene	<17	<17	<17	NL
Hexachlorocyclopentadiene	<150	<150	<150	NL
Hexachloroethane	<14	<14	<14	NL
Indeno (1,2,3-cd) pyrene	26.0 J	<13	<13	500[c,d]
Isophorone	<14	<14	<13	NL
2-Methylnaphthalene	22.8 J	<15	<15	NL
2-Nitroaniline	<15	<15	<15	NL
3-Nitroaniline	<32	<32	<32	NL
4-Nitroaniline	<15	<15	<15	NL
Naphthalene	24.4 J	<19	<19	12,000[d]
Nitrobenzene	<16	<16	<16	NL
N-Nitroso-Di-n-propylamine	<17	<17	<17	NL
N-Nitrosodiphenylamine	<18	<18	<18	NL
Phenanthrene	229	<16	<16	100,000[d]
Pyrene	152	<14	16.3 J	100,000[d]
1,2,4-Trichlorobenzene	<16	<16	<16	NL

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value
[1] = 3-Methylphenol / 4-Methylphenol
B = Indicates analyte found in associated method blank.
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP BH9	BCP BH10	BCP BH11	Eastern USA Background Concentrations	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013		
Sample Depth	0-6 ft. bgs	0-6 ft. bgs	0-6 ft. bgs		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	2,140	2,650	2,250	33,000	NL
Antimony	<0.17	<0.16	<0.16	NA	NL
Arsenic	2	1.6	1.7	3-12*	13[a]
Barium	17.4	19.6	12.2	15-600	350[a]
Beryllium	0.12 B	0.13 B	0.12 B	0-1.75	7.2
Cadmium	0.15 B	0.11 B	0.18 B	0.1-1	2.5[a]
Calcium	40,300	39,400	41,000	130-35,000*	NL
Chromium	4.2	5.5	4.9	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	1.7 B	1.7 B	1.8 B	2.5-60*	NL
Copper	5.4	7	5.8	1-50	50
Iron	5,420	5,240	6,930	2,000-550,000	NL
Lead	27.9	44.1	7	***	63[a]
Magnesium	15,500	16,300	17,100	100-5,000	NL
Manganese	158	154	183	50-5,000	1,600[a]
Mercury	0.1	0.098	0.06	0.001-0.2	0.18[a]
Nickel	3.6 B	3.6 B	3.5 B	0.5-25	30
Potassium	471 B	541	559	8,500-43,000*	NL
Selenium	<0.39	<0.37	<0.36	0.1-3.9	3.9[a]
Silver	<0.14	0.14 B	<0.13	NA	2.0
Sodium	155 B	224 B	138 B	6,000-8,000	NL
Thallium	<0.15	0.21 B	<0.14	NA	NL
Vanadium	8.6	8.5	12.8	1-300	NL
Zinc	56.3	51.9	52.7	9-50	109[a]

mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP BH9	BCP BH10	BCP BH11	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013	
Sample Depth	0-6 ft. bgs	0-6 ft. bgs	0-6 ft. bgs	
Units	mg/kg	mg/kg	mg/kg	mg/kg
Cyanide	<0.14	<0.13	<0.14	27[a,b]

mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with “NS.” Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
** = Duplicate sample named BCP-MW6-4-14 on chain of custody

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP BH9	BCP BH10	BCP BH11	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013	
Sample Depth	0-6 ft. bgs	0-6 ft. bgs	0-6 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<18	<17	<18	-
Aroclor 1221	<23	<23	<23	-
Aroclor 1232	<18	<18	<18	-
Aroclor 1242	<19	<19	<19	-
Aroclor 1248	<17	<17	<17	-
Aroclor 1254	<28	<28	<28	-
Aroclor 1260	<20	<19	<20	-
Total Aroclor	ND	ND	ND	100

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP BH9	BCP BH10	BCP BH11	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	6/25/2013	6/25/2013	6/25/2013	
Sample Depth	0-6 ft. bgs	0-6 ft. bgs	0-6 ft. bgs	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<2.4	<2.4	<2.4	5[a]
Alpha-BHC	<1.9	<1.9	<1.9	20
Beta-BHC	<2.6	<2.6	<2.6	36
Delta-BHC	<1.5	<1.5	<1.5	40
Gamma-BHC (Lindane)	<2.4	<2.4	<2.4	100
Alpha-Chlordane	<3.0	<3.0	<2.9	94
Gamma-Chlordane	<2.4	<2.4	<2.4	NL
Dieldrin	<2.5	<2.5	<2.5	5[a]
4,4'-DDD	<2.6	<2.6	<2.5	3.3[b]
4,4'-DDE	<3.3	<3.2	<3.2	3.3[b]
4,4'-DDT	<2.5	<2.5	<2.4	3.3[b]
Endrin	<3.1	<3.1	<3.1	14
Endosulfan sulfate	<2.7	<2.7	<2.6	2,400*,[c]
Endrin aldehyde	<2.5	<2.4	<2.4	NL
Endosulfan-I	<3.1	<3.1	<3.0	2,400*,[c]
Endosulfan-II	<2.6	<2.5	<2.5	2,400*,[c]
Heptachlor	<2.3	<2.3	<2.3	42
Heptachlor epoxide	<2.5	<2.4	<2.4	NL
Methoxychlor	<3.2	<3.1	<3.1	NL
Endrin ketone	<2.9	<2.9	<2.8	NL
Toxaphene	<41	<41	<41	NL

µg/kg = micrograms per kilogram

ft. bgs = feet below ground surface

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 6

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Samples of Historic Fill Materials

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/17/2013	9/17/2013	9/17/2013	9/17/2013	
Sample Location	Northern Section of East Wall, Black Material Beneath Asphalt	Southern Section of East Wall, Black Material Beneath Asphalt	East Wall, C&D Debris Beneath Black Material	North Wall, Black Material Beneath Asphalt	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<4.5	<5.6	16.8	<4.2	50
Benzene	1.7	0.66 J	<0.31	1	60
Bromodichloromethane	<0.41	<0.52	<0.45	<0.39	NL
Bromoform	<0.33	<0.42	<0.36	<0.32	NL
Bromomethane	<1.1	<1.4	<1.2	<1.1	NL
2- Butanone	<3.5	<4.4	<3.8	<3.4	120
n-Butylbenzene	<0.20	<0.25	<0.21	<0.19	12,000[b]
sec- Butylbenzene	<0.18	<0.23	<0.20	<0.17	11,000[b]
tert- Butylbenzene	<0.41	<0.51	<0.44	<0.39	5,900[b]
Carbon Disulfide	1.1 J	11	<0.19	4.3 J	NL
Carbon Tetrachloride	<1.3	<1.7	<1.4	<1.3	760[b]
Chlorobenzene	<0.31	<0.39	<0.33	<0.29	1,100
Chloroethane	<0.69	<0.86	<0.74	<0.65	NL
Chloroform	<0.33	<0.41	<0.36	<0.31	370
Chloromethane	<1.4	<1.7	<1.5	<1.3	NL
Dibromochloromethane	<0.49	<0.61	<0.53	<0.46	NL
1,1- Dichloroethane	<0.38	<0.48	<0.41	<0.36	270[b]
1,2- Dichloroethane	<0.62	<0.78	<0.67	<0.59	20[a]
1,1- Dichloroethene	<0.60	<0.75	<0.65	<0.57	330[b]
Cis-1,2- Dichloroethene	<0.58	<0.73	<0.63	<0.55	250[b]
trans-1,2-Dichloroethene	<0.51	<0.64	<0.55	<0.48	190[b]
1,2- Dichloroethene (total)	<0.28	<0.35	<0.30	<0.27	NL
1,2- Dichloropropane	<0.48	<0.60	<0.52	<0.46	NL
cis-1,3- Dichloropropene	<0.33	<0.41	<0.36	<0.31	NL
trans-1,3-Dichloropropene	<0.33	<0.42	<0.36	<0.32	NL
Ethylbenzene	<0.20	<0.25	<0.22	<0.19	1,000[b]
2- Hexanone	<2.8	<3.5	<3.0	<2.6	NL
Isopropylbenzene	<0.32	<0.40	<0.35	<0.30	NL
p- Isopropyltoluene	<0.18	<0.23	<0.20	<0.17	NL
Methyl tert butyl ether	<0.45	<0.57	<0.49	<0.43	930[b]
4- Methyl-2-pentanone	<2.1	<2.7	<2.3	<2.0	NL
Methylene chloride	<1.8	<2.2	<1.9	<1.7	50
Naphthalene	<0.90	<1.1	<0.97	<0.85	12,000
n-Propylbenzene	<0.28	<0.35	<0.30	<0.26	3,900[b]
Styrene	<0.24	<0.29	<0.25	<0.22	NL
1,1,2,2- Tetrachloroethane	<0.34	<0.42	<0.36	<0.32	NL
Tetrachloroethene	<0.51	<0.63	<0.55	<0.48	1,300
Toluene	0.96 J	1.0 J	1.6 J	1.4 J	700
1,1,1- Trichloroethane	<0.21	<0.26	<0.22	<0.20	680[b]
1,1,2- Trichloroethane	<0.40	<0.50	<0.43	<0.38	NL
Trichloroethene	<0.54	<0.68	<0.59	<0.51	470
1,2,4- Trimethylbenzene	0.38 J	0.56 J	<0.25	0.83 J	3,600[b]
1,3,5- Trimethylbenzene	<0.15	<0.19	<0.16	0.49 J	8,400[b]
Vinyl chloride	<0.65	<0.82	<0.70	<0.62	20[b]
m,p- Xylene	0.78 J	0.90 J	0.48 J	1.2 J	260*
o-Xylene	0.31 J	0.37 J	<0.25	0.52 J	260*
Xylene (total)	1.1 J	1.3 J	0.48 J	1.8 J	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylene

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Part 375 (Unrestricted) Soil Cleanup Objectives	Part 375 (Residential) Soil Cleanup Objectives	Part 375 (Restricted Residential) Soil Cleanup Objectives	Part 375 (Commercial) Soil Cleanup Objectives	Part 375 (Industrial) Soil Cleanup Objectives
Date Sampled	**9/17/2013**	**9/17/2013**	**9/17/2013**	**9/17/2013**					
Sample Location	**Northern Section of East Wall, Black Material Beneath Asphalt**	**Southern Section of East Wall, Black Material Beneath Asphalt**	**East Wall, C&D Debris Beneath Black Material**	**North Wall, Black Material Beneath Asphalt**					
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Chlorophenol	<65	<62	<13	<13	NL	NL	NL	NL	NL
4-Chloro-3-methyl phenol	<73	<70	<14	<15	NL	NL	NL	NL	NL
2,4-Dichlorophenol	<83	<80	<16	<17	NL	NL	NL	NL	NL
2,4-Dimethylphenol	<470	<450	<91	<94	NL	NL	NL	NL	NL
2,4-Dinitrophenol	<720	<690	<140	<140	NL	NL	NL	NL	NL
4,6-Dinitro-o-cresol	<360	<350	<70	<72	NL	NL	NL	NL	NL
2-Methylphenol	<110	<110	<22	<23	330[b]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
3&4-Methylphenol	<140	<130	<27	<28	(330[b]/330[b])[1]	(100,000[f]/34,000)[1]	(100,000[f]/100,000[f])[1]	(500,000[g]/500,000[g])[1]	(1,000,000[h]/1,000,000[h])[1]
2-Nitrophenol	<77	<74	<15	<15	NL	NL	NL	NL	NL
4-Nitrophenol	<540	<520	<100	<110	NL	NL	NL	NL	NL
Pentachlorophenol	<200	<190	<39	<40	800[b]	2,400	6,700	6,700	55,000
Phenol	<82	<79	<16	<16	330[b]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
2,4,5-Trichlorophenol	<72	<69	<14	<14	NL	NL	NL	NL	NL
2,4,6-Trichlorophenol	<71	<68	<14	<14	NL	NL	NL	NL	NL
Acenaphthene	<77	179 J	22.0 J	97.2 J	20,000	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Acenaphthylene	59.3 J	261 J	19.0 J	110 J	100,000[a,d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Anthracene	122 J	764	68.4 J	323	100,000[a,d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Benzo(a)anthracene	455 J	*5,440*	385	*1,360*	1,000[c,d]	1,000[e]	1,000[e]	5,600	11,000
Benzo(a)pyrene	430 J	***5,380*** #	351	***1,310*** #	1,000[c]	1,000[e]	1,000[e]	1,000[e]	1,100
Benzo(b)fluoranthene	375 J	*5,160*	322	*1,540*	1,000[c,d]	1,000[e]	1,000[e]	5,600	11,000
Benzo(g,h,i)perylene	310 J	3800	228	932	100,000[d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Benzo(k)fluoranthene	421 J	*4,200*	247	834	800[c,d]	1,000	3,900	56,000	110,000
4-Bromophenyl phenyl ether	<72	<70	<14	<15	NL	NL	NL	NL	NL
Butyl benzyl phthalate	<59	314 J	<11	<12	NL	NL	NL	NL	NL
2-Chloronaphthalene	<78	<75	<15	<16	NL	NL	NL	NL	NL
4-Chloroaniline	<72	<69	<14	<14	NL	NL	NL	NL	NL
Carbazole	<68	388 J	32.7 J	151	NL	NL	NL	NL	NL
Chrysene	455 J	*6,100*	440	1,460	1,000[c,d]	1,000[e]	3,900	56,000	110,000
Bis (2-chloroethoxy) methane	<67	<65	<13	<13	NL	NL	NL	NL	NL
Bis (2-chloroethyl) ether	<87	<84	<17	<18	NL	NL	NL	NL	NL
Bis (2-chloroisopropyl) ether	<100	<99	<20	<21	NL	NL	NL	NL	NL
4-Chlorophenyl phenyl ether	<88	<85	<17	<18	NL	NL	NL	NL	NL
1,2-Dichlorobenzene	<74	<71	<14	<15	1,100	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
1,3-Dichlorobenzene	<82	<79	<16	<16	2,400	17,000	49,000	280,000	560,000
1,4-Dichlorobenzene	<76	<73	<15	<15	1,800	9,800	13,000	130,000	250,000
2,4-Dinitrotoluene	<190	<180	<37	<38	NL	NL	NL	NL	NL
2,6-Dinitrotoluene	<72	<69	<14	<14	NL	NL	NL	NL	NL
3,3'-Dichlorobenzidine	<140	<140	<28	<29	NL	NL	NL	NL	NL
Dibenzo(a,h)anthracene	95.5 J	***1,290*** #	76.4 J	298	330[b,d]	330[b]	330[b]	560	1,100
Dibenzofuran	<79	115 J	<15	102 J	7,000[d]	14,000	59,000	350,000	1,000,000[h]
Di-n-butyl phthalate	<150	<150	<30	<30	NL	NL	NL	NL	NL
Di-n-octyl phthalate	<45	<43	<8.7	<9.0	NL	NL	NL	NL	NL
Diethyl phthalate	<72	<69	<14	<14	NL	NL	NL	NL	NL
Dimethyl phthalate	<83	<80	<16	<17	NL	NL	NL	NL	NL
Bis (2-ethylhexyl) phthalate	<53	<51	<10	<11	NL	NL	NL	NL	NL

Fluoranthene	915	9,510	688	2,510	100,000[a,d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Fluorene	<76	194 J	<15	109 J	30,000	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Hexachlorobenzene	<90	<86	<17	<18	330[b]	330[b]	1,200	6,000	12,000
Hexachlorobutadiene	<83	<80	<16	<17	NL	NL	NL	NL	NL
Hexachlorocyclopentadiene	<720	<690	<140	<140	NL	NL	NL	NL	NL
Hexachloroethane	<69	<67	<13	<14	NL	NL	NL	NL	NL
Indeno (1,2,3-cd) pyrene	270 J	*3,130*	181	*748*	500[c,d]	500[e]	500[e]	5,600	11,000
Isophorone	<66	<64	<13	<13	NL	NL	NL	NL	NL
2-Methylnaphthalene	156 J	174 J	<14	195	NL	NL	NL	NL	NL
2-Nitroaniline	<72	<69	<14	<14	NL	NL	NL	NL	NL
3-Nitroaniline	<160	<150	<31	<31	NL	NL	NL	NL	NL
4-Nitroaniline	<72	<69	<14	<14	NL	NL	NL	NL	NL
Naphthalene	110 J	136 J	<18	240	12,000[d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Nitrobenzene	<77	<75	<15	<16	NL	NL	NL	NL	NL
N-Nitroso-Di-n-propylamine	<82	<79	<16	<16	NL	NL	NL	NL	NL
N-Nitrosodiphenylamine	<87	<83	<17	<17	NL	NL	NL	NL	NL
Phenanthrene	535 J	3,510	435	1,400	100,000[d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
Pyrene	767	10,200	824	2,300	100,000[d]	100,000[f]	100,000[f]	500,000[g]	1,000,000[h]
1,2,4-Trichlorobenzene	<79	<76	<15	<16	NL	NL	NL	NL	NL

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
[e] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 Soil Cleanup Objective value for this use of the site.
[f] = The Soil Cleanup Objectives for Residential and Restricted-Residential Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[g] = The Soil Cleanup Objectives for Commercial Use were capped at a maximum value of 500,000 ppb. See Technical Support Document, section 9.3.
[h] = The Soil Cleanup Objectives for Industrial Use were capped at a maximum value of 1,000,000 ppb. See Technical Support Document, section 9.3.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.
Underlined = Analyte detected above the Part 375 (Residential) Soil Cleanup Objectives.
Italicized = Analyte detected above the Part 375 (Restricted Residential) Soil Cleanup Objectives.
Bold = Analyte detected above the Part 375 (Commercial) Soil Cleanup Objectives.
# = Analyte detected above the Part 375 (Industrial) Soil Cleanup Objectives.

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives	Part 375 (Residential) Soil Cleanup Objectives	Part 375 (Restricted Residential) Soil Cleanup Objectives	Part 375 (Commercial) Soil Cleanup Objectives	Part 375 (Industrial) Soil Cleanup Objectives
Date Sampled	**9/17/2013**	**9/17/2013**	**9/17/2013**	**9/17/2013**						
Sample Location	**Northern Section of East Wall, Black Material Beneath Asphalt**	**Southern Section of East Wall, Black Material Beneath Asphalt**	**East Wall, C&D Debris Beneath Black Material**	**North Wall, Black Material Beneath Asphalt**						
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	8,360	12,700[3]	2,590	16,200	33,000	NL	NL	NL	NL	NL
Antimony	0.24 B	0.39 B	0.18 B	0.22 B	NA	NL	NL	NL	NL	NL
Arsenic	8.7	7.3	4.9	10.3	3-12*	13[a]	16[d]	16[d]	16[d]	16[d]
Barium	154	251[2]	68	532	15-600	350[a]	350[d]	400	400	10,000[e]
Beryllium	1	1.6[3]	0.14 B	2.3	0-1.75	7.2	14	72	590	2,700
Cadmium	0.66	1.5	0.11 B	3.5	0.1-1	2.5[a]	2.5[d]	4.3	9.3	60
Calcium	61,100	103,000	92,700	40,700	130-35,000*	NL	NL	NL	NL	NL
Chromium	15.8	*208*	6	14.3	1.5-40*	(1[b,c]/30[a,c])[1]	(22[c]/36[c])[1]	(110[c]/180[c])[1]	(400[c]/1,500[c])[1]	(800[c]/6,800[c])[1]
Cobalt	3.6 B	3.8 B	2.0 B	2.8 B	2.5-60*	NL	NL	NL	NL	NL
Copper	42.3	38.8	4.8	60.7	1-50	50	270	270	270	10,000[e]
Iron	10,900	40,700[3]	4,950	9,800	2,000-550,000	NL	NL	NL	NL	NL
Lead	190	236	321	***3,470***	***	63[a]	400	400	1,000	3,900
Magnesium	6,540	10,600[3]	2,270	7,520	100-5,000	NL	NL	NL	NL	NL
Manganese	713	*6,240*	181	1,260	50-5,000	1,600[a]	2,000[d]	2,000[d]	10,000[e]	10,000[e]
Mercury	0.11	0.1	0.13	0.34	0.001-0.2	0.18[a]	0.81[f]	0.81[f]	2.8[f]	5.7[f]
Nickel	12.7	18.7	5.8	13.2	0.5-25	30	140	310	310	10,000[e]
Potassium	684	1,060[3]	513	1,120	8,500-43,000*	NL	NL	NL	NL	NL
Selenium	0.82 B	<0.34	<0.35	1.9	0.1-3.9	3.9[a]	36	180	1,500	6,800
Silver	0.15 B	0.38 B	<0.13	0.28 B	NA	2.0	36	180	1,500	6,800
Sodium	642	1,060[3]	634	1,220	6,000-8,000	NL	NL	NL	NL	NL
Thallium	<0.13	0.99	0.15 B	<0.14	NA	NL	NL	NL	NL	NL
Vanadium	12.5	67.5	16.2	10.8	1-300	NL	NL	NL	NL	NL
Zinc	90.8	228	127	386	9-50	109[a]	2,200	10,000[e]	10,000[e]	10,000[e]

mg/kg = milligrams per kilogram
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[3] = Elevated reporting limit due to dilution required for matrix interference.
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[d] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 Soil Cleanup Objective value for this use of the site.
[e] = The Soil Cleanup Objectives for metals were capped at a maximum value of 10,000 ppm. See TSD Section 9.3
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.
= Analyte detected above Eastern USA Background Concentrations and the Part 375 (Unrestricted) Soil Cleanup Objectives.
Underlined = Analyte detected above the Part 375 (Residential) Soil Cleanup Objectives.
Italicized = Analyte detected above the Part 375 (Restricted Residential) Soil Cleanup Objectives.
Bold = Analyte detected above the Part 375 (Commercial) Soil Cleanup Objectives.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/17/2013	9/17/2013	9/17/2013	9/17/2013	
Sample Location	Northern Section of East Wall, Black Material Beneath Asphalt	Southern Section of East Wall, Black Material Beneath Asphalt	East Wall, C&D Debris Beneath Black Material	North Wall, Black Material Beneath Asphalt	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Cyanide	0.63	1.2	<0.13	0.59	27[a,b]

mg/kg = milligrams per kilogram

[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.

[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/17/2013	9/17/2013	9/17/2013	9/17/2013	
Sample Location	Northern Section of East Wall, Black Material Beneath Asphalt	Southern Section of East Wall, Black Material Beneath Asphalt	East Wall, C&D Debris Beneath Black Material	North Wall, Black Material Beneath Asphalt	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<14	<12	<13	<13	-
Aroclor 1221	<18	<16	<17	<17	-
Aroclor 1232	<14	<13	<13	<14	-
Aroclor 1242	<15	<13	<14	<14	-
Aroclor 1248	<13	<12	<12	<13	-
Aroclor 1254	<22	<20	<21	<21	-
Aroclor 1260	<15	18.1 J	<14	<15	-
Total Aroclor	ND	18.1 J	ND	ND	100

µg/kg = micrograms per kilogram

ND = Not detected

J = Indicates an estimated value

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP-Fill #1	BCP-Fill #2	BCP-Fill #3	BCP-Fill #4	Part 375 (Unrestricted) Soil Cleanup Objectives	Part 375 (Residential) Soil Cleanup Objectives
Date Sampled	9/17/2013	9/17/2013	9/17/2013	9/17/2013		
Sample Location	Northern Section of East Wall, Black Material Beneath Asphalt	Southern Section of East Wall, Black Material Beneath Asphalt	East Wall, C&D Debris Beneath Black Material	North Wall, Black Material Beneath Asphalt		
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.8	<1.6	<1.7	<1.8	5[a]	19
Alpha-BHC	<1.4	<1.3	<1.4	<1.4	20	97
Beta-BHC	<2.0	<1.8	<1.9	<1.9	36	72
Delta-BHC	<1.1	<1.0	<1.1	<1.1	40	100,000[d]
Gamma-BHC (Lindane)	<1.8	<1.6	<1.7	<1.8	100	280
Alpha-Chlordane	<2.2	<2.0	<2.1	<2.2	94	910
Gamma-Chlordane	<1.8	<1.6	<1.7	<1.8	NL	NL
Dieldrin	<1.9	<1.7	<1.8	<1.8	5[a]	39
4,4'-DDD	<1.9	<1.8	<1.8	<1.9	3.3[b]	2,600
4,4'-DDE	<2.5	<2.2	3.1 J	<2.4	3.3[b]	1,800
4,4'-DDT	<1.9	11.2	3.9 J	<1.8	3.3[b]	1,700
Endrin	<2.4	<2.1	<2.2	<2.3	14	2,200
Endosulfan sulfate	<2.0	<1.8	<1.9	<2.0	2,400*,[c]	4,800*
Endrin aldehyde	<1.8	<1.7	<1.7	<1.8	NL	NL
Endosulfan-I	<2.3	<2.1	<2.2	<2.3	2,400*,[c]	4,800*
Endosulfan-II	<1.9	<1.7	<1.8	<1.9	2,400*,[c]	4,800*
Heptachlor	<1.8	<1.6	<1.7	<1.7	42	420
Heptachlor epoxide	<1.8	<1.7	<1.7	<1.8	NL	NL
Methoxychlor	<2.4	<2.2	<2.2	<2.3	NL	NL
Endrin ketone	<2.2	<2.0	<2.0	<2.1	NL	NL
Toxaphene	<31	<28	<29	<30	NL	NL

µg/kg = micrograms per kilogram

NL = Not Listed

J = Indicates an estimated value

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

[d] = The Soil Cleanup Objectives for Residential and Restricted-Residential Use were capped at a maximum of 100,000 ppb. See TSD Section 9.3.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

Table 7

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Native Soil Samples Directly Underlying the Historic Fill Materials, Above the Smear Zone

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/25/2013	10/30/2013	11/14/2013	11/15/2013	
Sample Location	Sidewall	Sidewall	Sidewall	Sidewall	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.2	<3.2	<3.3	<2.9	50
Benzene	2.9	8	8.2	3	60
Bromodichloromethane	<0.29	<0.30	<0.31	<0.27	NL
Bromoform	<0.24	<0.24	<0.25	<0.21	NL
Bromomethane	<0.79	<0.81	<0.82	<0.72	NL
2- Butanone	<2.5	<2.6	<2.6	<2.3	120
n-Butylbenzene	<0.14	<0.14	<0.15	<0.13	12,000[b]
sec- Butylbenzene	<0.13	<0.13	<0.13	<0.12	11,000[b]
tert- Butylbenzene	<0.29	<0.29	<0.30	<0.26	5,900[b]
Carbon Disulfide	0.56 J	0.59 J	0.56 J	<0.11	NL
Carbon Tetrachloride	<0.94	<0.96	<0.98	<0.86	760[b]
Chlorobenzene	<0.22	<0.22	<0.23	<0.20	1,100
Chloroethane	<0.49	<0.50	<0.51	<0.44	NL
Chloroform	<0.23	<0.24	<0.24	<0.21	370
Chloromethane	<0.99	<1.0	<1.0	<0.90	NL
Dibromochloromethane	<0.35	<0.35	<0.36	<0.31	NL
1,1- Dichloroethane	<0.27	<0.27	<0.28	<0.25	270[b]
1,2- Dichloroethane	<0.44	<0.45	<0.46	<0.40	20[a]
1,1- Dichloroethene	<0.42	<0.43	<0.44	<0.39	330[b]
Cis-1,2- Dichloroethene	<0.41	<0.42	<0.43	<0.38	250[b]
trans-1,2-Dichloroethene	<0.36	<0.37	<0.38	<0.33	190[b]
1,2- Dichloroethene (total)	<0.20	<0.20	<0.21	<0.18	NL
1,2- Dichloropropane	<0.34	<0.35	<0.36	<0.31	NL
cis-1,3- Dichloropropene	<0.23	<0.24	<0.24	<0.21	NL
trans-1,3-Dichloropropene	<0.24	<0.24	<0.25	<0.22	NL
Ethylbenzene	0.91 J	2.3	1.3 J	0.58 J	1,000[b]
2- Hexanone	<2.0	<2.0	<2.1	<1.8	NL
Isopropylbenzene	<0.23	0.35 J	0.25 J	<0.21	NL
p- Isopropyltoluene	<0.13	<0.13	<0.13	<0.12	NL
Methyl tert butyl ether	<0.32	<0.33	<0.34	<0.29	930[b]
4- Methyl-2-pentanone	<1.5	<1.5	<1.6	<1.4	NL
Methylene chloride	<1.3	<1.3	<1.3	<1.1	50
Naphthalene	<0.64	<0.65	<0.66	<0.58	12,000
n-Propylbenzene	<0.20	0.48 J	0.26 J	<0.18	3,900[b]
Styrene	<0.17	<0.17	<0.17	<0.15	NL
1,1,2,2- Tetrachloroethane	<0.24	<0.24	<0.25	<0.22	NL
Tetrachloroethene	<0.36	<0.37	<0.37	<0.33	1,300
Toluene	5.4	17.8	11.3	5.3	700
1,1,1- Trichloroethane	<0.15	<0.15	<0.15	<0.13	680[b]
1,1,2- Trichloroethane	<0.28	<0.29	<0.29	<0.26	NL
Trichloroethene	<0.38	<0.39	<0.40	<0.35	470
1,2,4- Trimethylbenzene	2.5 J	6.1	1.9 J	1.5 J	3,600[b]
1,3,5- Trimethylbenzene	1.1 J	2.7 J	1.1 J	0.73 J	8,400[b]
Vinyl chloride	<0.46	<0.47	<0.48	<0.42	20[b]
m,p- Xylene	4.2	13.5	5.8	3.7	260*
o-Xylene	1.3 J	4.3	2.6	1.1 J	260*
Xylene (total)	5.5	17.8	8.4	4.8	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/25/2013	10/30/2013	11/14/2013	11/15/2013	
Sample Location	Sidewall	Sidewall	Sidewall	Sidewall	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<12	<12	<12	<13	NL
4-Chloro-3-methyl phenol	<14	<14	<13	<15	NL
2,4-Dichlorophenol	<16	<16	<15	<16	NL
2,4-Dimethylphenol	<88	<88	<86	<93	NL
2,4-Dinitrophenol	<140	<140	<130	<140	NL
4,6-Dinitro-o-cresol	<68	<68	<66	<71	NL
2-Methylphenol	<22	<22	<21	<23	330[b]
3&4-Methylphenol	<26	<26	<26	<28	(330[b]/330[b])[1]
2-Nitrophenol	<14	<14	<14	<15	NL
4-Nitrophenol	<100	<100	<99	<110	NL
Pentachlorophenol	<38	<38	<37	<40	800[b]
Phenol	<15	<15	<15	<16	330[b]
2,4,5-Trichlorophenol	<14	<14	<13	<14	NL
2,4,6-Trichlorophenol	<13	<13	<13	<14	NL
Acenaphthene	<14	<14	<14	<15	20,000
Acenaphthylene	<11	<11	<11	<11	100,000[a,d]
Anthracene	<13	<13	<13	<14	100,000[a,d]
Benzo(a)anthracene	<14	<14	<14	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<11	<12	1,000[c]
Benzo(b)fluoranthene	<14	<14	<13	<14	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	<11	100,000[d]
Benzo(k)fluoranthene	<16	<16	<16	<17	800[c,d]
4-Bromophenyl phenyl ether	<14	<14	38.6 J	<14	NL
Butyl benzyl phthalate	<11	<11	<11	<12	NL
2-Chloronaphthalene	<15	<15	<14	<15	NL
4-Chloroaniline	<14	<14	<13	<14	NL
Carbazole	<13	<13	<12	<13	NL
Chrysene	14.1 J	<13	<13	<14	1,000[c,d]
Bis (2-chloroethoxy) methane	<13	<13	<12	<13	NL
Bis (2-chloroethyl) ether	<17	<16	<16	<17	NL
Bis (2-chloroisopropyl) ether	<19	<19	<19	<21	NL
4-Chlorophenyl phenyl ether	<17	<17	<16	<18	NL
1,2-Dichlorobenzene	<14	<14	<14	<15	1,100
1,3-Dichlorobenzene	<16	<16	<15	<16	2,400
1,4-Dichlorobenzene	<14	<14	<14	<15	1,800
2,4-Dinitrotoluene	<36	<36	<35	<38	NL
2,6-Dinitrotoluene	<14	<14	<13	<14	NL
3,3'-Dichlorobenzidine	<27	<27	<26	<29	NL
Dibenzo(a,h)anthracene	<13	<13	<13	<14	330[b,d]
Dibenzofuran	<15	<15	<15	<16	7,000[d]
Di-n-butyl phthalate	<29	<29	<28	<30	NL
Di-n-octyl phthalate	<8.5	<8.5	<8.3	<8.9	NL
Diethyl phthalate	35.1 J	<14	<13	<14	NL
Dimethyl phthalate	<16	<16	<15	<17	NL
Bis (2-ethylhexyl) phthalate	<10	<10	<9.8	<11	NL
Fluoranthene	15.2 J	<15	<14	<16	100,000[a,d]
Fluorene	<14	<14	<14	<15	30,000
Hexachlorobenzene	<17	<17	<17	<18	330[b]
Hexachlorobutadiene	<16	<16	<15	<17	NL
Hexachlorocyclopentadiene	<140	<140	<130	<140	NL
Hexachloroethane	<13	<13	<13	<14	NL
Indeno (1,2,3-cd) pyrene	<12	<12	<12	<13	500[c,d]
Isophorone	<12	<12	<12	<13	NL
2-Methylnaphthalene	<14	<14	<13	<15	NL
2-Nitroaniline	<14	<14	<13	<14	NL
3-Nitroaniline	<30	<30	<29	<31	NL
4-Nitroaniline	<14	<14	<13	<14	NL
Naphthalene	<17	<17	<17	<18	12,000[d]
Nitrobenzene	<15	<15	<14	<15	NL
N-Nitroso-Di-n-propylamine	<15	<15	<15	<16	NL
N-Nitrosodiphenylamine	<16	<16	<16	<17	NL
Phenanthrene	<15	<15	<14	<15	100,000[d]
Pyrene	16.5 J	<13	<12	<13	100,000[d]
1,2,4-Trichlorobenzene	<15	<15	<15	<16	NL

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/25/2013**	**10/30/2013**	**11/14/2013**	**11/15/2013**		
Sample Location	**Sidewall**	**Sidewall**	**Sidewall**	**Sidewall**		
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	7,330	1,930	2,100	7,480	33,000	NL
Antimony	<0.16	<0.13	<0.13	0.16 B	NA	NL
Arsenic	2.2	1.1	1.2	2.3	3-12*	13[a]
Barium	48.1	6.5	18.4	50	15-600	350[a]
Beryllium	0.34 B	0.078 B	0.089 B	0.28 B	0-1.75	7.2
Cadmium	<0.046	0.17 B	0.15 B	0.064 B	0.1-1	2.5[a]
Calcium	58,700	37,000	47,400	72,500	130-35,000*	NL
Chromium	<0.44/10.3[1]	<0.44/3.0[1]	<0.43/3.5[1]	<0.45/9.9[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	4.7 B	1.3 B	1.7 B	4.8	2.5-60*	NL
Copper	11.1	5.4	5.4	11.7	1-50	50
Iron	11,300	4,600	5,300	12,200	2,000-550,000	NL
Lead	10.9	5.9	6.1	11.2	***	63[a]
Magnesium	24,900	17,200	21,800	27,300	100-5,000	NL
Manganese	355	166	188	375	50-5,000	1,600[a]
Mercury	<0.010	<0.0097	0.011 B	0.014 B	0.001-0.2	0.18[a]
Nickel	10.7	2.9 B	3.7	11.1	0.5-25	30
Potassium	1,990	452	529	1,830	8,500-43,000*	NL
Selenium	<0.37	<0.30	<0.31	<0.32	0.1-3.9	3.9[a]
Silver	<0.13	<0.11	<0.11	0.11 B	NA	2.0
Sodium	298 B	158 B	183 B	550	6,000-8,000	NL
Thallium	0.25 B	<0.12	<0.12	<0.12	NA	NL
Vanadium	16.9	8	8.3	15.5	1-300	NL
Zinc	57.1	60	63.8	50	9-50	109[a]

mg/kg = milligrams per kilogram
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/25/2013**	**10/30/2013**	**11/14/2013**	**11/15/2013**	
Sample Location	**Sidewall**	**Sidewall**	**Sidewall**	**Sidewall**	
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Cyanide	<0.13	<0.13	<0.13	<0.14	27[a,b]

mg/kg = milligrams per kilogram
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/25/2013**	**10/30/2013**	**11/14/2013**	**11/15/2013**	
Sample Location	**Sidewall**	**Sidewall**	**Sidewall**	**Sidewall**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Aroclor 1016	<16	<16	<12	<13	-
Aroclor 1221	<21	<22	<16	<17	-
Aroclor 1232	<17	<17	<13	<13	-
Aroclor 1242	<18	<18	<13	<14	-
Aroclor 1248	<16	<16	<12	<12	-
Aroclor 1254	<26	<26	<20	<20	-
Aroclor 1260	<18	<18	<14	<14	-
Total Aroclor	ND	ND	ND	ND	100

µg/kg = micrograms per kilogram
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP-North Wall Composite	BCP-East Wall Composite #1	BCP-North Wall Composite 2	BCP-West Wall Composite 1	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/25/2013**	**10/30/2013**	**11/14/2013**	**11/15/2013**	
Sample Location	**Sidewall**	**Sidewall**	**Sidewall**	**Sidewall**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Aldrin	<2.2	<2.2	<1.6	<1.7	5[a]
Alpha-BHC	<1.7	<1.7	<1.3	<1.3	20
Beta-BHC	<2.4	<2.4	<1.8	<1.8	36
Delta-BHC	<1.3	<1.4	<1.0	<1.1	40
Gamma-BHC (Lindane)	<2.2	<2.2	<1.6	<1.7	100
Alpha-Chlordane	<2.7	<2.7	<2.0	<2.1	94
Gamma-Chlordane	<2.2	<2.2	<1.6	<1.7	NL
Dieldrin	<2.3	<2.3	<1.7	<1.8	5[a]
4,4'-DDD	<2.3	<2.4	<1.8	<1.8	3.3[b]
4,4'-DDE	<2.9	<3.0	<2.2	<2.3	3.3[b]
4,4'-DDT	<2.2	<2.3	<1.7	<1.7	3.3[b]
Endrin	<2.8	<2.9	<2.1	<2.2	14
Endosulfan sulfate	<2.4	<2.4	<1.8	<1.9	2,400*,[c]
Endrin aldehyde	<2.2	<2.2	<1.7	<1.7	NL
Endosulfan-I	<2.8	<2.8	<2.1	<2.2	2,400*,[c]
Endosulfan-II	<2.3	<2.3	<1.7	<1.8	2,400*,[c]
Heptachlor	<2.1	<2.1	<1.6	<1.6	42
Heptachlor epoxide	<2.2	<2.2	<1.7	<1.7	NL
Methoxychlor	<2.9	<2.9	<2.1	<2.2	NL
Endrin ketone	<2.6	<2.6	<2.0	<2.0	NL
Toxaphene	<37	<38	<28	<29	NL

µg/kg = micrograms per kilogram

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 8

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Groundwater Samples
Exterior to the Area of Known Petroleum Impact

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	**6/27/2013**	**6/27/2013**	**6/27/2013**	**6/27/2013**	**6/28/2013**	**6/28/2013**	
Units	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**
Acetone	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	50
Benzene	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	1
Bromodichloromethane	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	50
Bromoform	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	50
Bromomethane	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	5
2- Butanone	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	50
n-Butylbenzene	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	5
sec- Butylbenzene	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	5
tert- Butylbenzene	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87	5
Carbon Disulfide	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	60
Carbon Tetrachloride	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	5
Chlorobenzene	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	5
Chloroethane	<0.84	<0.84	<0.84	<0.84	<0.84	<0.84	5
Chloroform	<0.50	<0.50	1.4	<0.50	<0.50	<0.50	7
Chloromethane	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	5
Dibromochloromethane	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	NL
1,1- Dichloroethane	<0.37	<0.37	<0.37	<0.37	0.81 J	0.85 J	5
1,2- Dichloroethane	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	0.6
1,1- Dichloroethene	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	5
Cis-1,2- Dichloroethene	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	5
trans-1,2-Dichloroethene	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	5
1,2- Dichloroethene (total)	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	NL
1,2- Dichloropropane	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	1
cis-1,3- Dichloropropene	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.4[1]
trans-1,3-Dichloropropene	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	0.4[1]
Ethylbenzene	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	5
2- Hexanone	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	50
Isopropylbenzene	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	5
p- Isopropyltoluene	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55	5
Methyl tert butyl ether	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	10
4- Methyl-2-pentanone	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	NL
Methylene chloride	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	5
Naphthalene	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79	10
n-Propylbenzene	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	5
Styrene	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	5
1,1,2,2- Tetrachloroethane	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	5
Tetrachloroethene	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	5
Toluene	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46	5
1,1,1- Trichloroethane	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	5
1,1,2- Trichloroethane	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	1
Trichloroethene	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	5
1,2,4- Trimethylbenzene	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	5
1,3,5- Trimethylbenzene	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	5
Vinyl chloride	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	2
m,p- Xylene	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	5
o-Xylene	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	5
Xylene (total)	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	5

µg/l = micrograms per liter
NL = Not Listed
J = Indicates an estimated value.
[1] = Applies to the sum of cis- and trans- 1,3-dichloropropene.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
** = Duplicate sample named BCP-MW-09 on chain of custody

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	**6/27/2013**	**6/27/2013**	**6/27/2013**	**6/27/2013**	**6/28/2013**	**6/28/2013**	
Units	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**	**µg/l**
2-Chlorophenol	<0.38	<0.39	<0.39	<0.38	<0.38	<0.39	1*
4-Chloro-3-methyl phenol	<0.49	<0.50	<0.50	<0.49	<0.49	<0.50	1*
2,4-Dichlorophenol	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1*
2,4-Dimethylphenol	<1.1	<1.2	<1.2	<1.1	<1.1	<1.2	1*
2,4-Dinitrophenol	<2.5	<2.6	<2.6	<2.5	<2.5	<2.6	1*
4,6-Dinitro-o-cresol	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	1*
2-Methylphenol	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	1*
3&4-Methylphenol	<2.0	<2.1	<2.1	<2.0	<2.0	<2.1	1*
2-Nitrophenol	<0.50	<0.51	<0.51	<0.50	<0.50	<0.51	1*
4-Nitrophenol	<0.58	<0.60	<0.60	<0.58	<0.58	<0.60	1*
Pentachlorophenol	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	1*
Phenol	<0.51	<0.52	<0.52	<0.51	<0.51	<0.52	1*
2,4,5-Trichlorophenol	<0.57	<0.58	<0.58	<0.57	<0.57	<0.58	1*
2,4,6-Trichlorophenol	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32	1*
Acenaphthene	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	20
Acenaphthylene	<0.56	<0.57	<0.57	<0.56	<0.56	<0.57	NL
Anthracene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	50
Benzo(a)anthracene	<0.21	<0.22	<0.22	<0.21	<0.21	<0.22	0.002
Benzo(a)pyrene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	ND
Benzo(b)fluoranthene	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	0.002
Benzo(g,h,i)perylene	<0.25	<0.26	<0.26	<0.25	<0.25	<0.26	NL
Benzo(k)fluoranthene	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	0.002
4-Bromophenyl phenyl ether	<0.20	<0.21	<0.21	<0.20	<0.20	<0.21	NL
Butyl benzyl phthalate	<0.85	<0.87	<0.87	<0.85	<0.85	<0.87	50
2-Chloronaphthalene	<0.92	<0.94	<0.94	<0.92	<0.92	<0.94	10
4-Chloroaniline	<0.25	<0.26	<0.26	<0.25	<0.25	<0.26	5
Carbazole	<0.21	<0.22	<0.22	<0.21	<0.21	<0.22	NL
Chrysene	<0.20	<0.21	<0.21	<0.20	<0.20	<0.21	0.002
Bis (2-chloroethoxy) methane	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	5
Bis (2-chloroethyl) ether	<0.23	<0.24	<0.24	<0.23	<0.23	<0.24	1
Bis (2-chloroisopropyl) ether	<0.13	<0.14	<0.14	<0.13	<0.13	<0.14	5
4-Chlorophenyl phenyl ether	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NL
1,2-Dichlorobenzene	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	3
1,3-Dichlorobenzene	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	3
1,4-Dichlorobenzene	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	3
2,4-Dinitrotoluene	<0.68	<0.69	<0.69	<0.68	<0.68	<0.69	5
2,6-Dinitrotoluene	<0.64	<0.65	<0.65	<0.64	<0.64	<0.65	5
3,3'-Dichlorobenzidine	<0.50	<0.51	<0.51	<0.50	<0.50	<0.51	5
Dibenzo(a,h)anthracene	<0.21	<0.22	<0.22	<0.21	<0.21	<0.22	NL
Dibenzofuran	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	NL
Di-n-butyl phthalate	<0.39	<0.40	<0.40	<0.39	<0.39	<0.40	50
Di-n-octyl phthalate	<0.43	<0.44	<0.44	<0.43	<0.43	<0.44	50
Diethyl phthalate	<0.50	<0.51	<0.51	<0.50	<0.50	<0.51	50
Dimethyl phthalate	<0.50	<0.51	<0.51	<0.50	<0.50	<0.51	50
Bis (2-ethylhexyl) phthalate	<0.49	<0.50	<0.50	<0.49	2.6	0.54 J	5
Fluoranthene	<0.22	<0.23	<0.23	<0.22	<0.22	<0.23	50
Fluorene	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	50
Hexachlorobenzene	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.04
Hexachlorobutadiene	<0.29	<0.30	<0.30	<0.29	<0.29	<0.30	0.5
Hexachlorocyclopentadiene	<2.5	<2.6	<2.6	<2.5	<2.5	<2.6	5
Hexachloroethane	<0.44	<0.45	<0.45	<0.44	<0.44	<0.45	5
Indeno (1,2,3-cd) pyrene	<0.27	<0.28	<0.28	<0.27	<0.27	<0.28	0.002
Isophorone	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	50
2-Methylnaphthalene	<0.39	<0.40	<0.40	<0.39	<0.39	<0.40	NL
2-Nitroaniline	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28	5
3-Nitroaniline	<0.50	<0.51	<0.51	<0.50	<0.50	<0.51	5
4-Nitroaniline	<4.3	<4.4	<4.4	<4.3	<4.3	<4.4	5
Naphthalene	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	10
Nitrobenzene	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.4
N-Nitroso-Di-n-propylamine	<0.81	<0.82	<0.82	<0.81	<0.81	<0.82	NL
N-nitrosodiphenylamine	<0.54	<0.55	<0.55	<0.54	<0.54	<0.55	50
Phenanthrene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	50
Pyrene[d]	<0.22	<0.23	<0.23	<0.22	<0.22	<0.23	50
1,2,4-Trichlorobenzene	<0.28	<0.29	<0.29	<0.28	<0.28	<0.29	5

µg/l = micrograms per liter
NL = Not Listed
ND = Not Detected
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
* Refers to the sum of all Phenols.
** = Duplicate sample named BCP-MW-09 on chain of custody

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	6/27/2013	6/27/2013	6/27/2013	6/27/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l
Aluminum	146 B	<40	483	<40	245	190 B	NL
Antimony	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	3
Arsenic	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	25
Barium	92.4	49.1 B	81.8	33.9 B	78.8	78.2	1,000
Beryllium	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	3
Cadmium	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	5
Calcium	144,000	144,000	134,000	216,000	277,000	281,000	NL
Chromium	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	50
Cobalt	0.90 B	1.2 B	0.90 B	2.2 B	1.9 B	1.9 B	NL
Copper	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	200
Iron	706	67.2 B	547	33.9 B	445	336	300, 500*
Lead	<1.7	<1.7	1.9 B	<1.7	<1.7	<1.7	25
Magnesium	32,600	32,800	31,300	56,300	62,100	62,400	35,000
Manganese	171	207	173	298	229	233	300, 500*
Mercury	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067	0.7
Nickel	2.1 B	1.0 B	4.9 B	5.2 B	3.5 B	3.3 B	100
Potassium	9,480	9,500	10,400	16,300	13,900	14,000	NL
Selenium	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	10
Silver	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	50
Sodium	252,000	262,000	199,000	283,000	573,000	584,000	20,000
Thallium	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	0.5
Vanadium	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	NL
Zinc	2.8 B	20.3	23.9	92.6	2.3 B	2.0 B	2,000

µg/l = micrograms per liter
NL = Not Listed
B = Indicates analyte found in associated method blank.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
* = Applies to the sum of Iron and Manganese.
** = Duplicate sample named BCP-MW-09 on chain of custody.
= Analyte detected above the NYSDEC Groundwater Criteria.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	6/27/2013	6/27/2013	6/27/2013	6/27/2013	6/28/2013	6/28/2013	
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Cyanide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.2

mg/l = milligrams per liter
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
** = Duplicate sample named BCP-MW-09 on chain of custody.

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	6/27/2013	6/27/2013	6/27/2013	6/27/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l
Aroclor 1016	<0.072	<0.072	<0.078	<0.069	<0.071	<0.070	-
Aroclor 1221	<0.076	<0.075	<0.082	<0.072	<0.074	<0.074	-
Aroclor 1232	<0.17	<0.17	<0.19	<0.17	<0.17	<0.17	-
Aroclor 1242	<0.11	<0.11	<0.12	<0.10	<0.10	<0.10	-
Aroclor 1248	<0.16	<0.16	<0.17	<0.15	<0.15	<0.15	-
Aroclor 1254	<0.077	<0.076	<0.083	<0.073	<0.075	<0.074	-
Aroclor 1260	<0.066	<0.065	<0.071	<0.062	<0.064	<0.064	-
Total Aroclor	ND	ND	ND	ND	ND	ND	0.09

µg/l = micrograms per liter
ND = Not detected
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
** = Duplicate sample named BCP-MW-09 on chain of custody.

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP-MW1	BCP-MW2	BCP-MW3	BCP-MW4	BCP-MW5	BCP-MW5 Duplicate**	NYSDEC Class GA Groundwater Criteria
Date Sampled	6/27/2013	6/27/2013	6/27/2013	6/27/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l
Aldrin	<0.022	<0.022	<0.024	<0.021	<0.021	<0.021	NL
Alpha-BHC	<0.018	<0.018	<0.020	<0.017	<0.018	<0.018	0.01
Beta-BHC	<0.023	<0.022	<0.024	<0.021	<0.022	<0.022	0.04
Delta-BHC	<0.023	<0.023	<0.025	<0.022	<0.022	<0.022	0.04
Gamma-BHC (Lindane)	<0.022	<0.022	<0.024	<0.021	<0.022	<0.022	0.05
Alpha-Chlordane	<0.033	<0.032	<0.035	<0.031	<0.032	<0.032	NL
Gamma-Chlordane	<0.031	<0.030	<0.033	<0.029	<0.030	<0.030	NL
Dieldrin	<0.020	<0.020	<0.022	<0.019	<0.020	<0.020	0.004
4,4'-DDD	<0.023	<0.023	<0.025	<0.022	<0.023	<0.022	0.3
4,4'-DDE	<0.021	<0.021	<0.023	<0.020	<0.021	<0.021	0.2
4,4'-DDT	<0.025	<0.025	<0.027	<0.024	<0.025	<0.024	0.2
Endrin	<0.019	<0.019	<0.020	<0.018	<0.018	<0.018	NL
Endosulfan sulfate	<0.016	<0.016	<0.018	<0.016	<0.016	<0.016	NL
Endrin aldehyde	<0.017	<0.017	<0.019	<0.017	<0.017	<0.017	5
Endrin ketone	<0.031	<0.031	<0.034	<0.030	<0.030	<0.030	5
Endosulfan-I	<0.020	<0.020	<0.021	<0.019	<0.019	<0.019	NL
Endosulfan-II	<0.021	<0.020	<0.022	<0.020	<0.020	<0.020	NL
Heptachlor	<0.017	<0.017	<0.018	<0.016	<0.017	<0.017	0.04
Heptachlor epoxide	<0.019	<0.019	<0.021	<0.018	<0.019	<0.018	0.03
Methoxychlor	<0.022	<0.022	<0.024	<0.021	<0.022	<0.022	35
Toxaphene	<0.18	<0.17	<0.19	<0.17	<0.17	<0.17	0.06

µg/l = micrograms per liter
NL = Not Listed
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
** = Duplicate sample named BCP-MW-09 on chain of custody.

Table 9

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Groundwater Samples
Within the Area of Known Petroleum Impact

A. VOCs by USEPA SW-846 Method 8260

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l
Acetone	<2.8	41	28.2	50
Benzene	4,840	279	457	1
Bromodichloromethane	<0.33	<0.33	<0.33	50
Bromoform	<0.42	<0.42	<0.42	50
Bromomethane	<1.5	<1.5	<1.5	5
2- Butanone	<1.6	<1.6	10	50
n-Butylbenzene	<0.54	7.5	127	5
sec- Butylbenzene	3.0 J	2.2 J	16.5	5
tert- Butylbenzene	261	<0.87	<0.87	5
Carbon Disulfide	19.4	<0.59	<0.59	60
Carbon Tetrachloride	<0.62	<0.62	<0.62	5
Chlorobenzene	<0.48	<0.48	<0.48	5
Chloroethane	<0.84	<0.84	<0.84	5
Chloroform	10.5	<0.50	<0.50	7
Chloromethane	<1.4	<1.4	<1.4	5
Dibromochloromethane	<0.33	<0.33	<0.33	NL
1,1- Dichloroethane	2.4	<0.37	<0.37	5
1,2- Dichloroethane	9.1	<0.35	<0.35	0.6
1,1- Dichloroethene	<0.67	<0.67	<0.67	5
Cis-1,2- Dichloroethene	<0.54	<0.54	<0.54	5
trans-1,2-Dichloroethene	<0.54	<0.54	<0.54	5
1,2- Dichloroethene (total)	<0.54	<0.54	<0.54	NL
1,2- Dichloropropane	<0.45	<0.45	<0.45	1
cis-1,3- Dichloropropene	<0.22	<0.22	<0.22	0.4[1]
trans-1,3-Dichloropropene	<0.29	<0.29	<0.29	0.4[1]
Ethylbenzene	404	116	592	5
2- Hexanone	<2.3	<2.3	<2.3	50
Isopropylbenzene	14.1	13.9	53	5
p- Isopropyltoluene	0.96 J	0.99 J	24	5
Methyl tert butyl ether	<0.43	<0.43	<0.43	10
4- Methyl-2-pentanone	18.7	<1.3	<1.3	NL
Methylene chloride	<0.41	<0.41	<0.41	5
Naphthalene	72	142	1,050	10
n-Propylbenzene	45.7	45.9	148	5
Styrene	<0.49	<0.49	<0.49	5
1,1,2,2- Tetrachloroethane	<0.42	<0.42	<0.42	5
Tetrachloroethene	<0.61	<0.61	<0.61	5
Toluene	2,950	112	102	5
1,1,1- Trichloroethane	<0.94	<0.94	<0.94	5
1,1,2- Trichloroethane	<0.49	<0.49	<0.49	1
Trichloroethene	<0.45	<0.45	<0.45	5
1,2,4- Trimethylbenzene	270	130	4,810	5
1,3,5- Trimethylbenzene	41.4	44.7	1,280	5
Vinyl chloride	<0.61	<0.61	<0.61	2
m,p- Xylene	1,280	396	4,130	5
o-Xylene	592	55.8	1,360	5
Xylene (total)	1,870	452	5,490	5

µg/l = micrograms per liter
NL = Not Listed
J = Indicates an estimated value.
[1] = Applies to the sum of cis- and trans- 1,3-dichloropropene.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
= Analyte detected above the NYSDEC Groundwater Criteria.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l
2-Chlorophenol	<0.39	<0.39	<0.38	1*
4-Chloro-3-methyl phenol	<0.50	<0.50	<0.49	1*
2,4-Dichlorophenol	<0.33	<0.33	<0.33	1*
2,4-Dimethylphenol	13.3	<1.2	<1.1	1*
2,4-Dinitrophenol	<2.5	<2.5	<2.5	1*
4,6-Dinitro-o-cresol	<1.2	<1.2	<1.2	1*
2-Methylphenol	8.7 J	<1.3	<1.3	1*
3&4-Methylphenol	17	<2.1	<2.0	1*
2-Nitrophenol	<0.51	<0.51	<0.50	1*
4-Nitrophenol	<0.59	<0.59	<0.58	1*
Pentachlorophenol	<1.3	<1.3	<1.3	1*
Phenol	10	10.2	1.5 J	1*
2,4,5-Trichlorophenol	<0.58	<0.58	<0.57	1*
2,4,6-Trichlorophenol	<0.32	<0.32	<0.32	1*
Acenaphthene	<0.23	<0.23	0.53 J	20
Acenaphthylene	<0.56	<0.56	<0.56	NL
Anthracene	<0.21	<0.21	<0.21	50
Benzo(a)anthracene	0.44 J	<0.21	<0.21	0.002
Benzo(a)pyrene	0.46 J	<0.21	<0.21	ND
Benzo(b)fluoranthene	0.74 J	0.33 J	<0.23	0.002
Benzo(g,h,i)perylene	0.78 J	<0.26	<0.25	NL
Benzo(k)fluoranthene	0.54 J	<0.27	<0.27	0.002
4-Bromophenyl phenyl ether	<0.21	<0.21	<0.20	NL
Butyl benzyl phthalate	<0.86	<0.86	<0.85	50
2-Chloronaphthalene	<0.93	<0.93	<0.92	10
4-Chloroaniline	<0.25	<0.25	<0.25	5
Carbazole	0.29 J	0.49 J	1.7 J	NL
Chrysene	0.68 J	0.23 J	<0.20	0.002
Bis (2-chloroethoxy) methane	<0.21	<0.21	<0.21	5
Bis (2-chloroethyl) ether	<0.23	<0.23	<0.23	1
Bis (2-chloroisopropyl) ether	<0.14	<0.14	<0.13	5
4-Chlorophenyl phenyl ether	<0.20	<0.20	<0.20	NL
1,2-Dichlorobenzene	<0.26	<0.26	<0.26	3
1,3-Dichlorobenzene	<0.26	<0.26	<0.26	3
1,4-Dichlorobenzene	<0.25	<0.25	<0.25	3
2,4-Dinitrotoluene	<0.68	<0.68	<0.68	5
2,6-Dinitrotoluene	<0.65	<0.65	<0.64	5
3,3'-Dichlorobenzidine	<0.51	<0.51	<0.50	5
Dibenzo(a,h)anthracene	<0.21	<0.21	<0.21	NL
Dibenzofuran	<0.16	<0.16	<0.16	NL
Di-n-butyl phthalate	<0.39	<0.39	0.39 J	50
Di-n-octyl phthalate	<0.44	<0.44	<0.43	50
Diethyl phthalate	<0.51	<0.51	<0.50	50
Dimethyl phthalate	<0.51	<0.51	<0.50	50
Bis (2-ethylhexyl) phthalate	6.4	<0.49	0.59 J	5
Fluoranthene	1.1 J	0.45 J	0.44 J	50
Fluorene	<0.24	<0.24	0.49 J	50
Hexachlorobenzene	<0.30	<0.30	<0.30	0.04
Hexachlorobutadiene	<0.29	<0.29	<0.29	0.5
Hexachlorocyclopentadiene	<2.5	<2.5	<2.5	5
Hexachloroethane	<0.44	<0.44	<0.44	5
Indeno (1,2,3-cd) pyrene	0.59 J	<0.27	<0.27	0.002
Isophorone	<0.20	<0.20	<0.20	50
2-Methylnaphthalene	9.5	4.6	178	NL
2-Nitroaniline	<0.28	<0.28	<0.28	5
3-Nitroaniline	<0.51	<0.51	<0.50	5
4-Nitroaniline	<4.4	<4.4	<4.3	5
Naphthalene	77.2	15.7	396	10
Nitrobenzene	<0.25	<0.25	<0.25	0.4
N-Nitroso-Di-n-propylamine	<0.82	<0.82	<0.81	NL
N-nitrosodiphenylamine	<0.55	<0.55	<0.54	50
Phenanthrene	<0.21	<0.21	0.79 J	50
Pyrene[d]	0.81 J	0.29 J	0.31 J	50
1,2,4-Trichlorobenzene	<0.28	<0.28	<0.28	5

µg/l = micrograms per liter
NL = Not Listed
J = Indicates an estimated value.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
* Refers to the sum of all Phenols.
= Analyte detected above the NYSDEC Groundwater Criteria.

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l
Aluminum	5,360	<40	<40	NL
Antimony	3.9 B	<1.9	<1.9	3
Arsenic	12.2	<2.9	3.3 B	25
Barium	392	20.3 B	84.6	1,000
Beryllium	0.30 B	<0.25	<0.25	3
Cadmium	0.90 B	<0.50	<0.50	5
Calcium	139,000	29,900	84,700	NL
Chromium	17.4	<1.4	<1.4	50
Cobalt	5.4 B	<0.40	<0.40	NL
Copper	38.9	<7.0	<7.0	200
Iron	42,400	471	6,150	300, 500*
Lead	65.3	<1.7	9.2	25
Magnesium	27,800	3,000 B	11,300	35,000
Manganese	401	27.5	183	300, 500*
Mercury	0.18 B	<0.067	<0.067	0.7
Nickel	14.9 B	<0.57	1.0 B	100
Potassium	6,350	1,340 B	9,120	NL
Selenium	<4.8	<4.8	<4.8	10
Silver	<1.0	<1.0	<1.0	50
Sodium	111,000	8,470	136,000	20,000
Thallium	<1.9	<1.9	<1.9	0.5
Vanadium	16.1	<2.8	5.6 B	NL
Zinc	289	5.9 B	6.9 B	2,000

µg/l = micrograms per liter
NL = Not Listed
B = Indicates analyte found in associated method blank.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
* = Applies to the sum of Iron and Manganese.
= Analyte detected above the NYSDEC Groundwater Criteria.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	mg/l	mg/l	mg/l	mg/l
Cyanide	<0.010	<0.010	<0.010	0.2

mg/l = milligrams per liter
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l
Aroclor 1016	<0.066	<0.069	<0.069	-
Aroclor 1221	<0.069	<0.072	<0.072	-
Aroclor 1232	<0.16	<0.17	<0.17	-
Aroclor 1242	<0.097	<0.10	<0.10	-
Aroclor 1248	<0.14	<0.15	<0.15	-
Aroclor 1254	<0.069	<0.073	<0.073	-
Aroclor 1260	<0.059	<0.062	<0.062	-
Total Aroclor	ND	ND	ND	0.09

µg/l = micrograms per liter
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
ND = Not detected

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	TPMW5	TPMW6	TPMW16	NYSDEC Class GA Groundwater Criteria
Date Sampled	7/1/2013	6/28/2013	6/28/2013	
Units	µg/l	µg/l	µg/l	µg/l
Aldrin	<0.020	<0.021	<0.021	NL
Alpha-BHC	<0.016	<0.017	<0.017	0.01
Beta-BHC	<0.020	<0.021	<0.021	0.04
Delta-BHC	<0.021	<0.022	<0.022	0.04
Gamma-BHC (Lindane)	<0.020	<0.021	<0.021	0.05
Alpha-Chlordane	<0.030	<0.031	<0.031	NL
Gamma-Chlordane	<0.028	<0.029	<0.029	NL
Dieldrin	<0.018	<0.019	<0.019	0.004
4,4'-DDD	<0.021	<0.022	<0.022	0.3
4,4'-DDE	<0.019	<0.020	<0.020	0.2
4,4'-DDT	<0.023	<0.024	<0.024	0.2
Endrin	<0.017	<0.018	<0.018	NL
Endosulfan sulfate	<0.015	<0.016	<0.016	NL
Endrin aldehyde	<0.016	<0.017	<0.017	5
Endrin ketone	<0.028	<0.030	<0.030	5
Endosulfan-I	<0.018	<0.019	<0.019	NL
Endosulfan-II	<0.019	<0.020	<0.020	NL
Heptachlor	<0.015	<0.016	<0.016	0.04
Heptachlor epoxide	<0.017	<0.018	<0.018	0.03
Methoxychlor	<0.020	<0.021	<0.021	35
Toxaphene	<0.16	<0.17	<0.17	0.06

µg/l = micrograms per liter
NL = Not Listed
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)

Table 10

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Soil Vapor Samples

VOCs by USEPA SW-846 Method 8260

Sample ID	BCP SV1	BCP SV2	BCP SV3	BCP SV4	BCP SV4 Duplicate**	BCP SV5
Date Sampled	**6/26/2013**	**6/26/2013**	**6/26/2013**	**6/26/2013**	**6/26/2013**	**6/26/2013**
Units	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**	**µg/m^3**
Acetone	580	1870	587	615	582	90
1,3-Butadiene	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29
Benzene	34.5	75.4	16	18	17	0.77 J
Bromodichloromethane	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74
Bromoform	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
Bromomethane	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
Bromoethene	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
Benzyl Chloride	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon disulfide	26	111	<0.18	7.2	<0.18	<0.18
Chlorobenzene	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
Chloroethane	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	<0.49	76.7	4	5.4	<0.49	<0.49
Chloromethane	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
3-Chloropropene	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-Chlorotoluene	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Carbon tetrachloride	2	<0.58	<0.58	<0.58	<0.58	<0.58
Cyclohexane	38.6	118	12	8.3	<0.28	<0.28
1,1-Dichloroethane	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32
1,1-Dichloroethylene	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
1,2-Dibromoethane	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
1,2-Dichloroethane	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
1,2-Dichloropropane	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
1,4-Dioxane	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58
Dichlorodifluoromethane	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dibromochloromethane	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65
trans-1,2-Dichloroethylene	<0.28	<0.28	<0.28	<0.28	<0.28	<0.28
cis-1,2-Dichloroethylene	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31
cis-1,3-Dichloropropene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
m-Dichlorobenzene	4.1	<1.6	1.8 J	4.4	9.6	<1.6
o-Dichlorobenzene	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90
p-Dichlorobenzene	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
trans-1,3-Dichloropropene	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82
Ethanol	43.6	29	20.9	29.2	<0.24	27.7
Ethylbenzene	96.4	27	117	61.2	30	<0.39
Ethyl Acetate	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
4-Ethyltoluene	18	<0.30	45	16	<0.30	<0.30
Freon 113	2.4 J	<0.70	<0.70	<0.70	<0.70	<0.70
Freon 114	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
Heptane	134	193	45.9	44.3	39	<0.41
Hexachlorobutadiene	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6
Hexane	112	433	26	29	26	<0.32
2-Hexanone	8.6	<0.49	11	13	<0.49	<0.49
Isopropyl Alcohol	<0.25	<0.25	3.9	<0.25	<0.25	1.4
Methylene chloride	1.8	<0.31	<0.31	<0.31	<0.31	<0.31
Methyl ethyl ketone	36.3	36	35.1	35.1	29.5	3.5
Methyl Isobutyl Ketone	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
Methyl Tert Butyl Ether	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32
Propylene	<0.082	<0.082	<0.082	<0.082	<0.082	3.4
Styrene	2.3	<0.32	3.1	<0.32	<0.32	<0.32
1,1,1-Trichloroethane	1.3	<0.44	<0.44	<0.44	<0.44	<0.44
1,1,2,2-Tetrachloroethane	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52
1,1,2-Trichloroethane	<0.65	<0.65	<0.65	<0.65	<0.65	<0.65
1,2,4-Trichlorobenzene	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7
1,2,4-Trimethylbenzene	<0.33	<0.33	102	<0.33	<0.33	<0.33
1,3,5-Trimethylbenzene	22	<0.33	46	19	5.4	<0.33
2,2,4-Trimethylpentane	<0.39	218	<0.39	7.5	<0.39	<0.39
Tertiary Butyl Alcohol	9.7	<0.26	6.7	5.8	<0.26	<0.26
Tetrachloroethylene	5.6	2.8	6.4	<0.66	<0.66	<0.66
Tetrahydrofuran	7.4	11	5.9	6.2	<0.41	<0.41
Toluene	352	354	306	234	185	1.4 J
Trichloroethylene	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64
Trichlorofluoromethane	2.4 J	<0.49	<0.49	<0.49	<0.49	<0.49
Vinyl chloride	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Vinyl Acetate	86.5	<0.39	<0.39	<0.39	<0.39	<0.39
m,p-Xylene	310	58.6	460	308	134	<0.87
o-Xylene	140	13	158	95.6	38	<0.48
Xylenes (total)	450	72.1	617	404	172	<0.48

µg/m^3 = micrograms per cubic meter
J = Indicates an estimated value.
** = Duplicate sample named BCP-SV-6 on chain of custody

Table 11

250 Delaware Avenue
Buffalo, New York

Remedial Investigation Analytical Results for Equipment Blanks and Trip Blanks

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP-EB1	EB-2	EB-3	Trip Blank	Trip Blank
Date Sampled	6/5/2013	6/25/2013	7/1/2013	6/28/2013	6/28/2013
Units	µg/l	µg/l	µg/l	µg/l	µg/l
Acetone	<2.8	<2.8	<2.8	<2.8	<2.8
Benzene	<0.45	<0.45	<0.45	<0.45	<0.45
Bromodichloromethane	<0.33	<0.33	<0.33	<0.33	<0.33
Bromoform	<0.42	<0.42	<0.42	<0.42	<0.42
Bromomethane	<1.5	<1.5	<1.5	<1.5	<1.5
2- Butanone	<1.6	<1.6	<1.6	<1.6	<1.6
n-Butylbenzene	<0.54	<0.54	<0.54	<0.54	<0.54
sec- Butylbenzene	<0.58	<0.58	<0.58	<0.58	<0.58
tert- Butylbenzene	<0.87	<0.87	<0.87	<0.87	<0.87
Carbon Disulfide	<0.59	<0.59	<0.59	<0.59	<0.59
Carbon Tetrachloride	<0.62	<0.62	<0.62	<0.62	<0.62
Chlorobenzene	<0.48	<0.48	<0.48	<0.48	<0.48
Chloroethane	<0.84	<0.84	<0.84	<0.84	<0.84
Chloroform	<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	<1.4	<1.4	<1.4	<1.4	<1.4
Dibromochloromethane	<0.33	<0.33	<0.33	<0.33	<0.33
1,1- Dichloroethane	<0.37	<0.37	<0.37	<0.37	<0.37
1,2- Dichloroethane	<0.35	<0.35	<0.35	<0.35	<0.35
1,1- Dichloroethene	<0.67	<0.67	<0.67	<0.67	<0.67
Cis-1,2- Dichloroethene	<0.54	<0.54	<0.54	<0.54	<0.54
trans-1,2-Dichloroethene	<0.54	<0.54	<0.54	<0.54	<0.54
1,2- Dichloroethene (total)	<0.54	<0.54	<0.54	<0.54	<0.54
1,2- Dichloropropane	<0.45	<0.45	<0.45	<0.45	<0.45
cis-1,3- Dichloropropene	<0.22	<0.22	<0.22	<0.22	<0.22
trans-1,3-Dichloropropene	<0.29	<0.29	<0.29	<0.29	<0.29
Ethylbenzene	<0.38	<0.38	<0.38	<0.38	<0.38
2- Hexanone	<2.3	<2.3	<2.3	<2.3	<2.3
Isopropylbenzene	<0.64	<0.64	<0.64	<0.64	<0.64
p- Isopropyltoluene	<0.55	<0.55	<0.55	<0.55	<0.55
Methyl tert butyl ether	<0.43	<0.43	<0.43	<0.43	<0.43
4- Methyl-2-pentanone	<1.3	<1.3	<1.3	<1.3	<1.3
Methylene chloride	<0.41	0.52 J	<0.41	<0.41	<0.41
Naphthalene	<0.79	<0.79	<0.79	<0.79	<0.79
n-Propylbenzene	<0.59	<0.59	<0.59	<0.59	<0.59
Styrene	<0.49	<0.49	<0.49	<0.49	<0.49
1,1,2,2- Tetrachloroethane	<0.42	<0.42	<0.42	<0.42	<0.42
Tetrachloroethene	<0.61	<0.61	<0.61	<0.61	<0.61
Toluene	<0.46	<0.46	<0.46	<0.46	<0.46
1,1,1- Trichloroethane	<0.94	<0.94	<0.94	<0.94	<0.94
1,1,2- Trichloroethane	<0.49	<0.49	<0.49	<0.49	<0.49
Trichloroethene	<0.45	<0.45	<0.45	<0.45	<0.45
1,2,4- Trimethylbenzene	<0.47	<0.47	<0.47	<0.47	<0.47
1,3,5- Trimethylbenzene	<1.1	<1.1	<1.1	<1.1	<1.1
Vinyl chloride	<0.61	<0.61	<0.61	<0.61	<0.61
m,p- Xylene	<0.70	<0.70	<0.70	<0.70	<0.70
o-Xylene	<0.41	<0.41	<0.41	<0.41	<0.41
Xylene (total)	<0.41	<0.41	<0.41	<0.41	<0.41

µg/l = micrograms per liter
J = Indicates an estimated value

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP-EB1	EB-2	EB-3
Date Sampled	6/5/2013	6/25/2013	7/1/2013
Units	µg/l	µg/l	µg/l
2-Chlorophenol	<0.41	<0.40	<0.36
4-Chloro-3-methyl phenol	<0.52	<0.52	<0.47
2,4-Dichlorophenol	<0.35	<0.35	<0.31
2,4-Dimethylphenol	<1.2	<1.2	<1.1
2,4-Dinitrophenol	<2.7	<2.6	<2.4
4,6-Dinitro-o-cresol	<1.3	<1.3	<1.1
2-Methylphenol	<1.4	<1.4	<1.2
3&4-Methylphenol	<2.2	<2.1	<1.9
2-Nitrophenol	<0.53	<0.53	<0.48
4-Nitrophenol	<0.62	<0.61	<0.56
Pentachlorophenol	<1.3	<1.3	<1.2
Phenol	<0.54	<0.54	<0.49
2,4,5-Trichlorophenol	<0.61	<0.60	<0.55
2,4,6-Trichlorophenol	<0.34	<0.33	<0.30
Acenaphthene	<0.24	<0.24	<0.22
Acenaphthylene	<0.59	<0.59	<0.53
Anthracene	<0.22	<0.22	<0.20
Benzo(a)anthracene	<0.22	<0.22	<0.20
Benzo(a)pyrene	<0.22	<0.22	<0.20
Benzo(b)fluoranthene	<0.24	<0.24	<0.22
Benzo(g,h,i)perylene	<0.27	<0.27	<0.24
Benzo(k)fluoranthene	<0.29	<0.28	<0.26
4-Bromophenyl phenyl ether	<0.22	<0.21	<0.19
Butyl benzyl phthalate	<0.91	<0.90	<0.81
2-Chloronaphthalene	<0.98	<0.97	<0.88
4-Chloroaniline	<0.27	<0.26	<0.24
Carbazole	<0.23	<0.22	<0.20
Chrysene	<0.21	<0.21	<0.19
Bis (2-chloroethoxy) methane	<0.22	<0.22	<0.20
Bis (2-chloroethyl) ether	<0.25	<0.24	<0.22
Bis (2-chloroisopropyl) ether	<0.14	<0.14	<0.13
4-Chlorophenyl phenyl ether	<0.21	<0.21	<0.19
1,2-Dichlorobenzene	<0.28	<0.27	<0.25
1,3-Dichlorobenzene	<0.27	<0.27	<0.24
1,4-Dichlorobenzene	<0.26	<0.26	<0.23
2,4-Dinitrotoluene	<0.72	<0.71	<0.64
2,6-Dinitrotoluene	<0.68	<0.68	<0.61
3,3'-Dichlorobenzidine	<0.53	<0.53	<0.48
Dibenzo(a,h)anthracene	<0.23	<0.22	<0.20
Dibenzofuran	<0.17	<0.16	<0.15
Di-n-butyl phthalate	<0.41	<0.41	<0.37
Di-n-octyl phthalate	<0.46	<0.46	<0.41
Diethyl phthalate	<0.53	<0.53	<0.48
Dimethyl phthalate	<0.53	<0.53	<0.48
Bis (2-ethylhexyl) phthalate	<0.52	<0.51	<0.47
Fluoranthene	<0.24	<0.23	<0.21
Fluorene	<0.25	<0.25	<0.23
Hexachlorobenzene	<0.32	<0.31	<0.28
Hexachlorobutadiene	<0.31	<0.31	<0.28
Hexachlorocyclopentadiene	<2.7	<2.6	<2.4
Hexachloroethane	<0.47	<0.46	<0.42
Indeno (1,2,3-cd) pyrene	<0.29	<0.29	<0.26
Isophorone	<0.21	<0.21	<0.19
2-Methylnaphthalene	<0.42	<0.41	<0.37
2-Nitroaniline	<0.30	<0.29	<0.26
3-Nitroaniline	<0.53	<0.53	<0.48
4-Nitroaniline	<4.6	<4.6	<4.1
Naphthalene	<0.18	<0.18	<0.16
Nitrobenzene	<0.26	<0.26	<0.24
N-Nitroso-Di-n-propylamine	<0.86	<0.85	<0.77
N-nitrosodiphenylamine	<0.58	<0.57	<0.52
Phenanthrene	<0.22	<0.22	<0.20
Pyrene[d]	<0.24	<0.23	<0.21
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.27

µg/l = micrograms per liter

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP-EB1	EB-2	EB-3
Date Sampled	6/5/2013	6/25/2013	7/1/2013
Units	µg/l	µg/l	µg/l
Aluminum	<40	<40	<40
Antimony	<1.9	<1.9	<1.9
Arsenic	<2.9	<2.9	<2.9
Barium	<0.81	<0.81	<0.81
Beryllium	<0.25	<0.25	<0.25
Cadmium	<0.50	<0.50	<0.50
Calcium	80.8 B	47.9 B	146 B
Chromium	<1.4	<1.4	1.8 B
Cobalt	<0.40	<0.40	<0.40
Copper	<7.0	<7.0	<7.0
Iron	<20	<20	74.7 B
Lead	<1.7	<1.7	<1.7
Magnesium	<59	<59	<59
Manganese	<0.81	<0.81	1.2 B
Mercury	<0.067	<0.067	<0.067
Nickel	<0.57	<0.57	<0.57
Potassium	<160	<160	<160
Selenium	<4.8	<4.8	<4.8
Silver	<1.0	<1.0	<1.0
Sodium	398 B	206 B	221 B
Thallium	<1.9	<1.9	<1.9
Vanadium	<2.8	<2.8	<2.8
Zinc	<0.50	0.50 B	1.6 B

µg/l = micrograms per liter
B = Indicates analyte found in associated method blank.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP-EB1	EB-2	EB-3
Date Sampled	6/5/2013	6/25/2013	7/1/2013
Units	mg/l	mg/l	mg/l
Cyanide	<0.010	<0.010	<0.010

mg/l = milligrams per liter

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP-EB1	EB-2	EB-3
Date Sampled	6/5/2013	6/25/2013	7/1/2013
Units	µg/l	µg/l	µg/l
Aroclor 1016	<0.092	<0.072	<0.079
Aroclor 1221	<0.096	<0.075	<0.083
Aroclor 1232	<0.22	<0.17	<0.19
Aroclor 1242	<0.14	<0.11	<0.12
Aroclor 1248	<0.20	<0.16	<0.17
Aroclor 1254	<0.097	<0.076	<0.084
Aroclor 1260	<0.083	<0.065	<0.072
Total Aroclor	ND	ND	ND

µg/l = micrograms per liter
ND = Not Detected

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP-EB1	EB-2	EB-3
Date Sampled	6/5/2013	6/25/2013	7/1/2013
Units	µg/l	µg/l	µg/l
Aldrin	<0.028	<0.021	<0.024
Alpha-BHC	<0.023	<0.018	<0.020
Beta-BHC	<0.029	<0.022	<0.025
Delta-BHC	<0.029	<0.022	<0.025
Gamma-BHC (Lindane)	<0.028	<0.022	<0.024
Alpha-Chlordane	<0.041	<0.032	<0.036
Gamma-Chlordane	<0.039	<0.030	<0.033
Dieldrin	<0.026	<0.020	<0.022
4,4'-DDD	<0.029	<0.023	<0.025
4,4'-DDE	<0.027	<0.021	<0.023
4,4'-DDT	<0.032	<0.025	<0.027
Endrin	<0.024	<0.018	<0.020
Endosulfan sulfate	<0.021	<0.016	<0.018
Endrin aldehyde	<0.022	<0.017	<0.019
Endrin ketone	<0.039	<0.030	<0.034
Endosulfan-I	<0.025	<0.019	<0.022
Endosulfan-II	<0.026	<0.020	<0.023
Heptachlor	<0.022	<0.017	<0.019
Heptachlor epoxide	<0.024	<0.019	<0.021
Methoxychlor	<0.028	<0.022	<0.024
Toxaphene	<0.22	<0.17	<0.19

µg/l = micrograms per liter

Table 12

250 Delaware Avenue
Buffalo, New York

Comparison of Maximum Known Contaminant Concentrations in Site Soil and Historic Fill Materials Prior to the Interim Remedial Measure to the NYSDEC Final Human Health-based Soil Cleanup Objectives for Unrestricted Site Use

Analyte	Maximum Concentration	Sample ID	Final Human Health-based SCOs (Unrestricted Site Use)
SOIL			
VOCs by USEPA 8260 (µg/kg)			
Benzene	25,400[1]	BH21 (8-10 ft. bgs)	2,000
n-Butylbenzene	293,000[1]	BH21 (8-10 ft. bgs)	330,000
Ethylbenzene	184,000[1]	BH21 (8-10 ft. bgs)	23,000
Methyl tert butyl ether	1,140[2]	BH25 (12-16 ft. bgs)	38,000
Naphthalene	382,000[1]	BH21 (8-10 ft. bgs)	70,000
n-Propylbenzene	225,000[1]	BH21 (8-10 ft. bgs)	330,000
Toluene	368,000[1]	BH21 (8-10 ft. bgs)	570,000
1,2,4- Trimethylbenzene	920,000[1]	BH21 (8-10 ft. bgs)	41,000
1,3,5- Trimethylbenzene	225,000[1]	BH21 (8-10 ft. bgs)	41,000
m,p- Xylene	714,000[1]	BH21 (8-10 ft. bgs)	400,000*
o-Xylene	511,000[1]	BH21 (8-10 ft. bgs)	400,000*
SVOCs by USEPA 8270 (µg/kg)			
Naphthalene	62,700[1]	BH19	70,000
HISTORIC FILL MATERIALS			
VOCs by USEPA 8260 (µg/kg)			
Benzo(a)anthracene	5,440[3]	BCP-Fill #2	52
Benzo(a)pyrene	5,380[3]	BCP-Fill #2	1.1
Benzo(b)fluoranthene	5,160[3]	BCP-Fill #2	52
Benzo(k)fluoranthene	4,200[3]	BCP-Fill #2	520
Chrysene	6,100[3]	BCP-Fill #2	520
Dibenzo(a,h)anthracene	1,290[3]	BCP-Fill #2	5.2
Indeno(1,2,3-cd)pyrene	3,130[3]	BCP-Fill #2	52
Metals by USEPA 6010/7471 (mg/kg)			
Cadmium	3.5[3]	BCP-Fill #4	0.43
Chromium (total)	208[3]	BCP-Fill #2	18/11**
Copper	60.7[3]	BCP-Fill #4	270
Lead	3,470[3]	BCP-Fill #4	200
Manganese	6,240[3]	BCP-Fill #2	180
Mercury	0.34[3]	BCP-Fill #4	0.81
Zinc	386[3]	BCP-Fill #4	1,100
Pesticides by USEPA 8081 (µg/kg)			
4,4'-DDT	11.2[3]	BCP-Fill #2	170

µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
* Applies to the total xylenes
** Chromium III / Chromium VI
NYSDEC Final Human Health-based Soil Cleanup Objectives for unrestricted site use
New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document
New York State Department of Environmental Conservation and New York State Department of Health
September 2006
[1] = LCS April 2002 Study (Ref. 19)
[2] = LCS June 2002 Study (Ref. 21)
[3] = LCS 2013 Remedial Investigation
= Analyte detected above the NYSDEC Final Human Health-based Soil Cleanup Objective

Table 13

NYSDEC Part 375 Soil Cleanup Objectives for Unrestricted Site Use

A. VOCs by USEPA SW-846 Method 8260

Analyte	**Part 375 (Unrestricted) Soil Cleanup Objectives**
Units	**µg/kg**
Acetone	50
Benzene	60
Bromodichloromethane	NL
Bromoform	NL
Bromomethane	NL
2- Butanone	120
n-Butylbenzene	12,000[b]
sec- Butylbenzene	11,000[b]
tert- Butylbenzene	5,900[b]
Carbon Disulfide	NL
Carbon Tetrachloride	760[b]
Chlorobenzene	1,100
Chloroethane	NL
Chloroform	370
Chloromethane	NL
Dibromochloromethane	NL
1,1- Dichloroethane	270[b]
1,2- Dichloroethane	20[a]
1,1- Dichloroethene	330[b]
Cis-1,2- Dichloroethene	250[b]
trans-1,2-Dichloroethene	190[b]
1,2- Dichloroethene (total)	NL
1,2- Dichloropropane	NL
cis-1,3- Dichloropropene	NL
trans-1,3-Dichloropropene	NL
Ethylbenzene	1,000[b]
2- Hexanone	NL
Isopropylbenzene	NL
p- Isopropyltoluene	NL
Methyl tert butyl ether	930[b]
4- Methyl-2-pentanone	NL
Methylene chloride	50
Naphthalene	12,000
n-Propylbenzene	3,900[b]
Styrene	NL
1,1,2,2- Tetrachloroethane	NL
Tetrachloroethene	1,300
Toluene	700
1,1,1- Trichloroethane	680[b]
1,1,2- Trichloroethane	NL
Trichloroethene	470
1,2,4- Trimethylbenzene	3,600[b]
1,3,5- Trimethylbenzene	8,400[b]
Vinyl chloride	20[b]
m,p- Xylene	260*
o-Xylene	260*
Xylene (total)	260*

µg/kg = micrograms per kilogram
NL = Not Listed
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Analyte	Part 375 (Unrestricted) Soil Cleanup Objectives
Units	**µg/kg**
2-Chlorophenol	NL
4-Chloro-3-methyl phenol	NL
2,4-Dichlorophenol	NL
2,4-Dimethylphenol	NL
2,4-Dinitrophenol	NL
4,6-Dinitro-o-cresol	NL
2-Methylphenol	330[b]
3&4-Methylphenol	(330[b]/330[b])[1]
2-Nitrophenol	NL
4-Nitrophenol	NL
Pentachlorophenol	800[b]
Phenol	330[b]
2,4,5-Trichlorophenol	NL
2,4,6-Trichlorophenol	NL
Acenaphthene	20,000
Acenaphthylene	100,000[a,d]
Anthracene	100,000[a,d]
Benzo(a)anthracene	1,000[c,d]
Benzo(a)pyrene	1,000[c]
Benzo(b)fluoranthene	1,000[c,d]
Benzo(g,h,i)perylene	100,000[d]
Benzo(k)fluoranthene	800[c,d]
4-Bromophenyl phenyl ether	NL
Butyl benzyl phthalate	NL
2-Chloronaphthalene	NL
4-Chloroaniline	NL
Carbazole	NL
Chrysene	1,000[c,d]
Bis (2-chloroethoxy) methane	NL
Bis (2-chloroethyl) ether	NL
Bis (2-chloroisopropyl) ether	NL
4-Chlorophenyl phenyl ether	NL
1,2-Dichlorobenzene	1,100
1,3-Dichlorobenzene	2,400
1,4-Dichlorobenzene	1,800
2,4-Dinitrotoluene	NL
2,6-Dinitrotoluene	NL
3,3'-Dichlorobenzidine	NL
Dibenzo(a,h)anthracene	330[b,d]
Dibenzofuran	7,000[d]
Di-n-butyl phthalate	NL
Di-n-octyl phthalate	NL
Diethyl phthalate	NL
Dimethyl phthalate	NL
Bis (2-ethylhexyl) phthalate	NL
Fluoranthene	100,000[a,d]
Fluorene	30,000
Hexachlorobenzene	330[b]
Hexachlorobutadiene	NL
Hexachlorocyclopentadiene	NL
Hexachloroethane	NL
Indeno (1,2,3-cd) pyrene	500[c,d]
Isophorone	NL
2-Methylnaphthalene	NL
2-Nitroaniline	NL
3-Nitroaniline	NL
4-Nitroaniline	NL
Naphthalene	12,000[d]
Nitrobenzene	NL
N-Nitroso-Di-n-propylamine	NL
N-Nitrosodiphenylamine	NL
Phenanthrene	100,000[d]
Pyrene	100,000[d]
1,2,4-Trichlorobenzene	NL

µg/kg = micrograms per kilogram

NL = Not Listed

[1] = 3-Methylphenol / 4-Methylphenol

[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.

[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Analyte	Eastern USA Background Concentrations	Part 375 (Unrestricted) Soil Cleanup Objectives
Units	**mg/kg**	**mg/kg**
Aluminum	33,000	NL
Antimony	NA	NL
Arsenic	3-12*	13[a]
Barium	15-600	350[a]
Beryllium	0-1.75	7.2
Cadmium	0.1-1	2.5[a]
Calcium	130-35,000*	NL
Chromium	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	2.5-60*	NL
Copper	1-50	50
Iron	2,000-550,000	NL
Lead	***	63[a]
Magnesium	100-5,000	NL
Manganese	50-5,000	1,600[a]
Mercury	0.001-0.2	0.18[a]
Nickel	0.5-25	30
Potassium	8,500-43,000*	NL
Selenium	0.1-3.9	3.9[a]
Silver	NA	2.0
Sodium	6,000-8,000	NL
Thallium	NA	NL
Vanadium	1-300	NL
Zinc	9-50	109[a]

mg/kg = milligrams per kilogram
NL = Not Listed
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Analyte	Part 375 (Unrestricted) Soil Cleanup Objectives
Units	**mg/kg**
Cyanide	27[a,b]

mg/kg = milligrams per kilogram
ft. bgs = feet below ground surface
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with “NS.” Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Analyte	Part 375 (Unrestricted) Soil Cleanup Objectives
Units	**µg/kg**
Aroclor 1016	-
Aroclor 1221	-
Aroclor 1232	-
Aroclor 1242	-
Aroclor 1248	-
Aroclor 1254	-
Aroclor 1260	-
Total Aroclor	100

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Analyte	Part 375 (Unrestricted) Soil Cleanup Objectives
Units	**µg/kg**
Aldrin	5[a]
Alpha-BHC	20
Beta-BHC	36
Delta-BHC	40
Gamma-BHC (Lindane)	100
Alpha-Chlordane	94
Gamma-Chlordane	NL
Dieldrin	5[a]
4,4'-DDD	3.3[b]
4,4'-DDE	3.3[b]
4,4'-DDT	3.3[b]
Endrin	14
Endosulfan sulfate	2,400*,[c]
Endrin aldehyde	NL
Endosulfan-I	2,400*,[c]
Endosulfan-II	2,400*,[c]
Heptachlor	42
Heptachlor epoxide	NL
Methoxychlor	NL
Endrin ketone	NL
Toxaphene	NL

µg/kg = micrograms per kilogram

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 14

250 Delaware Avenue
Buffalo, New York

Offsite Waste Disposal Volumes and Facilities

Material	Quantity (tons)	Disposal Location	Disposal Dates[1]
Petroleum-Impacted Soils and Overlying Fill Materials	19,054.16	Tonawanda Terminals Corporation, Tonawanda, New York (NYSDEC ID 9-1464-00132)	August 19, 2013 – November 22, 2013
	4,987.82	Waste Management, Chaffee, New York (NYSDEC ID 9-1462-00001)	August 19, 2013 – December 4, 2013
Historic Fill Materials	10,296.47	Chautauqua County Landfill, Jamestown, New York (NYSDEC ID 9-0636-00006)	February 20, 2014 – June 5, 2014
Petroleum-Impacted Soils, Overlying Fill Materials, and Historic Fill Materials (mix)	829.64	Waste Management, Chaffee, New York (NYSDEC ID 9-1462-00001)	June 5, 2014
4,000-gallon gasoline UST	Not Applicable	Twin Village Recycling, Depew, New York	September 12, 2013
8,000-gallon gasoline UST			
1,000-gallon UST, suspected former waste oil			
4,000-gallon UST, unknown former contents			

[1] = Refer to Appendices O, P, and Q for specific disposal dates

Table 15

250 Delaware Avenue
Buffalo, New York

Analytical Results for Composite Soil Samples Collected for Waste Characterization Analyses Within the Anticipated Petroleum-Related Excavation Area

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<1.2	<3100	<5600	<500	<1400	<1500	50
Benzene	6.1	17900	52400	662	2660	<340	60
Bromodichloromethane	<0.19	<520	<940	<84	<240	<240	NL
Bromoform	<1.8	<5000	<8900	<800	<2300	<2300	NL
Bromomethane	<0.48	<1300	<2300	<210	<590	<600	NL
2- Butanone	<1.2	<3100	<5600	<500	<1400	<1400	120
Carbon Disulfide	0.30 J	<410	<730	<66	<190	<190	NL
Carbon Tetrachloride	<0.67	<1800	<3200	<290	<820	<840	760[b]
Chlorobenzene	<0.25	<680	<1200	<110	<310	<320	1,100
Chloroethane	<1.2	<3100	<5600	<500	<1400	<1500	NL
Chloroform	<0.47	<1300	<2300	<210	<580	<600	370
Chloromethane	<0.43	<1100	<2100	<190	<520	<540	NL
Dibromochloromethane	<0.27	<730	<1300	<120	<330	<340	NL
1,1- Dichloroethane	<0.25	<670	<1200	<110	<300	<310	270[b]
1,2- Dichloroethane	<0.26	<710	<1300	<110	<320	<330	20[a]
1,1- Dichloroethene	<0.34	<910	<1600	<150	<410	<430	330[b]
Cis-1,2- Dichloroethene	<0.28	<740	<1300	<120	<340	<350	250[b]
trans-1,2-Dichloroethene	<0.26	<710	<1300	<110	<320	<330	190[b]
1,2- Dichloropropane	<0.34	<920	<1700	<150	<420	<430	NL
cis-1,3- Dichloropropene	<0.16	<420	<760	<68	<190	<200	NL
trans-1,3-Dichloropropene	<0.46	<1200	<2200	<200	<560	<580	NL
Ethylbenzene	1.5 J	216000	377000	5880	40200	6390	1,000[b]
2- Hexanone	<1.2	<3100	<5600	<500	<1400	<1400	NL
4- Methyl-2-pentanone	<0.46	<1200	<2200	<200	<560	<580	NL
Methylene chloride	<1.1	<2900	<5200	<460	<1300	<1300	50
Styrene	<0.22	<580	<1000	<93	<260	<270	NL
1,1,2,2-Tetrachloroethane	<0.39	<1100	<1900	<170	<480	<490	NL
Tetrachloroethene	<0.21	<570	<1000	<91	<260	<270	1,300
Toluene	12.1	556000	1080000	2200	68300	7220	700
1,1,1- Trichloroethane	<0.29	<780	<1400	<130	<350	<360	680[b]
1,1,2- Trichloroethane	<0.68	<1800	<3300	<290	<830	<850	NL
Trichloroethene	<0.19	<520	<940	<84	<240	<250	470
Vinyl chloride	<0.25	<680	<1200	<110	<310	<320	20[b]
Xylene (total)	11.5	1380000	2480000	28500	342000	51800	260*

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<1.1	<76	<9500	<670	<1400	<3700	<3700
Benzene	7.7	<18	<2200	<160	1550	9550	2620
Bromodichloromethane	<0.19	<13	<1600	<110	<130	<350	<340
Bromoform	<1.8	<120	<15000	<1100	<110	<280	<280
Bromomethane	<0.46	<31	<3900	<280	<350	<930	<920
2- Butanone	<1.1	<75	<9400	<670	<1100	<3000	<2900
Carbon Disulfide	6.4	<9.9	<1200	<88	<55	<150	<140
Carbon Tetrachloride	<0.64	<44	<5500	<390	<420	<1100	<1100
Chlorobenzene	<0.24	<17	<2100	<150	<98	<260	<260
Chloroethane	<1.1	<76	<9500	<670	<220	<570	<570
Chloroform	<0.45	<31	<3900	<270	<100	<280	<270
Chloromethane	<0.41	<28	<3500	<250	<440	<1200	<1200
Dibromochloromethane	<0.26	<18	<2200	<160	<150	<410	<400
1,1- Dichloroethane	<0.24	<16	<2000	<140	<120	<320	<310
1,2- Dichloroethane	<0.25	<17	<2200	<150	<200	<520	<510
1,1- Dichloroethene	<0.32	<22	<2800	<200	<190	<500	<490
Cis-1,2- Dichloroethene	<0.26	<18	<2300	<160	<180	<490	<480
trans-1,2-Dichloroethene	<0.25	<17	<2200	<150	<160	<430	<420
1,2- Dichloropropane	<0.33	<22	<2800	<200	<150	<400	<400
cis-1,3- Dichloropropene	<0.15	<10	<1300	<91	<100	<280	<270
trans-1,3-Dichloropropene	<0.44	<30	<3700	<260	<110	<280	<280
Ethylbenzene	5.8	66.3 J	72400	9980	18200	94700	66900
2- Hexanone	<1.1	<75	<9400	<670	<890	<2300	<2300
4- Methyl-2-pentanone	<0.44	<30	<3800	<270	<670	<1800	<1800
Methylene chloride	<1.0	<70	<8700	<620	<560	<1500	<1500
Styrene	<0.21	<14	<1800	<120	<75	<200	<190
1,1,2,2-Tetrachloroethane	<0.37	<26	<3200	<230	<110	<280	<280
Tetrachloroethene	<0.20	<14	<1700	<120	<160	<420	<420
Toluene	23.7	<51	12400 J	826 J	29400	153000	121000
1,1,1- Trichloroethane	<0.28	<19	<2400	<170	<66	<170	<170
1,1,2- Trichloroethane	<0.64	<44	<5500	<390	<130	<330	<330
Trichloroethene	<0.19	<13	<1600	<110	<170	<450	<450
Vinyl chloride	<0.24	<16	<2100	<150	<210	<550	<540
Xylene (total)	32.8	149	795000	79500	139000	602000	401000

µg/kg = micrograms per kilogram
J = Indicates an estimated value
NL = Not Listed

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. TCLP VOCs by USEPA SW-846 Method 8260

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Benzene	<0.045	0.312	0.12	<0.045	0.135	<0.045	0.5
2- Butanone	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	200.0
Carbon Tetrachloride	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	0.5
Chlorobenzene	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	100.0
Chloroform	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	6.0
1,4-Dichlorobenzene	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	7.5
1,2- Dichloroethane	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	0.5
1,1- Dichloroethene	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067	0.7
Tetrachloroethene	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	0.7
Trichloroethene	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	0.5
Vinyl chloride	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	0.2

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Benzene	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
2- Butanone	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Carbon Tetrachloride	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062
Chlorobenzene	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048
Chloroform	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026
1,2- Dichloroethane	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035
1,1- Dichloroethene	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067
Tetrachloroethene	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062
Trichloroethene	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
Vinyl chloride	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061

mg/l = milligrams per liter
Regulatory Level = Concentration at which a solid waste exhibits the characteristic of toxicity and is therefore hazardous. Code of Federal Regulations, Title 40, 261.24

C. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<13	<13	<13	<13	<13	<13	NL
4-Chloro-3-methyl phenol	<15	<14	<15	<15	<15	<14	NL
2,4-Dichlorophenol	<17	<16	<17	<17	<17	<16	NL
2,4-Dimethylphenol	<95	<93	<95	<94	<94	<91	NL
2,4-Dinitrophenol	<150	<140	<150	<140	<140	<140	NL
4,6-Dinitro-o-cresol	<73	<71	<73	<72	<72	<70	NL
2-Methylphenol	<23	<23	<23	<23	<23	<22	330[b]
3&4-Methylphenol	<28	<28	<28	<28	171 J	<27	(330[b]/330[b])[1]
2-Nitrophenol	<16	<15	<15	<15	<15	<15	NL
4-Nitrophenol	<110	<110	<110	<110	<110	<100	NL
Pentachlorophenol	<41	<40	<41	<41	<41	<39	800[b]
Phenol	<17	<16	<17	<16	<16	<16	330[b]
2,4,5-Trichlorophenol	<15	<14	<15	<14	<14	<14	NL
2,4,6-Trichlorophenol	<14	<14	<14	<14	<14	<14	NL
Acenaphthene	<16	164	128	60.7 J	70.0 J	102 J	20,000
Acenaphthylene	<12	<11	<12	21.5 J	<12	<11	100,000[a,d]
Anthracene	<14	93.8 J	42.3 J	15.9 J	28.7 J	26.1 J	100,000[a,d]
Benzo(a)anthracene	<15	100 J	32.2 J	<15	24.5 J	19.0 J	1,000[c,d]
Benzo(a)pyrene	<13	85.2 J	22.8 J	<12	<12	<12	1,000[c]
Benzo(b)fluoranthene	<15	129	21.9 J	<14	<14	<14	1,000[c,d]
Benzo(g,h,i)perylene	<12	76.7 J	19.4 J	<12	<12	<11	100,000[d]
Benzo(k)fluoranthene	<18	71.9 J	<18	<17	<17	<17	800[c,d]
4-Bromophenyl phenyl ether	<15	<14	<15	<15	<15	<14	NL
Butyl benzyl phthalate	<12	<12	<12	<12	<12	<11	NL
2-Chloronaphthalene	<16	<15	<16	<16	<16	<15	NL
4-Chloroaniline	<15	<14	<15	<14	<14	<14	NL
Carbazole	<14	26.0 J	<14	<14	<14	<13	NL
Chrysene	<14	151	29.3 J	<14	31.1 J	21.6 J	1,000[c,d]
Bis (2-chloroethoxy) methane	<14	<13	<14	<14	<14	<13	NL
Bis (2-chloroethyl) ether	<18	<17	<18	<18	<18	<17	NL
Bis (2-chloroisopropyl) ether	<21	<20	<21	<21	<21	<20	NL
4-Chlorophenyl phenyl ether	<18	<17	<18	<18	<18	<17	NL
1,2-Dichlorobenzene	<15	<15	<15	<15	<15	<14	1,100
1,3-Dichlorobenzene	<17	<16	<17	<17	<17	<16	2,400
1,4-Dichlorobenzene	<15	<15	<15	<15	<15	<15	1,800
2,4-Dinitrotoluene	<39	<38	<39	<39	<39	<37	NL
2,6-Dinitrotoluene	<15	<14	<15	<14	<14	<14	NL
3,3'-Dichlorobenzidine	<29	<29	<29	<29	<29	<28	NL
Dibenzo(a,h)anthracene	<14	<14	<14	<14	<14	<13	330[b,d]
Dibenzofuran	<16	<16	<16	<16	<16	<15	7,000[d]
Di-n-butyl phthalate	<31	<30	<31	<31	<31	<30	NL
Di-n-octyl phthalate	<9.1	<8.9	<9.1	<9.0	<9.0	<8.7	NL
Diethyl phthalate	<15	<14	<15	<14	<14	<14	NL

Dimethyl phthalate	<17	<16	<17	<17	<17	<16	NL
Bis (2-ethylhexyl) phthalate	171 J	319	302	187 J	123 J	118 J	NL
Fluoranthene	<16	430	82.5 J	18.9 J	67.3 J	43.4 J	100,000[a,d]
Fluorene	<15	159	100 J	<15	64.7 J	73.2 J	30,000
Hexachlorobenzene	<18	<18	<18	<18	<18	<17	330[b]
Hexachlorobutadiene	<17	<17	<17	<17	<17	<16	NL
Hexachlorocyclopentadiene	<150	<140	<150	<140	<140	<140	NL
Hexachloroethane	<14	<14	<14	<14	<14	<13	NL
Indeno (1,2,3-cd) pyrene	<13	56.9 J	<13	<13	<13	<12	500[c,d]
Isophorone	<13	<13	<13	<13	<13	<13	NL
2-Methylnaphthalene	<15	20000	26900	15000	18800	28600	NL
2-Nitroaniline	<15	<14	<15	<14	<14	<14	NL
3-Nitroaniline	<32	<31	<32	<32	<32	<30	NL
4-Nitroaniline	<15	<14	<15	<14	<14	<14	NL
Naphthalene	<19	21500	28700	14800	19100	21800	12,000[d]
Nitrobenzene	<16	<15	<16	<16	<16	<15	NL
N-Nitroso-Di-n-propylamine	<17	<16	<17	<17	<17	<16	NL
N-Nitrosodiphenylamine	<18	<17	<18	<17	<17	<17	NL
Phenanthrene	<16	466	178	71.9 J	102 J	111	100,000[d]
Pyrene	<14	312	71.7 J	21.1 J	60.7 J	43.4 J	100,000[d]
1,2,4-Trichlorobenzene	<16	<16	<16	<16	<16	<15	NL

Sample ID	**BCP WC BH7**	**BCP WC BH8**	**BCP WC BH9**	**BCP WC BH10**	**BCP WC BH11**	**BCP WC BH12**	**BCP WC BH13**
Date Sampled	**7/2/2013**	**7/2/2013**	**7/2/2013**	**7/2/2013**	**10/8/2013**	**10/8/2013**	**10/8/2013**
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Chlorophenol	<13	<13	<13	<13	<12	<12	<12
4-Chloro-3-methyl phenol	<14	<15	<14	<14	<13	<14	<13
2,4-Dichlorophenol	<16	<17	<16	<16	<15	<15	<15
2,4-Dimethylphenol	<90	<93	<91	<93	<86	<87	<86
2,4-Dinitrophenol	<140	<140	<140	<140	<130	<130	<130
4,6-Dinitro-o-cresol	<69	<72	<70	<71	<66	<67	<66
2-Methylphenol	<22	<23	<22	<23	<21	<21	<21
3&4-Methylphenol	<27	<28	<27	<28	<26	<26	<26
2-Nitrophenol	<15	<15	<15	<15	<14	<14	<14
4-Nitrophenol	<100	<110	<110	<110	<99	<100	<99
Pentachlorophenol	<39	<40	<39	<40	<37	<37	<37
Phenol	<16	<16	<16	<16	59.6 J	<15	<15
2,4,5-Trichlorophenol	<14	<14	<14	<14	<13	<13	<13
2,4,6-Trichlorophenol	<14	<14	<14	<14	<13	<13	<13
Acenaphthene	<15	<15	122	124	43.4 J	47.3 J	55.6 J
Acenaphthylene	<11	<11	<11	<11	<11	<11	<11
Anthracene	<13	<14	48.7 J	174	18.4 J	27.5 J	37.0 J
Benzo(a)anthracene	27.5 J	<15	69.5 J	265	<14	<14	21.3 J
Benzo(a)pyrene	<12	<12	66.3 J	286	<11	<11	<11
Benzo(b)fluoranthene	34.2 J	<14	65.8 J	257	<13	<13	<13
Benzo(g,h,i)perylene	<11	<11	53.0 J	211	<11	<11	<11
Benzo(k)fluoranthene	24.1 J	<17	55.6 J	233	<16	<16	<16
4-Bromophenyl phenyl ether	<14	<14	<14	<14	<13	<13	<13
Butyl benzyl phthalate	<11	<12	<11	<12	<11	<11	<11
2-Chloronaphthalene	<15	<16	<15	<15	<14	<14	73.7 J
4-Chloroaniline	<14	<14	<14	<14	<13	<13	<13
Carbazole	<13	<14	17.0 J	119	<12	<13	<13
Chrysene	52.0 J	<14	79.2 J	311	13.6 J	<13	16.1 J
Bis (2-chloroethoxy) methane	<13	<13	<13	<13	<12	<12	<12
Bis (2-chloroethyl) ether	<17	<17	<17	<17	<16	<16	<16
Bis (2-chloroisopropyl) ether	<20	<21	<20	<20	<19	<19	<19
4-Chlorophenyl phenyl ether	<17	<18	<17	<17	<16	<16	<16
1,2-Dichlorobenzene	<14	<15	<14	<15	<14	<14	<14
1,3-Dichlorobenzene	<16	<16	<16	<16	<15	<15	<15
1,4-Dichlorobenzene	<15	<15	<15	<15	<14	<14	<14
2,4-Dinitrotoluene	<37	<38	<37	<38	<35	<36	<35
2,6-Dinitrotoluene	<14	<14	<14	<14	<13	<13	<13
3,3'-Dichlorobenzidine	<28	<29	<28	<28	<26	<27	<27
Dibenzo(a,h)anthracene	<13	<14	<13	73.1 J	<13	<13	<13
Dibenzofuran	<15	<16	<15	78.4 J	18.2 J	<15	<15
Di-n-butyl phthalate	<29	<30	<30	<30	<28	<28	<28
Di-n-octyl phthalate	<8.7	<8.9	<8.8	<8.9	<8.3	<8.3	<8.3
Diethyl phthalate	<14	<14	<14	<14	<13	<13	<13
Dimethyl phthalate	<16	<17	<16	<16	<15	<15	<15
Bis (2-ethylhexyl) phthalate	264 J	<11	120 J	<11	<9.8	14.6 J	<9.8
Fluoranthene	86.8 J	<16	181	958	18.5 J	19.4 J	27.8 J
Fluorene	<15	<15	116	111	51.4 J	59.9 J	86.4 J
Hexachlorobenzene	<17	<18	<18	<18	<17	<17	<17
Hexachlorobutadiene	<16	<17	<16	<16	<15	<15	<15
Hexachlorocyclopentadiene	<140	<140	<140	<140	<130	<130	<130
Hexachloroethane	<13	<14	<14	<14	<13	<13	<13
Indeno (1,2,3-cd) pyrene	<12	<13	43.7 J	177	<12	<12	<12
Isophorone	<13	<13	<13	<13	<12	<12	<12
2-Methylnaphthalene	114	209	30100	2440	12200	12800	14900
2-Nitroaniline	<14	<14	<14	<14	<13	<13	<13
3-Nitroaniline	<30	<31	<31	<31	<29	<29	<29
4-Nitroaniline	<14	<14	<14	<14	<13	<13	<13
Naphthalene	56.6 J	<18	26900	2250	11100	14500	16500
Nitrobenzene	<15	<15	<15	<15	<14	<14	<14
N-Nitroso-Di-n-propylamine	<16	<16	<16	<16	<15	<15	<15
N-Nitrosodiphenylamine	<17	<17	<17	<17	<16	<16	<16
Phenanthrene	71.5 J	<16	210	1020	58.8 J	79.5 J	118
Pyrene	71.3 J	<13	167	689	27.4 J	28.7 J	44.2 J
1,2,4-Trichlorobenzene	<15	<16	<15	<16	<15	<15	<15

µg/kg = micrograms per kilogram

J = Indicates an estimated value
NL = Not Listed
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

D. TCLP SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
2-Methylphenol	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	200.0
3&4-Methylphenol	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	200.0
Pentachlorophenol	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	100.0
2,4,5-Trichlorophenol	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	400.0
2,4,6-Trichlorophenol	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	2.0
1,4-Dichlorobenzene	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	7.5
2,4-Dinitrotoluene	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	0.13
Hexachlorobenzene	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.13
Hexachlorobutadiene	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	0.5
Hexachloroethane	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	3.0
Nitrobenzene	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	2.0
Pyridine	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	5.0

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
2-Methylphenol	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
3&4-Methylphenol	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Pentachlorophenol	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
2,4,5-Trichlorophenol	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057
2,4,6-Trichlorophenol	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
1,4-Dichlorobenzene	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
2,4-Dinitrotoluene	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Hexachlorobenzene	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexachlorobutadiene	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029
Hexachloroethane	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
Nitrobenzene	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Pyridine	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052

mg/l = milligrams per liter
mg/l = milligrams per liter
Regulatory Level = Concentration at which a solid waste exhibits the characteristic of toxicity and is therefore hazardous.
Code of Federal Regulations, Title 40, 261.24

E. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Eastern USA Background Concentrations	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	0.58 B	0.74 B	0.84 B	1.0 B	1.2	1.2	3-12*	13[a]
Barium	24.5	12.2	18.7	6.9	10	12.1	15-600	350[a]
Cadmium	0.20 B	0.19 B	0.22 B	0.36 B	0.21 B	0.29 B	0.1-1	2.5[a]
Chromium	3.6	4.3	4.3	4.2	4.3	5.1	1.5-40*	(1[b,c]/30[a,c])[1]
Lead	10.6	10.5	16.5	13.4	8.7	13	***	63[a]
Mercury	0.013 B	0.018 B	0.015 B	0.022 B	0.014 B	0.044	0.001-0.2	0.18[a]
Selenium	<0.36	<0.35	<0.38	<0.37	<0.34	<0.33	0.1-3.9	3.9[a]
Silver	<0.13	<0.13	<0.14	<0.13	<0.12	<0.12	NA	2.0

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	0.96	1	1.4	0.93 B	1.3	1.0 B	1.3
Barium	25	29.9	13.3	10.8	11.1	7.5	10.5
Cadmium	0.15 B	0.18 B	0.35 B	0.25 B	0.25 B	0.24 B	0.26 B
Chromium	7.4	3.9	5	4.1	3.7	3.2	3.3
Lead	15.1	5.7	14.3	9.3	10.3	8.9	9.7
Mercury	0.018 B	0.017 B	0.026 B	0.019 B	<0.0097	<0.010	<0.010
Selenium	<0.33	<0.34	<0.33	<0.33	<0.37	<0.37	<0.38
Silver	<0.12	<0.12	<0.12	<0.12	<0.13	<0.13	<0.14

mg/kg = milligrams per kilogram
B = Indicates analyte found in associated method blank.
NA = Not Available
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

F. TCLP Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Arsenic	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	5.0
Barium	0.52	0.29 B	0.27 B	0.26 B	0.21 B	0.28 B	100.0
Cadmium	0.0038 B	0.0035 B	0.0026 B	0.0041	0.0012 B	0.0079	1.0
Chromium	<0.0014	<0.0014	<0.0014	0.0018 B	<0.0014	<0.0014	5.0
Lead	0.2	0.013	0.03	0.022	0.017	0.029	5.0
Mercury	<0.000067	<0.000067	0.000094 B	0.000075 B	<0.000067	0.00013 B	0.2
Selenium	0.012 B	0.012 B	0.012 B	0.013 B	0.0097 B	0.013 B	1.0
Silver	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5.0

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Arsenic	<0.0029	<0.0029	<0.0029	<0.0029	0.0056 B	0.0044 B	0.0073 B
Barium	0.46 B	1.1	0.19 B	0.23 B	0.26 B	0.14 B	0.30 B
Cadmium	0.0014 B	0.0017 B	0.0039 B	0.0056	<0.00050	<0.00050	<0.00050
Chromium	<0.0014	<0.0014	0.0014 B	<0.0014	<0.0014	<0.0014	<0.0014
Lead	0.021	0.0039 B	0.046	0.043	0.05	0.084	0.059
Mercury	<0.000067	<0.000067	<0.000067	0.00015 B	<0.000067	<0.000067	0.00015 B
Selenium	0.010 B	0.013 B	0.012 B	0.012 B	0.014 B	0.014 B	0.015 B
Silver	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

mg/l = milligrams per liter
B = Indicates analyte found in associated method blank.
mg/l = milligrams per liter
Regulatory Level = Concentration at which a solid waste exhibits the characteristic of toxicity and is therefore hazardous.
Code of Federal Regulations, Title 40, 261.24

G. Herbicides by USEPA SW-846 Method 8151

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2,4-D	<2.0	<1.9	<1.9	<1.9	<1.9	<1.8	NL
2,4,5-TP (Silvex)	<2.4	<2.3	<2.3	<2.3	<2.3	<2.3	3,800
2,4,5-T	<1.4	<1.3	<1.3	<1.3	<1.3	<1.3	NL

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2,4-D	<1.8	<1.9	<1.8	<1.9	<1.8	<1.8	<1.8
2,4,5-TP (Silvex)	<2.2	<2.3	<2.2	<2.3	<2.2	<2.2	<2.2
2,4,5-T	<1.3	<1.3	<1.3	<1.3	<1.2	<1.3	<1.3

µg/kg = micrograms per kilogram
NL = Not Listed
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006
(375-6.8, Soil Cleanup Objective Tables)

H. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<2.4	<2.2	<2.3	<2.3	<2.4	<2.2	5[a]
Alpha-BHC	<1.9	<1.7	<1.8	<1.8	<1.9	<1.7	20
Beta-BHC	<2.6	<2.4	<2.5	<2.5	<2.6	<2.4	36
Delta-BHC	<1.5	<1.4	<1.4	<1.4	<1.5	<1.4	40
Gamma-BHC (Lindane)	<2.4	<2.2	<2.3	<2.3	<2.4	<2.2	100
Alpha-Chlordane	<3.0	<2.7	<2.9	<2.8	<2.9	<2.7	94
Gamma-Chlordane	<2.4	<2.2	<2.3	<2.3	<2.3	<2.2	NL
Dieldrin	<2.5	<2.3	<2.4	<2.4	<2.5	<2.3	5[a]
4,4'-DDD	<2.6	<2.4	<2.5	<2.4	<2.5	<2.4	3.3[b]
4,4'-DDE	<3.3	<3.0	<3.1	<3.1	<3.2	<3.0	3.3[b]
4,4'-DDT	<2.5	<2.3	<2.4	<2.3	<2.4	<2.3	3.3[b]
Endrin	<3.2	<2.9	<3.0	<3.0	<3.1	<2.9	14
Endosulfan sulfate	<2.7	<2.5	<2.6	<2.5	<2.6	<2.5	2,400*,[c]
Endrin aldehyde	<2.5	<2.2	<2.4	<2.3	<2.4	<2.2	NL
Endosulfan-I	<3.1	<2.8	<3.0	<2.9	<3.0	<2.8	2,400*,[c]
Endosulfan-II	<2.6	<2.3	<2.5	<2.4	<2.5	<2.3	2,400*,[c]
Heptachlor	<2.4	<2.1	<2.2	<2.2	<2.3	<2.1	42
Heptachlor epoxide	<2.5	<2.2	<2.4	<2.3	<2.4	<2.2	NL
Methoxychlor	<3.2	<2.9	<3.0	<3.0	<3.1	<2.9	NL
Endrin ketone	<2.9	<2.6	<2.8	<2.7	<2.8	<2.6	NL
Toxaphene	<42	<38	<40	<39	<40	<38	NL

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<2.3	<2.3	<2.2	<2.3	<2.2	<2.2	<2.2
Alpha-BHC	<1.8	<1.8	<1.7	<1.8	<1.7	<1.8	<1.7
Beta-BHC	<2.5	<2.5	<2.4	<2.4	<2.4	<2.4	<2.4
Delta-BHC	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Gamma-BHC (Lindane)	<2.3	<2.3	<2.2	<2.2	<2.2	<2.2	<2.2
Alpha-Chlordane	<2.8	<2.8	<2.7	<2.8	<2.7	<2.7	<2.7
Gamma-Chlordane	<2.3	<2.3	<2.2	<2.2	<2.2	<2.2	<2.2
Dieldrin	<2.4	<2.4	<2.3	<2.4	<2.3	<2.3	<2.3
4,4'-DDD	<2.5	<2.5	<2.3	<2.4	<2.3	<2.4	<2.4
4,4'-DDE	<3.1	<3.1	<2.9	<3.0	<3.0	<3.0	<3.0
4,4'-DDT	<2.4	<2.4	<2.2	<2.3	<2.2	<2.3	<2.3
Endrin	<3.0	<3.0	<2.8	<2.9	<2.9	<2.9	<2.9
Endosulfan sulfate	<2.6	<2.6	<2.4	<2.5	<2.4	<2.5	<2.5
Endrin aldehyde	<2.3	<2.3	<2.2	<2.3	<2.2	<2.2	<2.2
Endosulfan-I	<2.9	<2.9	<2.8	<2.9	<2.8	<2.8	<2.8
Endosulfan-II	<2.4	<2.4	<2.3	<2.4	<2.3	<2.3	<2.3
Heptachlor	<2.2	<2.2	<2.1	<2.2	<2.1	<2.1	<2.1
Heptachlor epoxide	<2.3	<2.3	<2.2	<2.3	<2.2	<2.3	<2.2
Methoxychlor	<3.0	<3.0	<2.9	<3.0	<2.9	<2.9	<2.9
Endrin ketone	<2.7	<2.7	<2.6	<2.7	<2.6	<2.6	<2.6
Toxaphene	<39	<39	<37	<39	<37	<38	<38

µg/kg = micrograms per kilogram
NL = Not Listed
ft. bgs = feet below ground surface
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.
* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

I. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<18	<17	<17	<18	<17	<17	-
Aroclor 1221	<24	<22	<22	<23	<22	<23	-
Aroclor 1232	<19	<18	<18	<19	<18	<18	-
Aroclor 1242	<20	<19	<19	<20	<19	<19	-
Aroclor 1248	<18	<17	<17	<17	<17	<17	-
Aroclor 1254	<29	<27	<27	<29	<27	<28	-
Aroclor 1260	<20	<19	<19	<20	<19	<19	-
Total Aroclor	ND	ND	ND	ND	ND	ND	100

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<16	<17	<17	<17	<17	<16	<16
Aroclor 1221	<21	<22	<22	<23	<22	<21	<22
Aroclor 1232	<17	<17	<17	<18	<17	<17	<17
Aroclor 1242	<18	<18	<18	<19	<18	<18	<18
Aroclor 1248	<16	<16	<16	<17	<16	<16	<16
Aroclor 1254	<26	<27	<27	<28	<27	<26	<26
Aroclor 1260	<18	<19	<19	<19	<19	<18	<18
Total Aroclor	ND	ND	ND	ND	ND	ND	ND

µg/kg = micrograms per kilogram
ND = Not Detected

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006
(375-6.8, Soil Cleanup Objective Tables)

J. Flashpoint by Method 1020

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	° F	° F	° F	° F	° F	° F	° F
Ignitability (Flashpoint)	>230	>230	>230	>230	>230	>230	140° F

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	° F	° F	° F	° F	° F	° F	° F
Ignitability (Flashpoint)	>230	>230	>230	>230	>230	>230	>230

° F = Degrees Farenheit
Regulatory Level = Temperature beneath which a solid waste exhibits the characteristic of ignitability and is therefore hazardous.
Code of Federal Regulations, Title 40, 261.21

K. Corrosivity by Method CHAP7

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Corrosivity as pH	8.2	8.2	8.2	8.3	8.5	8.3	≤2 or ≥12.5

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Corrosivity as pH	8.4	8.1	8.1	8.1	8.1	8	8

Regulatory Level = pH at which a solid waste exhibits the characteristic of corrosivity and is therefore hazardous.
Code of Federal Regulations, Title 40, 261.22

L. Reactivity by Method CHAP7

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6	Regulatory Level
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Cyanide Reactivity	<1.8	<1.7	<1.8	<1.8	<1.8	<1.7	250 mg/kg
Sulfide Reactivity	<61	<57	<58	<59	<58	<58	500 mg/kg

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Cyanide Reactivity	<1.7	<1.8	<1.7	<1.7	<1.7	<1.6	<1.7
Sulfide Reactivity	<57	<58	<57	<58	<55	<55	<55

mg/kg = milligrams per kilogram
Regulatory Level = Releasable concentration (from waste) at which a solid waste exhibits the characteristic of reactivity and is therefore hazardous.
EPA SW-846 Chapter 7, Revision 3 (December 1996)

M. Percent Solids by Method SM21 2540B Mod.

Sample ID	BCP WC BH1	BCP WC BH2	BCP WC BH3	BCP WC BH4	BCP WC BH5	BCP WC BH6
Date Sampled	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/2/2013	7/2/2013
Units	Percent	Percent	Percent	Percent	Percent	Percent
Percent Solids	82.4	87.4	85.5	84.4	85.5	86.8

Sample ID	BCP WC BH7	BCP WC BH8	BCP WC BH9	BCP WC BH10	BCP WC BH11	BCP WC BH12	BCP WC BH13
Date Sampled	7/2/2013	7/2/2013	7/2/2013	7/2/2013	10/8/2013	10/8/2013	10/8/2013
Units	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Percent Solids	87.8	85.7	88.2	86.9	90.3	91	90.6

Table 16

250 Delaware Avenue
Buffalo, New York

Analytical Results for Composite Groundwater Sample Collected for Waste Characterization Analyses Within the Anticipated Petroleum-Related Excavation Area

A. VOCs by USEPA 624

Sample ID	WCW1	Trip Blank	Regulatory Level
Date Sampled	7/18/2013	-	
Units	µg/l	µg/l	µg/l
Acrolein	<4.8	<4.8	NL
Acrylonitrile	<1.3	<1.3	
Benzene	1970	<0.13	
Bromodichloromethane	<0.16	<0.16	
Bromoform	<1.0	<1.0	
Bromomethane	<0.43	<0.43	
Carbon Tetrachloride	<0.27	<0.27	
Chlorobenzene	<0.13	<0.13	
Chloroethane	1.7	<0.25	
2-Chloroethyl vinyl ether	<1.1	<1.1	
Chloroform	3.6	<0.13	8,500[2]
Chloromethane	<0.13	<0.13	NL
Dibromochloromethane	<0.33	<0.33	
1,2-Dichlorobenzene	<0.25	<0.25	
1,3-Dichlorobenzene	<0.16	<0.16	
1,4-Dichlorobenzene	<0.17	<0.17	
Dichlorodifluoromethane	<0.25	<0.25	
1,1- Dichloroethane	0.67 J	<0.13	
1,2- Dichloroethane	1.2	<0.13	
1,1- Dichloroethene	<0.21	<0.21	
Cis-1,2- Dichloroethene	<0.13	<0.13	
trans-1,2-Dichloroethene	<0.13	<0.13	
1,2- Dichloropropane	<0.25	<0.25	
cis-1,3- Dichloropropene	<0.27	<0.27	
trans-1,3-Dichloropropene	<0.25	<0.25	
Ethylbenzene	777	0.14 J	
Methylene chloride	0.52 J	<0.19	
1,1,2,2-Tetrachloroethane	<0.29	<0.29	
Tetrachloroethene	<0.15	<0.15	
Toluene	1360	<0.13	
1,1,1- Trichloroethane	<0.25	<0.25	
1,1,2- Trichloroethane	<0.25	<0.25	
Trichloroethene	<0.14	<0.14	
Trichlorofluoromethane	<0.25	<0.25	
Vinyl chloride	<0.13	<0.13	
Xylene (total)	3940	0.86 J	

µg/l = micrograms per liter
J = Indicates an estimated value
NL = Not Listed
[2] = Maximum Allowable Instantaneous Discharge Limit; Compliance determined on the basis of a grab sample
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

B. SVOCs by USEPA 625

Sample ID	WCW1	Regulatory Level
Date Sampled	**7/18/2013**	
Units	**µg/l**	**µg/l**
2-Chlorophenol	<0.41	8,000[1] (total) 20,000[2] (total)
4-Chloro-3-methyl phenol	<0.38	
2,4-Dichlorophenol	<0.38	
2,4-Dimethylphenol	<2.8	
2,4-Dinitrophenol	<5.1	
4,6-Dinitro-o-cresol	<2.6	
2-Nitrophenol	<0.48	
4-Nitrophenol	<2.8	
Pentachlorophenol	<1.3	
Phenol	<0.95	
2,4,6-Trichlorophenol	<0.36	
Acenaphthene	<0.26	NL
Acenaphthylene	<0.15	
Anthracene	0.27 J	
Benzidine	<1.3	
Benzo(a)anthracene	<0.22	
Benzo(a)pyrene	<0.21	
Benzo(b)fluoranthene	<0.21	
Benzo(g,h,i)perylene	<0.31	
Benzo(k)fluoranthene	<0.27	
4-Bromophenyl phenyl ether	<0.33	
Butyl benzyl phthalate	<0.27	
2-Chloronaphthalene	<0.26	
4-Chloroaniline	<0.64	
Chrysene	<0.27	
Bis (2-chloroethoxy) methane	<0.22	
Bis (2-chloroethyl) ether	<0.38	
Bis (2-chloroisopropyl) ether	<0.29	
4-Chlorophenyl phenyl ether	<0.30	
1,2-Dichlorobenzene	<0.28	
1,2-Diphenylhydrazine	<0.26	
1,3-Dichlorobenzene	<0.26	
1,4-Dichlorobenzene	<0.26	
2,4-Dinitrotoluene	<0.26	
2,6-Dinitrotoluene	<0.26	
3,3'-Dichlorobenzidine	<0.91	
Dibenzo(a,h)anthracene	<0.26	
Di-n-butyl phthalate	0.60 J	
Di-n-octyl phthalate	<0.24	
Diethyl phthalate	<0.19	
Dimethyl phthalate	<0.23	
Bis (2-ethylhexyl) phthalate	3.6 JB	
Fluoranthene	0.30 J	100[2]
Fluorene	<0.24	NL
Hexachlorobenzene	<0.26	
Hexachlorobutadiene	<0.34	
Hexachlorocyclopentadiene	<5.1	
Hexachloroethane	<0.29	
Indeno (1,2,3-cd) pyrene	<0.22	
Isophorone	<0.32	
Naphthalene	227	
Nitrobenzene	<0.26	
N-Nitrosodimethylamine	<0.60	
N-Nitroso-di-n-propylamine	<0.28	
N-Nitrosodiphenylamine	<0.44	
Phenanthrene	0.42 J	
Pyrene	<0.25	100[2]
1,2,4-Trichlorobenzene	<0.26	NL

µg/l = micrograms per liter
J = Indicates an estimated value
NL = Not Listed
[1] = As determined on the basis of a single composite sample.
[2] = Maximum Allowable Instantaneous Discharge Limit; Compliance determined on the basis of a grab sample
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

C. Metals by USEPA 200.7 and 245.1

Sample ID	WCW1	Regulatory Level
Date Sampled	7/18/2013	
Units	µg/l	µg/l
Arsenic	6.7	NL
Barium	350	
Beryllium	<0.25	
Cadmium	<0.50	40,000[2]
Chromium	1.8 B	40,000[2] (total) 9,200[2] (hexavalent)
Copper	<7.0	16,000[2]
Lead	7	65,000[2]
Mercury	<0.067	7,000[2]
Nickel	3.2 B	14,000[2]
Selenium	<4.8	2,400[2]
Silver	<1.0	2,200[2]
Titanium	6.3 B	NL
Zinc	126	25,000[2]

µg/l = micrograms per liter
NL = Not Listed
B = Indicates analyte found in associated method blank
[2] = Maximum Allowable Instantaneous Discharge Limit; Compliance determined on the basis of a grab sample
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

D. Pesticides and PCBs by USEPA 608

Sample ID	WCW1	Regulatory Level
Date Sampled	7/18/2013	
Units	µg/l	µg/l
Aldrin	<0.021	NL
Alpha-BHC	<0.017	1,900[2] (total)
Beta-BHC	<0.021	
Delta-BHC	<0.022	
Gamma-BHC (Lindane)	<0.021	
Chlordane	<0.17	NL
Dieldrin	<0.019	
4,4'-DDD	<0.022	680[2]
4,4'-DDE	<0.020	NL
4,4'-DDT	<0.024	
Endrin	<0.018	
Endosulfan sulfate	<0.016	
Endrin aldehyde	<0.017	
Endosulfan-I	<0.019	1,600[2] (total)
Endosulfan-II	<0.020	
Heptachlor	<0.016	NL
Heptachlor epoxide	<0.018	
Methoxychlor	<0.021	
Toxaphene	<0.17	
Aroclor 1016	<0.069	2[2] (total)
Aroclor 1221	<0.072	
Aroclor 1232	<0.17	
Aroclor 1242	<0.10	
Aroclor 1248	<0.15	
Aroclor 1254	<0.073	
Aroclor 1260	<0.062	

µg/l = micrograms per liter
NL = Not Listed
[2] = Maximum Allowable Instantaneous Discharge Limit; Compliance determined on the basis of a grab sample
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

E. Cyanide by USEPA 335.4

Sample ID	WCW1	Regulatory Level
Date Sampled	7/18/2013	
Units	mg/l	mg/l
Cyanide	<0.010	66.0[2] (total) 6.2[2] (amenable)

mg/l = milligrams per liter
[2] = Maximum Allowable Instantaneous Discharge Limit; Compliance determined on the basis of a grab sample
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

F. Total Extractable Hydrocarbons by USEPA 1664A

Sample ID	WCW1	Regulatory Level
Date Sampled	7/18/2013	
Units	mg/l	mg/l
HEM Petroleum Hydrocarbons	<4.1	100[1]

mg/l = milligrams per liter
[1] = As determined on the basis of a single composite sample.
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

G. Total Suspended Solids by USEPA SM21 2540D

Sample ID	WCW1	Regulatory Level
Date Sampled	7/18/2013	
Units	mg/l	mg/l
Solids, Total Suspended	43	250

mg/l = milligrams per liter
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

H. Total Dissolved Solids by USEPA SM21 2540C

Sample ID	**WCW1**
Date Sampled	**7/18/2013**
Units	**mg/l**
Solids, Total Dissolved	1980

mg/l = milligrams per liter

I. Total Solids by USEPA SM21 2540B

Sample ID	**WCW1**
Date Sampled	**7/18/2013**
Units	**mg/l**
Solids, Total	2070

mg/l = milligrams per liter

J. Total Phosphates by USEPA 365.4

Sample ID	**WCW1**	**Regulatory Level**
Date Sampled	**7/18/2013**	
Units	**mg/l**	**mg/l**
Phosphorus, Total	0.89	15.35

mg/l = milligrams per liter
Regulatory Level = Maximum concentration of analyte for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007

K. pH by USEPA 150.1

Sample ID	**WCW1**	**Regulatory Level**
Date Sampled	**7/18/2013**	
pH	6.8[a]	5.0 – 12.0

mg/l = milligrams per liter
[a] = Analysis performed past the required 15 minutes of collection time/holding time.
Regulatory Level = Acceptable pH for water to be discharged to the public sewer system.
Buffalo Sewer Authority Sewer Use and Regulations (November 29, 2007)

Table 17

250 Delaware Avenue
Buffalo, New York

Analytical Results for Composite Soil/Fill Samples Collected for Waste Characterization Analyses Within the Anticipated Historic Fill-Related Excavation Area

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.4	<3.5	<3.4	<3.9	<3.3	<3.3	50
Benzene	1.3	1.1	0.89	0.45 J	1.9	1	60
Bromodichloromethane	<0.32	<0.33	<0.31	<0.36	<0.30	<0.30	NL
Bromoform	<0.25	<0.26	<0.25	<0.29	<0.24	<0.24	NL
Bromomethane	<0.85	<0.88	<0.84	<0.96	<0.82	<0.82	NL
2- Butanone	<2.7	<2.8	<2.7	<3.1	<2.6	<2.6	120
n-Butylbenzene	<0.15	<0.16	<0.15	<0.17	<0.14	<0.14	12,000[b]
Sec-Butylbenzene	<0.14	<0.14	<0.14	<0.16	<0.13	<0.13	11,000[b]
Tert-Butylbenzene	<0.31	<0.32	<0.31	<0.35	<0.30	<0.30	5,900[b]
Carbon Disulfide	1.0 J	0.83 J	3.0 J	0.94 J	<0.13	0.98 J	NL
Carbon Tetrachloride	<1.0	<1.1	<1.0	<1.1	<0.97	<0.98	760[b]
Chlorobenzene	<0.24	<0.24	<0.23	<0.27	<0.23	<0.23	1,100
Chloroethane	<0.52	<0.54	<0.52	<0.59	<0.50	<0.50	NL
Chloroform	<0.25	<0.26	<0.25	<0.28	<0.24	<0.24	370
Chloromethane	<1.1	<1.1	<1.0	<1.2	<1.0	<1.0	NL
Dibromochloromethane	<0.37	<0.39	<0.37	<0.42	<0.36	<0.36	NL
1,1- Dichloroethane	<0.29	<0.30	<0.29	<0.33	<0.28	<0.28	270[b]
1,2- Dichloroethane	<0.47	<0.49	<0.47	<0.54	<0.45	<0.46	20[a]
1,1- Dichloroethene	<0.45	<0.47	<0.45	<0.52	<0.44	<0.44	330[b]
Cis-1,2- Dichloroethene	<0.44	<0.46	<0.44	<0.50	<0.43	<0.43	250[b]
trans-1,2-Dichloroethene	<0.39	<0.40	<0.38	<0.44	<0.37	<0.37	190[b]
1,2-Dichloroethene (total)	<0.21	<0.22	<0.21	<0.24	<0.20	<0.21	NL
1,2- Dichloropropane	<0.37	<0.38	<0.36	<0.42	<0.35	<0.35	NL
cis-1,3- Dichloropropene	<0.25	<0.26	<0.25	<0.29	<0.24	<0.24	NL
trans-1,3-Dichloropropene	<0.25	<0.26	<0.25	<0.29	<0.24	<0.24	NL
Ethylbenzene	0.26 J	0.27 J	<0.15	<0.18	0.43 J	<0.15	1,000[b]
2- Hexanone	<2.1	<2.2	<2.1	<2.4	<2.0	<2.0	NL
Isopropylbenzene	<0.24	<0.25	<0.24	<0.28	<0.23	<0.23	NL
p-Isopropyltoluene	<0.14	<0.14	<0.14	<0.16	<0.13	0.41 J	NL
Methyl tert butyl ether	<0.35	<0.36	<0.34	<0.39	<0.33	<0.33	930[b]
4- Methyl-2-pentanone	<1.6	<1.7	<1.6	<1.8	<1.5	<1.6	NL
Methylene chloride	<1.3	<1.4	<1.3	<1.5	<1.3	<1.3	50
Naphthalene	<0.69	1.2 J	<0.68	0.85 J	1.0 J	<0.66	12,000
n-Propylbenzene	<0.21	<0.22	<0.21	<0.24	<0.20	<0.20	3,900[b]
Styrene	<0.18	<0.19	<0.18	<0.20	<0.17	<0.17	NL
1,1,2,2-Tetrachloroethane	<0.26	<0.27	<0.25	<0.29	<0.25	<0.25	NL
Tetrachloroethene	<0.39	<0.40	<0.38	<0.44	<0.37	<0.37	1,300
Toluene	2.2 J	1.7 J	1.2 J	0.47 J	3.1 J	1.5 J	700
1,1,1- Trichloroethane	<0.16	<0.16	<0.16	<0.18	<0.15	<0.15	680[b]
1,1,2- Trichloroethane	<0.30	<0.31	<0.30	<0.34	<0.29	<0.29	NL
Trichloroethene	<0.41	<0.43	<0.41	<0.47	<0.40	<0.40	470
1,2,4-Trimethylbenzene	0.71 J	1.2 J	0.73 J	0.37 J	1.6 J	0.73 J	3,600[b]
1,3,5-Trimethylbenzene	0.32 J	0.60 J	0.41 J	<0.13	0.80 J	0.39 J	8,400[b]
Vinyl chloride	<0.50	<0.52	<0.49	<0.56	<0.48	<0.48	20[b]
M,p-xylene	1.4 J	1.4 J	0.95 J	<0.28	2.3	1.3 J	260*
O-xylene	<0.18	0.48 J	<0.18	<0.20	0.71 J	0.41 J	260*
Xylene (total)	1.4 J	1.9	0.95 J	<0.20	3	1.7	260*

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/21/2013	10/21/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.4	<3.0	<3.4	50
Benzene	2.2	1.3	1.3	60
Bromodichloromethane	<0.32	<0.28	<0.32	NL
Bromoform	<0.25	<0.22	<0.25	NL
Bromomethane	<0.85	<0.75	<0.85	NL
2- Butanone	<2.7	<2.4	<2.7	120
n-Butylbenzene	<0.15	<0.13	<0.15	12,000[b]
Sec-Butylbenzene	<0.14	<0.12	<0.14	11,000[b]
Tert-Butylbenzene	<0.31	<0.27	<0.31	5,900[b]
Carbon Disulfide	0.55 J	4.1	1.3 J	NL
Carbon Tetrachloride	<1.0	<0.89	<1.0	760[b]
Chlorobenzene	<0.24	<0.21	<0.23	1,100
Chloroethane	<0.52	<0.46	<0.52	NL
Chloroform	<0.25	<0.22	<0.25	370
Chloromethane	<1.1	<0.94	<1.1	NL
Dibromochloromethane	<0.37	<0.33	<0.37	NL
1,1- Dichloroethane	<0.29	<0.26	<0.29	270[b]
1,2- Dichloroethane	<0.47	<0.42	<0.47	20[a]
1,1- Dichloroethene	<0.46	<0.40	<0.45	330[b]
Cis-1,2- Dichloroethene	<0.44	<0.39	<0.44	250[b]
trans-1,2-Dichloroethene	<0.39	<0.34	<0.39	190[b]
1,2-Dichloroethene (total)	<0.21	<0.19	<0.21	NL
1,2- Dichloropropane	<0.37	<0.32	<0.37	NL
cis-1,3- Dichloropropene	<0.25	<0.22	<0.25	NL
trans-1,3-Dichloropropene	<0.26	<0.22	<0.25	NL
Ethylbenzene	0.47 J	0.25 J	0.22 J	1,000[b]
2- Hexanone	<2.1	<1.9	<2.1	NL
Isopropylbenzene	<0.24	<0.21	<0.24	NL
p-Isopropyltoluene	<0.14	<0.12	<0.14	NL
Methyl tert butyl ether	<0.35	<0.30	<0.34	930[b]
4- Methyl-2-pentanone	<1.6	<1.4	<1.6	NL
Methylene chloride	<1.3	<1.2	<1.3	50
Naphthalene	<0.69	<0.60	<0.68	12,000
n-Propylbenzene	<0.21	<0.19	<0.21	3,900[b]
Styrene	<0.18	<0.16	<0.18	NL
1,1,2,2-Tetrachloroethane	<0.26	<0.23	<0.26	NL
Tetrachloroethene	<0.39	<0.34	<0.38	1,300
Toluene	3.6 J	2.3 J	2.1 J	700
1,1,1- Trichloroethane	<0.16	<0.14	<0.16	680[b]
1,1,2- Trichloroethane	<0.30	<0.27	<0.30	NL
Trichloroethene	<0.41	<0.36	<0.41	470
1,2,4-Trimethylbenzene	1.4 J	0.82 J	0.71 J	3,600[b]
1,3,5-Trimethylbenzene	0.68 J	0.40 J	0.37 J	8,400[b]
Vinyl chloride	<0.50	<0.44	<0.50	20[b]
M,p-xylene	2.8	1.7	1.6 J	260*
O-xylene	0.83 J	0.49 J	0.38 J	260*
Xylene (total)	3.6	2.2	2	260*

µg/kg = micrograms per kilogram

NL = Not Listed

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<63	<65	<62	<67	<65	<65	NL
4-Chloro-3-methyl phenol	<71	<74	<69	<75	<73	<73	NL
2,4-Dichlorophenol	<81	<84	<79	<86	<83	<83	NL
2,4-Dimethylphenol	<460	<470	<450	<480	<470	<470	NL
2,4-Dinitrophenol	<700	<730	<680	<740	<720	<720	NL
4,6-Dinitro-o-cresol	<350	<360	<340	<370	<360	<360	NL
2-Methylphenol	<110	<120	<110	<120	<110	<110	330[b]
3&4-Methylphenol	<140	<140	<130	<140	<140	<140	(330[b]/330[b])[1]
2-Nitrophenol	<75	<77	<73	<79	<77	<77	NL
4-Nitrophenol	<520	<540	<510	<560	<540	<540	NL
Pentachlorophenol	<200	<200	<190	<210	<200	<200	800[b]
Phenol	<80	<82	<78	<85	<82	<82	330[b]
2,4,5-Trichlorophenol	<70	<73	<68	<74	<72	<72	NL
2,4,6-Trichlorophenol	<69	<72	<67	<73	<71	<71	NL
Acenaphthene	1230	359 J	79.7 J	907	93.8 J	<77	20,000
Acenaphthylene	95.4 J	608	<55	92.7 J	<58	<58	100,000[a,d]
Anthracene	4070	1260	195 J	2050	270 J	105 J	100,000[a,d]
Benzo(a)anthracene	9910	9830	735	7000	1450	348 J	1,000[c,d]
Benzo(a)pyrene	7960	8380	630	5310	1310	643	1,000[c]
Benzo(b)fluoranthene	7540	7340	658	6360	1270	569 J	1,000[c,d]
Benzo(g,h,i)perylene	4640	4400	491 J	3240	836	454 J	100,000[d]
Benzo(k)fluoranthene	6220	6380	338 J	3040	931	311 J	800[c,d]
4-Bromophenyl phenyl ether	<71	<73	<69	<75	<73	<73	NL
Butyl benzyl phthalate	<57	<59	<56	<61	<59	<59	NL
2-Chloronaphthalene	<76	<79	<74	<81	<78	<78	NL
4-Chloroaniline	<70	<73	<68	<74	<72	<72	NL
Carbazole	1910	642	231 J	1070	210 J	<68	NL
Chrysene	9060	8950	874	6830	1610	363 J	1,000[c,d]
Bis (2-chloroethoxy) methane	<66	<68	<64	<70	<68	<68	NL
Bis (2-chloroethyl) ether	<85	<88	<83	<91	<88	<88	NL
Bis (2-chloroisopropyl) ether	<100	<100	<98	<110	<100	<100	NL
4-Chlorophenyl phenyl ether	<86	<89	<84	<91	<88	<88	NL
1,2-Dichlorobenzene	<72	<75	<71	<77	<74	<75	1,100
1,3-Dichlorobenzene	<80	<83	<78	<85	<82	<83	2,400
1,4-Dichlorobenzene	<74	<77	<73	<79	<77	<77	1,800
2,4-Dinitrotoluene	<190	<190	<180	<200	<190	<190	NL
2,6-Dinitrotoluene	<70	<73	<68	<74	<72	<72	NL
3,3'-Dichlorobenzidine	<140	<150	<140	<150	<140	<140	NL
Dibenzo(a,h)anthracene	1410	1290	<65	975	234 J	445 J	330[b,d]
Dibenzofuran	1060	262 J	79.0 J	514 J	86.2 J	<80	7,000[d]
Di-n-butyl phthalate	<150	<150	<140	<160	<150	<150	NL
Di-n-octyl phthalate	<44	<45	<43	<46	<45	<45	NL
Diethyl phthalate	<70	<72	<68	<74	<72	<72	NL
Dimethyl phthalate	<81	<84	<79	<86	<83	<84	NL
Bis (2-ethylhexyl) phthalate	<52	<54	<51	<55	<53	<53	NL
Fluoranthene	20100	16400	1790	14400	2730	649	100,000[a,d]
Fluorene	1580	369 J	<73	725	<77	<77	30,000
Hexachlorobenzene	<88	<91	<86	<93	<90	<90	330[b]
Hexachlorobutadiene	<81	<84	<79	<86	<83	<84	NL
Hexachlorocyclopentadiene	<700	<730	<680	<740	<720	<720	NL
Hexachloroethane	<67	<70	<66	<72	<69	<70	NL
Indeno (1,2,3-cd) pyrene	5230	5220	497 J	3610	845	506 J	500[c,d]
Isophorone	<65	<67	<63	<68	<66	<67	NL
2-Methylnaphthalene	340 J	166 J	<69	161 J	113 J	<73	NL
2-Nitroaniline	<70	<73	<68	<74	<72	<72	NL
3-Nitroaniline	<150	<160	<150	<160	<160	<160	NL
4-Nitroaniline	<70	<73	<68	<74	<72	<72	NL
Naphthalene	445 J	566 J	<88	181 J	104 J	<93	12,000[d]
Nitrobenzene	<76	<78	<74	<80	<78	<78	NL
N-Nitroso-Di-n-propylamine	<80	<83	<78	<85	<82	<83	NL
N-Nitrosodiphenylamine	<85	<88	<83	<90	<87	<87	NL
Phenanthrene	16200	5170	1320	12200	1690	482 J	100,000[d]
Pyrene	15800	16700	1590	13500	2870	619	100,000[d]
1,2,4-Trichlorobenzene	<77	<80	<75	<82	<79	<80	NL

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/21/2013	10/21/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<65	<59	<62	NL
4-Chloro-3-methyl phenol	<73	<66	<69	NL
2,4-Dichlorophenol	<82	<75	<79	NL
2,4-Dimethylphenol	<470	<430	<450	NL
2,4-Dinitrophenol	<720	<650	<680	NL
4,6-Dinitro-o-cresol	<360	<330	<340	NL
2-Methylphenol	<110	<100	<110	330[b]
3&4-Methylphenol	<140	<130	<130	(330[b]/330[b])[1]
2-Nitrophenol	<76	<70	<73	NL
4-Nitrophenol	<540	<490	<510	NL
Pentachlorophenol	<200	<180	<190	800[b]
Phenol	<81	<74	<78	330[b]
2,4,5-Trichlorophenol	<72	<65	<68	NL
2,4,6-Trichlorophenol	<71	<65	<67	NL
Acenaphthene	<77	96.5 J	91.3 J	20,000
Acenaphthylene	<57	75.8 J	<55	100,000[a,d]
Anthracene	<69	328 J	246 J	100,000[a,d]
Benzo(a)anthracene	404 J	1760	877	1,000[c,d]
Benzo(a)pyrene	795	1740	1020	1,000[c]
Benzo(b)fluoranthene	828	1660	1100	1,000[c,d]
Benzo(g,h,i)perylene	705	1100	867	100,000[d]
Benzo(k)fluoranthene	372 J	1400	724	800[c,d]
4-Bromophenyl phenyl ether	<72	<66	<69	NL
Butyl benzyl phthalate	<58	<53	<56	NL
2-Chloronaphthalene	<78	<71	<74	NL
4-Chloroaniline	<72	<65	<68	NL
Carbazole	<68	259 J	260 J	NL
Chrysene	466 J	1830	927	1,000[c,d]
Bis (2-chloroethoxy) methane	<67	<61	<64	NL
Bis (2-chloroethyl) ether	<87	<80	<83	NL
Bis (2-chloroisopropyl) ether	<100	<94	<98	NL
4-Chlorophenyl phenyl ether	<88	<80	<84	NL
1,2-Dichlorobenzene	<74	<68	<71	1,100
1,3-Dichlorobenzene	<82	<75	<78	2,400
1,4-Dichlorobenzene	<76	<70	<73	1,800
2,4-Dinitrotoluene	<190	<170	<180	NL
2,6-Dinitrotoluene	<72	<65	<68	NL
3,3'-Dichlorobenzidine	<140	<130	<140	NL
Dibenzo(a,h)anthracene	503 J	637	517 J	330[b,d]
Dibenzofuran	<79	<72	113 J	7,000[d]
Di-n-butyl phthalate	<150	<140	<140	NL
Di-n-octyl phthalate	<45	<41	<43	NL
Diethyl phthalate	<71	<65	<68	NL
Dimethyl phthalate	<83	<76	<79	NL
Bis (2-ethylhexyl) phthalate	<53	<48	<50	NL
Fluoranthene	727	3930	2140	100,000[a,d]
Fluorene	<76	<70	98.7 J	30,000
Hexachlorobenzene	<90	<82	<86	330[b]
Hexachlorobutadiene	<83	<76	<79	NL
Hexachlorocyclopentadiene	<720	<650	<680	NL
Hexachloroethane	<69	<63	<66	NL
Indeno (1,2,3-cd) pyrene	687	1040	809	500[c,d]
Isophorone	<66	<60	<63	NL
2-Methylnaphthalene	<73	<66	<69	NL
2-Nitroaniline	<72	<65	<68	NL
3-Nitroaniline	<160	<140	<150	NL
4-Nitroaniline	<72	<65	<68	NL
Naphthalene	<92	<84	<88	12,000[d]
Nitrobenzene	<77	<71	<74	NL
N-Nitroso-Di-n-propylamine	<82	<75	<78	NL
N-Nitrosodiphenylamine	<86	<79	<82	NL
Phenanthrene	375 J	1570	1430	100,000[d]
Pyrene	708	3510	1910	100,000[d]
1,2,4-Trichlorobenzene	<79	<72	<75	NL

µg/kg = micrograms per kilogram
J = Indicates an estimated value
NL = Not Listed
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

D. TCLP Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6
Date Sampled	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/21/2013**
Units	**mg/l**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	**mg/l**
Arsenic	<0.0029	0.0045 B	<0.0029	0.0031 B	<0.0029	0.0032 B
Barium	0.74	1.1	1.2	1	1.4	0.78
Cadmium	0.0013 B	0.0049	0.0015 B	0.0026 B	0.0021 B	0.0022 B
Chromium	0.0049 B	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
Lead	0.012	0.062	0.012	0.48	0.046	0.043
Mercury	<0.000067	<0.000067	<0.000067	<0.000067	<0.000067	<0.000067
Selenium	0.0056 B	0.0049 B	<0.0048	0.0051 B	<0.0048	<0.0048
Silver	0.0013 B	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Regulatory Level
Date Sampled	**10/21/2013**	**10/21/2013**	**10/21/2013**	
Units	**mg/l**	**mg/l**	**mg/l**	**mg/l**
Arsenic	0.0042 B	0.0031 B	0.0048 B	5.0
Barium	0.73	0.8	0.88	100.0
Cadmium	0.00080 B	0.0011 B	0.0031 B	1.0
Chromium	0.0027 B	0.0016 B	<0.0014	5.0
Lead	0.0099 B	0.0086 B	0.14	5.0
Mercury	<0.000067	<0.000067	<0.000067	0.2
Selenium	<0.0048	<0.0048	<0.0048	1.0
Silver	<0.0010	<0.0010	<0.0010	5.0

mg/l = milligrams per liter
B = Indicates analyte found in associated method blank.
Regulatory Level = Concentration at which a solid waste exhibits the characteristic of toxicity and is therefore hazardous.
Code of Federal Regulations, Title 40, 261.24

G. Herbicides by USEPA SW-846 Method 8151

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/16/2013**	**10/21/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2,4-D	<1.9	<1.9	<1.8	<2.0	<1.9	5.8 J [a]	NL
2,4,5-TP (Silvex)	<2.3	<2.3	<2.2	<2.4	<2.3	<2.3	3,800
2,4,5-T	<1.3	<1.3	<1.3	<1.4	<1.4	<1.4	NL

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**10/21/2013**	**10/21/2013**	**10/21/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2,4-D	7.1 J	5.5 J [a]	9.0 J	NL
2,4,5-TP (Silvex)	<2.3	<2.2	<2.2	3,800
2,4,5-T	<1.3	<1.3	<1.3	NL

µg/kg = micrograms per kilogram
[a] = Elevated reporting limit due to dilution required for matrix interference.
NL = Not Listed
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006
(375-6.8, Soil Cleanup Objective Tables)

H. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.7	<1.7	<1.7	<1.8	<1.8	<1.7	5[a]
Alpha-BHC	<1.4	<1.4	<1.3	<1.4	<1.4	<1.4	20
Beta-BHC	<1.9	<1.9	<1.8	<1.9	<1.9	<1.9	36
Delta-BHC	<1.1	<1.1	<1.0	<1.1	<1.1	<1.1	40
Gamma-BHC (Lindane)	<1.7	<1.7	<1.7	<1.8	<1.8	<1.7	100
Alpha-Chlordane	<2.1	<2.1	<2.1	<2.2	<2.2	<2.2	94
Gamma-Chlordane	<1.7	<1.7	<1.7	<1.8	<1.7	<1.7	NL
Dieldrin	<1.8	<1.8	<1.8	<1.9	<1.8	<1.8	5[a]
4,4'-DDD	<1.9	<1.9	<1.8	<1.9	<1.9	<1.9	3.3[b]
4,4'-DDE	<2.3	<2.3	<2.3	<2.4	<2.4	<2.4	3.3[b]
4,4'-DDT	<1.8	<1.8	<1.7	<1.8	<1.8	<1.8	3.3[b]
Endrin	<2.3	<2.3	<2.2	<2.3	<2.3	<2.3	14
Endosulfan sulfate	<1.9	<1.9	<1.9	<2.0	<2.0	<1.9	2,400*[,c]
Endrin aldehyde	<1.8	<1.8	<1.7	<1.8	<1.8	<1.8	NL
Endosulfan-I	<2.2	<2.2	<2.2	<2.3	<2.3	<2.2	2,400*[,c]
Endosulfan-II	<1.8	<1.8	<1.8	<1.9	<1.9	<1.8	2,400*[,c]
Heptachlor	<1.7	<1.7	<1.6	<1.7	<1.7	<1.7	42
Heptachlor epoxide	<1.8	<1.8	<1.7	<1.8	<1.8	<1.8	NL
Methoxychlor	<2.3	<2.3	<2.2	<2.3	<2.3	<2.3	NL
Endrin ketone	<2.1	<2.1	<2.0	<2.1	<2.1	<2.1	NL
Toxaphene	<30	<30	<29	<30	<30	<30	NL

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/21/2013	10/21/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.7	<1.6	<1.7	5[a]
Alpha-BHC	<1.3	<1.3	<1.3	20
Beta-BHC	<1.8	<1.7	<1.8	36
Delta-BHC	<1.0	<1.0	<1.0	40
Gamma-BHC (Lindane)	<1.7	<1.6	<1.7	100
Alpha-Chlordane	<2.1	<2.0	<2.1	94
Gamma-Chlordane	<1.7	<1.6	<1.7	NL
Dieldrin	<1.8	<1.7	<1.8	5[a]
4,4'-DDD	<1.8	<1.7	<1.8	3.3[b]
4,4'-DDE	<2.3	<2.2	<2.3	3.3[b]
4,4'-DDT	<1.7	<1.7	<1.7	3.3[b]
Endrin	<2.2	<2.1	<2.2	14
Endosulfan sulfate	<1.9	<1.8	<1.9	2,400*[,c]
Endrin aldehyde	<1.7	<1.6	<1.7	NL
Endosulfan-I	<2.2	<2.1	<2.2	2,400*[,c]
Endosulfan-II	<1.8	<1.7	<1.8	2,400*[,c]
Heptachlor	<1.6	<1.6	<1.6	42
Heptachlor epoxide	<1.7	<1.6	<1.7	NL
Methoxychlor	<2.2	<2.1	<2.2	NL
Endrin ketone	<2.0	<1.9	<2.0	NL
Toxaphene	<29	<28	<29	NL

µg/kg = micrograms per kilogram
NL = Not Listed
[a] = For constituents where the calculated Soil Cleanup Objective was lower thal soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.
* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

I. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP Fill WC1	BCP Fill WC2	BCP Fill WC3	BCP Fill WC4	BCP Fill WC5	BCP Fill WC6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<13	<13	<13	<13	<13	<13	-
Aroclor 1221	<17	<17	<17	<17	<17	<17	-
Aroclor 1232	<13	<14	<13	<14	<14	<14	-
Aroclor 1242	<14	<14	<14	<15	<14	<14	-
Aroclor 1248	<13	<13	<12	<13	<13	<13	-
Aroclor 1254	<21	<21	<20	<21	<21	<21	-
Aroclor 1260	<14	<14	<14	<15	<15	<15	-
Total Aroclor	ND	ND	ND	ND	ND	ND	100

Sample ID	BCP Fill WC7	BCP Fill WC8	BCP Fill WC9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/21/2013	10/21/2013	10/21/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<13	<12	<13	-
Aroclor 1221	<17	<16	<17	-
Aroclor 1232	<13	<12	<13	-
Aroclor 1242	<14	<13	<14	-
Aroclor 1248	<12	<12	<12	-
Aroclor 1254	<20	<19	<20	-
Aroclor 1260	<14	<13	<14	-
Total Aroclor	ND	ND	ND	100

µg/kg = micrograms per kilogram
ND = Not Detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006
(375-6.8, Soil Cleanup Objective Tables)

Table 18

250 Delaware Avenue
Buffalo, New York

Analytical Results for Verification Soil Samples Collected from the Bottom of the Petroleum-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP Bottom 3	BCP Bottom 4	BCP Bottom 5	BCP Bottom 6	BCP Bottom 7	BCP Bottom 8	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/16/2013	9/18/2013	9/18/2013	9/18/2013	9/20/2013	9/20/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<2.9	<3.6	<2.6	<2.9	<2.5	<2.3	50
Benzene	5.5	5.9	8.6	4.3	3.6	4.6	60
Bromodichloromethane	<0.27	<0.34	<0.25	<0.27	<0.23	<0.21	NL
Bromoform	<0.22	<0.27	<0.20	<0.22	<0.19	<0.17	NL
Bromomethane	<0.73	<0.90	<0.66	<0.73	<0.62	<0.56	NL
2- Butanone	<2.3	<2.9	<2.1	<2.3	<2.0	<1.8	120
n-Butylbenzene	<0.13	<0.16	<0.12	<0.13	<0.11	<0.099	12,000[b]
sec- Butylbenzene	<0.12	1.4 J	1.0 J	0.64 J	4.5	9.7	11,000[b]
tert- Butylbenzene	<0.27	0.79 J	<0.24	0.31 J	<0.23	0.63 J	5,900[b]
Carbon Disulfide	<0.11	<0.14	<0.10	<0.11	<0.097	<0.087	NL
Carbon Tetrachloride	<0.87	<1.1	<0.79	<0.87	<0.74	<0.67	760[b]
Chlorobenzene	<0.20	<0.25	<0.18	<0.20	<0.17	<0.16	1,100
Chloroethane	<0.45	<0.55	<0.41	<0.45	<0.38	<0.35	NL
Chloroform	<0.22	<0.27	<0.20	<0.22	<0.18	<0.17	370
Chloromethane	<0.92	<1.1	<0.82	<0.91	<0.78	<0.70	NL
Dibromochloromethane	<0.32	<0.39	<0.29	<0.32	<0.27	<0.25	NL
1,1- Dichloroethane	<0.25	<0.31	<0.22	<0.25	<0.21	<0.19	270[b]
1,2- Dichloroethane	<0.41	<0.50	<0.37	<0.41	<0.35	<0.31	20[a]
1,1- Dichloroethene	<0.39	<0.48	<0.35	<0.39	<0.33	<0.30	330[b]
Cis-1,2- Dichloroethene	<0.38	<0.47	<0.34	<0.38	<0.32	<0.29	250[b]
trans-1,2-Dichloroethene	<0.34	<0.41	<0.30	<0.33	<0.28	<0.26	190[b]
1,2- Dichloroethene (total)	<0.18	<0.23	<0.17	<0.18	<0.16	<0.14	NL
1,2- Dichloropropane	<0.32	<0.39	<0.29	<0.32	<0.27	<0.24	NL
cis-1,3- Dichloropropene	<0.22	<0.27	<0.20	<0.22	<0.18	<0.17	NL
trans-1,3-Dichloropropene	<0.22	<0.27	<0.20	<0.22	<0.19	<0.17	NL
Ethylbenzene	1.3 J	1.4 J	20.9	1.6	0.84 J	1.1 J	1,000[b]
2- Hexanone	<1.8	<2.3	<1.6	<1.8	<1.6	<1.4	NL
Isopropylbenzene	<0.21	<0.26	5.7	1.7 J	0.20 J	0.47 J	NL
p- Isopropyltoluene	<0.12	<0.15	1.7 J	2.2 J	<0.10	<0.092	NL
Methyl tert butyl ether	<0.30	<0.37	<0.27	<0.30	<0.25	<0.23	930[b]
4- Methyl-2-pentanone	<1.4	<1.7	<1.3	<1.4	<1.2	<1.1	NL
Methylene chloride	<1.2	<1.4	<1.0	<1.2	<0.98	<0.89	50
Naphthalene	<0.59	<0.73	12.9	2.4 J	<0.50	<0.45	12,000
n-Propylbenzene	0.20 J	<0.22	8	2.5 J	0.24 J	0.39 J	3,900[b]
Styrene	<0.15	<0.19	<0.14	<0.15	<0.13	<0.12	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.27	<0.20	<0.22	<0.19	<0.17	NL
Tetrachloroethene	<0.33	<0.41	<0.30	<0.33	<0.28	<0.26	1,300
Toluene	10.6	10.7	8.1	7.0	7.5	9.4	700
1,1,1- Trichloroethane	<0.14	<0.17	<0.12	<0.14	<0.12	<0.10	680[b]
1,1,2- Trichloroethane	<0.26	<0.32	<0.23	<0.26	<0.22	3.2	NL
Trichloroethene	<0.36	<0.44	<0.32	<0.36	<0.30	<0.27	470
1,2,4- Trimethylbenzene	2.1 J	2.2 J	2.8 J	3.8	1.5 J	2.2 J	3,600[b]
1,3,5- Trimethylbenzene	0.91 J	0.88 J	1.0 J	1.3 J	0.66 J	0.88 J	8,400[b]
Vinyl chloride	<0.43	<0.53	<0.39	<0.43	<0.36	<0.33	20[b]
m,p- Xylene	6.7	7	6.9	6.1	4.8	6.3	260*
o-Xylene	2.3	2.1	2.7	1.7	1.5	1.9	260*
Xylene (total)	9.1	9.1	9.6	7.8	6.2	8.2	260*

Sample ID	BCP Bottom 9	BCP Bottom 10	BCP Bottom 11	BCP Bottom 12	BCP Bottom 12 Duplicate[1]	BCP Bottom 13	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/20/2013**	**9/20/2013**	**10/2/2013**	**10/2/2013**	**10/2/2013**	**10/4/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<2.4	<3.8	<3.1	<3.1	<3.2	<4.2	50
Benzene	7.3	11.9	6.3	7.8	6	13.1	60
Bromodichloromethane	<0.23	<0.36	<0.28	<0.28	<0.30	<0.39	NL
Bromoform	<0.18	<0.29	<0.23	<0.23	<0.24	<0.31	NL
Bromomethane	<0.61	<0.96	<0.77	<0.77	<0.80	<1.0	NL
2- Butanone	<1.9	<3.0	<2.4	<2.4	<2.5	<3.3	120
n-Butylbenzene	<0.11	<0.17	<0.14	<0.14	<0.14	<0.19	12,000[b]
sec- Butylbenzene	0.28 J	0.36 J	<0.12	0.66 J	0.91 J	1.3 J	11,000[b]
tert- Butylbenzene	<0.22	<0.35	<0.28	<0.28	<0.29	<0.38	5,900[b]
Carbon Disulfide	<0.094	<0.15	<0.12	0.42 J	<0.12	<0.16	NL
Carbon Tetrachloride	<0.72	<1.1	<0.91	<0.91	<0.95	<1.3	760[b]
Chlorobenzene	<0.17	<0.26	<0.21	<0.21	<0.22	<0.29	1,100
Chloroethane	<0.37	<0.59	<0.47	<0.47	<0.49	<0.65	NL
Chloroform	<0.18	<0.28	<0.23	<0.23	<0.24	<0.31	370
Chloromethane	<0.76	<1.2	<0.96	<0.96	<1.0	<1.3	NL
Dibromochloromethane	<0.26	<0.42	<0.33	<0.33	<0.35	<0.46	NL
1,1- Dichloroethane	<0.21	<0.33	<0.26	<0.26	<0.27	<0.36	270[b]
1,2- Dichloroethane	<0.34	<0.53	<0.43	<0.43	<0.45	<0.58	20[a]
1,1- Dichloroethene	<0.32	<0.51	<0.41	<0.41	<0.43	<0.56	330[b]
Cis-1,2- Dichloroethene	<0.32	<0.50	<0.40	<0.40	<0.42	<0.55	250[b]
trans-1,2-Dichloroethene	<0.28	<0.44	<0.35	<0.35	<0.37	<0.48	190[b]
1,2- Dichloroethene (total)	<0.15	<0.24	<0.19	<0.19	<0.20	<0.26	NL
1,2- Dichloropropane	<0.26	<0.41	<0.33	<0.33	<0.35	<0.45	NL
cis-1,3- Dichloropropene	<0.18	<0.28	<0.23	<0.23	<0.24	<0.31	NL
trans-1,3-Dichloropropene	<0.18	<0.29	<0.23	<0.23	<0.24	<0.31	NL
Ethylbenzene	2.2	2.8	1.3 J	3.1	2.9	3.2	1,000[b]
2- Hexanone	<1.5	<2.4	<1.9	<1.9	<2.0	<2.6	NL
Isopropylbenzene	0.36 J	0.89 J	0.23 J	0.54 J	0.37 J	0.66 J	NL
p- Isopropyltoluene	<0.099	<0.16	<0.13	<0.13	<0.13	<0.17	NL
Methyl tert butyl ether	<0.25	<0.39	<0.31	<0.31	<0.33	<0.43	930[b]
4- Methyl-2-pentanone	<1.2	<1.8	<1.5	<1.5	<1.5	<2.0	NL
Methylene chloride	<0.96	<1.5	<1.2	<1.2	<1.3	<1.7	50
Naphthalene	0.50 J	<0.77	<0.62	<0.62	<0.64	<0.85	12,000
n-Propylbenzene	0.39 J	1.1 J	0.29 J	0.94 J	0.62 J	0.91 J	3,900[b]
Styrene	<0.13	<0.20	<0.16	<0.16	<0.17	<0.22	NL
1,1,2,2- Tetrachloroethane	<0.18	<0.29	<0.23	<0.23	<0.24	<0.32	NL
Tetrachloroethene	<0.28	<0.43	<0.35	<0.35	<0.36	<0.48	1,300
Toluene	15.5	25	12.1	20.7	22	20.3	700
1,1,1- Trichloroethane	<0.11	<0.18	<0.14	<0.14	<0.15	<0.19	680[b]
1,1,2- Trichloroethane	<0.22	<0.34	<0.27	<0.27	<0.28	<0.37	NL
Trichloroethene	<0.29	<0.46	<0.37	<0.37	<0.39	<0.51	470
1,2,4- Trimethylbenzene	4.1	6.0	2.9 J	6.3	4.9	7.3	3,600[b]
1,3,5- Trimethylbenzene	1.6 J	2.4 J	1.2 J	2.3 J	1.8 J	2.7 J	8,400[b]
Vinyl chloride	<0.35	<0.56	<0.45	<0.45	<0.47	<0.61	20[b]
m,p- Xylene	11.1	15.8	6.9	13.8	10.8	15.1	260*
o-Xylene	3.5	5.1	2.2	4.6	4.6	4.5	260*
Xylene (total)	14.6	20.9	9.2	18.3	15.4	19.6	260*

Sample ID	BCP Bottom 14	BCP Bottom 15	BCP Bottom 16	BCP Bottom 17	BCP Bottom 18	BCP Bottom 19	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/4/2013	10/8/2013	10/9/2013	10/14/2013	10/15/2013	10/15/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<4.6	<260	<3.4	<3.0	<2.7	<2.9	50
Benzene	8.1	21.7 J	7.4	9.5	31	8.6	60
Bromodichloromethane	<0.43	<24	<0.32	<0.28	<0.25	<0.27	NL
Bromoform	<0.34	<19	<0.26	<0.23	<0.20	<0.22	NL
Bromomethane	<1.1	<64	<0.86	<0.76	<0.68	<0.73	NL
2- Butanone	<3.6	<200	<2.7	<2.4	<2.2	<2.3	120
n-Butylbenzene	<0.20	<11	<0.15	<0.13	<0.12	<0.13	12,000[b]
sec- Butylbenzene	<0.19	<10	1.3 J	1.9 J	<0.11	<0.12	11,000[b]
tert- Butylbenzene	<0.42	<23	<0.31	<0.28	<0.25	<0.27	5,900[b]
Carbon Disulfide	<0.18	<10	<0.13	1.1 J	<0.11	<0.11	NL
Carbon Tetrachloride	<1.4	<76	<1.0	<0.90	<0.81	<0.87	760[b]
Chlorobenzene	<0.32	<18	<0.24	<0.21	<0.19	<0.20	1,100
Chloroethane	<0.70	<39	<0.53	<0.47	<0.42	<0.45	NL
Chloroform	<0.34	<19	<0.25	<0.22	6	<0.22	370
Chloromethane	<1.4	<80	<1.1	<0.95	<0.85	<0.91	NL
Dibromochloromethane	<0.50	<28	<0.37	<0.33	<0.30	<0.32	NL
1,1- Dichloroethane	<0.39	<22	<0.29	<0.26	<0.23	<0.25	270[b]
1,2- Dichloroethane	<0.64	<36	<0.48	<0.42	<0.38	<0.41	20[a]
1,1- Dichloroethene	<0.61	<34	<0.46	<0.41	<0.36	<0.39	330[b]
Cis-1,2- Dichloroethene	<0.60	<33	<0.45	<0.40	<0.36	<0.38	250[b]
trans-1,2-Dichloroethene	<0.52	<29	<0.39	<0.35	<0.31	<0.33	190[b]
1,2- Dichloroethene (total)	<0.29	<16	<0.21	<0.19	<0.17	<0.18	NL
1,2- Dichloropropane	<0.50	<28	<0.37	<0.33	<0.29	<0.32	NL
cis-1,3- Dichloropropene	<0.34	<19	<0.25	<0.22	<0.20	<0.22	NL
trans-1,3-Dichloropropene	<0.34	<19	<0.26	<0.23	<0.20	<0.22	NL
Ethylbenzene	3	388	33.8	12.2	1.5	6.3	1,000[b]
2- Hexanone	<2.9	<160	<2.1	<1.9	<1.7	<1.8	NL
Isopropylbenzene	0.43 J	30.6 J	1.7 J	2.7 J	<0.19	0.44 J	NL
p- Isopropyltoluene	<0.19	<10	0.85 J	0.97 J	<0.11	<0.12	NL
Methyl tert butyl ether	<0.47	<26	<0.35	<0.31	<0.28	<0.30	930[b]
4- Methyl-2-pentanone	<2.2	<120	<1.6	<1.4	<1.3	<1.4	NL
Methylene chloride	<1.8	<100	<1.4	<1.2	<1.1	<1.2	50
Naphthalene	<0.92	<52	10.6	10.5	<0.55	<0.59	12,000
n-Propylbenzene	0.63 J	136 J	7	8.1	0.36 J	0.56 J	3,900[b]
Styrene	<0.24	<14	<0.18	<0.16	<0.14	<0.15	NL
1,1,2,2- Tetrachloroethane	<0.35	<19	<0.26	<0.23	<0.21	<0.22	NL
Tetrachloroethene	<0.52	<29	<0.39	<0.34	<0.31	<0.33	1,300
Toluene	18.6	678	66.5	39.5	9.7	13.4	700
1,1,1- Trichloroethane	<0.21	<12	<0.16	<0.14	<0.13	<0.14	680[b]
1,1,2- Trichloroethane	<0.41	<23	<0.31	<0.27	<0.24	<0.26	NL
Trichloroethene	<0.56	<31	<0.42	<0.37	<0.33	<0.36	470
1,2,4- Trimethylbenzene	6.7	478	60.9	80.7	3.3 J	3.4 J	3,600[b]
1,3,5- Trimethylbenzene	2.5 J	<8.5	15.5	23.4	1.3 J	1.3 J	8,400[b]
Vinyl chloride	<0.67	<37	<0.50	<0.44	<0.40	<0.43	20[b]
m,p- Xylene	14.4	1270	67.1	83.3	7.3	11.8	260*
o-Xylene	4.3	476	21.1	35.1	2.5	4.4	260*
Xylene (total)	18.7	1750	88.2	118	9.8	16.3	260*

Sample ID	BCP Bottom 20A	BCP Bottom 21	BCP Bottom 22	BCP Bottom 23	BCP Bottom 24	BCP Bottom 24 Duplicate[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/8/2013**	**10/17/2013**	**10/30/2013**	**10/30/2013**	**10/31/2013**	**10/31/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<2.9	<2.8	<3.2	<3.2	<3.6	<3.7	50
Benzene	5.1	5.2	7.6	6.5	6.9	7.2	60
Bromodichloromethane	<0.27	<0.26	<0.30	<0.30	<0.33	<0.35	NL
Bromoform	<0.22	<0.21	<0.24	<0.24	<0.27	<0.28	NL
Bromomethane	<0.74	<0.70	<0.81	<0.80	<0.90	<0.93	NL
2- Butanone	<2.3	<2.2	<2.6	<2.6	<2.8	<3.0	120
n-Butylbenzene	<0.13	<0.12	<0.14	<0.14	<0.16	<0.16	12,000[b]
sec- Butylbenzene	0.40 J	<0.11	<0.13	<0.13	<0.15	<0.15	11,000[b]
tert- Butylbenzene	<0.27	<0.26	<0.29	<0.29	<0.33	<0.34	5,900[b]
Carbon Disulfide	<0.11	<0.11	<0.13	<0.12	0.59 J	<0.15	NL
Carbon Tetrachloride	<0.88	<0.84	<0.96	<0.96	<1.1	<1.1	760[b]
Chlorobenzene	<0.20	<0.20	<0.22	<0.22	<0.25	<0.26	1,100
Chloroethane	<0.45	<0.43	<0.50	<0.49	<0.55	<0.57	NL
Chloroform	<0.22	<0.21	<0.24	<0.24	<0.27	<0.28	370
Chloromethane	<0.92	<0.88	<1.0	<1.0	<1.1	<1.2	NL
Dibromochloromethane	<0.32	<0.31	<0.35	<0.35	<0.39	<0.41	NL
1,1- Dichloroethane	<0.25	<0.24	<0.28	<0.27	<0.31	<0.32	270[b]
1,2- Dichloroethane	<0.41	<0.39	<0.45	<0.45	<0.50	<0.52	20[a]
1,1- Dichloroethene	<0.39	<0.38	<0.43	<0.43	<0.48	<0.50	330[b]
Cis-1,2- Dichloroethene	<0.38	<0.37	<0.42	<0.42	<0.47	<0.49	250[b]
trans-1,2-Dichloroethene	<0.34	<0.32	<0.37	<0.37	<0.41	<0.43	190[b]
1,2- Dichloroethene (total)	<0.19	<0.18	<0.20	<0.20	<0.23	<0.23	NL
1,2- Dichloropropane	<0.32	<0.31	<0.35	<0.35	<0.39	<0.40	NL
cis-1,3- Dichloropropene	<0.22	<0.21	<0.24	<0.24	<0.27	<0.28	NL
trans-1,3-Dichloropropene	<0.22	<0.21	<0.24	<0.24	<0.27	<0.28	NL
Ethylbenzene	1.1 J	1.2 J	1.7	1.5 J	1.6 J	1.6 J	1,000[b]
2- Hexanone	<1.8	<1.8	<2.0	<2.0	<2.2	<2.3	NL
Isopropylbenzene	<0.21	<0.20	<0.23	<0.23	<0.26	<0.27	NL
p- Isopropyltoluene	<0.12	<0.12	<0.13	<0.13	<0.15	<0.15	NL
Methyl tert butyl ether	<0.30	<0.29	<0.33	<0.33	<0.37	<0.38	930[b]
4- Methyl-2-pentanone	<1.4	<1.3	<1.5	<1.5	<1.7	<1.8	NL
Methylene chloride	<1.2	<1.1	<1.3	<1.3	<1.4	<1.5	50
Naphthalene	<0.59	<0.57	<0.65	<0.65	<0.72	<0.75	12,000
n-Propylbenzene	0.25 J	0.26 J	0.31 J	0.30 J	0.32 J	0.31 J	3,900[b]
Styrene	<0.16	<0.15	<0.17	<0.17	<0.19	<0.20	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.21	<0.24	<0.24	<0.27	<0.28	NL
Tetrachloroethene	<0.33	<0.32	<0.37	<0.37	<0.41	<0.42	1,300
Toluene	8.7	10.4	14.8	13.2	13.4	13.8	700
1,1,1- Trichloroethane	<0.14	<0.13	<0.15	<0.15	<0.17	<0.17	680[b]
1,1,2- Trichloroethane	<0.26	<0.25	<0.29	<0.29	<0.32	<0.33	NL
Trichloroethene	<0.36	<0.34	<0.39	<0.39	<0.44	<0.45	470
1,2,4- Trimethylbenzene	1.9 J	3.0 J	3.8 J	3.2 J	3.3 J	3.2 J	3,600[b]
1,3,5- Trimethylbenzene	0.78 J	1.2 J	1.5 J	1.4 J	1.4 J	1.3 J	8,400[b]
Vinyl chloride	<0.43	<0.41	<0.47	<0.47	<0.52	<0.55	20[b]
m,p- Xylene	5.2	6.9	9.6	7.9	8.2	8.3	260*
o-Xylene	1.7	2.3	3.2	2.7	2.7	2.9	260*
Xylene (total)	6.9	9.1	12.8	10.7	11	11.2	260*

Sample ID	BCP Bottom 25	BCP Bottom 26	BCP Bottom 27	BCP Bottom 28	BCP Bottom 29	BCP Bottom 30	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/1/2013	11/4/2013	11/7/2013	11/11/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.7	<3.2	<3.4	<3.2	<2.9	<3.1	50
Benzene	8.2	5.8	6.1	5.8	34.8	7	60
Bromodichloromethane	<0.34	<0.30	<0.32	<0.30	<0.27	<0.29	NL
Bromoform	<0.27	<0.24	<0.26	<0.24	<0.22	<0.23	NL
Bromomethane	<0.91	<0.81	<0.86	<0.79	<0.72	<0.78	NL
2- Butanone	<2.9	<2.6	<2.7	<2.5	<2.3	<2.5	120
n-Butylbenzene	<0.16	<0.14	<0.15	<0.14	<0.13	<0.14	12,000[b]
sec- Butylbenzene	<0.15	<0.13	<0.14	<0.13	<0.12	<0.13	11,000[b]
tert- Butylbenzene	<0.33	<0.30	<0.31	<0.29	<0.26	<0.28	5,900[b]
Carbon Disulfide	<0.14	<0.13	<0.13	<0.12	<0.11	0.34 J	NL
Carbon Tetrachloride	<1.1	<0.96	<1.0	<0.95	<0.86	<0.93	760[b]
Chlorobenzene	<0.25	<0.22	<0.24	<0.22	0.48 J	<0.22	1,100
Chloroethane	<0.56	<0.50	<0.53	<0.49	<0.44	<0.48	NL
Chloroform	<0.27	<0.24	<0.25	<0.24	<0.21	<0.23	370
Chloromethane	<1.1	<1.0	<1.1	<0.99	<0.90	<0.98	NL
Dibromochloromethane	<0.40	<0.35	<0.37	<0.35	<0.31	<0.34	NL
1,1- Dichloroethane	<0.31	<0.28	<0.29	<0.27	<0.25	<0.27	270[b]
1,2- Dichloroethane	<0.51	<0.45	<0.48	<0.44	<0.40	<0.43	20[a]
1,1- Dichloroethene	<0.49	<0.43	<0.46	<0.43	<0.39	<0.42	330[b]
Cis-1,2- Dichloroethene	<0.48	<0.42	<0.45	<0.41	<0.38	<0.41	250[b]
trans-1,2-Dichloroethene	<0.42	<0.37	<0.39	<0.36	<0.33	<0.36	190[b]
1,2- Dichloroethene (total)	<0.23	<0.20	<0.21	<0.20	<0.18	<0.20	NL
1,2- Dichloropropane	<0.40	<0.35	<0.37	<0.34	<0.31	<0.34	NL
cis-1,3- Dichloropropene	<0.27	<0.24	<0.25	<0.24	<0.21	<0.23	NL
trans-1,3-Dichloropropene	<0.27	<0.24	<0.26	<0.24	<0.22	<0.23	NL
Ethylbenzene	1.5 J	1.0 J	1.1 J	1.1 J	1.5	2.1	1,000[b]
2- Hexanone	<2.3	<2.0	<2.1	<2.0	<1.8	<2.0	NL
Isopropylbenzene	<0.26	<0.23	<0.25	<0.23	0.81 J	0.30 J	NL
p- Isopropyltoluene	<0.15	<0.13	<0.14	<0.13	<0.12	<0.13	NL
Methyl tert butyl ether	<0.37	<0.33	<0.35	<0.32	<0.29	<0.32	930[b]
4- Methyl-2-pentanone	<1.7	<1.5	<1.6	<1.5	<1.4	<1.5	NL
Methylene chloride	<1.4	<1.3	<1.4	<1.3	<1.1	<1.2	50
Naphthalene	<0.74	<0.65	<0.69	<0.64	<0.58	0.64 J	12,000
n-Propylbenzene	0.25 J	<0.20	0.24 J	0.26 J	0.53 J	0.42 J	3,900[b]
Styrene	<0.19	<0.17	<0.18	<0.17	<0.15	<0.16	NL
1,1,2,2- Tetrachloroethane	<0.28	<0.24	<0.26	<0.24	<0.22	<0.24	NL
Tetrachloroethene	<0.41	<0.37	<0.39	<0.36	<0.33	<0.35	1,300
Toluene	14.3	9.9	10.5	10.5	11.8	13.7	700
1,1,1- Trichloroethane	<0.17	<0.15	<0.16	<0.15	<0.13	<0.14	680[b]
1,1,2- Trichloroethane	<0.32	<0.29	<0.30	<0.28	<0.26	<0.28	NL
Trichloroethene	<0.44	<0.39	<0.42	<0.39	<0.35	<0.38	470
1,2,4- Trimethylbenzene	2.8 J	2.4 J	2.7 J	2.6 J	2.3 J	5.7	3,600[b]
1,3,5- Trimethylbenzene	1.2 J	1.1 J	1.1 J	1.1 J	1.2 J	2.1 J	8,400[b]
Vinyl chloride	<0.53	<0.47	<0.50	<0.46	<0.42	<0.46	20[b]
m,p- Xylene	8.3	6.1	6.6	6.5	7	15.8	260*
o-Xylene	2.6	2	2.1	2.1	2.3	6	260*
Xylene (total)	10.9	8.2	8.7	8.7	9.3	21.8	260*

Sample ID	BCP Bottom 31A	BCP Bottom 32	BCP Bottom 33	BCP Bottom 34	BCP Bottom 35	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/26/2013	11/12/2013	11/13/2013	11/13/2013	11/14/2013	11/14/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<2.9	14.3	<3.1	<2.8	<3.3	<3.3	50
Benzene	3.5	7.6	6.2	6.2	7	7.9	60
Bromodichloromethane	<0.26	<0.27	<0.29	<0.26	<0.30	<0.31	NL
Bromoform	<0.21	<0.22	<0.23	<0.21	<0.24	<0.25	NL
Bromomethane	<0.71	<0.74	<0.78	<0.71	<0.82	<0.83	NL
2- Butanone	<2.3	<2.3	<2.5	<2.2	<2.6	<2.6	120
n-Butylbenzene	<0.13	<0.13	<0.14	<0.12	<0.14	<0.15	12,000[b]
sec- Butylbenzene	<0.12	<0.12	<0.13	<0.11	<0.13	<0.14	11,000[b]
tert- Butylbenzene	<0.26	<0.27	<0.29	<0.26	0.36 J	<0.30	5,900[b]
Carbon Disulfide	<0.11	<0.11	<0.12	<0.11	<0.13	0.33 J	NL
Carbon Tetrachloride	<0.85	<0.88	<0.93	<0.84	<0.97	<0.99	760[b]
Chlorobenzene	<0.20	<0.20	<0.22	<0.20	<0.23	<0.23	1,100
Chloroethane	<0.44	<0.45	<0.48	<0.43	<0.50	<0.51	NL
Chloroform	<0.21	<0.22	<0.23	<0.21	<0.24	<0.25	370
Chloromethane	<0.89	<0.92	<0.98	<0.88	<1.0	<1.0	NL
Dibromochloromethane	<0.31	<0.32	<0.34	<0.31	<0.36	<0.36	NL
1,1- Dichloroethane	<0.24	<0.25	<0.27	<0.24	<0.28	<0.28	270[b]
1,2- Dichloroethane	<0.40	<0.41	<0.44	<0.39	<0.45	<0.46	20[a]
1,1- Dichloroethene	<0.38	<0.40	<0.42	<0.38	<0.44	<0.45	330[b]
Cis-1,2- Dichloroethene	<0.37	<0.39	<0.41	<0.37	<0.43	<0.43	250[b]
trans-1,2-Dichloroethene	<0.33	<0.34	<0.36	<0.32	<0.37	<0.38	190[b]
1,2- Dichloroethene (total)	<0.18	<0.19	<0.20	<0.18	<0.20	<0.21	NL
1,2- Dichloropropane	<0.31	<0.32	<0.34	<0.31	<0.35	<0.36	NL
cis-1,3- Dichloropropene	<0.21	<0.22	<0.23	<0.21	<0.24	<0.25	NL
trans-1,3-Dichloropropene	<0.21	<0.22	<0.23	<0.21	<0.24	<0.25	NL
Ethylbenzene	0.80 J	52.1	5.4	46	2.8	4.8	1,000[b]
2- Hexanone	<1.8	<1.8	<2.0	<1.8	<2.0	<2.1	NL
Isopropylbenzene	<0.20	0.47 J	0.36 J	3.2 J	1.8 J	0.73 J	NL
p- Isopropyltoluene	<0.12	<0.12	<0.13	<0.12	<0.13	<0.14	NL
Methyl tert butyl ether	<0.29	<0.30	<0.32	<0.29	<0.33	<0.34	930[b]
4- Methyl-2-pentanone	<1.4	<1.4	<1.5	<1.3	<1.5	<1.6	NL
Methylene chloride	<1.1	<1.2	<1.2	<1.1	<1.3	<1.3	50
Naphthalene	<0.57	<0.60	0.81 J	13.7	3.7 J	1.2 J	12,000
n-Propylbenzene	0.19 J	0.27 J	0.72 J	6.3	5.5	2.8 J	3,900[b]
Styrene	<0.15	<0.16	<0.16	<0.15	<0.17	<0.18	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.22	<0.24	<0.21	<0.25	<0.25	NL
Tetrachloroethene	<0.32	<0.34	<0.35	<0.32	<0.37	<0.38	1,300
Toluene	5.8	12.3	11.2	10.7	13	14.2	700
1,1,1- Trichloroethane	<0.13	<0.14	<0.14	<0.13	<0.15	<0.15	680[b]
1,1,2- Trichloroethane	<0.25	<0.26	<0.28	<0.25	<0.29	<0.30	NL
Trichloroethene	<0.35	<0.36	<0.38	<0.34	<0.40	<0.40	470
1,2,4- Trimethylbenzene	1.8 J	2.4 J	5.4	59.6	4.2	7.8	3,600[b]
1,3,5- Trimethylbenzene	0.80 J	1.0 J	1.7 J	9.2	1.5 J	1.8 J	8,400[b]
Vinyl chloride	<0.42	<0.43	<0.46	<0.41	<0.48	<0.49	20[b]
m,p- Xylene	4.6	62.8	12.9	71.5	9.8	12.9	260*
o-Xylene	1.4 J	2.5	2.7	3.8	3.1	4.2	260*
Xylene (total)	6	65.3	15.5	75.2	12.9	17.1	260*

Sample ID	BCP Bottom 37	BCP Bottom 38	BCP Bottom 39	BCP Bottom 40	BCP Bottom 41	BCP Bottom 42A	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/14/2013	11/14/2013	11/15/2013	11/15/2013	11/15/2013	11/19/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<2.9	<2.8	<3.3	<3.1	<330	<3.0	50
Benzene	5.1	13.2	4	6.9	<21	3.2	60
Bromodichloromethane	<0.27	<0.26	<0.30	<0.29	<31	<0.28	NL
Bromoform	<0.21	<0.21	<0.24	<0.23	<25	<0.23	NL
Bromomethane	<0.71	<0.71	<0.82	<0.78	<83	<0.76	NL
2- Butanone	<2.3	<2.3	<2.6	<2.5	<260	<2.4	120
n-Butylbenzene	<0.13	<0.13	<0.14	<0.14	<15	<0.13	12,000[b]
sec- Butylbenzene	<0.12	<0.12	<0.13	0.45 J	<14	<0.12	11,000[b]
tert- Butylbenzene	<0.26	<0.26	<0.30	<0.28	<30	<0.28	5,900[b]
Carbon Disulfide	<0.11	<0.11	<0.13	<0.12	<13	<0.12	NL
Carbon Tetrachloride	<0.85	<0.85	<0.97	<0.93	<100	<0.90	760[b]
Chlorobenzene	<0.20	<0.20	<0.23	<0.22	<23	<0.21	1,100
Chloroethane	<0.44	<0.44	<0.50	<0.48	<51	<0.47	NL
Chloroform	<0.21	<0.21	<0.24	<0.23	<25	<0.22	370
Chloromethane	<0.89	<0.89	<1.0	<0.97	<100	<0.95	NL
Dibromochloromethane	<0.31	<0.31	<0.36	<0.34	<36	<0.33	NL
1,1- Dichloroethane	<0.24	<0.24	<0.28	<0.27	<28	<0.26	270[b]
1,2- Dichloroethane	<0.40	<0.40	<0.45	<0.43	<47	<0.42	20[a]
1,1- Dichloroethene	<0.38	<0.38	<0.44	<0.42	<45	<0.41	330[b]
Cis-1,2- Dichloroethene	<0.37	<0.37	<0.43	<0.41	<44	<0.40	250[b]
trans-1,2-Dichloroethene	<0.33	<0.33	<0.37	<0.36	<38	<0.35	190[b]
1,2- Dichloroethene (total)	<0.18	<0.18	<0.20	<0.20	<21	<0.19	NL
1,2- Dichloropropane	<0.31	<0.31	<0.35	<0.34	<36	<0.33	NL
cis-1,3- Dichloropropene	<0.21	<0.21	<0.24	<0.23	<25	<0.22	NL
trans-1,3-Dichloropropene	<0.21	<0.21	<0.24	<0.23	<25	<0.23	NL
Ethylbenzene	1.2 J	1.9	0.64 J	21.8	115 J	0.72 J	1,000[b]
2- Hexanone	<1.8	<1.8	<2.0	<1.9	<210	<1.9	NL
Isopropylbenzene	<0.20	0.35 J	0.79 J	7.7	60.3 J	<0.22	NL
p- Isopropyltoluene	<0.12	<0.12	<0.13	0.79 J	18.3 J	<0.12	NL
Methyl tert butyl ether	<0.29	<0.29	<0.33	<0.32	<34	<0.31	930[b]
4- Methyl-2-pentanone	<1.4	<1.3	<1.5	<1.5	<160	<1.4	NL
Methylene chloride	<1.1	<1.1	<1.3	<1.2	<130	<1.2	50
Naphthalene	<0.58	1.1 J	<0.66	7.2	190 J	<0.61	12,000
n-Propylbenzene	0.24 J	0.70 J	0.56 J	7.2	74.9 J	0.20 J	3,900[b]
Styrene	<0.15	<0.15	<0.17	<0.16	<18	<0.16	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.21	<0.25	<0.24	<25	<0.23	NL
Tetrachloroethene	<0.32	<0.32	<0.37	<0.35	<38	<0.34	1,300
Toluene	9.8	13.2	6.1	12.4	<21	5.5	700
1,1,1- Trichloroethane	<0.13	<0.13	<0.15	<0.14	<15	<0.14	680[b]
1,1,2- Trichloroethane	<0.25	<0.25	<0.29	<0.28	<30	<0.27	NL
Trichloroethene	<0.35	<0.35	<0.40	<0.38	<41	<0.37	470
1,2,4- Trimethylbenzene	2.9 J	6.4	1.5 J	38.5	433	1.8 J	3,600[b]
1,3,5- Trimethylbenzene	1.1 J	2.5 J	0.79 J	12.2	113 J	0.77 J	8,400[b]
Vinyl chloride	<0.42	<0.42	<0.48	<0.45	<49	<0.44	20[b]
m,p- Xylene	6.5	10.5	3.7	51.5	170	3.9	260*
o-Xylene	2.2	5	1.3 J	3.2	<18	1.2 J	260*
Xylene (total)	8.7	15.5	4.9	54.7	170	5.1	260*

Sample ID	BCP Bottom 43	BCP Bottom 44	BCP Bottom 45	BCP Bottom 46	BCP Bottom 47	BCP Bottom 48	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/20/2013	11/21/2013	11/21/2013	11/22/2013	11/26/2013	11/26/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<2.9	<3.1	<2.9	<3.4	<2.9	<3.0	50
Benzene	2.2	4.3	3.1	<0.21	5.2	10.5	60
Bromodichloromethane	<0.27	<0.29	<0.27	<0.31	<0.27	<0.27	NL
Bromoform	<0.22	<0.23	<0.22	<0.25	<0.21	<0.22	NL
Bromomethane	<0.73	<0.77	<0.72	<0.84	<0.72	<0.74	NL
2- Butanone	<2.3	<2.5	<2.3	<2.7	<2.3	<2.3	120
n-Butylbenzene	<0.13	<0.14	<0.13	<0.15	<0.13	<0.13	12,000[b]
sec- Butylbenzene	<0.12	<0.13	<0.12	<0.14	<0.12	0.40 J	11,000[b]
tert- Butylbenzene	<0.26	<0.28	<0.26	<0.31	<0.26	<0.27	5,900[b]
Carbon Disulfide	<0.11	<0.12	<0.11	0.79 J	<0.11	<0.11	NL
Carbon Tetrachloride	<0.87	<0.92	<0.86	<1.0	<0.85	<0.88	760[b]
Chlorobenzene	<0.20	<0.21	<0.20	<0.23	<0.20	1.9	1,100
Chloroethane	<0.45	<0.48	<0.44	<0.52	<0.44	<0.45	NL
Chloroform	<0.21	<0.23	<0.21	<0.25	<0.21	<0.22	370
Chloromethane	<0.91	<0.97	<0.90	<1.0	<0.89	<0.92	NL
Dibromochloromethane	<0.32	<0.34	<0.32	<0.37	<0.31	<0.32	NL
1,1- Dichloroethane	<0.25	0.64 J	0.86 J	<0.29	<0.24	<0.25	270[b]
1,2- Dichloroethane	<0.40	<0.43	<0.40	<0.47	<0.40	<0.41	20[a]
1,1- Dichloroethene	<0.39	<0.41	<0.39	<0.45	<0.38	<0.40	330[b]
Cis-1,2- Dichloroethene	<0.38	<0.40	<0.38	<0.44	<0.37	<0.39	250[b]
trans-1,2-Dichloroethene	<0.33	<0.35	<0.33	<0.38	<0.33	<0.34	190[b]
1,2- Dichloroethene (total)	<0.18	<0.19	<0.18	<0.21	<0.18	<0.19	NL
1,2- Dichloropropane	<0.31	<0.33	<0.31	<0.36	<0.31	<0.32	NL
cis-1,3- Dichloropropene	<0.22	<0.23	<0.21	<0.25	<0.21	<0.22	NL
trans-1,3-Dichloropropene	<0.22	<0.23	<0.22	<0.25	<0.21	<0.22	NL
Ethylbenzene	0.42 J	0.61 J	0.72 J	44.3	1.2 J	1.6	1,000[b]
2- Hexanone	<1.8	<1.9	<1.8	<2.1	<1.8	<1.8	NL
Isopropylbenzene	<0.21	<0.22	<0.21	1.4 J	0.23 J	0.48 J	NL
p- Isopropyltoluene	<0.12	<0.13	<0.12	<0.14	<0.12	<0.12	NL
Methyl tert butyl ether	<0.30	<0.31	<0.29	<0.34	<0.29	<0.30	930[b]
4- Methyl-2-pentanone	<1.4	<1.5	<1.4	<1.6	<1.4	<1.4	NL
Methylene chloride	<1.2	<1.2	<1.1	<1.3	<1.1	<1.2	50
Naphthalene	<0.59	<0.62	<0.58	1.2 J	<0.58	<0.60	12,000
n-Propylbenzene	<0.18	<0.19	<0.18	1.1 J	0.24 J	0.35 J	3,900[b]
Styrene	<0.15	<0.16	<0.15	<0.18	<0.15	<0.16	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.23	<0.22	<0.25	<0.22	<0.22	NL
Tetrachloroethene	<0.33	<0.35	<0.33	<0.38	<0.33	<0.34	1,300
Toluene	3.5 J	5.6	3.9	13.5	9.9	10.7	700
1,1,1- Trichloroethane	<0.13	<0.14	<0.13	<0.16	<0.13	<0.14	680[b]
1,1,2- Trichloroethane	<0.26	<0.28	<0.26	<0.30	<0.26	<0.26	NL
Trichloroethene	<0.35	<0.38	<0.35	<0.41	<0.35	<0.36	470
1,2,4- Trimethylbenzene	1.2 J	1.4 J	1.2 J	7.2	2.4 J	2.4 J	3,600[b]
1,3,5- Trimethylbenzene	0.55 J	0.67 J	0.50 J	1.9 J	1.0 J	0.95 J	8,400[b]
Vinyl chloride	<0.42	<0.45	<0.42	<0.49	<0.42	<0.43	20[b]
m,p- Xylene	2.6	3.7	3.2	105	6.6	13.5	260*
o-Xylene	0.87 J	1.3 J	0.87 J	4.3	2.1	2.5	260*
Xylene (total)	3.5	5	4	109	8.7	16	260*

Sample ID	BCP Bottom 49	BCP Bottom 50	BCP Bottom 51	BCP Bottom 62	BCP Bottom 63	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/27/2013**	**11/27/2013**	**12/4/2013**	**6/5/2014**	**6/5/2014**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<2.9	<3.1	22	<2.2	<2.1	50
Benzene	1.4	6.1	11	2.7	3.9	60
Bromodichloromethane	<0.27	<0.29	<0.30	<0.16	<0.16	NL
Bromoform	<0.22	<0.23	<0.24	<0.27	<0.27	NL
Bromomethane	<0.74	<0.78	<0.82	<0.46	<0.45	NL
2- Butanone	<2.3	<2.5	<2.6	<2.4	<2.3	120
n-Butylbenzene	<0.13	<0.14	0.49 J	<0.19	0.26 J	12,000[b]
sec- Butylbenzene	<0.12	<0.13	0.27 J	<0.57	<0.56	11,000[b]
tert- Butylbenzene	<0.27	<0.28	<0.30	<0.16	<0.16	5,900[b]
Carbon Disulfide	<0.11	<0.12	<0.13	<0.10	<0.098	NL
Carbon Tetrachloride	<0.88	<0.93	<0.98	<0.17	<0.16	760[b]
Chlorobenzene	<0.20	<0.22	<0.23	<0.12	<0.12	1,100
Chloroethane	<0.45	<0.48	<0.50	<0.58	<0.57	NL
Chloroform	<0.22	<0.23	<0.24	<0.13	<0.13	370
Chloromethane	<0.92	<0.98	<1.0	<0.43	<0.42	NL
Dibromochloromethane	<0.32	<0.34	<0.36	<0.25	<0.24	NL
1,1- Dichloroethane	<0.25	<0.27	<0.28	<0.21	<0.20	270[b]
1,2- Dichloroethane	<0.41	<0.44	<0.46	<0.25	<0.24	20[a]
1,1- Dichloroethene	<0.39	<0.42	<0.44	<0.32	<0.31	330[b]
Cis-1,2- Dichloroethene	<0.38	<0.41	<0.43	<0.35	<0.34	250[b]
trans-1,2-Dichloroethene	<0.34	<0.36	<0.37	<0.32	<0.31	190[b]
1,2- Dichloroethene (total)	<0.18	<0.20	<0.21	<0.32	<0.31	NL
1,2- Dichloropropane	<0.32	<0.34	<0.35	<0.32	<0.31	NL
cis-1,3- Dichloropropene	<0.22	<0.23	<0.24	<0.17	<0.17	NL
trans-1,3-Dichloropropene	<0.22	<0.23	<0.25	<0.20	<0.20	NL
Ethylbenzene	<0.13	11	2.7	0.57 J	0.94 J	1,000[b]
2- Hexanone	<1.8	<2.0	<2.0	<0.58	<0.57	NL
Isopropylbenzene	<0.21	1.8 J	0.61 J	0.60 J	0.28 J	NL
p- Isopropyltoluene	<0.12	0.24 J	<0.13	<0.13	0.27 J	NL
Methyl tert butyl ether	<0.30	<0.32	<0.33	<0.14	<0.14	930[b]
4- Methyl-2-pentanone	<1.4	<1.5	<1.6	<0.42	<0.40	NL
Methylene chloride	<1.2	<1.2	<1.3	<0.41	<0.40	50
Naphthalene	<0.59	2.7 J	<0.66	<0.30	<0.30	12,000
n-Propylbenzene	<0.18	1.6 J	0.76 J	0.34 J	0.36 J	3,900[b]
Styrene	<0.16	<0.16	<0.17	<0.13	<0.13	NL
1,1,2,2- Tetrachloroethane	<0.22	<0.24	<0.25	<0.30	<0.29	NL
Tetrachloroethene	<0.33	<0.35	<0.37	<0.24	<0.23	1,300
Toluene	1.3 J	8.7	22.9	4.6	7.3	700
1,1,1- Trichloroethane	<0.14	<0.14	<0.15	<0.17	<0.16	680[b]
1,1,2- Trichloroethane	<0.26	<0.28	<0.29	<0.44	<0.43	NL
Trichloroethene	<0.36	<0.38	<0.40	<0.19	<0.18	470
1,2,4- Trimethylbenzene	0.51 J	12.7	9.6	1.4 J	2.8 J	3,600[b]
1,3,5- Trimethylbenzene	0.24 J	4.3	4.0 J	<1.2	<1.1	8,400[b]
Vinyl chloride	<0.43	<0.46	<0.48	<0.70	<0.68	20[b]
m,p- Xylene	1.1 J	40.5	16.3	3.4	4.9	260*
o-Xylene	<0.15	4.3	5.3	1.1 J	1.7	260*
Xylene (total)	1.1 J	44.8	21.5	4.5	6.6	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value
[1] = Sample named BCP IRM Duplicate 1 on chain of custody
[2] = Sample named BCP IRM Duplicate 2 on chain of custody
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP Bottom 3	BCP Bottom 4	BCP Bottom 5	BCP Bottom 6	BCP Bottom 7	BCP Bottom 8	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/16/2013**	**9/18/2013**	**9/18/2013**	**9/18/2013**	**9/20/2013**	**9/20/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<16	<15	<16	<15	<16	<15	20,000
Acenaphthylene	<12	<11	<12	<11	<12	<11	100,000[a,d]
Anthracene	<14	<14	<15	<14	<14	<13	100,000[a,d]
Benzo(a)anthracene	<15	<15	<16	<15	<15	<14	1,000[c,d]
Benzo(a)pyrene	<13	<12	<13	<12	<13	<12	1,000[c]
Benzo(b)fluoranthene	<15	<14	<15	<14	<15	<14	1,000[c,d]
Benzo(g,h,i)perylene	<12	<11	<12	<11	<12	<11	100,000[d]
Benzo(k)fluoranthene	<18	<17	<18	<17	<18	<17	800[c,d]
Chrysene	<14	<14	<15	<14	<14	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<14	<13	<14	<13	330[b,d]
Fluoranthene	<16	<16	<17	<16	<16	<15	100,000[a,d]
Fluorene	<15	<15	<16	<15	<15	<15	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<13	<13	<13	<12	500[c,d]
Naphthalene	<19	<18	<19	42.0 J	<19	<18	12,000[d]
Phenanthrene	<16	<15	<16	<15	<16	<15	100,000[d]
Pyrene	<14	<13	<14	<13	<14	<13	100,000[d]

Sample ID	BCP Bottom 9	BCP Bottom 10	BCP Bottom 11	BCP Bottom 12	BCP Bottom 12 Duplicate[1]	BCP Bottom 13	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**9/20/2013**	**9/20/2013**	**10/2/2013**	**10/2/2013**	**10/2/2013**	**10/4/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<16	<16	<16	<17	<17	<16	20,000
Acenaphthylene	<12	<12	<12	<13	<13	<12	100,000[a,d]
Anthracene	<14	<15	<15	<15	<15	<15	100,000[a,d]
Benzo(a)anthracene	<15	<16	<16	<16	<17	<16	1,000[c,d]
Benzo(a)pyrene	<13	<13	<13	<13	<14	<13	1,000[c]
Benzo(b)fluoranthene	<15	<15	<15	<16	<16	<15	1,000[c,d]
Benzo(g,h,i)perylene	<12	<12	<12	<13	<13	<12	100,000[d]
Benzo(k)fluoranthene	<18	<18	<18	<19	<19	<18	800[c,d]
Chrysene	<15	<15	<15	<16	<16	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<15	<15	<15	<14	330[b,d]
Fluoranthene	<16	<17	<17	<17	<18	<17	100,000[a,d]
Fluorene	<16	<16	<16	<17	<17	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<13	<14	<14	<13	500[c,d]
Naphthalene	<19	<19	<20	<20	<21	<19	12,000[d]
Phenanthrene	<16	<16	<17	<17	<17	<16	100,000[d]
Pyrene	<14	<14	<14	<15	<15	<14	100,000[d]

Sample ID	BCP Bottom 14	BCP Bottom 15	BCP Bottom 16	BCP Bottom 17	BCP Bottom 18	BCP Bottom 19	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**10/4/2013**	**10/8/2013**	**10/9/2013**	**10/14/2013**	**10/15/2013**	**10/15/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<16	<16	<17	<17	<16	<16	20,000
Acenaphthylene	<12	<12	<13	<12	<12	<12	100,000[a,d]
Anthracene	<14	<14	<15	<15	<14	<14	100,000[a,d]
Benzo(a)anthracene	<15	<15	<16	<16	<15	<15	1,000[c,d]
Benzo(a)pyrene	<13	<13	<14	<13	<13	<13	1,000[c]
Benzo(b)fluoranthene	<15	<15	<16	<16	<15	<15	1,000[c,d]
Benzo(g,h,i)perylene	<12	<12	<13	<12	<12	<12	100,000[d]
Benzo(k)fluoranthene	<18	<18	<19	<19	<18	<18	800[c,d]
Chrysene	<15	<15	<16	<15	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<15	<15	<14	<14	330[b,d]
Fluoranthene	<16	<16	<17	<17	<16	<16	100,000[a,d]
Fluorene	<16	<16	<17	<17	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<14	<14	<13	<13	500[c,d]
Naphthalene	<19	47.6 J	28.3 J	<20	<19	<19	12,000[d]
Phenanthrene	<16	<16	<17	<17	<16	<16	100,000[d]
Pyrene	<14	<14	<15	<15	<14	<14	100,000[d]

Sample ID	BCP Bottom 20A	BCP Bottom 21	BCP Bottom 22	BCP Bottom 23	BCP Bottom 24	BCP Bottom 24 Duplicate	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/8/2013**	**10/17/2013**	**10/30/2013**	**10/30/2013**	**10/31/2013**	**10/31/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<17	<17	<16	<16	<15	<16	20,000
Acenaphthylene	<12	<12	<12	<12	<11	<12	100,000[a,d]
Anthracene	<15	<15	<15	<15	<14	<14	100,000[a,d]
Benzo(a)anthracene	<16	<16	<16	<16	<15	<15	1,000[c,d]
Benzo(a)pyrene	<13	<13	<13	<13	<12	<12	1,000[c]
Benzo(b)fluoranthene	<15	<16	<15	<15	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<12	<12	<12	<12	<11	<12	100,000[d]
Benzo(k)fluoranthene	<19	<19	<18	<18	<17	<18	800[c,d]
Chrysene	<15	<16	<15	<15	<14	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<15	<15	<14	<15	<14	<14	330[b,d]
Fluoranthene	<17	<17	<17	<17	<16	<16	100,000[a,d]
Fluorene	<16	<17	<16	<16	<15	<15	30,000
Indeno (1,2,3-cd) pyrene	<14	<14	<13	<13	<13	<13	500[c,d]
Naphthalene	<20	<20	<19	<20	<18	<19	12,000[d]
Phenanthrene	<17	<17	<16	<16	<15	<16	100,000[d]
Pyrene	<14	<15	<14	<14	<13	<14	100,000[d]

Sample ID	BCP Bottom 25	BCP Bottom 26	BCP Bottom 27	BCP Bottom 28	BCP Bottom 29	BCP Bottom 30	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**10/31/2013**	**11/1/2013**	**11/1/2013**	**11/4/2013**	**11/7/2013**	**11/11/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<15	<15	<15	<14	<15	<16	20,000
Acenaphthylene	<11	<11	<11	<11	<12	<12	100,000[a,d]
Anthracene	<14	<14	<14	<13	<14	<14	100,000[a,d]
Benzo(a)anthracene	<15	<15	<15	<14	<15	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<11	<12	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	<13	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	<11	<12	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	<16	<17	<18	800[c,d]
Chrysene	<14	<14	<14	<13	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<14	<13	<14	<14	330[b,d]
Fluoranthene	<16	<16	<16	<15	<16	<16	100,000[a,d]
Fluorene	<15	<15	<15	<14	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<13	<12	<13	<13	500[c,d]
Naphthalene	<18	<18	<18	<17	<19	<19	12,000[d]
Phenanthrene	<15	<15	<16	<14	<16	<16	100,000[d]
Pyrene	<13	<13	<13	<12	<14	<14	100,000[d]

Sample ID	BCP Bottom 31A	BCP Bottom 32	BCP Bottom 33	BCP Bottom 34	BCP Bottom 35	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/26/2013**	**11/12/2013**	**11/13/2013**	**11/13/2013**	**11/14/2013**	**11/14/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<17	<15	<16	<16	<16	<17	20,000
Acenaphthylene	<12	<12	<12	<12	<12	<13	100,000[a,d]
Anthracene	<15	<14	27.5 J	<14	<15	<15	100,000[a,d]
Benzo(a)anthracene	<16	<15	106 J	<15	<16	<16	1,000[c,d]
Benzo(a)pyrene	<13	<12	156	<13	<13	<14	1,000[c]
Benzo(b)fluoranthene	<16	<14	158	<15	<15	<16	1,000[c,d]
Benzo(g,h,i)perylene	<12	<12	111 J	<12	<12	<13	100,000[d]
Benzo(k)fluoranthene	<19	<17	75.7 J	<18	<19	<19	800[c,d]
Chrysene	<15	<14	106 J	<15	<15	<16	1,000[c,d]
Dibenzo(a,h)anthracene	<15	<14	95.4 J	<14	<15	<15	330[b,d]
Fluoranthene	<17	<16	231	<16	<17	<17	100,000[a,d]
Fluorene	<17	<15	<16	<16	<16	<17	30,000
Indeno (1,2,3-cd) pyrene	<14	<13	119 J	<13	<14	<14	500[c,d]
Naphthalene	<20	<19	23.3 J	<19	<20	<20	12,000[d]
Phenanthrene	<17	<16	214	<16	<17	<17	100,000[d]
Pyrene	<15	<14	197	<14	<14	<15	100,000[d]

Sample ID	BCP Bottom 37	BCP Bottom 38	BCP Bottom 39	BCP Bottom 40	BCP Bottom 41	BCP Bottom 42A	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/14/2013**	**11/14/2013**	**11/15/2013**	**11/15/2013**	**11/15/2013**	**11/19/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<15	<15	<15	<16	<15	<16	20,000
Acenaphthylene	<11	<12	<12	<12	<11	<12	100,000[a,d]
Anthracene	<14	<14	<14	<14	<14	<14	100,000[a,d]
Benzo(a)anthracene	<15	<15	<15	<15	<15	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<13	<12	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	<15	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<11	<12	<12	<12	<11	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	<18	<17	<18	800[c,d]
Chrysene	<14	<14	<14	<15	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<14	<14	<13	<14	330[b,d]
Fluoranthene	<16	<16	<16	<16	<15	<16	100,000[a,d]
Fluorene	<15	<15	<15	<16	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<13	<13	<12	<13	500[c,d]
Naphthalene	<18	<19	<19	39.2 J	67.0 J	<19	12,000[d]
Phenanthrene	<15	<16	<16	<16	<15	<16	100,000[d]
Pyrene	<13	<14	<14	<14	<13	<14	100,000[d]

Sample ID	BCP Bottom 43	BCP Bottom 44	BCP Bottom 45	BCP Bottom 46	BCP Bottom 47	BCP Bottom 48	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/20/2013**	**11/21/2013**	**11/21/2013**	**11/22/2013**	**11/26/2013**	**11/26/2013**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<15	<15	<16	<16	<15	<16	20,000
Acenaphthylene	<11	<11	<12	<12	<12	<12	100,000[a,d]
Anthracene	<14	<14	<14	<15	<14	<14	100,000[a,d]
Benzo(a)anthracene	<15	<15	<15	<16	<15	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<13	<12	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<15	<15	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<12	<12	<12	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<18	<19	<17	<18	800[c,d]
Chrysene	<14	<14	<14	<15	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<13	<14	<15	<14	<14	330[b,d]
Fluoranthene	<16	<15	<16	<17	<16	<16	100,000[a,d]
Fluorene	<15	<15	<15	<16	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<12	<13	<14	<13	<13	500[c,d]
Naphthalene	<18	<18	<19	<20	<19	<19	12,000[d]
Phenanthrene	<16	<15	<16	<17	<16	<16	100,000[d]
Pyrene	<13	<13	<14	<14	<14	<14	100,000[d]

Sample ID	BCP Bottom 49	BCP Bottom 50	BCP Bottom 51	BCP Bottom 62	BCP Bottom 63	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/27/2013	11/27/2013	12/4/2013	6/5/2014	6/5/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<15	<15	<17	<15	<16	20,000
Acenaphthylene	<11	<11	<12	<11	<12	100,000[a,d]
Anthracene	<14	<14	<15	<13	<14	100,000[a,d]
Benzo(a)anthracene	<15	<15	<16	<14	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<13	<12	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<15	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<12	<11	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<19	<17	<18	800[c,d]
Chrysene	<14	<14	<15	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<13	<14	<15	<13	<14	330[b,d]
Fluoranthene	<15	<16	<17	<15	<16	100,000[a,d]
Fluorene	<15	<15	<16	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<12	<13	<14	<12	<13	500[c,d]
Naphthalene	<18	24.8 J	<20	<18	<19	12,000[d]
Phenanthrene	<15	<16	<17	<15	<16	100,000[d]
Pyrene	<13	<13	<14	<13	<14	100,000[d]

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
J = Indicates an estimated value
[1] = Sample named BCP IRM Duplicate 1 on chain of custody
[2] = Sample named BCP IRM Duplicate 2 on chain of custody
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 19

250 Delaware Avenue
Buffalo, New York

Expanded Analytical Results for Verification Soil Samples Collected from the Bottom of the Petroleum-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP Bottom 11	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013	
Sample Location	Floor	Floor	
Units	µg/kg	µg/kg	µg/kg
Acetone	<3.1	<3.3	50
Benzene	6.3	7.9	60
Bromodichloromethane	<0.28	<0.31	NL
Bromoform	<0.23	<0.25	NL
Bromomethane	<0.77	<0.83	NL
2- Butanone	<2.4	<2.6	120
n-Butylbenzene	<0.14	<0.15	12,000[b]
sec- Butylbenzene	<0.12	<0.14	11,000[b]
tert- Butylbenzene	<0.28	<0.30	5,900[b]
Carbon Disulfide	<0.12	0.33 J	NL
Carbon Tetrachloride	<0.91	<0.99	760[b]
Chlorobenzene	<0.21	<0.23	1,100
Chloroethane	<0.47	<0.51	NL
Chloroform	<0.23	<0.25	370
Chloromethane	<0.96	<1.0	NL
Dibromochloromethane	<0.33	<0.36	NL
1,1- Dichloroethane	<0.26	<0.28	270[b]
1,2- Dichloroethane	<0.43	<0.46	20[a]
1,1- Dichloroethene	<0.41	<0.45	330[b]
Cis-1,2- Dichloroethene	<0.40	<0.43	250[b]
trans-1,2-Dichloroethene	<0.35	<0.38	190[b]
1,2- Dichloroethene (total)	<0.19	<0.21	NL
1,2- Dichloropropane	<0.33	<0.36	NL
cis-1,3- Dichloropropene	<0.23	<0.25	NL
trans-1,3-Dichloropropene	<0.23	<0.25	NL
Ethylbenzene	1.3 J	4.8	1,000[b]
2- Hexanone	<1.9	<2.1	NL
Isopropylbenzene	0.23 J	0.73 J	NL
p- Isopropyltoluene	<0.13	<0.14	NL
Methyl tert butyl ether	<0.31	<0.34	930[b]
4- Methyl-2-pentanone	<1.5	<1.6	NL
Methylene chloride	<1.2	<1.3	50
Naphthalene	<0.62	1.2 J	12,000
n-Propylbenzene	0.29 J	2.8 J	3,900[b]
Styrene	<0.16	<0.18	NL
1,1,2,2- Tetrachloroethane	<0.23	<0.25	NL
Tetrachloroethene	<0.35	<0.38	1,300
Toluene	12.1	14.2	700
1,1,1- Trichloroethane	<0.14	<0.15	680[b]
1,1,2- Trichloroethane	<0.27	<0.30	NL
Trichloroethene	<0.37	<0.40	470
1,2,4- Trimethylbenzene	2.9 J	7.8	3,600[b]
1,3,5- Trimethylbenzene	1.2 J	1.8 J	8,400[b]
Vinyl chloride	<0.45	<0.49	20[b]
m,p- Xylene	6.9	12.9	260*
o-Xylene	2.2	4.2	260*
Xylene (total)	9.2	17.1	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP Bottom 11	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013	
Sample Location	Floor	Floor	
Units	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<14	<14	NL
4-Chloro-3-methyl phenol	<15	<16	NL
2,4-Dichlorophenol	<18	<18	NL
2,4-Dimethylphenol	<99	<100	NL
2,4-Dinitrophenol	<150	<160	NL
4,6-Dinitro-o-cresol	<76	<79	NL
2-Methylphenol	<24	<25	330[b]
3&4-Methylphenol	<30	<31	(330[b]/330[b])[1]
2-Nitrophenol	<16	<17	NL
4-Nitrophenol	<110	<120	NL
Pentachlorophenol	<43	<45	800[b]
Phenol	<17	<18	330[b]
2,4,5-Trichlorophenol	<15	<16	NL
2,4,6-Trichlorophenol	<15	<16	NL
Acenaphthene	<16	<17	20,000
Acenaphthylene	<12	<13	100,000[a,d]
Anthracene	<15	<15	100,000[a,d]
Benzo(a)anthracene	<16	<16	1,000[c,d]
Benzo(a)pyrene	<13	<14	1,000[c]
Benzo(b)fluoranthene	<15	<16	1,000[c,d]
Benzo(g,h,i)perylene	<12	<13	100,000[d]
Benzo(k)fluoranthene	<18	<19	800[c,d]
4-Bromophenyl phenyl ether	<15	<16	NL
Butyl benzyl phthalate	<12	<13	NL
2-Chloronaphthalene	<17	<17	NL
4-Chloroaniline	<15	<16	NL
Carbazole	<14	<15	NL
Chrysene	<15	<16	1,000[c,d]
Bis (2-chloroethoxy) methane	<14	<15	NL
Bis (2-chloroethyl) ether	<19	<19	NL
Bis (2-chloroisopropyl) ether	<22	<23	NL
4-Chlorophenyl phenyl ether	<19	<19	NL
1,2-Dichlorobenzene	<16	<16	1,100
1,3-Dichlorobenzene	<17	<18	2,400
1,4-Dichlorobenzene	<16	<17	1,800
2,4-Dinitrotoluene	<41	<42	NL
2,6-Dinitrotoluene	<15	<16	NL
3,3'-Dichlorobenzidine	<31	<32	NL
Dibenzo(a,h)anthracene	<15	<15	330[b,d]
Dibenzofuran	<17	<18	7,000[d]
Di-n-butyl phthalate	<32	<34	NL
Di-n-octyl phthalate	<9.5	<9.9	NL
Diethyl phthalate	<15	<16	NL
Dimethyl phthalate	<18	<18	NL
Bis (2-ethylhexyl) phthalate	<11	<12	NL
Fluoranthene	<17	<17	100,000[a,d]
Fluorene	<16	<17	30,000
Hexachlorobenzene	<19	<20	330[b]
Hexachlorobutadiene	<18	<18	NL
Hexachlorocyclopentadiene	<150	<160	NL
Hexachloroethane	<15	<15	NL
Indeno (1,2,3-cd) pyrene	<13	<14	500[c,d]
Isophorone	<14	<15	NL
2-Methylnaphthalene	<15	<16	NL
2-Nitroaniline	<15	<16	NL
3-Nitroaniline	<33	<35	NL
4-Nitroaniline	<15	<16	NL
Naphthalene	<20	<20	12,000[d]
Nitrobenzene	<16	<17	NL
N-Nitroso-Di-n-propylamine	<17	<18	NL
N-Nitrosodiphenylamine	<18	<19	NL
Phenanthrene	<17	<17	100,000[d]
Pyrene	<14	<15	100,000[d]
1,2,4-Trichlorobenzene	<17	<18	NL

µg/kg = micrograms per kilogram
NL = Not Listed
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP Bottom 11	BCP Bottom 36	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013		
Sample Location	Floor	Floor		
Units	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	1,700	2,020	33,000	NL
Antimony	<0.15	<0.16	NA	NL
Arsenic	1.3	1.3	3-12*	13[a]
Barium	14	32.2	15-600	350[a]
Beryllium	0.11 B	0.084 B	0-1.75	7.2
Cadmium	<0.042	0.22 B	0.1-1	2.5[a]
Calcium	47,300	47,700	130-35,000*	NL
Chromium	<(0.51/3.3)[1]	<(0.51/3.7)[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	1.7 B	1.7 B	2.5-60*	NL
Copper	6.9	5.8	1-50	50
Iron	5,400	5,400	2,000-550,000	NL
Lead	6.6	5.2	***	63[a]
Magnesium	22,000	21,100	100-5,000	NL
Manganese	164	181	50-5,000	1,600[a]
Mercury	<0.010	<0.0098	0.001-0.2	0.18[a]
Nickel	3.4 B	3.7 B	0.5-25	30
Potassium	424 B	545	8,500-43,000*	NL
Selenium	<0.34	<0.36	0.1-3.9	3.9[a]
Silver	<0.12	<0.13	NA	2.0
Sodium	191 B	215 B	6,000-8,000	NL
Thallium	<0.13	<0.14	NA	NL
Vanadium	7.8	8.3	1-300	NL
Zinc	62.1	85.8	9-50	109[a]

mg/kg = milligrams per kilogram
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP Bottom 11	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013	
Sample Location	Floor	Floor	
Units	mg/kg	mg/kg	mg/kg
Cyanide	<0.13	<0.15	27[a,b]

mg/kg = milligrams per kilogram
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP Bottom 11	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013	
Sample Location	Floor	Floor	
Units	µg/kg	µg/kg	µg/kg
Aroclor 1016	<19	<14	-
Aroclor 1221	<24	<19	-
Aroclor 1232	<19	<15	-
Aroclor 1242	<21	<16	-
Aroclor 1248	<18	<14	-
Aroclor 1254	<30	<23	-
Aroclor 1260	<21	<16	-
Total Aroclor	ND	ND	100

µg/kg = micrograms per kilogram
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP Bottom 11	BCP Bottom 36	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/2/2013	11/14/2013	
Sample Location	Floor	Floor	
Units	µg/kg	µg/kg	µg/kg
Aldrin	<2.5	<1.9	5[a]
Alpha-BHC	<2.0	<1.5	20
Beta-BHC	<2.7	<2.1	36
Delta-BHC	<1.6	<1.2	40
Gamma-BHC (Lindane)	<2.5	<1.9	100
Alpha-Chlordane	<3.1	<2.4	94
Gamma-Chlordane	<2.5	<1.9	NL
Dieldrin	<2.6	<2.0	5[a]
4,4'-DDD	<2.7	<2.1	3.3[b]
4,4'-DDE	<3.4	<2.6	3.3[b]
4,4'-DDT	<2.6	<2.0	3.3[b]
Endrin	<3.3	<2.5	14
Endosulfan sulfate	<2.8	<2.1	2,400*,[c]
Endrin aldehyde	<2.6	<2.0	NL
Endosulfan-I	<3.2	<2.5	2,400*,[c]
Endosulfan-II	<2.7	<2.0	2,400*,[c]
Heptachlor	<2.4	<1.9	42
Heptachlor epoxide	<2.6	<2.0	NL
Methoxychlor	<3.3	<2.5	NL
Endrin ketone	<3.0	<2.3	NL
Toxaphene	<43	<33	NL

µg/kg = micrograms per kilogram

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 20

250 Delaware Avenue
Buffalo, New York

Analytical Results for Verification Soil Samples Collected from the Sidewalls of the Petroleum-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP North Wall 1	BCP North Wall 2	BCP North Wall 3	BCP North Wall 4	BCP North Wall 5	BCP North Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/20/2013	9/20/2013	9/20/2013	11/1/2013	11/4/2013	11/14/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<2.5	<2.4	<2.7	<2.9	<3.8	<3.0	50
Benzene	3.1	2.9	2.9	2.2	6.3	6.2	60
Bromodichloromethane	<0.23	<0.23	<0.25	<0.27	<0.36	<0.28	NL
Bromoform	<0.18	<0.18	<0.20	<0.22	<0.29	<0.22	NL
Bromomethane	<0.61	<0.61	<0.67	<0.73	<0.96	<0.74	NL
2- Butanone	<2.0	<1.9	<2.1	<2.3	<3.0	<2.4	120
n-Butylbenzene	<0.11	<0.11	<0.12	<0.13	<0.17	<0.13	12,000[b]
sec- Butylbenzene	<0.10	8.2	1.8 J	<0.12	<0.16	<0.12	11,000[b]
tert- Butylbenzene	<0.22	0.24 J	0.25 J	<0.27	<0.35	<0.27	5,900[b]
Carbon Disulfide	0.48 J	<0.094	<0.10	<0.11	<0.15	<0.12	NL
Carbon Tetrachloride	<0.73	<0.72	<0.80	<0.87	<1.1	<0.88	760[b]
Chlorobenzene	<0.17	<0.17	<0.19	<0.20	<0.27	<0.21	1,100
Chloroethane	<0.38	<0.37	<0.41	<0.45	<0.59	<0.46	NL
Chloroform	<0.18	<0.18	<0.20	<0.22	<0.28	<0.22	370
Chloromethane	<0.77	<0.76	<0.84	<0.91	<1.2	<0.93	NL
Dibromochloromethane	<0.27	<0.26	<0.29	<0.32	<0.42	<0.32	NL
1,1- Dichloroethane	<0.21	<0.21	<0.23	<0.25	<0.33	<0.25	270[b]
1,2- Dichloroethane	<0.34	<0.34	<0.37	<0.41	<0.53	<0.41	20[a]
1,1- Dichloroethene	<0.33	<0.32	<0.36	<0.39	<0.51	<0.40	330[b]
Cis-1,2- Dichloroethene	<0.32	<0.32	<0.35	<0.38	<0.50	<0.39	250[b]
trans-1,2-Dichloroethene	<0.28	<0.28	<0.31	<0.33	<0.44	<0.34	190[b]
1,2- Dichloroethene (total)	<0.15	<0.15	<0.17	<0.18	<0.24	<0.19	NL
1,2- Dichloropropane	<0.27	<0.26	<0.29	<0.32	<0.41	<0.32	NL
cis-1,3- Dichloropropene	<0.18	<0.18	<0.20	<0.22	<0.28	<0.22	NL
trans-1,3-Dichloropropene	<0.18	<0.18	<0.20	<0.22	<0.29	<0.22	NL
Ethylbenzene	0.67 J	0.65 J	1.3 J	0.33 J	1.1 J	2.1	1,000[b]
2- Hexanone	<1.5	<1.5	<1.7	<1.8	<2.4	<1.9	NL
Isopropylbenzene	<0.18	<0.17	2.2 J	<0.21	<0.27	0.78 J	NL
p- Isopropyltoluene	<0.10	<0.099	2.3 J	<0.12	<0.16	<0.12	NL
Methyl tert butyl ether	<0.25	<0.25	<0.27	<0.30	<0.39	<0.30	930[b]
4- Methyl-2-pentanone	<1.2	<1.1	<1.3	<1.4	<1.8	<1.4	NL
Methylene chloride	<0.97	<0.96	<1.1	<1.2	<1.5	<1.2	50
Naphthalene	<0.50	<0.49	1.0 J	<0.59	<0.77	<0.60	12,000
n-Propylbenzene	<0.15	0.16 J	3.1 J	<0.18	0.26 J	0.31 J	3,900[b]
Styrene	<0.13	<0.13	<0.14	<0.15	<0.20	<0.16	NL
1,1,2,2- Tetrachloroethane	<0.19	<0.18	<0.20	<0.22	<0.29	<0.22	NL
Tetrachloroethene	<0.28	<0.27	<0.30	<0.33	<0.43	<0.34	1,300
Toluene	6.2	5.8	5.6	3.3 J	10.9	11.5	700
1,1,1- Trichloroethane	<0.11	<0.11	<0.12	<0.13	<0.18	<0.14	680[b]
1,1,2- Trichloroethane	<0.22	<0.22	<0.24	<0.26	<0.34	<0.26	NL
Trichloroethene	<0.30	<0.29	<0.33	<0.35	<0.47	<0.36	470
1,2,4- Trimethylbenzene	1.5 J	1.3 J	13.2	0.79 J	2.4 J	3.1 J	3,600[b]
1,3,5- Trimethylbenzene	0.64 J	0.59 J	4	0.43 J	1.1 J	1.3 J	8,400[b]
Vinyl chloride	<0.36	<0.35	<0.39	<0.43	<0.56	<0.43	20[b]
m,p- Xylene	4.2	3.7	8.7	2	6.3	8	260*
o-Xylene	1.4	1.1 J	1.4	0.65 J	2	2.5	260*
Xylene (total)	5.6	4.9	10.1	2.7	8.3	10.5	260*

Sample ID	BCP North Wall 7	BCP North Wall 8	BCP North Wall 12	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/14/2013	12/4/2013	6/5/2014	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.2	68.6	<2.6	50
Benzene	10.9	22.4	2.1	60
Bromodichloromethane	<0.30	<0.29	<0.19	NL
Bromoform	<0.24	<0.23	<0.32	NL
Bromomethane	<0.81	<0.79	<0.55	NL
2- Butanone	<2.6	8.2	<2.8	120
n-Butylbenzene	<0.14	0.76 J	<0.22	12,000[b]
sec- Butylbenzene	<0.13	0.38 J	<0.68	11,000[b]
tert- Butylbenzene	<0.30	<0.29	<0.19	5,900[b]
Carbon Disulfide	0.27 J	<0.12	<0.12	NL
Carbon Tetrachloride	<0.97	<0.94	<0.20	760[b]
Chlorobenzene	<0.22	<0.22	<0.14	1,100
Chloroethane	<0.50	<0.48	<0.69	NL
Chloroform	<0.24	<0.23	<0.15	370
Chloromethane	<1.0	<0.98	<0.51	NL
Dibromochloromethane	<0.35	<0.34	<0.29	NL
1,1- Dichloroethane	<0.28	<0.27	<0.24	270[b]
1,2- Dichloroethane	<0.45	<0.44	<0.29	20[a]
1,1- Dichloroethene	<0.43	<0.42	<0.38	330[b]
Cis-1,2- Dichloroethene	<0.42	<0.41	<0.41	250[b]
trans-1,2-Dichloroethene	<0.37	<0.36	<0.38	190[b]
1,2- Dichloroethene (total)	<0.20	<0.20	<0.38	NL
1,2- Dichloropropane	<0.35	<0.34	<0.38	NL
cis-1,3- Dichloropropene	<0.24	<0.23	<0.21	NL
trans-1,3-Dichloropropene	<0.24	<0.24	<0.24	NL
Ethylbenzene	1.4 J	5	<0.63	1,000[b]
2- Hexanone	<2.0	<2.0	<0.69	NL
Isopropylbenzene	0.28 J	0.99 J	<0.15	NL
p- Isopropyltoluene	<0.13	0.27 J	<0.16	NL
Methyl tert butyl ether	<0.33	<0.32	<0.17	930[b]
4- Methyl-2-pentanone	<1.5	<1.5	<0.49	NL
Methylene chloride	<1.3	1.9	<0.48	50
Naphthalene	<0.65	1.1 J	<0.36	12,000
n-Propylbenzene	0.31 J	1.2 J	<0.14	3,900[b]
Styrene	<0.17	<0.17	<0.16	NL
1,1,2,2- Tetrachloroethane	<0.24	<0.24	<0.36	NL
Tetrachloroethene	<0.37	<0.36	<0.29	1,300
Toluene	12.5	47.3	3.7 J	700
1,1,1- Trichloroethane	<0.15	<0.15	<0.20	680[b]
1,1,2- Trichloroethane	<0.29	<0.28	<0.52	NL
Trichloroethene	<0.39	<0.38	<0.22	470
1,2,4- Trimethylbenzene	3.4 J	16.8	<1.3	3,600[b]
1,3,5- Trimethylbenzene	1.4 J	6.9	<1.4	8,400[b]
Vinyl chloride	<0.47	<0.46	<0.83	20[b]
m,p- Xylene	8.2	31.2	2.6	260*
o-Xylene	2.7	10.3	0.83 J	260*
Xylene (total)	10.9	41.5	3.4	260*

Sample ID	BCP East Wall 1A	BCP East Wall 2A	BCP East Wall 3	BCP East Wall 4	BCP East Wall 5	BCP East Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/17/2013	10/30/2013	9/20/2013	10/31/2013	10/31/2013	11/1/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.1	<3.2	<2.6	<3.0	<3.2	<3.2	50
Benzene	6.4	7.8	3.1	5.4	5.3	6.3	60
Bromodichloromethane	<0.29	<0.30	<0.24	<0.28	<0.30	<0.30	NL
Bromoform	<0.23	<0.24	<0.19	<0.22	<0.24	<0.24	NL
Bromomethane	<0.78	<0.79	<0.65	<0.75	<0.81	<0.80	NL
2- Butanone	<2.5	<2.5	<2.0	<2.4	<2.6	<2.5	120
n-Butylbenzene	<0.14	<0.14	<0.11	<0.13	<0.14	<0.14	12,000[b]
sec- Butylbenzene	<0.13	<0.13	<0.11	<0.12	<0.13	<0.13	11,000[b]
tert- Butylbenzene	<0.28	<0.29	<0.24	<0.27	<0.29	<0.29	5,900[b]
Carbon Disulfide	<0.12	<0.12	0.49 J	<0.12	0.21 J	<0.12	NL
Carbon Tetrachloride	<0.93	<0.95	<0.77	<0.89	<0.96	<0.95	760[b]
Chlorobenzene	<0.22	<0.22	<0.18	<0.21	<0.22	<0.22	1,100
Chloroethane	<0.48	<0.49	<0.40	<0.46	<0.50	<0.49	NL
Chloroform	<0.23	<0.24	<0.19	<0.22	<0.24	<0.24	370
Chloromethane	<0.97	<0.99	<0.81	<0.93	<1.0	<1.0	NL
Dibromochloromethane	<0.34	<0.35	<0.28	<0.33	<0.35	<0.35	NL
1,1- Dichloroethane	<0.27	<0.27	<0.22	<0.25	<0.28	<0.27	270[b]
1,2- Dichloroethane	<0.43	<0.44	<0.36	<0.42	<0.45	<0.45	20[a]
1,1- Dichloroethene	<0.42	<0.43	<0.35	<0.40	<0.43	<0.43	330[b]
Cis-1,2- Dichloroethene	<0.41	<0.41	<0.34	<0.39	<0.42	<0.42	250[b]
trans-1,2-Dichloroethene	<0.36	<0.36	<0.30	<0.34	<0.37	<0.37	190[b]
1,2- Dichloroethene (total)	<0.20	<0.20	<0.16	<0.19	<0.20	<0.20	NL
1,2- Dichloropropane	<0.34	<0.34	<0.28	<0.32	<0.35	<0.35	NL
cis-1,3- Dichloropropene	<0.23	<0.24	<0.19	<0.22	<0.24	<0.24	NL
trans-1,3-Dichloropropene	<0.23	<0.24	<0.19	<0.22	<0.24	<0.24	NL
Ethylbenzene	1.7	1.7	0.63 J	1.1 J	0.99 J	1.1 J	1,000[b]
2- Hexanone	<1.9	<2.0	<1.6	<1.9	<2.0	<2.0	NL
Isopropylbenzene	0.25 J	0.23 J	<0.19	<0.21	<0.23	<0.23	NL
p- Isopropyltoluene	<0.13	<0.13	<0.11	<0.12	<0.13	<0.13	NL
Methyl tert butyl ether	<0.32	<0.32	<0.26	<0.30	<0.33	<0.33	930[b]
4- Methyl-2-pentanone	<1.5	<1.5	<1.2	<1.4	<1.5	<1.5	NL
Methylene chloride	<1.2	<1.3	<1.0	<1.2	<1.3	<1.3	50
Naphthalene	<0.63	<0.64	<0.52	<0.60	<0.65	<0.65	12,000
n-Propylbenzene	0.35 J	0.35 J	<0.16	0.23 J	<0.20	0.23 J	3,900[b]
Styrene	<0.16	<0.17	<0.14	<0.16	<0.17	<0.17	NL
1,1,2,2- Tetrachloroethane	<0.24	<0.24	<0.20	<0.23	<0.24	<0.24	NL
Tetrachloroethene	<0.35	<0.36	<0.29	<0.34	<0.37	<0.36	1,300
Toluene	14	15.5	5.4	10.1	9.4	10.2	700
1,1,1- Trichloroethane	<0.14	<0.15	<0.12	<0.14	<0.15	<0.15	680[b]
1,1,2- Trichloroethane	<0.28	<0.28	<0.23	<0.27	<0.29	<0.28	NL
Trichloroethene	<0.38	<0.39	<0.31	<0.36	<0.39	<0.39	470
1,2,4- Trimethylbenzene	4.8	3.8 J	1.2 J	2.5 J	2.1 J	2.6 J	3,600[b]
1,3,5- Trimethylbenzene	1.9 J	1.6 J	0.53 J	1.1 J	0.94 J	1.1 J	8,400[b]
Vinyl chloride	<0.46	<0.46	<0.38	<0.44	<0.47	<0.47	20[b]
m,p- Xylene	10.2	10.1	3.4	6.3	5.5	6.4	260*
o-Xylene	3.3	3.4	1.2 J	1.9	1.9	2.2	260*
Xylene (total)	13.5	13.4	4.6	8.2	7.5	8.6	260*

Sample ID	BCP East Wall 7	BCP East Wall 8	BCP East Wall 9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/1/2013	11/4/2013	12/4/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.1	<3.0	26.5	50
Benzene	5.4	4	12.4	60
Bromodichloromethane	<0.29	<0.28	<0.31	NL
Bromoform	<0.23	<0.23	<0.25	NL
Bromomethane	<0.78	<0.76	<0.82	NL
2- Butanone	<2.5	<2.4	<2.6	120
n-Butylbenzene	<0.14	<0.13	<0.15	12,000[b]
sec- Butylbenzene	<0.13	<0.12	<0.13	11,000[b]
tert- Butylbenzene	<0.29	<0.28	<0.30	5,900[b]
Carbon Disulfide	<0.12	<0.12	<0.13	NL
Carbon Tetrachloride	<0.93	<0.91	<0.98	760[b]
Chlorobenzene	<0.22	<0.21	<0.23	1,100
Chloroethane	<0.48	<0.47	<0.51	NL
Chloroform	<0.23	<0.23	<0.24	370
Chloromethane	<0.98	<0.95	<1.0	NL
Dibromochloromethane	<0.34	<0.33	<0.36	NL
1,1- Dichloroethane	<0.27	<0.26	<0.28	270[b]
1,2- Dichloroethane	<0.44	<0.42	<0.46	20[a]
1,1- Dichloroethene	<0.42	<0.41	<0.44	330[b]
Cis-1,2- Dichloroethene	<0.41	<0.40	<0.43	250[b]
trans-1,2-Dichloroethene	<0.36	<0.35	<0.38	190[b]
1,2- Dichloroethene (total)	<0.20	<0.19	<0.21	NL
1,2- Dichloropropane	<0.34	<0.33	<0.36	NL
cis-1,3- Dichloropropene	<0.23	<0.23	<0.24	NL
trans-1,3-Dichloropropene	<0.23	<0.23	<0.25	NL
Ethylbenzene	0.96 J	0.80 J	3.1	1,000[b]
2- Hexanone	<2.0	<1.9	<2.1	NL
Isopropylbenzene	<0.22	<0.22	0.62 J	NL
p- Isopropyltoluene	<0.13	<0.12	<0.13	NL
Methyl tert butyl ether	<0.32	<0.31	<0.34	930[b]
4- Methyl-2-pentanone	<1.5	<1.4	<1.6	NL
Methylene chloride	<1.2	<1.2	<1.3	50
Naphthalene	<0.63	<0.62	<0.67	12,000
n-Propylbenzene	0.21 J	<0.19	0.79 J	3,900[b]
Styrene	<0.17	<0.16	<0.17	NL
1,1,2,2- Tetrachloroethane	<0.24	<0.23	<0.25	NL
Tetrachloroethene	<0.36	<0.35	<0.37	1,300
Toluene	9.2	7.5	27.5	700
1,1,1- Trichloroethane	<0.15	<0.14	<0.15	680[b]
1,1,2- Trichloroethane	<0.28	<0.27	<0.29	NL
Trichloroethene	<0.38	<0.37	<0.40	470
1,2,4- Trimethylbenzene	2.4 J	2.2 J	10.8	3,600[b]
1,3,5- Trimethylbenzene	1.1 J	0.90 J	4.2	8,400[b]
Vinyl chloride	<0.46	<0.45	<0.48	20[b]
m,p- Xylene	5.7	5.1	18.3	260*
o-Xylene	1.9	1.6	6.2	260*
Xylene (total)	7.6	6.7	24.5	260*

Sample ID	BCP South Wall 1	BCP South Wall 2	BCP South Wall 3	BCP South Wall 4	BCP South Wall 5	BCP South Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/8/2013	10/9/2013	10/10/2013	10/14/2013	10/17/2013	11/4/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.4	<3.1	<3.1	<3.3	<2.9	<3.5	50
Benzene	7.5	7.1	40	23	5.4	7	60
Bromodichloromethane	<0.32	<0.29	<0.29	<0.31	<0.27	<0.32	NL
Bromoform	<0.25	<0.24	<0.23	<0.25	<0.22	<0.26	NL
Bromomethane	<0.85	<0.79	<0.77	<0.83	<0.73	<0.87	NL
2- Butanone	<2.7	<2.5	<2.4	<2.6	<2.3	<2.8	120
n-Butylbenzene	<0.15	<0.14	<0.14	<0.15	<0.13	<0.15	12,000[b]
sec- Butylbenzene	<0.14	0.51 J	0.34 J	3.8 J	<0.12	<0.14	11,000[b]
tert- Butylbenzene	<0.31	<0.29	<0.28	<0.30	<0.27	<0.32	5,900[b]
Carbon Disulfide	<0.13	<0.12	<0.12	<0.13	<0.11	<0.14	NL
Carbon Tetrachloride	<1.0	<0.94	<0.92	<0.99	<0.87	<1.0	760[b]
Chlorobenzene	<0.24	<0.22	<0.21	1.8	<0.20	<0.24	1,100
Chloroethane	<0.52	<0.48	<0.47	<0.51	<0.45	<0.54	NL
Chloroform	<0.25	<0.23	<0.23	<0.25	<0.22	<0.26	370
Chloromethane	<1.1	<0.98	<0.96	<1.0	<0.91	<1.1	NL
Dibromochloromethane	<0.37	<0.34	<0.34	<0.36	<0.32	<0.38	NL
1,1- Dichloroethane	<0.29	<0.27	<0.26	<0.28	<0.25	<0.30	270[b]
1,2- Dichloroethane	<0.47	<0.44	<0.43	<0.46	<0.41	<0.49	20[a]
1,1- Dichloroethene	<0.45	<0.42	<0.41	<0.45	<0.39	<0.47	330[b]
Cis-1,2- Dichloroethene	<0.44	<0.41	<0.40	<0.44	<0.38	<0.46	250[b]
trans-1,2-Dichloroethene	<0.39	<0.36	<0.35	<0.38	<0.33	<0.40	190[b]
1,2- Dichloroethene (total)	<0.21	<0.20	<0.19	<0.21	<0.18	<0.22	NL
1,2- Dichloropropane	<0.37	<0.34	<0.33	<0.36	<0.32	<0.38	NL
cis-1,3- Dichloropropene	<0.25	<0.23	<0.23	<0.25	<0.22	<0.26	NL
trans-1,3-Dichloropropene	<0.25	<0.24	<0.23	<0.25	<0.22	<0.26	NL
Ethylbenzene	1.9	5.8	6.3	6.4	1.3 J	1.2 J	1,000[b]
2- Hexanone	<2.1	<2.0	<1.9	<2.1	<1.8	<2.2	NL
Isopropylbenzene	0.27 J	1.1 J	0.94 J	1.3 J	<0.21	<0.25	NL
p- Isopropyltoluene	<0.14	<0.13	<0.13	<0.14	<0.12	<0.14	NL
Methyl tert butyl ether	<0.35	<0.32	<0.31	<0.34	<0.30	<0.36	930[b]
4- Methyl-2-pentanone	<1.6	<1.5	<1.5	<1.6	<1.4	<1.7	NL
Methylene chloride	<1.3	<1.2	<1.2	<1.3	<1.2	<1.4	50
Naphthalene	<0.69	4.8	2.1 J	1.1 J	<0.59	<0.70	12,000
n-Propylbenzene	0.42 J	2.5 J	1.6 J	2.3 J	0.28 J	<0.22	3,900[b]
Styrene	<0.18	<0.17	<0.16	<0.18	<0.15	<0.18	NL
1,1,2,2- Tetrachloroethane	<0.26	<0.24	<0.23	<0.25	<0.22	<0.26	NL
Tetrachloroethene	<0.39	<0.36	<0.35	<0.38	<0.33	<0.40	1,300
Toluene	15.8	14.4	76.7	29.1	10.8	11.7	700
1,1,1- Trichloroethane	<0.16	<0.15	<0.14	<0.15	<0.14	<0.16	680[b]
1,1,2- Trichloroethane	<0.30	<0.28	<0.28	<0.30	<0.26	<0.31	NL
Trichloroethene	<0.41	<0.38	<0.38	<0.41	<0.35	<0.42	470
1,2,4- Trimethylbenzene	4.1 J	25.8	17.6	12	3.2 J	2.1 J	3,600[b]
1,3,5- Trimethylbenzene	1.7 J	6.1	5.8	4.8	1.3 J	0.91 J	8,400[b]
Vinyl chloride	<0.50	<0.46	<0.45	<0.49	<0.43	<0.51	20[b]
m,p- Xylene	9.2	23.4	33	24.6	6.6	6.5	260*
o-Xylene	3.1	6	14.4	7	2.3	2	260*
Xylene (total)	12.2	29.4	47.4	31.6	8.9	8.5	260*

Sample ID	BCP South Wall 7	BCP South Wall 8	BCP South Wall 10	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/7/2013	12/4/2013	6/5/2014	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<350	28.2	<2.1	50
Benzene	689	11.8	5.5	60
Bromodichloromethane	<33	<0.31	<0.16	NL
Bromoform	<26	<0.25	<0.27	NL
Bromomethane	<88	<0.83	<0.46	NL
2- Butanone	<280	5.8	<2.3	120
n-Butylbenzene	<16	<0.15	1.3 J	12,000[b]
sec- Butylbenzene	<14	0.25 J	1.2 J	11,000[b]
tert- Butylbenzene	<32	<0.30	<0.16	5,900[b]
Carbon Disulfide	<14	<0.13	<0.099	NL
Carbon Tetrachloride	<100	<0.98	<0.17	760[b]
Chlorobenzene	<24	<0.23	<0.12	1,100
Chloroethane	<54	<0.51	<0.57	NL
Chloroform	<26	<0.24	<0.13	370
Chloromethane	<110	<1.0	<0.43	NL
Dibromochloromethane	<38	<0.36	<0.24	NL
1,1- Dichloroethane	<30	<0.28	<0.20	270[b]
1,2- Dichloroethane	<49	<0.46	<0.24	20[a]
1,1- Dichloroethene	<47	<0.44	<0.31	330[b]
Cis-1,2- Dichloroethene	<46	<0.43	<0.34	250[b]
trans-1,2-Dichloroethene	<40	<0.38	<0.32	190[b]
1,2- Dichloroethene (total)	<22	<0.21	<0.32	NL
1,2- Dichloropropane	<38	<0.36	<0.32	NL
cis-1,3- Dichloropropene	<26	<0.24	<0.17	NL
trans-1,3-Dichloropropene	<26	<0.25	<0.20	NL
Ethylbenzene	<16	2.8	2.1	1,000[b]
2- Hexanone	<220	<2.1	<0.57	NL
Isopropylbenzene	<25	0.57 J	1.4 J	NL
p- Isopropyltoluene	<14	<0.13	<0.13	NL
Methyl tert butyl ether	<36	<0.34	<0.14	930[b]
4- Methyl-2-pentanone	<170	<1.6	<0.41	NL
Methylene chloride	<140	<1.3	<0.40	50
Naphthalene	<71	<0.67	0.75 J	12,000
n-Propylbenzene	69.4 J	0.70 J	3.2 J	3,900[b]
Styrene	<19	<0.17	<0.13	NL
1,1,2,2- Tetrachloroethane	<27	<0.25	<0.30	NL
Tetrachloroethene	<40	<0.37	<0.24	1,300
Toluene	<22	24.7	10.9	700
1,1,1- Trichloroethane	<16	<0.15	<0.16	680[b]
1,1,2- Trichloroethane	<31	<0.29	1.8	NL
Trichloroethene	<43	<0.40	<0.19	470
1,2,4- Trimethylbenzene	200 J	9.5	11.4	3,600[b]
1,3,5- Trimethylbenzene	26.5 J	3.8 J	<1.2	8,400[b]
Vinyl chloride	<51	<0.48	<0.69	20[b]
m,p- Xylene	54.2 J	16.4	8	260*
o-Xylene	<18	5.5	2.7	260*
Xylene (total)	54.2 J	21.9	10.7	260*

Sample ID	BCP West Wall 1	BCP West Wall 2	BCP West Wall 3	BCP West Wall 4	BCP West Wall 4 Duplicate[1]	BCP West Wall 5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/7/2013**	**11/12/2013**	**11/13/2013**	**11/14/2013**	**11/14/2013**	**11/14/2013**	
Sample Depth	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<360	43.6	<3.1	<2.9	<3.6	<3.1	50
Benzene	1120	278	18.3	8.8	10.1	6.8	60
Bromodichloromethane	<33	<0.30	<0.29	<0.27	<0.34	<0.29	NL
Bromoform	<27	<0.24	<0.23	<0.22	<0.27	<0.23	NL
Bromomethane	<89	<0.81	<0.77	<0.73	<0.90	<0.78	NL
2- Butanone	<280	<2.6	<2.4	<2.3	<2.9	<2.5	120
n-Butylbenzene	<16	<0.14	<0.14	<0.13	<0.16	<0.14	12,000[b]
sec- Butylbenzene	<14	<0.13	0.27 J	0.59 J	0.67 J	1.4 J	11,000[b]
tert- Butylbenzene	<32	<0.29	<0.28	<0.27	<0.33	0.37 J	5,900[b]
Carbon Disulfide	<14	<0.13	0.43 J	<0.11	<0.14	<0.12	NL
Carbon Tetrachloride	<110	<0.96	<0.92	<0.87	<1.1	<0.92	760[b]
Chlorobenzene	<25	<0.22	<0.21	<0.20	<0.25	<0.21	1,100
Chloroethane	<55	<0.50	<0.47	<0.45	<0.56	<0.48	NL
Chloroform	<26	<0.24	<0.23	0.74 J	1.1 J	<0.23	370
Chloromethane	<110	<1.0	<0.96	<0.91	<1.1	<0.97	NL
Dibromochloromethane	<39	<0.35	<0.34	<0.32	<0.39	<0.34	NL
1,1- Dichloroethane	<30	<0.28	<0.26	<0.25	<0.31	<0.26	270[b]
1,2- Dichloroethane	<50	<0.45	<0.43	<0.41	<0.50	<0.43	20[a]
1,1- Dichloroethene	<48	<0.43	<0.41	<0.39	<0.48	<0.42	330[b]
Cis-1,2- Dichloroethene	<46	<0.42	<0.40	<0.38	<0.47	<0.41	250[b]
trans-1,2-Dichloroethene	<41	<0.37	<0.35	<0.33	<0.41	<0.35	190[b]
1,2- Dichloroethene (total)	<22	<0.20	<0.19	<0.18	<0.23	<0.19	NL
1,2- Dichloropropane	<38	<0.35	<0.33	<0.31	<0.39	<0.34	NL
cis-1,3- Dichloropropene	<26	<0.24	<0.23	<0.22	<0.27	<0.23	NL
trans-1,3-Dichloropropene	<27	<0.24	<0.23	<0.22	<0.27	<0.23	NL
Ethylbenzene	<16	6.7	41.4	5.1	5.9	1.8	1,000[b]
2- Hexanone	<220	<2.0	<1.9	<1.8	<2.3	<1.9	NL
Isopropylbenzene	<25	0.81 J	2.4 J	0.98 J	1.1 J	0.41 J	NL
p- Isopropyltoluene	<15	<0.13	<0.13	<0.12	<0.15	<0.13	NL
Methyl tert butyl ether	<36	<0.33	<0.31	<0.30	<0.37	<0.32	930[b]
4- Methyl-2-pentanone	<170	3.7 J	<1.5	<1.4	<1.7	<1.5	NL
Methylene chloride	<140	<1.3	<1.2	<1.2	<1.4	<1.2	50
Naphthalene	<72	0.97 J	14.8	2.5 J	3.4 J	<0.63	12,000
n-Propylbenzene	<22	1.0 J	5.6	3.5 J	3.1 J	0.35 J	3,900[b]
Styrene	<19	<0.17	<0.16	<0.15	<0.19	<0.16	NL
1,1,2,2- Tetrachloroethane	<27	<0.24	<0.23	<0.22	<0.27	<0.23	NL
Tetrachloroethene	<40	<0.37	<0.35	<0.33	<0.41	<0.35	1,300
Toluene	44.6 J	25.1	18.4	20.7	25.1	13.7	700
1,1,1- Trichloroethane	<16	<0.15	<0.14	<0.13	<0.17	<0.14	680[b]
1,1,2- Trichloroethane	<32	<0.29	<0.27	<0.26	<0.32	<0.28	NL
Trichloroethene	<43	<0.39	<0.37	<0.35	<0.44	<0.38	470
1,2,4- Trimethylbenzene	52.9 J	12.3	52.5	12.4	16	3.7 J	3,600[b]
1,3,5- Trimethylbenzene	<12	5	11.9	4.2	6.1	1.5 J	8,400[b]
Vinyl chloride	<52	<0.47	<0.45	<0.42	<0.53	<0.45	20[b]
m,p- Xylene	64.0 J	24.4	159	24.9	32	9.4	260*
o-Xylene	<19	7.6	48.2	9.7	12.8	2.9	260*
Xylene (total)	64.0 J	32	207	34.6	44.9	12.3	260*

Sample ID	BCP West Wall 6	BCP West Wall 7	BCP West Wall 11	BCP West Wall 13	BCP West Wall 14	BCP West Wall 14 Duplicate[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/15/2013**	**11/22/2013**	**11/27/2013**	**6/5/2014**	**6/5/2014**	**6/5/2014**	
Sample Depth	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<2.7	<350	<2.9	<2.2	<2.2	<2.3	50
Benzene	5	<22	5.4	3.2	4.7	4.8	60
Bromodichloromethane	<0.26	<32	<0.27	<0.16	<0.16	<0.17	NL
Bromoform	<0.21	<26	<0.21	<0.27	<0.28	<0.29	NL
Bromomethane	<0.69	<87	<0.71	<0.46	<0.47	<0.49	NL
2- Butanone	<2.2	<280	<2.3	<2.4	<2.4	<2.5	120
n-Butylbenzene	<0.12	<15	<0.13	<0.19	0.21 J	0.52 J	12,000[b]
sec- Butylbenzene	0.44 J	<14	0.96 J	<0.57	<0.58	<0.61	11,000[b]
tert- Butylbenzene	<0.25	<32	<0.26	<0.16	<0.16	<0.17	5,900[b]
Carbon Disulfide	<0.11	<13	0.70 J	<0.10	<0.10	<0.11	NL
Carbon Tetrachloride	<0.82	<100	<0.85	<0.17	<0.17	<0.18	760[b]
Chlorobenzene	<0.19	<24	<0.20	<0.12	<0.12	<0.13	1,100
Chloroethane	<0.42	<53	<0.44	<0.58	<0.59	<0.62	NL
Chloroform	<0.20	<26	<0.21	<0.13	<0.13	<0.14	370
Chloromethane	<0.86	<110	<0.89	<0.43	<0.44	<0.46	NL
Dibromochloromethane	<0.30	<38	<0.31	<0.25	<0.25	<0.26	NL
1,1- Dichloroethane	<0.23	<30	<0.24	<0.21	<0.21	<0.22	270[b]
1,2- Dichloroethane	<0.38	<48	<0.40	<0.25	<0.25	<0.26	20[a]
1,1- Dichloroethene	<0.37	<46	<0.38	<0.32	<0.32	<0.34	330[b]
Cis-1,2- Dichloroethene	<0.36	<45	<0.37	<0.35	<0.35	<0.37	250[b]
trans-1,2-Dichloroethene	<0.31	<40	<0.33	<0.32	<0.33	<0.34	190[b]
1,2- Dichloroethene (total)	<0.17	<22	<0.18	<0.32	<0.33	<0.34	NL
1,2- Dichloropropane	<0.30	<38	<0.31	<0.32	<0.33	<0.34	NL
cis-1,3- Dichloropropene	<0.20	<26	<0.21	<0.17	<0.18	<0.19	NL
trans-1,3-Dichloropropene	<0.21	<26	<0.21	<0.20	<0.21	<0.22	NL
Ethylbenzene	1.2 J	324	20	0.57 J	1.1 J	1.5 J	1,000[b]
2- Hexanone	<1.7	<220	<1.8	<0.58	<0.59	<0.62	NL
Isopropylbenzene	2.4 J	<25	3.2 J	<0.13	0.37 J	0.55 J	NL
p- Isopropyltoluene	<0.11	<14	0.77 J	<0.13	0.25 J	0.65 J	NL
Methyl tert butyl ether	<0.28	<35	<0.29	<0.14	<0.14	<0.15	930[b]
4- Methyl-2-pentanone	<1.3	<160	<1.4	<0.42	<0.42	<0.44	NL
Methylene chloride	<1.1	<140	<1.1	<0.41	<0.42	<0.44	50
Naphthalene	<0.55	<70	1.3 J	<0.30	<0.31	<0.32	12,000
n-Propylbenzene	2.8 J	<22	1.6 J	<0.12	0.46 J	0.75 J	3,900[b]
Styrene	<0.14	<18	<0.15	<0.13	<0.13	<0.14	NL
1,1,2,2- Tetrachloroethane	<0.21	<26	<0.22	<0.30	<0.31	<0.32	NL
Tetrachloroethene	<0.31	<39	<0.32	<0.24	<0.25	<0.26	1,300
Toluene	9.1	<22	10	5.2	8.7	9.6	700
1,1,1- Trichloroethane	<0.13	<16	<0.13	<0.17	<0.17	<0.18	680[b]
1,1,2- Trichloroethane	<0.24	<31	<0.25	<0.44	<0.45	<0.47	NL
Trichloroethene	<0.33	<42	<0.35	<0.19	<0.19	<0.20	470
1,2,4- Trimethylbenzene	2.8 J	90.6 J	10.4	1.3 J	3.3 J	5.2	3,600[b]
1,3,5- Trimethylbenzene	1.2 J	18.3 J	2.2 J	<1.2	<1.2	1.5 J	8,400[b]
Vinyl chloride	<0.40	<51	<0.42	<0.70	<0.71	<0.75	20[b]
m,p- Xylene	6.6	1630	18.7	3.4	5.7	7.3	260*
o-Xylene	2.3	<18	3.6	1.2 J	2	2.4	260*
Xylene (total)	8.9	1640	22.3	4.7	7.7	9.7	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
[1] = Sample named BCP IRM Duplicate 3 on chain of custody
[2] = Sample named BCP IRM Duplicate 6 on chain of custody
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP North Wall 1	BCP North Wall 2	BCP North Wall 3	BCP North Wall 4	BCP North Wall 5	BCP North Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	9/20/2013	9/20/2013	9/20/2013	11/1/2013	11/4/2013	11/14/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<15	<15	<15	<15	<14	<16	20,000
Acenaphthylene	<12	<11	<11	<11	<11	<12	100,000[a,d]
Anthracene	<14	<13	<14	<14	<13	<14	100,000[a,d]
Benzo(a)anthracene	<15	<14	<15	<15	<14	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<12	<11	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	<14	<13	<15	1,000[c,d]
Benzo(g,h,i)perylene	<12	<11	<11	<11	<11	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	<17	<16	<18	800[c,d]
Chrysene	<14	<14	<14	<14	<13	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<13	<14	<13	<13	<14	330[b,d]
Fluoranthene	23.5 J	<15	<16	<15	<15	<16	100,000[a,d]
Fluorene	<15	<15	<15	<15	<14	<15	30,000
Indeno (1,2,3-cd) pyrene	<13	<12	<13	<13	<12	<13	500[c,d]
Naphthalene	<19	<18	<18	<18	<17	<19	12,000[d]
Phenanthrene	<16	<15	<15	<15	<14	<16	100,000[d]
Pyrene	19.6 J	<13	<13	<13	<13	<14	100,000[d]

Sample ID	BCP North Wall 7	BCP North Wall 8	BCP North Wall 12	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/14/2013	12/4/2013	6/5/2014	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<15	<15	<15	20,000
Acenaphthylene	<11	<11	<11	100,000[a,d]
Anthracene	<14	<14	<13	100,000[a,d]
Benzo(a)anthracene	<15	<15	<14	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	800[c,d]
Chrysene	<14	<14	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<13	<14	<13	330[b,d]
Fluoranthene	<15	<16	<15	100,000[a,d]
Fluorene	<15	<15	<15	30,000
Indeno (1,2,3-cd) pyrene	<12	<13	<12	500[c,d]
Naphthalene	<18	<18	<18	12,000[d]
Phenanthrene	<15	<15	<15	100,000[d]
Pyrene	<13	<13	<13	100,000[d]

Sample ID	BCP East Wall 1A	BCP East Wall 2A	BCP East Wall 3	BCP East Wall 4	BCP East Wall 5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/17/2013	10/30/2013	9/20/2013	10/31/2013	10/31/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<17	<16	<16	<15	<15	20,000
Acenaphthylene	<13	<12	<12	<11	<12	100,000[a,d]
Anthracene	<15	<14	<14	<13	<14	100,000[a,d]
Benzo(a)anthracene	<17	<15	<15	<14	<15	1,000[c,d]
Benzo(a)pyrene	<14	<13	<13	<12	<12	1,000[c]
Benzo(b)fluoranthene	<16	<15	<15	<14	<14	1,000[c,d]
Benzo(g,h,i)perylene	<13	<12	<12	<11	<12	100,000[d]
Benzo(k)fluoranthene	<19	<18	<18	<17	<17	800[c,d]
Chrysene	<16	<15	<14	<14	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<15	<14	<14	<13	<14	330[b,d]
Fluoranthene	<18	<16	<16	<15	<16	100,000[a,d]
Fluorene	<17	<16	<15	<15	<15	30,000
Indeno (1,2,3-cd) pyrene	<14	<13	<13	<12	<13	500[c,d]
Naphthalene	<21	<19	<19	<18	<19	12,000[d]
Phenanthrene	<17	<16	<16	<15	<16	100,000[d]
Pyrene	<15	<14	<14	<13	<14	100,000[d]

Sample ID	BCP East Wall 6	BCP East Wall 7	BCP East Wall 8	BCP East Wall 9	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/1/2013	11/1/2013	11/4/2013	12/4/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<14	<15	<15	<14	20,000
Acenaphthylene	<11	<11	<11	<10	100,000[a,d]
Anthracene	<13	<13	<14	<12	100,000[a,d]
Benzo(a)anthracene	<14	<14	<15	<13	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<11	1,000[c]
Benzo(b)fluoranthene	<13	<14	<14	<13	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	<10	100,000[d]
Benzo(k)fluoranthene	<16	<17	<17	<15	800[c,d]
Chrysene	<13	<14	<14	<13	1,000[c,d]
Dibenzo(a,h)anthracene	<13	<13	<14	<12	330[b,d]
Fluoranthene	<15	<15	<16	<14	100,000[a,d]
Fluorene	<14	<15	<15	<13	30,000
Indeno (1,2,3-cd) pyrene	<12	<12	<13	<11	500[c,d]
Naphthalene	<17	<18	<18	<16	12,000[d]
Phenanthrene	<15	<15	<15	<14	100,000[d]
Pyrene	<13	<13	<13	<12	100,000[d]

Sample ID	BCP South Wall 1	BCP South Wall 2	BCP South Wall 3	BCP South Wall 4	BCP South Wall 5	BCP South Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/8/2013	10/9/2013	10/10/2013	10/14/2013	10/17/2013	11/4/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<16	<15	<16	<16	<16	<14	20,000
Acenaphthylene	<12	<11	<12	<12	<12	<11	100,000[a,d]
Anthracene	<15	<14	<15	<14	<14	<13	100,000[a,d]
Benzo(a)anthracene	<16	<15	<16	<15	<15	<14	1,000[c,d]
Benzo(a)pyrene	<13	<12	<13	<13	<13	<11	1,000[c]
Benzo(b)fluoranthene	<15	<14	<15	<15	<15	<13	1,000[c,d]
Benzo(g,h,i)perylene	<12	<11	<12	<12	<12	<11	100,000[d]
Benzo(k)fluoranthene	<18	<17	<18	<18	<18	<16	800[c,d]
Chrysene	<15	<14	<15	<15	<15	<13	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<14	<14	<14	<14	<13	330[b,d]
Fluoranthene	<17	<16	<16	<16	<16	<14	100,000[a,d]
Fluorene	<16	<15	<16	<16	<16	<14	30,000
Indeno (1,2,3-cd) pyrene	<13	<13	<13	<13	<13	<12	500[c,d]
Naphthalene	<19	<18	55.0 J	<19	<19	<17	12,000[d]
Phenanthrene	<16	<16	21.6 J	<16	<16	<14	100,000[d]
Pyrene	<14	<13	14.1 J	<14	<14	<12	100,000[d]

Sample ID	BCP South Wall 7	BCP South Wall 8	BCP South Wall 10	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/7/2013	12/4/2013	6/5/2014	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<16	<14	<16	20,000
Acenaphthylene	<12	<10	<12	100,000[a,d]
Anthracene	<15	<12	<14	100,000[a,d]
Benzo(a)anthracene	<16	<13	<15	1,000[c,d]
Benzo(a)pyrene	<13	<11	<12	1,000[c]
Benzo(b)fluoranthene	<15	<13	<15	1,000[c,d]
Benzo(g,h,i)perylene	<12	<10	<12	100,000[d]
Benzo(k)fluoranthene	<19	<16	<18	800[c,d]
Chrysene	<15	<13	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<15	<12	<14	330[b,d]
Fluoranthene	<17	<14	<16	100,000[a,d]
Fluorene	<16	<14	<15	30,000
Indeno (1,2,3-cd) pyrene	<14	<11	<13	500[c,d]
Naphthalene	25.8 J	<17	<19	12,000[d]
Phenanthrene	<17	<14	<16	100,000[d]
Pyrene	<14	<12	<14	100,000[d]

Sample ID	BCP West Wall 1	BCP West Wall 2	BCP West Wall 3	BCP West Wall 4	BCP West Wall 4 Duplicate[1]	BCP West Wall 5	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	11/7/2013	11/12/2013	11/13/2013	11/14/2013	11/14/2013	11/14/2013	
Sample Depth	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acenaphthene	<16	<15	<16	<16	<17	<15	20,000
Acenaphthylene	<12	<11	<12	<12	<13	<11	100,000[a,d]
Anthracene	<15	<14	<14	<14	<15	<14	100,000[a,d]
Benzo(a)anthracene	<16	<15	<15	<15	<16	<15	1,000[c,d]
Benzo(a)pyrene	<13	<12	<13	<12	<13	<12	1,000[c]
Benzo(b)fluoranthene	<15	<14	<15	<14	<16	<14	1,000[c,d]
Benzo(g,h,i)perylene	<12	<11	<12	<12	<12	<11	100,000[d]
Benzo(k)fluoranthene	<19	<17	<18	<18	<19	<17	800[c,d]
Chrysene	<15	<14	<15	<14	<16	<14	1,000[c,d]
Dibenzo(a,h)anthracene	<15	<14	<14	<14	<15	<13	330[b,d]
Fluoranthene	<17	<16	<16	<16	<17	<15	100,000[a,d]
Fluorene	<16	<15	<16	<15	<17	<15	30,000
Indeno (1,2,3-cd) pyrene	<14	<13	<13	<13	<14	<12	500[c,d]
Naphthalene	<20	<18	42.1 J	<19	<20	<18	12,000[d]
Phenanthrene	<17	<16	<16	<16	<17	<15	100,000[d]
Pyrene	<14	<13	<14	<14	<15	<13	100,000[d]

Sample ID	BCP West Wall 6	BCP West Wall 7	BCP West Wall 11	BCP West Wall 13	BCP West Wall 14	BCP West Wall 14 Duplicate[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**11/15/2013**	**11/22/2013**	**11/27/2013**	**6/5/2014**	**6/5/2014**	**6/5/2014**	
Sample Depth	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	**Smear Zone**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acenaphthene	<15	<15	<15	<15	<15	<16	20,000
Acenaphthylene	<11	<11	<11	<12	<12	<12	100,000[a,d]
Anthracene	<14	<13	<14	<14	<14	<14	100,000[a,d]
Benzo(a)anthracene	<15	<14	<14	<15	<15	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	<12	<12	<13	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	<14	<14	<15	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	<12	<11	<12	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	<17	<17	<18	800[c,d]
Chrysene	<14	<14	<14	<14	<14	<15	1,000[c,d]
Dibenzo(a,h)anthracene	<14	<13	<13	<14	<14	<14	330[b,d]
Fluoranthene	<16	<15	<15	<16	<16	<16	100,000[a,d]
Fluorene	<15	<15	<15	<15	<15	<16	30,000
Indeno (1,2,3-cd) pyrene	<13	<12	<12	<13	<13	<13	500[c,d]
Naphthalene	<18	20.5 J	32.8 J	<18	<18	<19	12,000[d]
Phenanthrene	<15	<15	<15	<16	<16	<16	100,000[d]
Pyrene	<13	<13	<13	<14	<14	<14	100,000[d]

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
[1] = Sample named BCP IRM Duplicate 3 on chain of custody
[2] = Sample named BCP IRM Duplicate 6 on chain of custody
J = Indicates an estimated value
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 21

250 Delaware Avenue
Buffalo, New York

Expanded Analytical Results for Verification Soil Samples Collected from the Sidewalls of the Petroleum-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013	
Sample Location	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.0	<2.9	<2.7	50
Benzene	5.4	2.2	5	60
Bromodichloromethane	<0.28	<0.27	<0.26	NL
Bromoform	<0.22	<0.22	<0.21	NL
Bromomethane	<0.75	<0.73	<0.69	NL
2- Butanone	<2.4	<2.3	<2.2	120
n-Butylbenzene	<0.13	<0.13	<0.12	12,000[b]
sec- Butylbenzene	<0.12	<0.12	0.44 J	11,000[b]
tert- Butylbenzene	<0.27	<0.27	<0.25	5,900[b]
Carbon Disulfide	<0.12	<0.11	<0.11	NL
Carbon Tetrachloride	<0.89	<0.87	<0.82	760[b]
Chlorobenzene	<0.21	<0.20	<0.19	1,100
Chloroethane	<0.46	<0.45	<0.42	NL
Chloroform	<0.22	<0.22	<0.20	370
Chloromethane	<0.93	<0.91	<0.86	NL
Dibromochloromethane	<0.33	<0.32	<0.30	NL
1,1- Dichloroethane	<0.25	<0.25	<0.23	270[b]
1,2- Dichloroethane	<0.42	<0.41	<0.38	20[a]
1,1- Dichloroethene	<0.40	<0.39	<0.37	330[b]
Cis-1,2- Dichloroethene	<0.39	<0.38	<0.36	250[b]
trans-1,2-Dichloroethene	<0.34	<0.33	<0.31	190[b]
1,2- Dichloroethene (total)	<0.19	<0.18	<0.17	NL
1,2- Dichloropropane	<0.32	<0.32	<0.30	NL
cis-1,3- Dichloropropene	<0.22	<0.22	<0.20	NL
trans-1,3-Dichloropropene	<0.22	<0.22	<0.21	NL
Ethylbenzene	1.1 J	0.33 J	1.2 J	1,000[b]
2- Hexanone	<1.9	<1.8	<1.7	NL
Isopropylbenzene	<0.21	<0.21	2.4 J	NL
p- Isopropyltoluene	<0.12	<0.12	<0.11	NL
Methyl tert butyl ether	<0.30	<0.30	<0.28	930[b]
4- Methyl-2-pentanone	<1.4	<1.4	<1.3	NL
Methylene chloride	<1.2	<1.2	<1.1	50
Naphthalene	<0.60	<0.59	<0.55	12,000
n-Propylbenzene	0.23 J	<0.18	2.8 J	3,900[b]
Styrene	<0.16	<0.15	<0.14	NL
1,1,2,2- Tetrachloroethane	<0.23	<0.22	<0.21	NL
Tetrachloroethene	<0.34	<0.33	<0.31	1,300
Toluene	10.1	3.3 J	9.1	700
1,1,1- Trichloroethane	<0.14	<0.13	<0.13	680[b]
1,1,2- Trichloroethane	<0.27	<0.26	<0.24	NL
Trichloroethene	<0.36	<0.35	<0.33	470
1,2,4- Trimethylbenzene	2.5 J	0.79 J	2.8 J	3,600[b]
1,3,5- Trimethylbenzene	1.1 J	0.43 J	1.2 J	8,400[b]
Vinyl chloride	<0.44	<0.43	<0.40	20[b]
m,p- Xylene	6.3	2	6.6	260*
o-Xylene	1.9	0.65 J	2.3	260*
Xylene (total)	8.2	2.7	8.9	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013	
Sample Location	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<13	<13	<13	NL
4-Chloro-3-methyl phenol	<14	<14	<14	NL
2,4-Dichlorophenol	<16	<16	<16	NL
2,4-Dimethylphenol	<91	<92	<93	NL
2,4-Dinitrophenol	<140	<140	<140	NL
4,6-Dinitro-o-cresol	<70	<71	<71	NL
2-Methylphenol	<22	<22	<23	330[b]
3&4-Methylphenol	<27	<28	<28	(330[b]/330[b])[1]
2-Nitrophenol	<15	<15	<15	NL
4-Nitrophenol	<100	<110	<110	NL
Pentachlorophenol	<39	<40	<40	800[b]
Phenol	<16	<16	<16	330[b]
2,4,5-Trichlorophenol	<14	<14	<14	NL
2,4,6-Trichlorophenol	<14	<14	<14	NL
Acenaphthene	<15	<15	<15	20,000
Acenaphthylene	<11	<11	<11	100,000[a,d]
Anthracene	<13	<14	<14	100,000[a,d]
Benzo(a)anthracene	<14	<15	<15	1,000[c,d]
Benzo(a)pyrene	<12	<12	<12	1,000[c]
Benzo(b)fluoranthene	<14	<14	<14	1,000[c,d]
Benzo(g,h,i)perylene	<11	<11	<11	100,000[d]
Benzo(k)fluoranthene	<17	<17	<17	800[c,d]
4-Bromophenyl phenyl ether	<14	<14	<14	NL
Butyl benzyl phthalate	<11	<12	<12	NL
2-Chloronaphthalene	<15	<15	<15	NL
4-Chloroaniline	<14	<14	<14	NL
Carbazole	<13	<13	<13	NL
Chrysene	<14	<14	<14	1,000[c,d]
Bis (2-chloroethoxy) methane	<13	<13	<13	NL
Bis (2-chloroethyl) ether	<17	<17	<17	NL
Bis (2-chloroisopropyl) ether	<20	<20	<21	NL
4-Chlorophenyl phenyl ether	<17	<17	<17	NL
1,2-Dichlorobenzene	<14	<15	<15	1,100
1,3-Dichlorobenzene	<16	<16	<16	2,400
1,4-Dichlorobenzene	<15	<15	<15	1,800
2,4-Dinitrotoluene	<37	<38	<38	NL
2,6-Dinitrotoluene	<14	<14	<14	NL
3,3'-Dichlorobenzidine	<28	<28	<29	NL
Dibenzo(a,h)anthracene	<13	<13	<14	330[b,d]
Dibenzofuran	<15	<16	<16	7,000[d]
Di-n-butyl phthalate	<30	<30	<30	NL
Di-n-octyl phthalate	<8.7	<8.8	<8.9	NL
Diethyl phthalate	<14	<14	<14	NL
Dimethyl phthalate	<16	<16	<17	NL
Bis (2-ethylhexyl) phthalate	<10	<10	<11	NL
Fluoranthene	<15	<15	<16	100,000[a,d]
Fluorene	<15	<15	<15	30,000
Hexachlorobenzene	<17	<18	<18	330[b]
Hexachlorobutadiene	<16	<16	<17	NL
Hexachlorocyclopentadiene	<140	<140	<140	NL
Hexachloroethane	<13	<14	<14	NL
Indeno (1,2,3-cd) pyrene	<12	<13	<13	500[c,d]
Isophorone	<13	<13	<13	NL
2-Methylnaphthalene	<14	<14	<14	NL
2-Nitroaniline	<14	<14	<14	NL
3-Nitroaniline	<30	<31	<31	NL
4-Nitroaniline	<14	<14	<14	NL
Naphthalene	<18	<18	<18	12,000[d]
Nitrobenzene	<15	<15	<15	NL
N-Nitroso-Di-n-propylamine	<16	<16	<16	NL
N-Nitrosodiphenylamine	<17	<17	<17	NL
Phenanthrene	<15	<15	<15	100,000[d]
Pyrene	<13	<13	<13	100,000[d]
1,2,4-Trichlorobenzene	<15	<16	<16	NL

µg/kg = micrograms per kilogram
NL = Not Listed
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013		
Sample Location	Smear Zone	Smear Zone	Smear Zone		
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	1,810	4,860	2,880	33,000	NL
Antimony	<0.13	<0.14	0.71 B	NA	NL
Arsenic	1.2	1.9	1.2	3-12*	13[a]
Barium	18.4	34.4	34.7	15-600	350[a]
Beryllium	0.078 B	0.26 B	0.11 B	0-1.75	7.2
Cadmium	0.13 B	0.099 B	0.12 B	0.1-1	2.5[a]
Calcium	52,400	62,600	47,900	130-35,000*	NL
Chromium	(<0.46/3.5)[1]	(<0.46/7.2)[1]	(<0.47/0.47)[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	1.6 B	3.9 B	2.1 B	2.5-60*	NL
Copper	5.6	9.6	7.1	1-50	50
Iron	5,270	10,100	6,630	2,000-550,000	NL
Lead	5.3	9.7	6.2	***	63[a]
Magnesium	18,500	25,200	21,600	100-5,000	NL
Manganese	172	371	242	50-5,000	1,600[a]
Mercury	<0.0095	0.014 B	<0.011	0.001-0.2	0.18[a]
Nickel	3.2 B	8.3	4.8	0.5-25	30
Potassium	408 B	1,010	793	8,500-43,000*	NL
Selenium	<0.30	<0.31	<0.33	0.1-3.9	3.9[a]
Silver	<0.11	<0.11	<0.12	NA	2.0
Sodium	218 B	263 B	244 B	6,000-8,000	NL
Thallium	0.15 B	0.19 B	<0.13	NA	NL
Vanadium	8.6	12.3	9.9	1-300	NL
Zinc	72.6	55	55.1	9-50	109[a]

mg/kg = milligrams per kilogram
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013	
Sample Location	Smear Zone	Smear Zone	Smear Zone	
Units	mg/kg	mg/kg	mg/kg	mg/kg
Cyanide	<0.12	<0.13	<0.14	27[a,b]

mg/kg = milligrams per kilogram
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with “NS.” Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013	
Sample Location	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<13	<17	<13	-
Aroclor 1221	<17	<22	<17	-
Aroclor 1232	<13	<17	<14	-
Aroclor 1242	<14	<18	<14	-
Aroclor 1248	<12	<16	<13	-
Aroclor 1254	<20	<27	<21	-
Aroclor 1260	<14	<18	<15	-
Total Aroclor	ND	ND	ND	100

µg/kg = micrograms per kilogram
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP East Wall 4	BCP North Wall 4	BCP West Wall 6	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/31/2013	11/1/2013	11/15/2013	
Sample Location	Smear Zone	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<2.3	<2.2	<1.7	5[a]
Alpha-BHC	<1.8	<1.8	<1.4	20
Beta-BHC	<2.5	<2.4	<1.9	36
Delta-BHC	<1.4	<1.4	<1.1	40
Gamma-BHC (Lindane)	<2.3	<2.2	<1.7	100
Alpha-Chlordane	<2.9	<2.7	<2.1	94
Gamma-Chlordane	<2.3	<2.2	<1.7	NL
Dieldrin	<2.4	<2.3	<1.8	5[a]
4,4'-DDD	<2.5	<2.4	<1.9	3.3[b]
4,4'-DDE	<3.1	<3.0	<2.4	3.3[b]
4,4'-DDT	<2.4	<2.3	<1.8	3.3[b]
Endrin	<3.0	<2.9	<2.3	14
Endosulfan sulfate	<2.6	<2.5	<1.9	2,400*,[c]
Endrin aldehyde	<2.4	<2.3	<1.8	NL
Endosulfan-I	<3.0	<2.9	<2.2	2,400*,[c]
Endosulfan-II	<2.5	<2.4	<1.8	2,400*,[c]
Heptachlor	<2.3	<2.1	<1.7	42
Heptachlor epoxide	<2.4	<2.3	<1.8	NL
Methoxychlor	<3.1	<2.9	<2.3	NL
Endrin ketone	<2.8	<2.7	<2.1	NL
Toxaphene	<40	<38	<30	NL

µg/kg = micrograms per kilogram

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 22

250 Delaware Avenue
Buffalo, New York

Analytical Results for Verification Soil Samples Collected from the Bottom of the Fill-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	2/21/2014	2/24/2014	2/24/2014	3/10/2014	2/26/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<3.3	<3.2	<3.4	21.2	<3.3	50
Benzene	2.2	6.2	6.9	10.1	1.5	60
Bromodichloromethane	<0.30	<0.30	<0.32	<0.17	<0.31	NL
Bromoform	<0.24	<0.24	<0.25	<0.28	<0.25	NL
Bromomethane	<0.81	<0.80	<0.85	<0.48	<0.82	NL
2- Butanone	<2.6	<2.5	<2.7	<2.4	<2.6	120
n-Butylbenzene	<0.14	<0.14	<0.15	<0.19	<0.14	12,000[b]
sec- Butylbenzene	<0.13	<0.13	<0.14	<0.59	<0.13	11,000[b]
tert- Butylbenzene	<0.30	<0.29	<0.31	<0.17	<0.30	5,900[b]
Carbon Disulfide	1.4 J	<0.41	<0.44	0.28 J	<0.42	NL
Carbon Tetrachloride	<0.97	<0.96	<1.0	<0.17	<0.98	760[b]
Chlorobenzene	<0.23	<0.22	<0.24	<0.13	<0.23	1,100
Chloroethane	<0.50	<0.49	<0.52	<0.60	<0.50	NL
Chloroform	<0.24	<0.24	<0.25	<0.13	<0.24	370
Chloromethane	<1.0	<1.0	<1.1	<0.45	<1.0	NL
Dibromochloromethane	<0.36	<0.35	<0.37	<0.26	<0.36	NL
1,1- Dichloroethane	<0.28	<0.27	<0.29	<0.21	<0.28	270[b]
1,2- Dichloroethane	<0.45	<0.45	<0.48	<0.26	<0.46	20[a]
1,1- Dichloroethene	<0.44	<0.43	<0.46	<0.33	<0.44	330[b]
Cis-1,2- Dichloroethene	<0.43	<0.42	<0.45	<0.36	<0.43	250[b]
trans-1,2-Dichloroethene	<0.37	<0.37	<0.39	<0.33	<0.38	190[b]
1,2- Dichloroethene (total)	<0.20	<0.37	<0.39	<0.33	<0.38	NL
1,2- Dichloropropane	<0.35	<0.35	<0.37	<0.33	<0.36	NL
cis-1,3- Dichloropropene	<0.24	<0.24	<0.25	<0.18	<0.24	NL
trans-1,3-Dichloropropene	<0.24	<0.24	<0.26	<0.21	<0.25	NL
Ethylbenzene	0.59 J	1.5 J	1.6 J	2.1	0.25 J	1,000[b]
2- Hexanone	<2.0	<2.0	<2.1	<0.60	<2.1	NL
Isopropylbenzene	<0.23	0.26 J	0.25 J	0.41 J	<0.24	NL
p- Isopropyltoluene	<0.13	<0.13	<0.14	<0.14	<0.13	NL
Methyl tert butyl ether	<0.33	<0.33	<0.35	<0.15	<0.33	930[b]
4- Methyl-2-pentanone	<1.5	<1.5	<1.6	<0.43	<1.6	NL
Methylene chloride	<1.3	<1.3	<1.4	<0.42	<1.3	50
Naphthalene	<0.66	<0.65	<0.69	0.62 J	<0.66	12,000
n-Propylbenzene	<0.20	0.36 J	0.32 J	0.53 J	<0.20	3,900[b]
Styrene	<0.17	<0.17	<0.18	<0.14	<0.17	NL
1,1,2,2- Tetrachloroethane	<0.25	<0.24	<0.26	<0.31	<0.25	NL
Tetrachloroethene	<0.37	<0.36	<0.39	<0.25	<0.37	1,300
Toluene	5.1	13.4	14.9	15.8	2.8 J	700
1,1,1- Trichloroethane	<0.15	<0.21	<0.22	<0.17	<0.21	680[b]
1,1,2- Trichloroethane	<0.29	<0.29	<0.30	<0.46	<0.29	NL
Trichloroethene	<0.40	<0.39	<0.41	<0.19	<0.40	470
1,2,4- Trimethylbenzene	1.6 J	3.6 J	3.6 J	6.2	0.96 J	3,600[b]
1,3,5- Trimethylbenzene	0.57 J	1.4 J	1.4 J	2.6 J	0.41 J	8,400[b]
Vinyl chloride	<0.48	<0.47	<0.50	<0.72	<0.48	20[b]
m,p- Xylene	3.2	8.9	9.7	12.1	1.8	260*
o-Xylene	1.0 J	2.7	3	3.6	0.51 J	260*
Xylene (total)	4.2	11.6	12.6	15.7	2.3	260*

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	3/11/2014	3/11/2014	3/12/2014	3/12/2014	3/12/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	22.9	18.7	17.3	17.6	17.7	50
Benzene	13.6	6	11	0.40 J	10.6	60
Bromodichloromethane	<0.18	<0.18	<0.18	<0.18	<0.19	NL
Bromoform	<0.31	<0.31	<0.31	<0.30	<0.32	NL
Bromomethane	<0.53	<0.52	<0.53	<0.51	<0.54	NL
2- Butanone	<2.7	<2.7	<2.7	<2.6	<2.7	120
n-Butylbenzene	<0.21	<0.21	0.48 J	<0.20	0.49 J	12,000[b]
sec- Butylbenzene	<0.66	<0.64	<0.65	<0.63	<0.67	11,000[b]
tert- Butylbenzene	<0.19	<0.18	<0.18	<0.18	<0.19	5,900[b]
Carbon Disulfide	0.33 J	0.30 J	0.46 J	<0.11	0.47 J	NL
Carbon Tetrachloride	<0.19	<0.19	<0.19	<0.19	<0.20	760[b]
Chlorobenzene	<0.14	<0.14	<0.14	<0.13	<0.14	1,100
Chloroethane	<0.67	<0.65	<0.66	<0.64	<0.68	NL
Chloroform	<0.15	<0.15	<0.15	<0.14	<0.15	370
Chloromethane	<0.50	<0.49	<0.49	<0.48	<0.50	NL
Dibromochloromethane	<0.28	<0.28	<0.28	<0.27	<0.29	NL
1,1- Dichloroethane	<0.24	<0.23	<0.23	<0.22	<0.24	270[b]
1,2- Dichloroethane	<0.28	<0.28	<0.28	<0.27	<0.29	20[a]
1,1- Dichloroethene	<0.36	<0.36	<0.36	<0.35	<0.37	330[b]
Cis-1,2- Dichloroethene	<0.40	<0.39	<0.39	<0.38	<0.40	250[b]
trans-1,2-Dichloroethene	<0.37	<0.36	<0.36	<0.35	<0.37	190[b]
1,2- Dichloroethene (total)	<0.37	<0.36	<0.36	<0.35	<0.37	NL
1,2- Dichloropropane	<0.37	<0.36	<0.37	<0.35	<0.38	NL
cis-1,3- Dichloropropene	<0.20	<0.20	<0.20	<0.19	<0.20	NL
trans-1,3-Dichloropropene	<0.23	<0.23	<0.23	<0.22	<0.24	NL
Ethylbenzene	3.4	1.4 J	2.8	<0.58	3.2	1,000[b]
2- Hexanone	<0.67	<0.65	<0.66	<0.64	<0.68	NL
Isopropylbenzene	0.64 J	0.29 J	0.50 J	<0.14	0.53 J	NL
p- Isopropyltoluene	<0.15	<0.15	<0.15	<0.15	<0.16	NL
Methyl tert butyl ether	<0.16	<0.16	<0.16	<0.15	<0.16	930[b]
4- Methyl-2-pentanone	<0.48	<0.47	<0.47	<0.45	<0.48	NL
Methylene chloride	<0.47	<0.46	<0.46	<0.45	<0.47	50
Naphthalene	<0.35	0.46 J	<0.35	<0.33	<0.35	12,000
n-Propylbenzene	0.85 J	0.40 J	0.80 J	<0.13	0.73 J	3,900[b]
Styrene	<0.15	<0.15	<0.15	<0.14	<0.15	NL
1,1,2,2- Tetrachloroethane	<0.35	<0.34	<0.34	<0.33	<0.35	NL
Tetrachloroethene	0.44 J	<0.27	<0.27	<0.26	<0.28	1,300
Toluene	26.2	11	23.4	0.86 J	24.4	700
1,1,1- Trichloroethane	<0.19	<0.19	<0.19	<0.18	<0.19	680[b]
1,1,2- Trichloroethane	<0.51	<0.50	<0.50	<0.48	<0.51	NL
Trichloroethene	<0.22	<0.21	<0.21	<0.21	<0.22	470
1,2,4- Trimethylbenzene	10.4	4.9	9.8	<1.2	9.3	3,600[b]
1,3,5- Trimethylbenzene	4.2 J	2.1 J	4.1 J	<1.3	3.9 J	8,400[b]
Vinyl chloride	<0.80	<0.79	<0.79	<0.77	<0.81	20[b]
m,p- Xylene	20.2	9.2	18.3	0.46 J	18.4	260*
o-Xylene	6.2	2.7	5.4	<0.24	5.7	260*
Xylene (total)	26.4	11.8	23.7	0.46 J	24.1	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	2/21/2014	2/24/2014	2/24/2014	3/10/2014	2/26/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<13	<12	<12	<12	<13	NL
4-Chloro-3-methyl phenol	<15	<14	<13	<14	<15	NL
2,4-Dichlorophenol	<17	<16	<15	<16	<16	NL
2,4-Dimethylphenol	<96	<88	<86	<88	<93	NL
2,4-Dinitrophenol	<150	<140	<130	<130	<140	NL
4,6-Dinitro-o-cresol	<74	<68	<66	<67	<72	NL
2-Methylphenol	<23	<21	<21	<21	<23	330[b]
3&4-Methylphenol	<29	<26	<26	<26	<28	(330[b]/330[b])[1]
2-Nitrophenol	<16	<14	<14	<14	<15	NL
4-Nitrophenol	<110	<100	<99	<100	<110	NL
Pentachlorophenol	<42	<38	<37	<38	<40	800[b]
Phenol	<17	<15	<15	<15	<16	330[b]
2,4,5-Trichlorophenol	<15	<14	<13	<13	<14	NL
2,4,6-Trichlorophenol	<15	<13	<13	<13	<14	NL
Acenaphthene	<16	<14	<14	<14	<15	20,000
Acenaphthylene	<12	<11	<11	<11	<11	100,000[a,d]
Anthracene	<14	30.0 J	<13	<13	<14	100,000[a,d]
Benzo(a)anthracene	<15	89.5 J	<14	<14	51.8 J	1,000[c,d]
Benzo(a)pyrene	<13	75.5 J	<11	<12	40.8 J	1,000[c]
Benzo(b)fluoranthene	<15	64.1 J	<13	<13	50.6 J	1,000[c,d]
Benzo(g,h,i)perylene	<12	54.3 J	<11	<11	27.1 J	100,000[d]
Benzo(k)fluoranthene	<18	74.5 J	<16	<16	<17	800[c,d]
4-Bromophenyl phenyl ether	<15	<14	<13	<14	<14	NL
Butyl benzyl phthalate	<12	<11	<11	<11	<12	NL
2-Chloronaphthalene	<16	<15	<14	<15	<16	NL
4-Chloroaniline	<15	<14	<13	<13	<14	NL
Carbazole	<14	<13	<12	<13	<14	NL
Chrysene	<15	111	<13	<13	38.9 J	1,000[c,d]
Bis (2-chloroethoxy) methane	<14	<13	<12	<13	<13	NL
Bis (2-chloroethyl) ether	<18	<16	<16	<16	<17	NL
Bis (2-chloroisopropyl) ether	<21	<19	<19	<19	<21	NL
4-Chlorophenyl phenyl ether	<18	<17	<16	<16	<18	NL
1,2-Dichlorobenzene	<15	<14	<14	<14	<15	1,100
1,3-Dichlorobenzene	<17	<15	<15	<15	<16	2,400
1,4-Dichlorobenzene	<16	<14	<14	<14	<15	1,800
2,4-Dinitrotoluene	<39	<36	<35	<36	<38	NL
2,6-Dinitrotoluene	<15	<14	<13	<13	<14	NL
3,3'-Dichlorobenzidine	<30	<27	<26	<27	<29	NL
Dibenzo(a,h)anthracene	<14	19.3 J	<13	<13	<14	330[b,d]
Dibenzofuran	<16	<15	<15	<15	<16	7,000[d]
Di-n-butyl phthalate	<31	<29	<28	<28	<30	NL
Di-n-octyl phthalate	<9.2	<8.4	<8.3	<8.4	<8.9	NL
Diethyl phthalate	<15	<13	<13	<13	17.9 JB	NL
Dimethyl phthalate	<17	<16	<15	<16	<17	NL
Bis (2-ethylhexyl) phthalate	<11	15.1 J	11.7 J	<9.9	<11	NL
Fluoranthene	<16	180	<14	15.0 J	77.5 J	100,000[a,d]
Fluorene	<16	<14	<14	<14	<15	30,000
Hexachlorobenzene	<18	<17	<17	<17	<18	330[b]
Hexachlorobutadiene	<17	<16	<15	<16	<17	NL
Hexachlorocyclopentadiene	<150	<140	<130	<130	<140	NL
Hexachloroethane	<14	<13	<13	<13	<14	NL
Indeno (1,2,3-cd) pyrene	<13	41.8 J	<12	<12	19.8 J	500[c,d]
Isophorone	<14	<12	<12	<12	<13	NL
2-Methylnaphthalene	<15	<14	<13	<14	<15	NL
2-Nitroaniline	<15	<14	<13	<13	<14	NL
3-Nitroaniline	<32	<30	<29	<29	<31	NL
4-Nitroaniline	<15	<14	<13	<13	<14	NL
Naphthalene	<19	<17	<17	<17	<18	12,000[d]
Nitrobenzene	<16	<15	<14	<15	<15	NL
N-Nitroso-Di-n-propylamine	<17	<15	<15	<15	<16	NL
N-Nitrosodiphenylamine	<18	<16	<16	<16	<17	NL
Phenanthrene	<16	152	<14	<15	63.9 J	100,000[d]
Pyrene	<14	204	<12	14.7 J	98.2 J	100,000[d]
1,2,4-Trichlorobenzene	<16	<15	<15	<15	<16	NL

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	3/11/2014	3/11/2014	3/12/2014	3/12/2014	3/12/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2-Chlorophenol	<12	<12	<12	<12	<12	NL
4-Chloro-3-methyl phenol	<13	<13	<14	<14	<14	NL
2,4-Dichlorophenol	<15	<15	<15	<16	<16	NL
2,4-Dimethylphenol	<86	<87	<87	<90	<88	NL
2,4-Dinitrophenol	<130	<130	<130	<140	<130	NL
4,6-Dinitro-o-cresol	<66	<67	<67	<69	<67	NL
2-Methylphenol	<21	<21	<21	<22	<21	330[b]
3&4-Methylphenol	<26	<26	<26	<27	<26	(330[b]/330[b])[1]
2-Nitrophenol	<14	<14	<14	<15	<14	NL
4-Nitrophenol	<99	<100	<100	<100	<100	NL
Pentachlorophenol	<37	<37	<38	<39	<38	800[b]
Phenol	<15	<15	<15	<16	<15	330[b]
2,4,5-Trichlorophenol	<13	<13	<13	<14	<13	NL
2,4,6-Trichlorophenol	<13	<13	<13	<14	<13	NL
Acenaphthene	<14	<14	<14	<15	<14	20,000
Acenaphthylene	<11	<11	<11	<11	<11	100,000[a,d]
Anthracene	<13	<13	19.4 J	<13	<13	100,000[a,d]
Benzo(a)anthracene	23.3 J	46.6 J	48.3 J	<14	<14	1,000[c,d]
Benzo(a)pyrene	19.1 J	41.2 J	45.0 J	<12	<12	1,000[c]
Benzo(b)fluoranthene	27.1 J	61.8 J	48.3 J	<14	<13	1,000[c,d]
Benzo(g,h,i)perylene	17.4 J	31.2 J	34.3 J	<11	<11	100,000[d]
Benzo(k)fluoranthene	<16	18.7 J	37.0 J	<17	<16	800[c,d]
4-Bromophenyl phenyl ether	<13	<13	<14	<14	<14	NL
Butyl benzyl phthalate	<11	<11	16.4 J	<11	<11	NL
2-Chloronaphthalene	<14	<14	<15	<15	<15	NL
4-Chloroaniline	<13	<13	<13	<14	<13	NL
Carbazole	<12	<13	13.6 J	<13	<13	NL
Chrysene	18.9 J	44.5 J	51.6 J	<14	<13	1,000[c,d]
Bis (2-chloroethoxy) methane	<12	<12	<13	<13	<13	NL
Bis (2-chloroethyl) ether	<16	<16	<16	<17	<16	NL
Bis (2-chloroisopropyl) ether	<19	<19	<19	<20	<19	NL
4-Chlorophenyl phenyl ether	<16	<16	<16	<17	<17	NL
1,2-Dichlorobenzene	<14	<14	<14	<14	<14	1,100
1,3-Dichlorobenzene	<15	<15	<15	<16	<15	2,400
1,4-Dichlorobenzene	<14	<14	<14	<15	<14	1,800
2,4-Dinitrotoluene	<35	<36	<36	<37	<36	NL
2,6-Dinitrotoluene	<13	<13	<13	<14	<13	NL
3,3'-Dichlorobenzidine	<26	<27	<27	<28	<27	NL
Dibenzo(a,h)anthracene	<13	<13	20.0 J	<13	<13	330[b,d]
Dibenzofuran	<15	<15	<15	<15	<15	7,000[d]
Di-n-butyl phthalate	<28	<28	<28	<29	<29	NL
Di-n-octyl phthalate	<8.3	<8.3	<8.4	<8.6	<8.4	NL
Diethyl phthalate	<13	<13	<13	<14	<13	NL
Dimethyl phthalate	<15	<15	<15	<16	<16	NL
Bis (2-ethylhexyl) phthalate	15.3 J	<9.8	26.6 J	<10	10.3 J	NL
Fluoranthene	38.5 J	80.0 J	89.3 J	<15	<15	100,000[a,d]
Fluorene	<14	<14	<14	<15	<14	30,000
Hexachlorobenzene	<17	<17	<17	<17	<17	330[b]
Hexachlorobutadiene	<15	<15	<16	<16	<16	NL
Hexachlorocyclopentadiene	<130	<130	<130	<140	<130	NL
Hexachloroethane	<13	<13	<13	<13	<13	NL
Indeno (1,2,3-cd) pyrene	15.0 J	28.1 J	31.5 J	<12	<12	500[c,d]
Isophorone	<12	<12	<12	<13	<12	NL
2-Methylnaphthalene	<13	<14	<14	<14	<14	NL
2-Nitroaniline	<13	<13	<13	<14	<13	NL
3-Nitroaniline	<29	<29	<29	<30	<30	NL
4-Nitroaniline	<13	<13	<13	<14	<13	NL
Naphthalene	<17	<17	18.9 J	<18	<17	12,000[d]
Nitrobenzene	<14	<14	<14	<15	<15	NL
N-Nitroso-Di-n-propylamine	<15	<15	<15	<16	<15	NL
N-Nitrosodiphenylamine	<16	<16	<16	<17	<16	NL
Phenanthrene	24.2 J	52.4 J	58.6 J	<15	<15	100,000[d]
Pyrene	33.3 J	81.5 J	80.6 J	<13	<13	100,000[d]
1,2,4-Trichlorobenzene	<15	<15	<15	<15	<15	NL

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value.
[1] = 3-Methylphenol / 4-Methylphenol
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/10/2014**	**2/26/2014**		
Units	**mg/kg**	**mg/kg**	**mg/kg**	**µg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	14800	2490	2380	2730	9620	33,000	NL
Antimony	<0.14	<0.13	<0.14	<0.14	0.32 B	NA	NL
Arsenic	5.4	1.5	1.1	1.7	4.7	3-12*	13[a]
Barium	229	14	26.4	16.7	73.2	15-600	350[a]
Beryllium	0.67	0.12 B	0.12 B	0.13 B	0.39	0-1.75	7.2
Cadmium	0.076 B	0.080 B	0.11 B	0.15 B	0.17 B	0.1-1	2.5[a]
Calcium	8630	31200	31700	44000	79900	130-35,000*	NL
Chromium	(0.81/18.5)[1]	(0.17 B/4.0)[1]	(0.17 B/3.6)[1]	(0.32 B/4.3)[1]	(0.25 B/12.8)[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	10.7	2.0 B	1.7 B	2.3 B	6.4	2.5-60*	NL
Copper	14.5	5.5	5.4	6.4	13	1-50	50
Iron	24100	6480	5220	6870	14900	2,000-550,000	NL
Lead	17.5	10.4	18.2	14.4	16.7	***	63[a]
Magnesium	7690	17900	15400	20100	20700	100-5,000	NL
Manganese	439	157	148	210	366	50-5,000	1,600[a]
Mercury	0.032 B	0.020 B	<0.0075	0.020 B	0.019 B	0.001-0.2	0.18[a]
Nickel	26.7	4.2	3.8	4.7	15.1	0.5-25	30
Potassium	3410	448 B	436 B	491	1940	8,500-43,000*	NL
Selenium	<0.33	<0.31	<0.31	<0.32	<0.31	0.1-3.9	3.9[a]
Silver	<0.12	<0.11	<0.11	<0.12	<0.11	NA	2.0
Sodium	325 B	148 B	158 B	158 B	293 B	6,000-8,000	NL
Thallium	<0.13	0.24 B	0.24 B	0.22 B	<0.12	NA	NL
Vanadium	23	10.4	8.6	10.7	18.3	1-300	NL
Zinc	79.2	62.8	66.8	56.1	59.3	9-50	109[a]

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**3/11/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	**3/12/2014**		
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	2140	5850	2460	4210	3080	33,000	NL
Antimony	<0.14	<0.14	<0.14	<0.14	<0.14	NA	NL
Arsenic	1.4	2.3	1.3	1.2	1.4	3-12*	13[a]
Barium	12.3	45.4	13.1	21.3	15.1	15-600	350[a]
Beryllium	0.11 B	0.26 B	0.13 B	0.23 B	0.17 B	0-1.75	7.2
Cadmium	0.20 B	0.13 B	0.18 B	0.14 B	0.14 B	0.1-1	2.5[a]
Calcium	42800	41800	41800	1550	35400	130-35,000*	NL
Chromium	(0.16 B/3.9)[1]	(0.19 B/8.1)[1]	(0.37 B/3.7)[1]	(0.38 B/4.7)[1]	(0.78/3.4)[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	2.2 B	3.6 B	1.8 B	2.6 B	2.3 B	2.5-60*	NL
Copper	5.9	8	5.8	8.6	6.8	1-50	50
Iron	6220	10200	6140	6310	6160	2,000-550,000	NL
Lead	12.3	25.3	15	11.8	13	***	63[a]
Magnesium	18700	16200	19200	1310	13800	100-5,000	NL
Manganese	174	267	207	136	196	50-5,000	1,600[a]
Mercury	0.024 B	0.034	0.020 B	0.043	0.035	0.001-0.2	0.18[a]
Nickel	4.1	9.2	4.3	5.2	5.4	0.5-25	30
Potassium	472	1120	505	424 B	500	8,500-43,000*	NL
Selenium	<0.31	<0.32	<0.32	<0.33	<0.33	0.1-3.9	3.9[a]
Silver	<0.11	<0.11	<0.11	<0.12	<0.12	NA	2.0
Sodium	214 B	279 B	329 B	133 B	184 B	6,000-8,000	NL
Thallium	0.17 B	0.19 B	0.14 B	<0.13	<0.13	NA	NL
Vanadium	10.7	14	9.2	8.6	8.3	1-300	NL
Zinc	60.1	55.1	106	89.2	56.8	9-50	109[a]

mg/kg = milligrams per kilogram
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/10/2014**	**2/26/2014**	
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Cyanide	0.16	0.028 B	<0.025	<0.023	<0.024	27[a,b]

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**3/11/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	**3/12/2014**	
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Cyanide	0.028 B	0.032 B	<0.025	<0.024	<0.024	27[a,b]

mg/kg = milligrams per kilogram
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	2/21/2014	2/24/2014	2/24/2014	3/10/2014	2/26/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<6.5	<5.8	<5.9	<5.9	<6.1	-
Aroclor 1221	<20	<18	<18	<18	<19	-
Aroclor 1232	<4.7	<4.2	<4.3	<4.2	<4.4	-
Aroclor 1242	<6.3	<5.7	<5.8	<5.7	<5.9	-
Aroclor 1248	<4.6	<4.1	<4.2	<4.1	<4.3	-
Aroclor 1254	<8.9	<8.0	<8.2	<8.1	<8.4	-
Aroclor 1260	<7.9	<7.1	<7.3	<7.2	<7.5	-
Total Aroclor	ND	ND	ND	ND	ND	100

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	3/11/2014	3/11/2014	3/12/2014	3/12/2014	3/12/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aroclor 1016	<5.8	<5.8	<5.7	<6.0	<5.8	-
Aroclor 1221	<18	<18	<17	<18	<18	-
Aroclor 1232	<4.2	<4.2	<4.1	<4.3	<4.2	-
Aroclor 1242	<5.7	<5.6	<5.6	<5.9	<5.7	-
Aroclor 1248	<4.1	<4.1	<4.0	<4.2	<4.1	-
Aroclor 1254	<8.0	<8.0	<7.9	<8.3	<8.0	-
Aroclor 1260	<7.1	<7.1	<7.0	<7.4	<7.1	-
Total Aroclor	ND	ND	ND	ND	ND	100

µg/kg = micrograms per kilogram
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006
(375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP Bottom 52	BCP Bottom 53	BCP Bottom 54	BCP Bottom 55	BCP Bottom 56	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	2/21/2014	2/24/2014	2/24/2014	3/10/2014	2/26/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.8	<1.6	<1.7	<1.6	<1.7	5[a]
Alpha-BHC	<1.4	<1.3	<1.3	<1.3	<1.4	20
Beta-BHC	<2.0	<1.8	<1.8	<1.8	<1.8	36
Delta-BHC	<1.1	<1.0	<1.0	<1.0	<1.1	40
Gamma-BHC (Lindane)	<1.8	<1.6	<1.6	<1.6	<1.7	100
Alpha-Chlordane	<2.2	<2.0	<2.0	<2.0	<2.1	94
Gamma-Chlordane	<1.8	<1.6	<1.6	<1.6	<1.7	NL
Dieldrin	<1.9	<1.7	<1.7	<1.7	<1.8	5[a]
4,4'-DDD	<1.9	<1.7	<1.8	<1.8	<1.8	3.3[b]
4,4'-DDE	<2.4	<2.2	<2.2	<2.2	<2.3	3.3[b]
4,4'-DDT	<1.9	<1.7	<1.7	<1.7	<1.7	3.3[b]
Endrin	<2.4	<2.1	<2.2	<2.1	<2.2	14
Endosulfan sulfate	<2.0	<1.8	<1.8	<1.8	<1.9	2,400*[,c]
Endrin aldehyde	<1.8	<1.7	<1.7	<1.7	<1.7	NL
Endosulfan-I	<2.3	<2.1	<2.1	<2.1	<2.2	2,400*[,c]
Endosulfan-II	<1.9	<1.7	<1.8	<1.7	<1.8	2,400*[,c]
Heptachlor	<1.8	<1.6	<1.6	<1.6	<1.6	42
Heptachlor epoxide	<1.8	<1.7	<1.7	<1.7	<1.7	NL
Methoxychlor	<2.4	<2.1	<2.2	<2.2	<2.2	NL
Endrin ketone	<2.2	<1.9	<2.0	<2.0	<2.0	NL
Toxaphene	<31	<28	<28	<28	<29	NL

Sample ID	BCP Bottom 57	BCP Bottom 58	BCP Bottom 59	BCP Bottom 60	BCP Bottom 61	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	3/11/2014	3/11/2014	3/12/2014	3/12/2014	3/12/2014	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aldrin	<1.6	<1.6	<1.6	<1.7	<1.6	5[a]
Alpha-BHC	<1.3	<1.3	<1.3	<1.3	<1.3	20
Beta-BHC	<1.8	<1.8	<1.7	<1.8	<1.8	36
Delta-BHC	<1.0	<1.0	<0.99	<1.0	<1.0	40
Gamma-BHC (Lindane)	<1.6	<1.6	<1.6	<1.7	<1.6	100
Alpha-Chlordane	<2.0	<2.0	<2.0	<2.1	<2.0	94
Gamma-Chlordane	<1.6	<1.6	<1.6	<1.7	<1.6	NL
Dieldrin	<1.7	<1.7	<1.7	<1.8	<1.7	5[a]
4,4'-DDD	<1.7	<1.7	<1.7	<1.8	<1.7	3.3[b]
4,4'-DDE	<2.2	<2.2	<2.1	<2.3	<2.2	3.3[b]
4,4'-DDT	<1.7	<1.7	<1.6	<1.7	<1.7	3.3[b]
Endrin	<2.1	<2.1	<2.1	<2.2	<2.1	14
Endosulfan sulfate	<1.8	<1.8	<1.8	<1.9	<1.8	2,400*[,c]
Endrin aldehyde	<1.6	<1.6	<1.6	<1.7	<1.7	NL
Endosulfan-I	<2.1	<2.1	<2.0	<2.2	<2.1	2,400*[,c]
Endosulfan-II	<1.7	<1.7	<1.7	<1.8	<1.7	2,400*[,c]
Heptachlor	<1.6	<1.6	<1.5	<1.6	<1.6	42
Heptachlor epoxide	<1.6	<1.6	<1.6	<1.7	<1.7	NL
Methoxychlor	<2.1	<2.1	<2.1	<2.2	<2.1	NL
Endrin ketone	<1.9	<1.9	<1.9	<2.0	<1.9	NL
Toxaphene	<28	<28	<27	<29	<28	NL

µg/kg = micrograms per kilogram

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Table 23

250 Delaware Avenue
Buffalo, New York

Analytical Results for Verification Soil/Fill Samples Collected from the Sidewalls of the Fill-Related Excavation

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	29.4	<3.1	<3.1	20.8	123	102	50
Benzene	0.32 J	2.4	6.9	5.7	0.79	0.49	60
Bromodichloromethane	<0.39	<0.29	<0.29	<0.19	<0.22	<0.20	NL
Bromoform	<0.32	<0.23	<0.23	<0.33	<0.37	<0.34	NL
Bromomethane	<1.1	<0.78	<0.78	<0.55	<0.62	<0.58	NL
2- Butanone	<3.4	<2.5	<2.5	<2.8	24	21.3	120
n-Butylbenzene	<0.19	<0.14	<0.14	0.50 J	<0.25	<0.23	12,000[b]
sec- Butylbenzene	<0.17	<0.13	<0.13	<0.69	<0.77	<0.72	11,000[b]
tert- Butylbenzene	<0.39	<0.29	<0.28	<0.19	<0.22	<0.20	5,900[b]
Carbon Disulfide	0.37 J	2.3 J	<0.40	1.9 J	<0.14	<0.13	NL
Carbon Tetrachloride	<1.3	<0.93	<0.93	<0.20	<0.23	<0.21	760[b]
Chlorobenzene	<0.29	<0.22	<0.22	<0.14	<0.16	<0.15	1,100
Chloroethane	<0.65	<0.48	<0.48	<0.70	<0.78	<0.73	NL
Chloroform	<0.31	<0.23	<0.23	<0.16	<0.17	<0.16	370
Chloromethane	<1.3	<0.98	<0.97	<0.52	<0.58	<0.55	NL
Dibromochloromethane	<0.46	<0.34	<0.34	<0.30	<0.33	<0.31	NL
1,1- Dichloroethane	<0.36	<0.27	<0.27	<0.25	<0.28	<0.26	270[b]
1,2- Dichloroethane	<0.59	<0.44	<0.43	<0.30	<0.33	<0.31	20[a]
1,1- Dichloroethene	<0.57	<0.42	<0.42	<0.38	<0.43	<0.40	330[b]
Cis-1,2- Dichloroethene	<0.55	<0.41	<0.41	<0.42	<0.47	<0.44	250[b]
trans-1,2-Dichloroethene	<0.49	<0.36	<0.36	<0.38	<0.43	<0.40	190[b]
1,2- Dichloroethene (total)	<0.27	<0.36	<0.36	<0.38	<0.43	<0.40	NL
1,2- Dichloropropane	<0.46	<0.34	<0.34	<0.39	<0.43	<0.41	NL
cis-1,3- Dichloropropene	<0.31	<0.23	<0.23	<0.21	<0.23	<0.22	NL
trans-1,3-Dichloropropene	<0.32	<0.23	<0.23	<0.24	<0.27	<0.25	NL
Ethylbenzene	<0.19	0.54 J	1.3 J	2.5	<0.71	<0.67	1,000[b]
2- Hexanone	<2.7	<2.0	<1.9	<0.70	<0.78	<0.73	NL
Isopropylbenzene	<0.30	<0.22	<0.22	0.43 J	<0.17	<0.16	NL
p- Isopropyltoluene	<0.17	<0.13	<0.13	<0.16	<0.18	<0.17	NL
Methyl tert butyl ether	<0.43	<0.32	<0.32	<0.17	<0.19	<0.18	930[b]
4- Methyl-2-pentanone	<2.0	<1.5	<1.5	<0.50	<0.56	<0.52	NL
Methylene chloride	<1.7	<1.2	<1.2	<0.49	<0.55	<0.51	50
Naphthalene	<0.86	<0.63	<0.63	0.40 J	<0.41	<0.38	12,000
n-Propylbenzene	<0.26	<0.19	0.25 J	0.69 J	<0.16	<0.15	3,900[b]
Styrene	<0.22	<0.16	<0.16	<0.16	<0.18	<0.17	NL
1,1,2,2- Tetrachloroethane	<0.32	<0.24	<0.24	<0.36	<0.41	<0.38	NL
Tetrachloroethene	<0.48	<0.35	<0.35	<0.29	<0.32	<0.30	1,300
Toluene	<0.27	4.7	12	17.5	1.4 J	0.60 J	700
1,1,1- Trichloroethane	<0.20	<0.20	<0.20	<0.20	<0.22	<0.21	680[b]
1,1,2- Trichloroethane	<0.38	<0.28	<0.28	<0.53	<0.59	<0.56	NL
Trichloroethene	<0.52	<0.38	<0.38	<0.23	<0.25	<0.24	470
1,2,4- Trimethylbenzene	<0.22	1.2 J	2.3 J	9.1	<1.5	<1.4	3,600[b]
1,3,5- Trimethylbenzene	<0.14	0.59 J	1.0 J	3.7 J	<1.6	<1.5	8,400[b]
Vinyl chloride	<0.62	<0.46	<0.46	<0.84	<0.94	<0.88	20[b]
m,p- Xylene	<0.31	2.7	7	15.4	0.55 J	<0.42	260*
o-Xylene	<0.22	0.74 J	2.2	4.7	<0.29	<0.27	260*
Xylene (total)	<0.22	3.5	9.1	20.1	0.72 J	<0.21	260*

µg/kg = micrograms per kilogram
NL = Not Listed
J = Indicates an estimated value
** Named BCP IRM Duplicate 5 on chain of custody
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
2-Chlorophenol	<68	<65	<13	<13	<13	<14	NL
4-Chloro-3-methyl phenol	<76	<73	<15	<14	<15	<16	NL
2,4-Dichlorophenol	<87	<83	<17	<16	<17	<18	NL
2,4-Dimethylphenol	<490	<470	<96	<91	<95	<100	NL
2,4-Dinitrophenol	<750	<720	<150	<140	<150	<160	NL
4,6-Dinitro-o-cresol	<380	<360	<74	<70	<73	<79	NL
2-Methylphenol	<120	<110	<23	<22	<23	<25	330
3&4-Methylphenol	153 J	<140	<29	<27	<28	<31	(330[b]/330[b])[1]
2-Nitrophenol	<80	<77	<16	<15	<16	<17	NL
4-Nitrophenol	<560	<540	<110	<110	<110	<120	NL
Pentachlorophenol	<210	<200	<41	<39	<41	<44	800[b]
Phenol	94.2 J	<82	<17	<16	<17	<18	330[b]
2,4,5-Trichlorophenol	<75	<72	<15	<14	<15	<16	NL
2,4,6-Trichlorophenol	<74	<71	<15	<14	<14	<16	NL
Acenaphthene	2570	<77	<16	<15	<16	<17	20,000
Acenaphthylene	572 J	<58	<12	<11	<12	<13	100,000[a,d]
Anthracene	7260	<69	<14	25.1 J	<14	<15	100,000[a,d]
Benzo(a)anthracene	14600	122 J	<15	160	<15	21.1 J	1,000[c,d]
Benzo(a)pyrene	12600	128 J	<13	237	<13	<14	1,000[c]
Benzo(b)fluoranthene	11400	129 J	<15	254	<15	<16	1,000[c,d]
Benzo(g,h,i)perylene	7700	154 J	<12	129	<12	<13	100,000[d]
Benzo(k)fluoranthene	10200	115 J	<18	88.0 J	<18	<19	800[c,d]
4-Bromophenyl phenyl ether	<76	<73	<15	<14	<15	<16	NL
Butyl benzyl phthalate	<61	<59	<12	<11	<12	<13	NL
2-Chloronaphthalene	<81	<78	<16	<15	<16	<17	NL
4-Chloroaniline	<75	<72	<15	<14	<15	<16	NL
Carbazole	4250	<68	<14	14.6 J	<14	<15	NL
Chrysene	13600	145 J	<15	147	<15	23.3 J	1,000[c,d]
Bis (2-chloroethoxy) methane	<71	<68	<14	<13	<14	<15	NL
Bis (2-chloroethyl) ether	<92	<88	<18	<17	<18	<19	NL
Bis (2-chloroisopropyl) ether	<110	<100	<21	<20	<21	<23	NL
4-Chlorophenyl phenyl ether	<92	<88	<18	<17	<18	<19	NL
1,2-Dichlorobenzene	<78	<75	<15	<15	<15	<16	1,100
1,3-Dichlorobenzene	<86	<83	<17	<16	<17	<18	2,400
1,4-Dichlorobenzene	<80	<77	<16	<15	<16	<17	1,800
2,4-Dinitrotoluene	<200	<190	<39	<37	<39	<42	NL
2,6-Dinitrotoluene	<75	<72	<15	<14	<15	<16	NL
3,3'-Dichlorobenzidine	<150	<140	<29	<28	<29	<32	NL
Dibenzo(a,h)anthracene	2740	<69	<14	57.5 J	<14	<15	330[b,d]
Dibenzofuran	2040	<80	<16	<16	<16	<17	7,000[d]
Di-n-butyl phthalate	<160	<150	<31	<30	<31	<33	NL
Di-n-octyl phthalate	<47	<45	<9.2	<8.8	<9.1	<9.9	NL
Diethyl phthalate	<75	<72	<15	<14	<15	<16	NL
Dimethyl phthalate	<87	<83	<17	<16	<17	<18	NL
Bis (2-ethylhexyl) phthalate	<56	<53	<11	18.6 J	<11	<12	NL
Fluoranthene	30900	227 J	<16	161	<16	34.0 J	100,000[a,d]
Fluorene	3070	<77	<16	<15	<16	<17	30,000
Hexachlorobenzene	<94	<90	<18	<18	<18	<20	330[b]
Hexachlorobutadiene	<87	<83	<17	<16	<17	<18	NL
Hexachlorocyclopentadiene	<750	<720	<150	<140	<150	<160	NL
Hexachloroethane	<72	<69	<14	<14	<14	<15	NL
Indeno (1,2,3-cd) pyrene	7420	83.5 J	<13	130	<13	<14	500[c,d]
Isophorone	<69	<66	<14	<13	<13	<15	NL
2-Methylnaphthalene	1000	<73	<15	<14	<15	<16	NL
2-Nitroaniline	<75	<72	<15	<14	<15	<16	NL
3-Nitroaniline	<160	<160	<32	<31	<32	<35	NL
4-Nitroaniline	<75	<72	<15	<14	<15	<16	NL
Naphthalene	2300	<92	<19	<18	<19	<20	12,000[d]
Nitrobenzene	<81	<78	<16	<15	<16	<17	NL
N-Nitroso-Di-n-propylamine	<86	<82	<17	<16	<17	<18	NL
N-Nitrosodiphenylamine	<91	<87	<18	<17	<18	<19	NL
Phenanthrene	27300	113 J	<16	73.6 J	<16	24.9 J	100,000[d]
Pyrene	26300	216 J	<14	140	<14	28.0 J	100,000[d]
1,2,4-Trichlorobenzene	<83	<79	<16	<15	<16	<17	NL

µg/kg = micrograms per kilogram
NL = Not Listed
[1] = 3-Methylphenol / 4-Methylphenol
J = Indicates an estimated value.
** Named BCP IRM Duplicate 5 on chain of custody
[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.
[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

C. Metals by USEPA SW-846 Methods 6010/7471A

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Eastern USA Background Concentrations[2]	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**		
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	11700	8330	2730	7330	11700	8870	33,000	NL
Antimony	<0.15	<0.14	<0.15	<0.14	<0.15	<0.15	NA	NL
Arsenic	5.6	5.2	3.8	3.4	4	3.8	3-12*	13[a]
Barium	97.2	50.5	21.9	46.4	68.4	78.7	15-600	350[a]
Beryllium	0.46	0.34 B	0.13 B	0.35 B	0.92	0.41	0-1.75	7.2
Cadmium	0.25 B	0.25 B	0.28 B	0.24 B	0.22 B	0.23 B	0.1-1	2.5[a]
Calcium	10500	14700	41800	19800	2350	9440	130-35,000*	NL
Chromium	(1.7/11.2)[1]	(1/7.6)[1]	(0.34 B/4.2)[1]	(0.68/7.9)[1]	(0.13 B/14.3)[1]	(<0.14/10.1)[1]	1.5-40*	(1[b,c]/30[a,c])[1]
Cobalt	7	5.4	2.2 B	4.4 B	9	5.3	2.5-60*	NL
Copper	15.7	9.9	7.4	9.9	11.5	9.6	1-50	50
Iron	18100	13400	6890	11700	20400	12400	2,000-550,000	NL
Lead	109	75.7	36.2	122	19	106	***	63[a]
Magnesium	3010	5740	18200	8140	2640	4840	100-5,000	NL
Manganese	388	263	204	236	335	315	50-5,000	1,600[a]
Mercury	0.16	0.12	0.027 B	0.12	0.13	0.15	0.001-0.2	0.18[a]
Nickel	12.4	10.4	4.7	9.1	14.2	9.8	0.5-25	30
Potassium	1030	457 B	465 B	664	1500	1110	8,500-43,000*	NL
Selenium	<0.35	<0.33	<0.34	<0.32	<0.33	0.83 B	0.1-3.9	3.9[a]
Silver	<0.12	0.16 B	<0.12	0.14 B	<0.12	<0.13	NA	2.0
Sodium	87.6 B	262 B	271 B	494	143 B	168 B	6,000-8,000	NL
Thallium	0.14 B	0.24 B	0.28 B	0.18 B	<0.13	0.13 B	NA	NL
Vanadium	21.6	18.6	11.3	16.1	20.9	16.9	1-300	NL
Zinc	185	97.9	86.6	100	84.1	68.5	9-50	109[a]

mg/kg = milligrams per kilogram
** Named BCP IRM Duplicate 5 on chain of custody
NL = Not Listed
NA = Not Available
B = Indicates analyte found in associated method blank.
SB = Site Background Levels
* = New York State Background
[1] = Hexavalent Chromium/Trivalent Chromium
[2] = New York State Department of Environmental Conservation Memorandum – Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A, Table 4 (January 24, 1994 [Revised])
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Unrestricted Use Soil
[c] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*** = Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4- 61 mg/kg. Average background levels in metropolitan or suburban areas, or near highways, typically range between 200- 500 mg/kg.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

D. Cyanide by USEPA SW-846 Method 9012

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Cyanide	0.31	0.21	<0.028	<0.025	<0.026	<0.029	27[a,b]

mg/kg = milligrams per kilogram
** Named BCP IRM Duplicate 5 on chain of custody
[a] = The Soil Cleanup Objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific Soil Cleanup Objective.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with “NS.” Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

E. PCBs by USEPA SW-846 Method 8082

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Aroclor 1016	<6.7	<6.5	<6.3	<6.1	<6.4	<6.9	-
Aroclor 1221	<20	<20	<19	<18	<20	<21	-
Aroclor 1232	<4.8	<4.6	<4.6	<4.3	<4.6	<5.0	-
Aroclor 1242	<6.5	<6.3	<6.2	<5.9	<6.3	<6.7	-
Aroclor 1248	<4.7	<4.5	<4.5	<4.3	<4.5	<4.8	-
Aroclor 1254	<9.2	<8.9	<8.7	<8.3	<8.9	<9.5	-
Aroclor 1260	16.2 J	<7.9	<7.8	<7.4	<7.9	<8.4	-
Total Aroclor	16.2 J	ND	ND	ND	ND	ND	100

µg/kg = micrograms per kilogram
** Named BCP IRM Duplicate 5 on chain of custody
ND = Not detected
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

F. Pesticides by USEPA SW-846 Method 8081

Sample ID	BCP North Wall 9	BCP North Wall 10	BCP North Wall 11	BCP South Wall 9	BCP West Wall 12	BCP West Wall 12 (Duplicate)**	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	**2/21/2014**	**2/24/2014**	**2/24/2014**	**3/11/2014**	**3/12/2014**	**3/12/2014**	
Units	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Aldrin	<1.9	<1.8	<1.8	<1.7	<1.8	<1.9	5[a]
Alpha-BHC	<1.5	<1.4	<1.4	<1.3	<1.4	<1.5	20
Beta-BHC	<2.0	<2.0	<1.9	<1.8	<1.9	<2.1	36
Delta-BHC	<1.2	<1.1	<1.1	<1.0	<1.1	<1.2	40
Gamma-BHC (Lindane)	<1.9	<1.8	<1.8	<1.7	<1.8	<1.9	100
Alpha-Chlordane	<2.3	<2.2	<2.2	<2.1	<2.2	<2.4	94
Gamma-Chlordane	<1.9	<1.8	<1.8	<1.7	<1.8	<1.9	NL
Dieldrin	<1.9	<1.9	<1.9	<1.8	<1.9	<2.0	5[a]
4,4'-DDD	<2.0	<1.9	<1.9	<1.8	<1.9	<2.1	3.3[b]
4,4'-DDE	<2.5	<2.4	<2.4	<2.3	<2.4	<2.6	3.3[b]
4,4'-DDT	12.2[1]	<1.8	<1.8	<1.7	<1.8	<2.0	3.3[b]
Endrin	<2.4	<2.3	<2.3	<2.2	<2.3	<2.5	14
Endosulfan sulfate	<2.1	<2.0	<2.0	<1.9	<2.0	<2.1	2,400*[,c]
Endrin aldehyde	<1.9	<1.8	<1.8	<1.7	<1.8	<2.0	NL
Endosulfan-I	<2.4	<2.3	<2.3	<2.2	<2.3	<2.5	2,400*[,c]
Endosulfan-II	<2.0	<1.9	<1.9	<1.8	<1.9	<2.0	2,400*[,c]
Heptachlor	<1.8	<1.7	<1.7	<1.6	<1.7	<1.9	42
Heptachlor epoxide	<1.9	<1.8	<1.8	<1.7	<1.8	<2.0	NL
Methoxychlor	<2.4	<2.4	<2.3	<2.2	<2.4	<2.5	NL
Endrin ketone	<2.2	<2.2	<2.1	<2.0	<2.1	<2.3	NL
Toxaphene	<32	<31	<30	<29	<31	<33	NL

µg/kg = micrograms per kilogram

[1] = Confirmation value >40% RPD.

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Unrestricted Soil Cleanup Objective value.

* = Soil Cleanup Objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[c] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

Table 24

250 Delaware Avenue
Buffalo, New York

Analytical Results for Groundwater Sampled Within the Former Petroleum-Impacted Area

A. VOCs by USEPA SW-846 Method 8260

Sample ID	BCP MW6	BCP MW7	BCP MW8	Trip Blank	NYSDEC Class GA Groundwater Criteria
Date Sampled	5/29/2014	5/29/2014	5/29/2014	5/29/2014	
Units	µg/l	µg/l	µg/l	µg/l	µg/l
Acetone	<2.5	<2.5	<2.5	<2.5	50
Benzene	1.2	<0.32	210	<0.32	1
Bromodichloromethane	<0.34	<0.34	<0.34	<0.34	50
Bromoform	<0.61	<0.61	<0.61	<0.61	50
Bromomethane	<1.8	<1.8	<1.8	<1.8	5
2- Butanone	<2.3	<2.3	<2.3	<2.3	50
n-Butylbenzene	<1.1	<1.1	<1.1	<1.1	5
sec- Butylbenzene	<0.42	<0.42	<0.42	<0.42	5
tert- Butylbenzene	<0.39	<0.39	<0.39	<0.39	5
Carbon Disulfide	<0.46	<0.46	<0.46	<0.46	60
Carbon Tetrachloride	<0.53	<0.53	<0.53	<0.53	5
Chlorobenzene	<0.43	<0.43	<0.43	<0.43	5
Chloroethane	<0.53	<0.53	<0.53	<0.53	5
Chloroform	<0.41	<0.41	<0.41	<0.41	7
Chloromethane	<1.1	<1.1	<1.1	<1.1	5
Dibromochloromethane	<0.38	<0.38	<0.38	<0.38	NL
1,1- Dichloroethane	<0.36	<0.36	2.4	<0.36	5
1,2- Dichloroethane	<0.50	<0.50	<0.50	<0.50	0.6
1,1- Dichloroethene	<0.61	<0.61	<0.61	<0.61	5
Cis-1,2- Dichloroethene	<0.84	<0.84	<0.84	<0.84	5
trans-1,2-Dichloroethene	<0.51	<0.51	<0.51	<0.51	5
1,2- Dichloroethene (total)	<0.51	<0.51	<0.51	<0.51	NL
1,2- Dichloropropane	<0.50	<0.50	<0.50	<0.50	1
cis-1,3- Dichloropropene	<0.42	<0.42	<0.42	<0.42	0.4[1]
trans-1,3-Dichloropropene	<0.50	<0.50	<0.50	<0.50	0.4[1]
Ethylbenzene	<0.38	<0.38	<0.38	<0.38	5
2- Hexanone	<1.6	<1.6	<1.6	<1.6	50
Isopropylbenzene	<0.35	<0.35	<0.35	<0.35	5
p- Isopropyltoluene	<0.37	<0.37	<0.37	<0.37	5
Methyl tert butyl ether	<0.51	<0.51	3.2	<0.51	10
4- Methyl-2-pentanone	<0.99	<0.99	<0.99	<0.99	NL
Methylene chloride	<0.28	<0.28	<0.28	<0.28	5
Naphthalene	<0.69	<0.69	<0.69	<0.69	10
n-Propylbenzene	<0.49	<0.49	<0.49	<0.49	5
Styrene	<0.85	<0.85	<0.85	<0.85	5
1,1,2,2- Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	5
Tetrachloroethene	<0.59	<0.59	<0.59	<0.59	5
Toluene	<0.33	<0.33	0.36 J	<0.33	5
1,1,1- Trichloroethane	<0.46	<0.46	<0.46	<0.46	5
1,1,2- Trichloroethane	<0.45	<0.45	<0.45	<0.45	1
Trichloroethene	<0.47	<0.47	<0.47	<0.47	5
1,2,4- Trimethylbenzene	<0.32	<0.32	0.55 J	<0.32	5
1,3,5- Trimethylbenzene	<0.38	<0.38	<0.38	<0.38	5
Vinyl chloride	<0.58	<0.58	<0.58	<0.58	2
m,p- Xylene	<0.93	<0.93	<0.93	<0.93	5
o-Xylene	<0.36	<0.36	0.42 J	<0.36	5
Xylene (total)	<0.36	<0.36	0.79 J	<0.36	5

µg/l = micrograms per liter
NL = Not Listed
J = Indicates an estimated value.
[1] = Applies to the sum of cis- and trans- 1,3-dichloropropene.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
= Analyte detected above the NYSDEC Groundwater Criteria.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	BCP MW6	BCP MW7	BCP MW8	NYSDEC Class GA Groundwater Criteria
Date Sampled	5/29/2014	5/29/2014	5/29/2014	
Units	µg/l	µg/l	µg/l	µg/l
2-Chlorophenol	<0.31	<0.31	<0.31	1*
4-Chloro-3-methyl phenol	<0.83	<0.83	<0.83	1*
2,4-Dichlorophenol	<0.40	<0.40	<0.40	1*
2,4-Dimethylphenol	<0.56	<0.56	<0.57	1*
2,4-Dinitrophenol	<2.5	<2.5	<2.5	1*
4,6-Dinitro-o-cresol	<1.9	<1.9	<1.9	1*
2-Methylphenol	<0.23	<0.23	<0.23	1*
3&4-Methylphenol	<0.47	<0.47	<0.47	1*
2-Nitrophenol	<2.9	<2.9	<2.9	1*
4-Nitrophenol	<0.53	<0.53	<0.54	1*
Pentachlorophenol	<1.1	<1.1	<1.1	1*
Phenol	<0.30	<0.30	<0.31	1*
2,4,5-Trichlorophenol	<0.37	<0.37	<0.37	1*
2,4,6-Trichlorophenol	<0.18	<0.18	<0.18	1*
Acenaphthene	<0.32	<0.32	<0.32	20
Acenaphthylene	<0.21	<0.21	<0.22	NL
Anthracene	<0.19	<0.19	<0.19	50
Benzo(a)anthracene	<0.49	<0.49	<0.50	0.002
Benzo(a)pyrene	<0.16	<0.16	<0.16	ND
Benzo(b)fluoranthene	<0.25	<0.25	<0.25	0.002
Benzo(g,h,i)perylene	<0.83	<0.83	<0.84	NL
Benzo(k)fluoranthene	<0.87	<0.87	<0.88	0.002
4-Bromophenyl phenyl ether	<0.47	<0.47	<0.48	NL
Butyl benzyl phthalate	<0.53	<0.53	<0.54	50
2-Chloronaphthalene	<0.31	<0.31	<0.32	10
4-Chloroaniline	<0.56	<0.56	<0.56	5
Carbazole	<0.16	<0.16	<0.16	NL
Chrysene	<0.17	<0.17	<0.17	0.002
Bis (2-chloroethoxy) methane	<0.29	<0.29	<0.29	5
Bis (2-chloroethyl) ether	<0.35	<0.35	<0.35	1
Bis (2-chloroisopropyl) ether	<0.33	<0.33	<0.34	5
4-Chlorophenyl phenyl ether	<0.25	<0.25	<0.25	NL
1,2-Dichlorobenzene	<0.20	<0.20	<0.20	3
1,3-Dichlorobenzene	<0.27	<0.27	<0.27	3
1,4-Dichlorobenzene	<0.23	<0.23	<0.23	3
2,4-Dinitrotoluene	<0.46	<0.46	<0.46	5
2,6-Dinitrotoluene	<0.30	<0.30	<0.30	5
3,3'-Dichlorobenzidine	<0.27	<0.27	<0.27	5
Dibenzo(a,h)anthracene	<0.64	<0.64	<0.64	NL
Dibenzofuran	<0.26	<0.26	<0.26	NL
Di-n-butyl phthalate	0.77 JB	0.66 JB	0.98 JB	50
Di-n-octyl phthalate	<0.28	<0.28	<0.28	50
Diethyl phthalate	<0.20	<0.20	<0.20	50
Dimethyl phthalate	<0.34	<0.34	<0.34	50
Bis (2-ethylhexyl) phthalate	1.9 JB	0.98 JB	5.4 B	5
Fluoranthene	<0.45	<0.45	<0.45	50
Fluorene	<0.21	<0.21	<0.21	50
Hexachlorobenzene	<0.29	<0.29	<0.29	0.04
Hexachlorobutadiene	<0.22	<0.22	<0.23	0.5
Hexachlorocyclopentadiene	<1.3	<1.3	<1.3	5
Hexachloroethane	<0.30	<0.30	<0.31	5
Indeno (1,2,3-cd) pyrene	<0.82	<0.82	<0.83	0.002
Isophorone	<0.45	<0.45	<0.45	50
2-Methylnaphthalene	<0.26	<0.26	0.50 J	NL
2-Nitroaniline	<0.40	<0.40	<0.40	5
3-Nitroaniline	<1.4	<1.4	<1.4	5
4-Nitroaniline	<2.2	<2.2	<2.2	5
Naphthalene	<0.30	<0.30	0.52 J	10
Nitrobenzene	<0.39	<0.39	<0.40	0.4
N-Nitroso-Di-n-propylamine	<0.40	<0.40	<0.41	NL
N-nitrosodiphenylamine	<0.19	<0.19	<0.19	50
Phenanthrene	<0.14	<0.14	0.42 J	50
Pyrene[d]	<0.17	<0.17	<0.17	50
1,2,4-Trichlorobenzene	<0.36	<0.36	<0.36	5

µg/l = micrograms per liter
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
NL = Not Listed
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
* Refers to the sum of all Phenols.
= Analyte detected above the NYSDEC Groundwater Criteria.

Table 25

250 Delaware Avenue
Buffalo, New York

Backfill Quantities and Sources

NYSDOT Source	Origin	Quantity (tons)
NYSDOT Source #5-3R	Buffalo Crushed Stone, Lancaster, New York	22,685.76
NYSDOT Source #5-7RS	County Line Stone Company, Akron, New York	6,907.69

Table 26

250 Delaware Avenue
Buffalo, New York

Volatile Organic Compound Analytical Results for Samples Collected from the Excavation that Exceed the Part 375 Soil Cleanup Objectives for Unrestricted Site Use

A. Soil - VOCs by USEPA SW-846 Method 8260

Sample ID	BCP Bottom 15	BCP West Wall 1	BCP West Wall 2	BCP West Wall 7	BCP South Wall 7	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/8/2013	11/7/2013	11/12/2013	11/22/2013	11/7/2013	
Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	<260	<360	43.6	<350	<350	50
Benzene	21.7 J	1120	278	<22	689	60
Bromodichloromethane	<24	<33	<0.30	<32	<33	NL
Bromoform	<19	<27	<0.24	<26	<26	NL
Bromomethane	<64	<89	<0.81	<87	<88	NL
2- Butanone	<200	<280	<2.6	<280	<280	120
n-Butylbenzene	<11	<16	<0.14	<15	<16	12,000[b]
sec- Butylbenzene	<10	<14	<0.13	<14	<14	11,000[b]
tert- Butylbenzene	<23	<32	<0.29	<32	<32	5,900[b]
Carbon Disulfide	<10	<14	<0.13	<13	<14	NL
Carbon Tetrachloride	<76	<110	<0.96	<100	<100	760[b]
Chlorobenzene	<18	<25	<0.22	<24	<24	1,100
Chloroethane	<39	<55	<0.50	<53	<54	NL
Chloroform	<19	<26	<0.24	<26	<26	370
Chloromethane	<80	<110	<1.0	<110	<110	NL
Dibromochloromethane	<28	<39	<0.35	<38	<38	NL
1,1- Dichloroethane	<22	<30	<0.28	<30	<30	270[b]
1,2- Dichloroethane	<36	<50	<0.45	<48	<49	20[a]
1,1- Dichloroethene	<34	<48	<0.43	<46	<47	330[b]
Cis-1,2- Dichloroethene	<33	<46	<0.42	<45	<46	250[b]
trans-1,2-Dichloroethene	<29	<41	<0.37	<40	<40	190[b]
1,2- Dichloroethene (total)	<16	<22	<0.20	<22	<22	NL
1,2- Dichloropropane	<28	<38	<0.35	<38	<38	NL
cis-1,3- Dichloropropene	<19	<26	<0.24	<26	<26	NL
trans-1,3-Dichloropropene	<19	<27	<0.24	<26	<26	NL
Ethylbenzene	388	<16	6.7	324	<16	1,000[b]
2- Hexanone	<160	<220	<2.0	<220	<220	NL
Isopropylbenzene	30.6 J	<25	0.81 J	<25	<25	NL
p- Isopropyltoluene	<10	<15	<0.13	<14	<14	NL
Methyl tert butyl ether	<26	<36	<0.33	<35	<36	930[b]
4- Methyl-2-pentanone	<120	<170	3.7 J	<160	<170	NL
Methylene chloride	<100	<140	<1.3	<140	<140	50
Naphthalene	<52	<72	0.97 J	<70	<71	12,000
n-Propylbenzene	136 J	<22	1.0 J	<22	69.4 J	3,900[b]
Styrene	<14	<19	<0.17	<18	<19	NL
1,1,2,2- Tetrachloroethane	<19	<27	<0.24	<26	<27	NL
Tetrachloroethene	<29	<40	<0.37	<39	<40	1,300
Toluene	678	44.6 J	25.1	<22	<22	700
1,1,1- Trichloroethane	<12	<16	<0.15	<16	<16	680[b]
1,1,2- Trichloroethane	<23	<32	<0.29	<31	<31	NL
Trichloroethene	<31	<43	<0.39	<42	<43	470
1,2,4- Trimethylbenzene	478	52.9 J	12.3	90.6 J	200 J	3,600[b]
1,3,5- Trimethylbenzene	<8.5	<12	5	18.3 J	26.5 J	8,400[b]
Vinyl chloride	<37	<52	<0.47	<51	<51	20[b]
m,p- Xylene	1270	64.0 J	24.4	1630	54.2 J	260*
o-Xylene	476	<19	7.6	<18	<18	260*
Xylene (total)	1750	64.0 J	32	1640	54.2 J	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value
[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.
[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.
Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)
*= Based on the sum of the Total Xylenes.
= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. Groundwater - VOCs by USEPA SW-846 Method 8260

Sample ID	BCP MW6	BCP MW8	NYSDEC Class GA Groundwater Criteria
Date Sampled	5/29/2014	5/29/2014	
Units	µg/l	µg/l	µg/l
Acetone	<2.5	<2.5	50
Benzene	1.2	210	1
Bromodichloromethane	<0.34	<0.34	50
Bromoform	<0.61	<0.61	50
Bromomethane	<1.8	<1.8	5
2- Butanone	<2.3	<2.3	50
n-Butylbenzene	<1.1	<1.1	5
sec- Butylbenzene	<0.42	<0.42	5
tert- Butylbenzene	<0.39	<0.39	5
Carbon Disulfide	<0.46	<0.46	60
Carbon Tetrachloride	<0.53	<0.53	5
Chlorobenzene	<0.43	<0.43	5
Chloroethane	<0.53	<0.53	5
Chloroform	<0.41	<0.41	7
Chloromethane	<1.1	<1.1	5
Dibromochloromethane	<0.38	<0.38	NL
1,1- Dichloroethane	<0.36	2.4	5
1,2- Dichloroethane	<0.50	<0.50	0.6
1,1- Dichloroethene	<0.61	<0.61	5
Cis-1,2- Dichloroethene	<0.84	<0.84	5
trans-1,2-Dichloroethene	<0.51	<0.51	5
1,2- Dichloroethene (total)	<0.51	<0.51	NL
1,2- Dichloropropane	<0.50	<0.50	1
cis-1,3- Dichloropropene	<0.42	<0.42	0.4[1]
trans-1,3-Dichloropropene	<0.50	<0.50	0.4[1]
Ethylbenzene	<0.38	<0.38	5
2- Hexanone	<1.6	<1.6	50
Isopropylbenzene	<0.35	<0.35	5
p- Isopropyltoluene	<0.37	<0.37	5
Methyl tert butyl ether	<0.51	3.2	10
4- Methyl-2-pentanone	<0.99	<0.99	NL
Methylene chloride	<0.28	<0.28	5
Naphthalene	<0.69	<0.69	10
n-Propylbenzene	<0.49	<0.49	5
Styrene	<0.85	<0.85	5
1,1,2,2- Tetrachloroethane	<0.40	<0.40	5
Tetrachloroethene	<0.59	<0.59	5
Toluene	<0.33	0.36 J	5
1,1,1- Trichloroethane	<0.46	<0.46	5
1,1,2- Trichloroethane	<0.45	<0.45	1
Trichloroethene	<0.47	<0.47	5
1,2,4- Trimethylbenzene	<0.32	0.55 J	5
1,3,5- Trimethylbenzene	<0.38	<0.38	5
Vinyl chloride	<0.58	<0.58	2
m,p- Xylene	<0.93	<0.93	5
o-Xylene	<0.36	0.42 J	5
Xylene (total)	<0.36	0.79 J	5

µg/l = micrograms per liter
NL = Not Listed
J = Indicates an estimated value.
[1] = Applies to the sum of cis- and trans- 1,3-dichloropropene.
NYSDEC Groundwater Criteria (Class GA) = 6 NYCRR Part 703 (June 1998 and April 2000 Addendum)
= Analyte detected above the NYSDEC Groundwater Criteria.

Table 27

250 Delaware Avenue
Buffalo, New York

Analytical Results for Soil Samples Collected from the Off-Site Sewer Trench

A. VOCs by USEPA SW-846 Method 8260

Sample ID	**Sewer Bottom 1**	**Trench Sample 2**	**Part 375 (Unrestricted) Soil Cleanup Objectives**
Date Sampled	**10/24/2013**	**10/25/2013**	
Sample Depth	**Smear Zone**	**Smear Zone**	
Units	**µg/kg**	**µg/kg**	**µg/kg**
Acetone	<2000	<3.3	50
Benzene	<130	5.7	60
Bromodichloromethane	<190	<0.31	NL
Bromoform	<150	<0.25	NL
Bromomethane	<500	<0.84	NL
2- Butanone	<1600	<2.7	120
n-Butylbenzene	13200	<0.15	12,000[b]
sec- Butylbenzene	2500 J	<0.14	11,000[b]
tert- Butylbenzene	<180	<0.31	5,900[b]
Carbon Disulfide	<78	<0.13	NL
Carbon Tetrachloride	<600	<1.0	760[b]
Chlorobenzene	<140	<0.23	1,100
Chloroethane	<310	<0.51	NL
Chloroform	<150	<0.25	370
Chloromethane	<630	<1.0	NL
Dibromochloromethane	<220	<0.37	NL
1,1- Dichloroethane	<170	<0.29	270[b]
1,2- Dichloroethane	<280	<0.47	20[a]
1,1- Dichloroethene	<270	<0.45	330[b]
Cis-1,2- Dichloroethene	<260	<0.44	250[b]
trans-1,2-Dichloroethene	<230	<0.38	190[b]
1,2- Dichloroethene (total)	<130	<0.21	NL
1,2- Dichloropropane	<220	<0.36	NL
cis-1,3- Dichloropropene	<150	<0.25	NL
trans-1,3-Dichloropropene	<150	<0.25	NL
Ethylbenzene	6630	1.7	1,000[b]
2- Hexanone	<1300	<2.1	NL
Isopropylbenzene	1800 J	0.26 J	NL
p- Isopropyltoluene	2430 J	<0.14	NL
Methyl tert butyl ether	<210	<0.34	930[b]
4- Methyl-2-pentanone	<960	<1.6	NL
Methylene chloride	<800	<1.3	50
Naphthalene	8240	<0.68	12,000
n-Propylbenzene	8160	0.56 J	3,900[b]
Styrene	<110	<0.18	NL
1,1,2,2- Tetrachloroethane	<150	<0.25	NL
Tetrachloroethene	<230	<0.38	1,300
Toluene	610 J	12.3	700
1,1,1- Trichloroethane	<93	<0.15	680[b]
1,1,2- Trichloroethane	<180	<0.30	NL
Trichloroethene	<250	<0.41	470
1,2,4- Trimethylbenzene	121000	3.7 J	3,600[b]
1,3,5- Trimethylbenzene	38400	1.6 J	8,400[b]
Vinyl chloride	<290	<0.49	20[b]
m,p- Xylene	27300	8.4	260*
o-Xylene	1620	2.6	260*
Xylene (total)	28900	11.1	260*

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
NL = Not Listed
J = Indicates an estimated value

[a] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[b] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

*= Based on the sum of the Total Xylenes.

= Analyte detected above the Part 375 (Unrestricted) Soil Cleanup Objectives.

B. SVOCs by USEPA SW-846 Method 8270

Sample ID	Sewer Bottom 1	Trench Sample 2	Part 375 (Unrestricted) Soil Cleanup Objectives
Date Sampled	10/24/2013	10/25/2013	
Sample Depth	Smear Zone	Smear Zone	
Units	µg/kg	µg/kg	µg/kg
Acenaphthene	36.7 J	<15	20,000
Acenaphthylene	<11	<11	100,000[a,d]
Anthracene	20.5 J	<14	100,000[a,d]
Benzo(a)anthracene	26.3 J	33.3 J	1,000[c,d]
Benzo(a)pyrene	24.7 J	36.2 J	1,000[c]
Benzo(b)fluoranthene	26.3 J	35.8 J	1,000[c,d]
Benzo(g,h,i)perylene	17.7 J	22.8 J	100,000[d]
Benzo(k)fluoranthene	29.7 J	31.1 J	800[c,d]
Chrysene	28.1 J	31.8 J	1,000[c,d]
Dibenzo(a,h)anthracene	<13	<14	330[b,d]
Fluoranthene	58.0 J	55.0 J	100,000[a,d]
Fluorene	<15	<15	30,000
Indeno (1,2,3-cd) pyrene	19.3 J	<13	500[c,d]
Naphthalene	3470	<18	12,000[d]
Phenanthrene	53.0 J	36.1 J	100,000[d]
Pyrene	45.5 J	68.2 J	100,000[d]

µg/kg = micrograms per kilogram
ft. bgs = feet below ground surface
J = Indicates an estimated value

[a] = The Soil Cleanup Objectives for Unrestricted Use were capped at a maximum value of 100,000 ppb. See Technical Support Document, section 9.3.

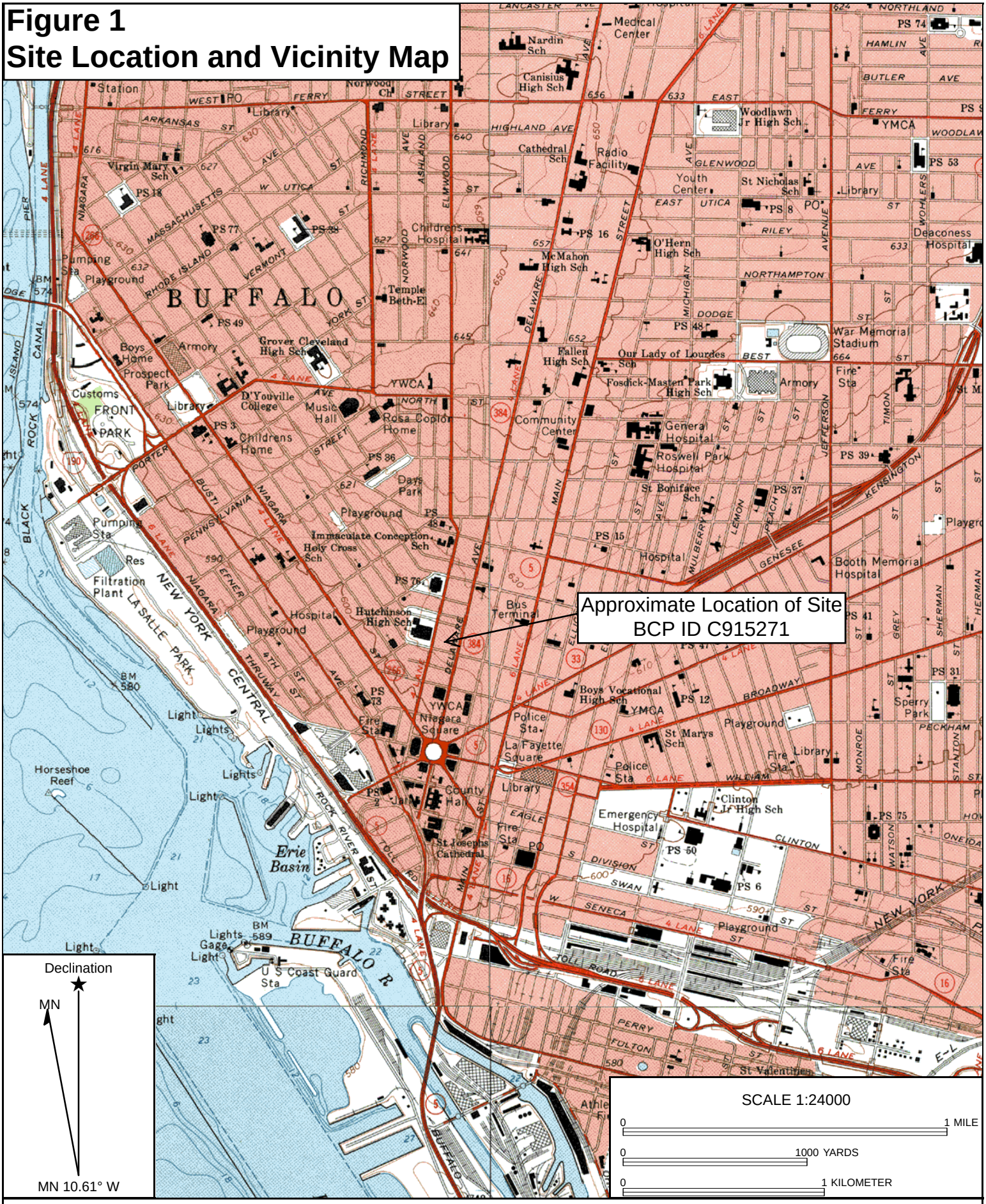
[b] = For constituents where the calculated Soil Cleanup Objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Soil Cleanup Objective value.

[c] = For constituents where the calculated Soil Cleanup Objective was lower than the rural soil background concentration, as determined by the NYSDEC and NYSDOH rural soil survey, the rural soil background concentration is used as the Unrestricted Soil Cleanup Objective value for this use of the site.

[d] = Protection of ecological resources Soil Cleanup Objectives were not developed for contaminants identified in Table 375-6.8(b) [Restricted Site Use] with "NS." Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the NYSDEC to calculate a protection of ecological resources Soil Cleanup Objective according to the TSD.

Part 375 Soil Cleanup Objectives = New York State Department of Environmental Conservation 6 NYCRR Part 375 Environmental Remediation Programs, December 14, 2006 (375-6.8, Soil Cleanup Objective Tables)

Figure 1
Site Location and Vicinity Map

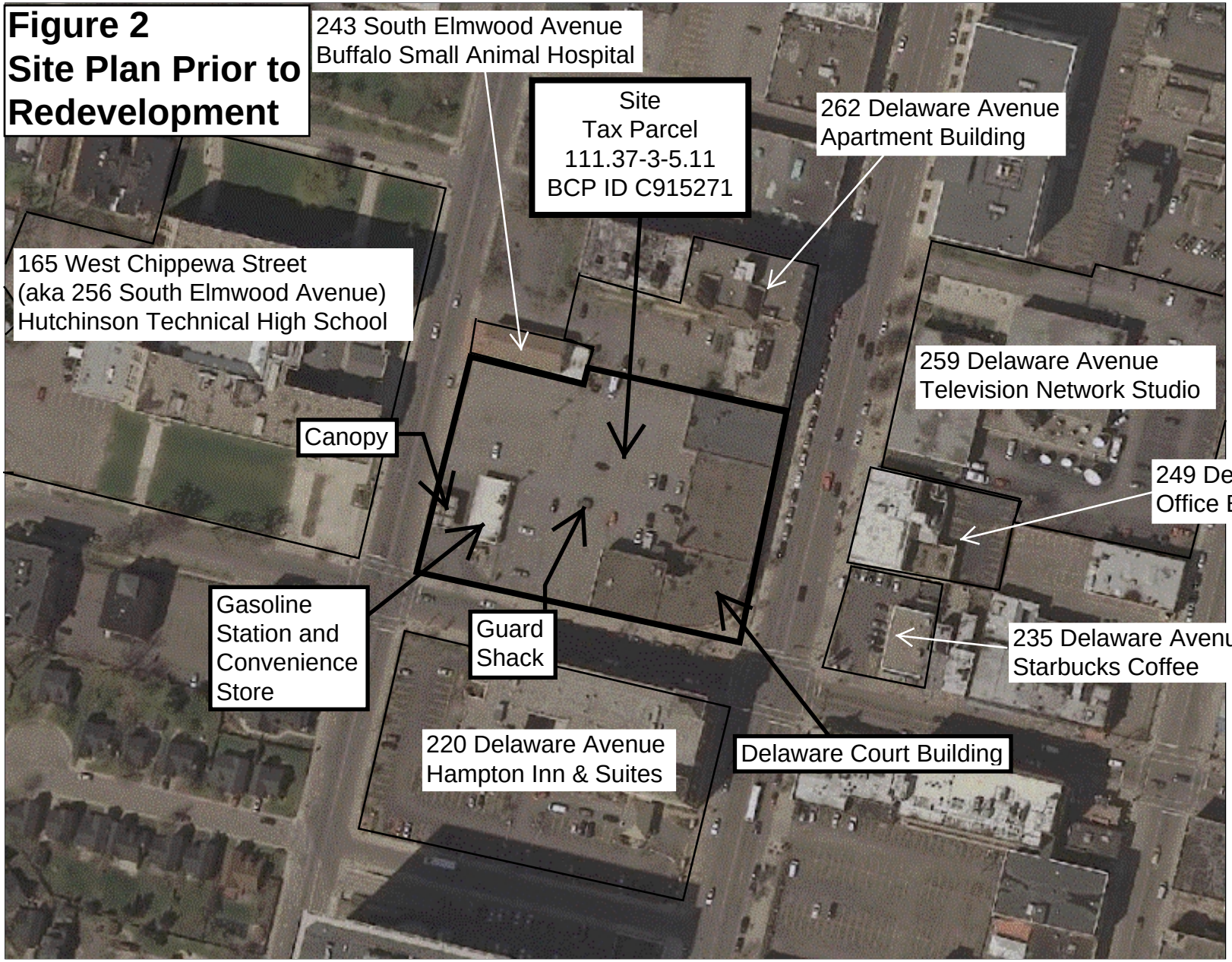


Quadrangle: Buffalo NE (NY)
Map Date: 1965
Scale: 1 inch = 2,000 ft.

Site: 250 Delaware Avenue, Buffalo, New York

Erie County On-Line Mapping Application

Figure 2
Site Plan Prior to Redevelopment



Legend

2011_bdy

1 INCH = 145 FEET

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

aerial imagery
dated 2011

N

SOUTH ELMWOOD AVENUE

SIDEWALK

SIDEWALK

NORTH ADJACENT VETERINARY CLINIC

FENCE

DELAWARE COURT BUILDING

APPROXIMATE EXTENT OF SOIL AND/OR GROUNDWATER REQUIRING REMEDIATION, BASED ON FIELD OBSERVATIONS AND ANALYTICAL RESULTS FROM SAMPLING CONDUCTED BY LCS IN 2002.

APPROXIMATE EXTENT OF GROUNDWATER REQUIRING REMEDIATION, BASED ON ANALYTICAL RESULTS FROM SAMPLING CONDUCTED BY EPS OF VERMONT IN 2009.

B-8
B-5
B-1
BCP BH11
BH5
BH6*#
BH2
BH3
BCP BH5/MW5
BCP SV5
BH13
BH32*
TPMW14*#
BH4
AOC #1
BH1
BH7
BCP SV2
BCP BH2/MW2
B-2
A
B
B'
BH31*#
TPMW13*
BH8
BH14*#
BH9
BCP BH10
UNKNOWN PISTON AND RESERVOIR TANK**
AOC #2
BH39*
TPMW21*#
B-9
BH33*
TPMW15*#
BH11*#
TPMW2*#
EP
B-6
BCP BH4/MW4
SHED
BH29*
TPMW11*#
BCP SV4
BH38*
TPMW20*
BH16*
BH15*#
UNKNOWN UST**
UNKNOWN PISTON**
BH30*#
TPMW12*#
BCP SV1
B-3
BCP BH1/MW1
PUMP ISLAND
BH28*#
TPMW10*#
EP
AOC #3
GASOLINE STATION
BH17
EP
BH34*P
TPMW16*P
EP2
EP
ACTIVE USTS
BH10*#P
TPMW1*#P
BCP BH9
BH41*
TPMW23*
REMEDIATION SHED
BH27*#
TPMW9*#
BH40*
TPMW22*
BH35*
TPMW17*
BH18*#P
EP
UNKNOWN UST**
TANK PIT MONITORING WELL *#
BH37*
TPMW19*
BH26*
TPMW8*#
BH20*#P
EP
EP3
EP
BH19*#
TPMW3*#P
EP
B-7
BCP BH3/MW3
B-4
BH25*#P
TPMW7*#P
EP1
EP
BH24*
TPMW6*#
BH23*#
TPMW5*#
BH36*
TPMW18*
BCP SV3
BH42*
TPMW24*
BH22
TPMW4*#
BH21*#P
A'

CROSS-SECTIONS
A-A' FIGURE 9
B-B' FIGURE 10
C-C' FIGURE 11

SIDEWALK

WEST CHIPPEWA STREET

C&W Soil Boring 1 (2003)*

C&W Soil Boring 2 (2003)*

BLUE INDICATES AN EXCEEDANCE OF NYSDEC GUIDANCE VALUE IN GROUNDWATER IN APRIL 2009 SAMPLING EVENT

● BOREHOLE / MONITORING WELL
USTs = UNDERGROUND STORAGE TANKS
* = INDICATES SAMPLE SUBMITTED TO LAB FOR ANALYSIS
# = INDICATES AN EXCEEDANCE OF NYSDEC GUIDANCE VALUE
P = FREE PHASE PETROLEUM PRODUCT NOTED
⊕ EP =APPROXIMATE LOCATION OF EXTRACTION POINT
○ EP = PILOT EXTRACTION POINT
AOC = AREA OF CONCERN

** INDICATES TANK/LIFT DISCOVERED DURING INTERIM REMEDIAL MEASURE

COMPLETED DURING 2013 LCS REMEDIAL INVESTIGATION
■ INTERIOR BOREHOLE
BOREHOLE AND MONITORING WELL
SOIL VAPOR POINT

COMPLETED DURING 2012 EMPIRE GEOTECHNICAL STUDY (REF. 2)
BOREHOLE
BOREHOLE AND MONITORING WELL

SITE BOUNDARY

Drawn by: APS/MP

Checked by: DBR

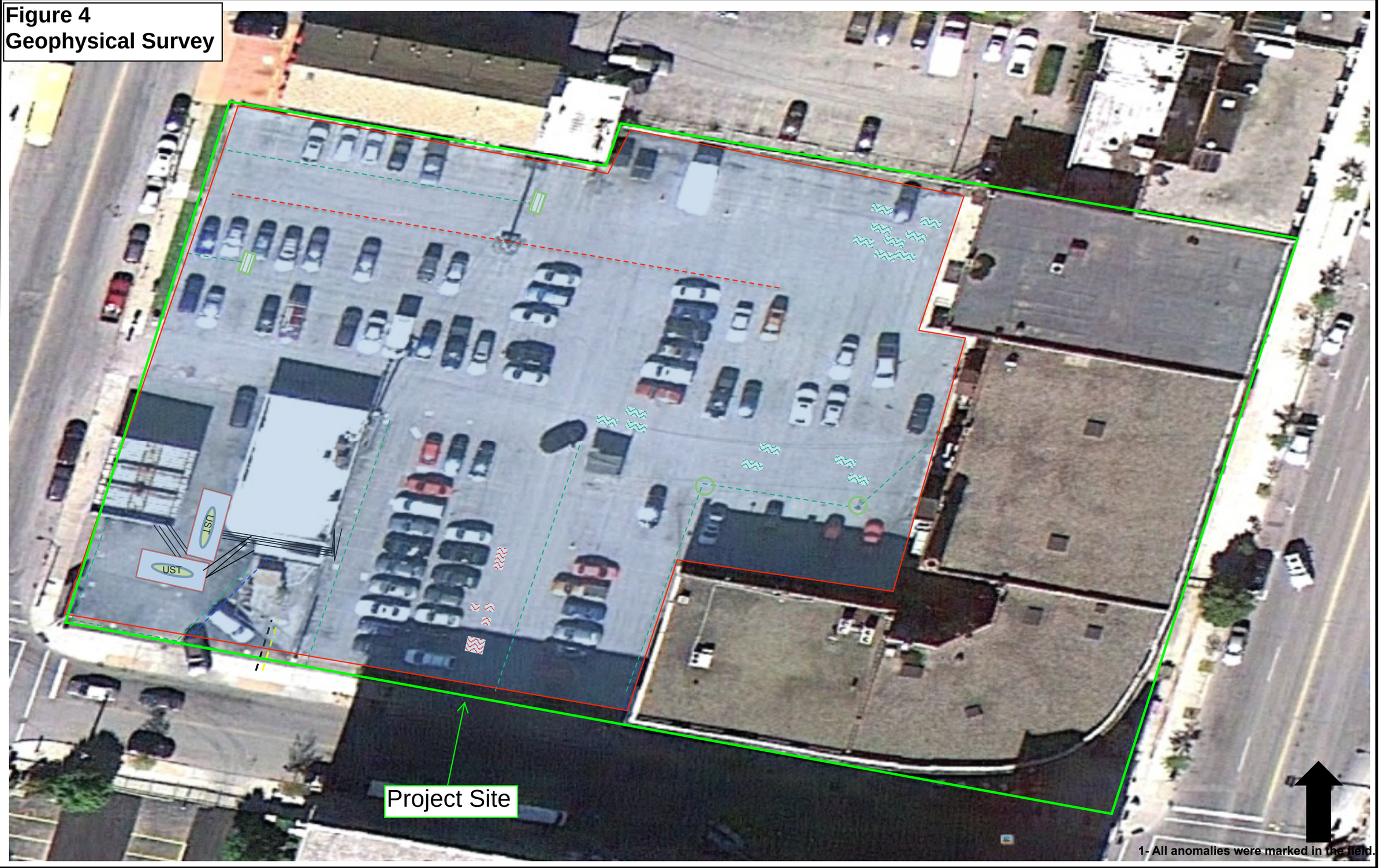
Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

FIGURE 3
PREVIOUS STUDIES AND REMEDIAL ACTIONS
250 DELAWARE AVENUE
BUFFALO, NEW YORK

LCS, INC.

Figure 4
Geophysical Survey



NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, PO Box 765
Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY PLAN

SITE : **Commercial / Industrial Property**
232 Deleware Avenue, Buffalo, NY

CLIENT: LCS Inc.,
DATE: June 24, 2012
Scale See Map

INFORMATION

- GPR/EM Surveyed Areas0
- Major Anomalies
- Scattered Anomalies
- Underground Utilities/Pipes
- Drain / Pit
- UST (Underground Storage Tank)

N

NORTH ADJACENT
VETERINARY CLINIC

FENCE

B-8

B-5

B-1

BCP BH11

APPROXIMATE EXTENT OF PETROLEUM-IMPACTED SOIL AND/OR GROUNDWATER
REQUIRING REMEDIATION AFTER COMPLETION OF REMEDIAL INVESTIGATION

BCP BH5/MW5

BCP SV5

BCP SV2

BCP BH2/MW2

B-2

BCP BH10

UNKNOWN PISTON
AND RESERVOIR TANK**

B-9

B-6

BCP BH4/MW4

SHED

BCP SV4

UNKNOWN
PISTON**

GASOLINE
STATION

UNKNOWN
UST**

PUMP
ISLAND

BCP SV1

B-3

BCP BH1/MW1

TPMW16

ACTIVE
USTS

BCP BH9

APPROXIMATE EXTENT OF GROUNDWATER
REQUIRING REMEDIATION AFTER
COMPLETION OF REMEDIAL INVESTIGATION

UNKNOWN
UST**

B-7

BCP BH3/MW3

B-4

TPMW6

TPMW5

BCP SV3

SIDEWALK

SOUTH ELMWOOD AVENUE

SIDEWALK

DELAWARE COURT BUILDING

WEST CHIPPEWA STREET

■ BOREHOLE
⊕ MONITORING WELL
◒ SOIL VAPOR POINT
USTs = UNDERGROUND STORAGE TANKS

COMPLETED DURING 2012 EMPIRE GEOTECHNICAL STUDY (REF. 2)
◉ BOREHOLE
⊕ BOREHOLE AND MONITORING WELL

SITE BOUNDARY

** INDICATES TANK/LIFT DISCOVERED DURING INTERIM REMEDIAL MEASURE

Drawn by: MP

Checked by: DBR

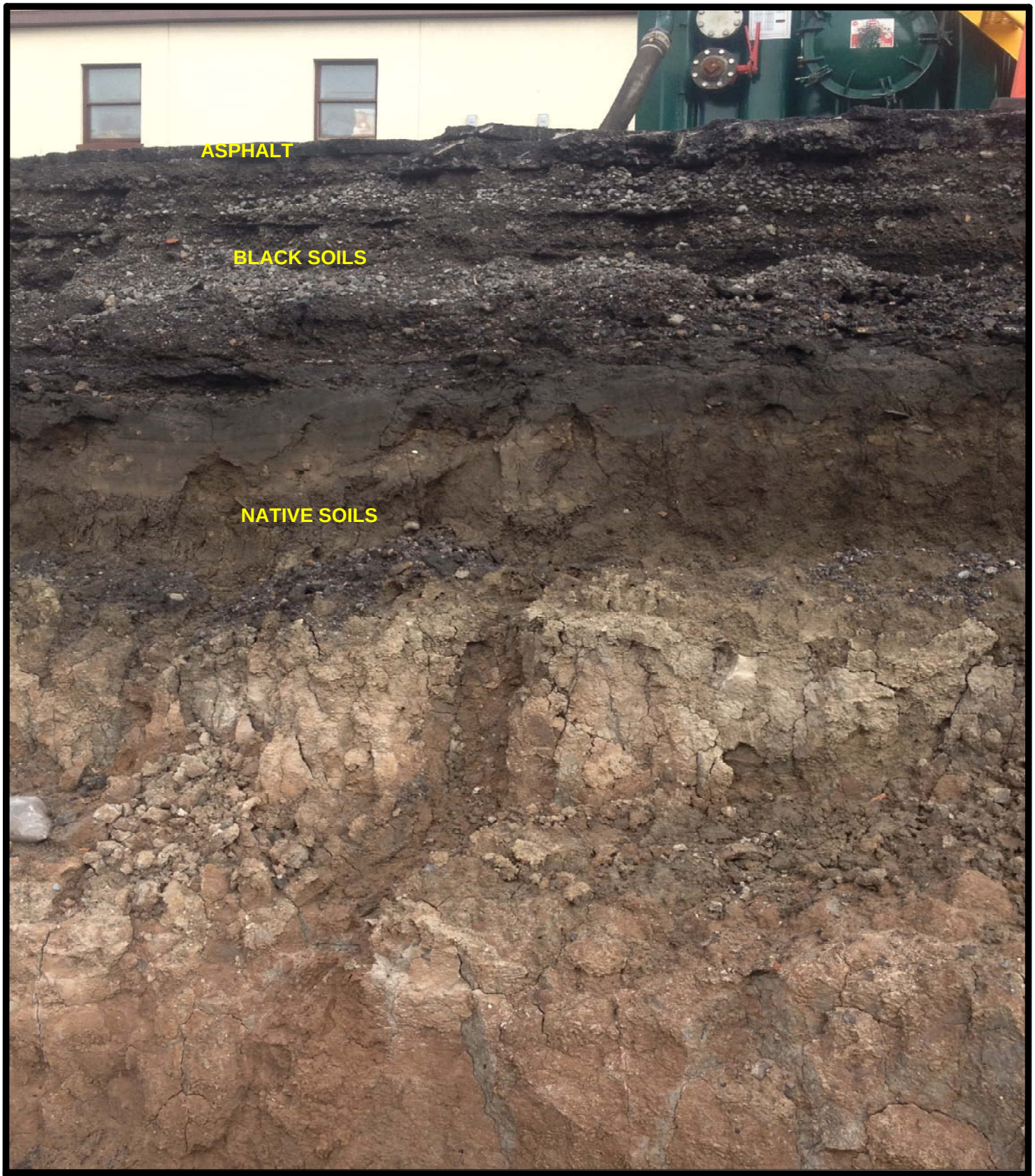
Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

FIGURE 5
REMEDIAL INVESTIGATION
SAMPLE LOCATIONS

250 DELAWARE AVENUE
BUFFALO, NEW YORK

LCS, INC.



LCS INC.

FIGURE 6
HISTORIC FILL MATERIALS EXPOSED ON THE NORTH WALL OF THE PETROLEUM-RELATED SOIL EXCAVATION

250 DELAWARE AVENUE
BUFFALO, NEW YORK

BCP C915271

LCS INC.

FIGURE 7
HISTORIC FILL MATERIALS EXPOSED ON THE EAST WALL OF THE PETROLEUM-RELATED SOIL EXCAVATION

250 DELAWARE AVENUE
BUFFALO, NEW YORK

BCP C915271

N

NORTH ADJACENT VETERINARY CLINIC

FENCE

APPROXIMATE EXTENT OF PETROLEUM-IMPACTED SOIL AND/OR GROUNDWATER REQUIRING REMEDIATION AFTER COMPLETION OF REMEDIAL INVESTIGATION

AREA OF LOW HYDRAULIC CONDUCTIVITY CLAY ABOVE WATER-BEARING ZONE

SIDEWALK

SOUTH ELMWOOD AVENUE

SIDEWALK

BCP MW7

602.81 BCP BH5/MW5

BCP SV5

602.5

602.4

602.3

602.2

602.1

602.0

601.9

601.8

601.7

601.6

601.5

601.4

601.3

601.2

601.1

601.0

UNKNOWN PISTON AND RESERVOIR TANK**

UNKNOWN PISTON**

UNKNOWN UST**

GASOLINE STATION

PUMP ISLAND

ACTIVE USTS

UNKNOWN UST**

601.13 TPMW16

BCP MW8

BCP MW6

601.19 BCP BH3/MW3

BCP SV3

600.98 TPMW6

TPMW5

601.02 TPMW4

601.80 BCP BH4/MW4

BCP SV4

SHED

BCP SV2

601.98 BCP BH2/MW2

BCP BH10

DELAWARE COURT BUILDING

BCP SV1

601.44 BCP BH1/MW1

BCP BH11

BCP BH9

APPROXIMATE EXTENT OF GROUNDWATER REQUIRING REMEDIATION AFTER COMPLETION OF REMEDIAL INVESTIGATION

SIDEWALK

WEST CHIPPEWA STREET

■ BOREHOLE
⌖ MONITORING WELL
◒ SOIL VAPOR POINT

GENERAL DIRECTION OF GROUNDWATER FLOW IN SHALLOW OVERBURDEN

USTs = UNDERGROUND STORAGE TANKS
** INDICATES TANK/LIFT DISCOVERED DURING INTERIM REMEDIAL MEASURE

601.44 BCP BH1/MW1 = 601.44 = OVERBURDEN GROUNDWATER ELEVATION IN WELL, IN FEET (NAVD88), RECORDED ON JUNE 27, 2013

601.0 OVERBURDEN POTENTIOMETRIC SURFACE, IN FEET (NAVD88)

CONTACT INFERRED

SITE BOUNDARY

Drawn by: MP

Checked by: DBR

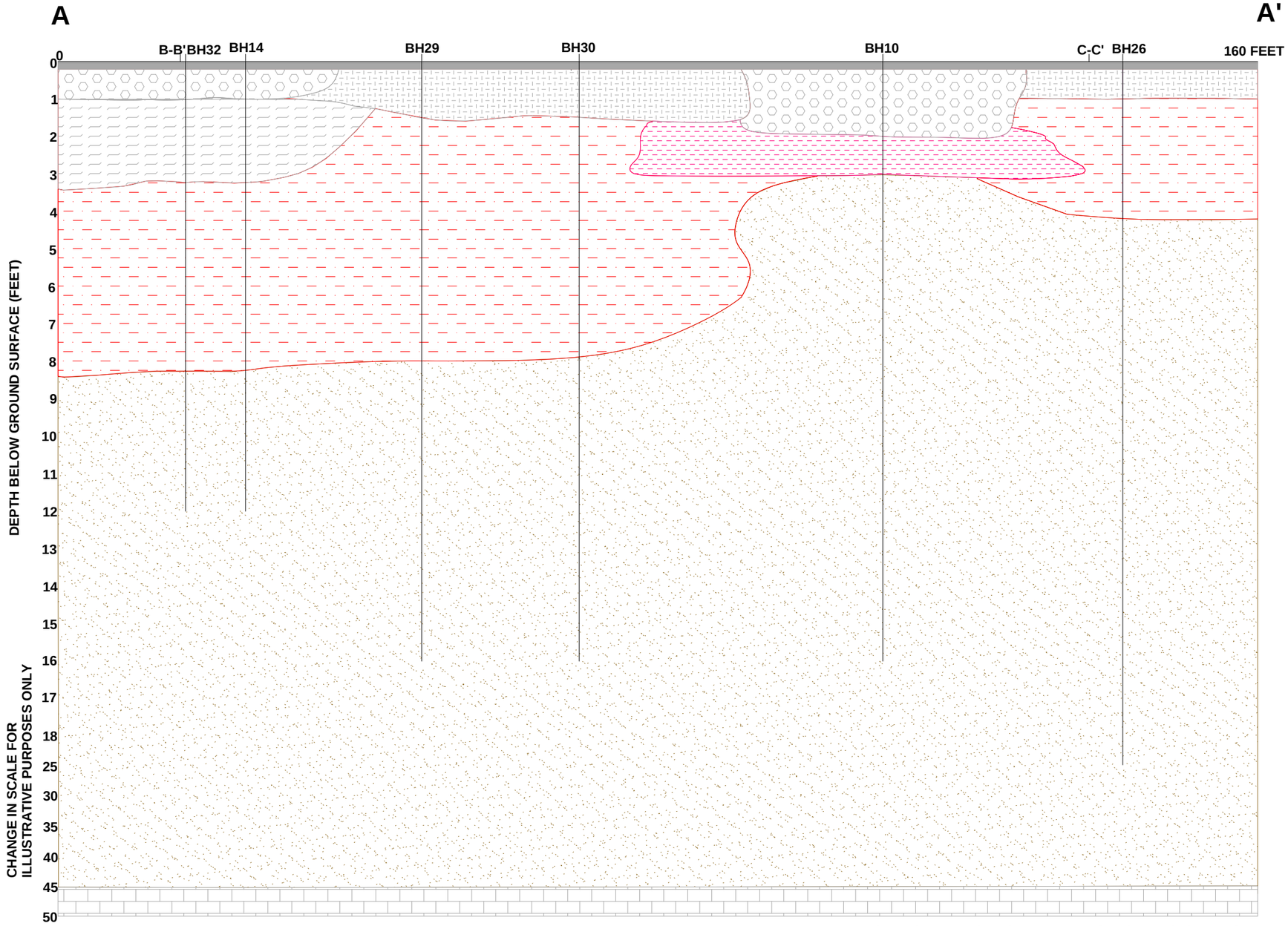
Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

FIGURE 8
ISOPOTENTIAL MAP OF GROUNDWATER IN THE SHALLOW OVERBURDEN PRIOR TO THE INTERIM REMEDIAL MEASURE

250 DELAWARE AVENUE
BUFFALO, NEW YORK

LCS, INC.



FILL MATERIAL

- ASPHALT
- GRAVEL
- GRAVELLY CLAYEY SILT
- SANDY GRAVEL

NATIVE SOILS

- SILTY CLAY/CLAY
- SAND
- SANDY SILT

BEDROCK*

- LIMESTONE

* CONTACT INFERRED FROM "GEOTECHNICAL EVALUATION REPORT FOR PROPOSED BUILDING AND PARKING GARAGE, 250 DELAWARE AVENUE, BUFFALO, NEW YORK," DATED DECEMBER 17, 2012, PREPARED BY EMPIRE GEOSERVICES, INC.

Drawn by: MP

Checked by: DBR

0 15 30

Approximate Scale in Feet

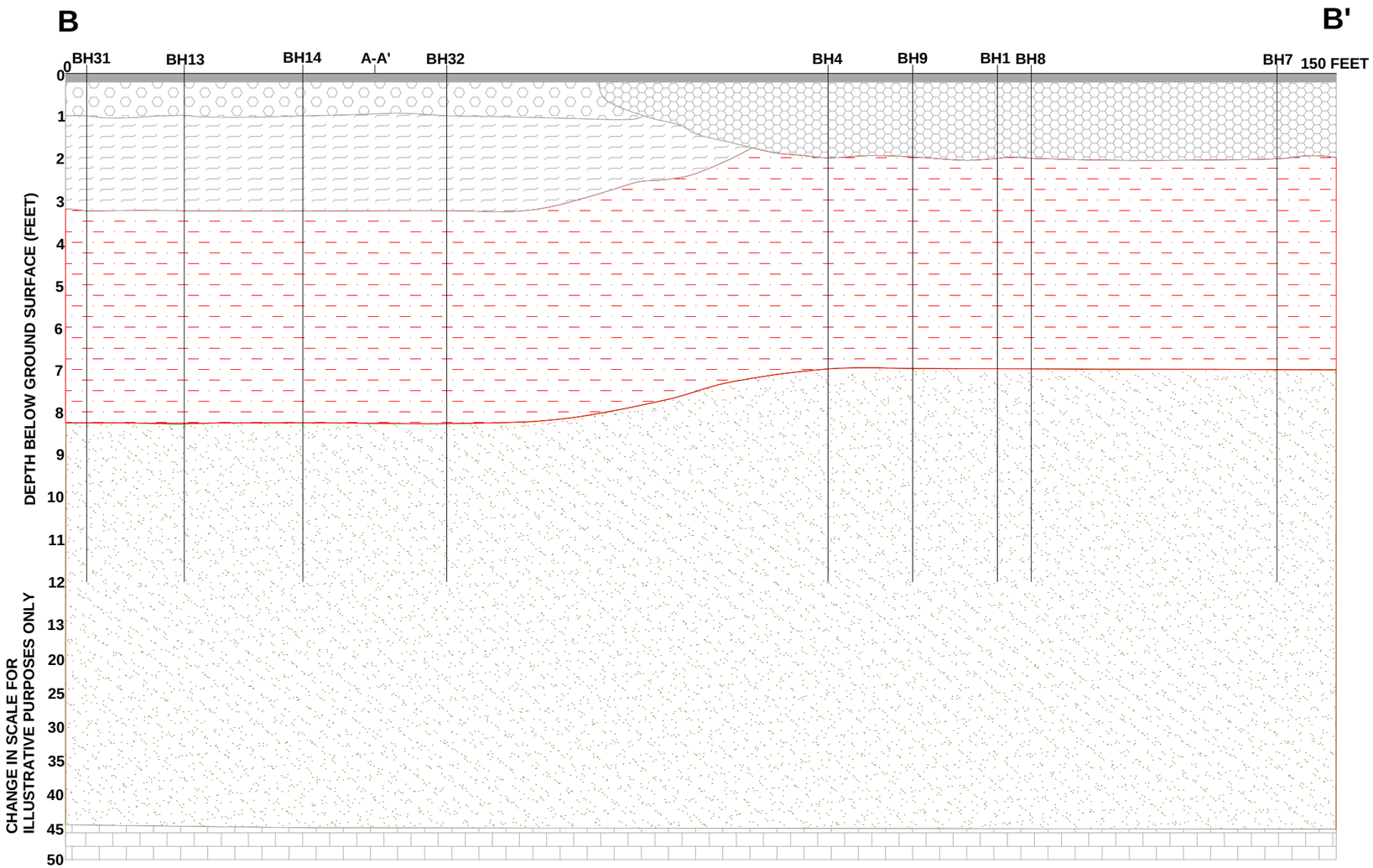
BCP ID C915271

FIGURE 9

CROSS-SECTION A-A' OF SHALLOW OVERBURDEN

250 DELAWARE AVENUE BUFFALO, NEW YORK

LCS INC.



REFER TO FIGURE 3 FOR TRANSECT LOCATION

FILL MATERIAL

- ASPHALT
- SILTY GRAVEL
- GRAVEL
- GRAVELLY CLAYEY SILT

NATIVE SOILS

- SILTY CLAY
- SAND

BEDROCK*

- LIMESTONE

* CONTACT INFERRED FROM "GEOTECHNICAL EVALUATION REPORT FOR PROPOSED BUILDING AND PARKING GARAGE, 250 DELAWARE AVENUE, BUFFALO, NEW YORK," DATED DECEMBER 17, 2012, PREPARED BY EMPIRE GEOSERVICES, INC.

Drawn by: MP

Checked by: DBR

0 15 30

Approximate Scale in Feet

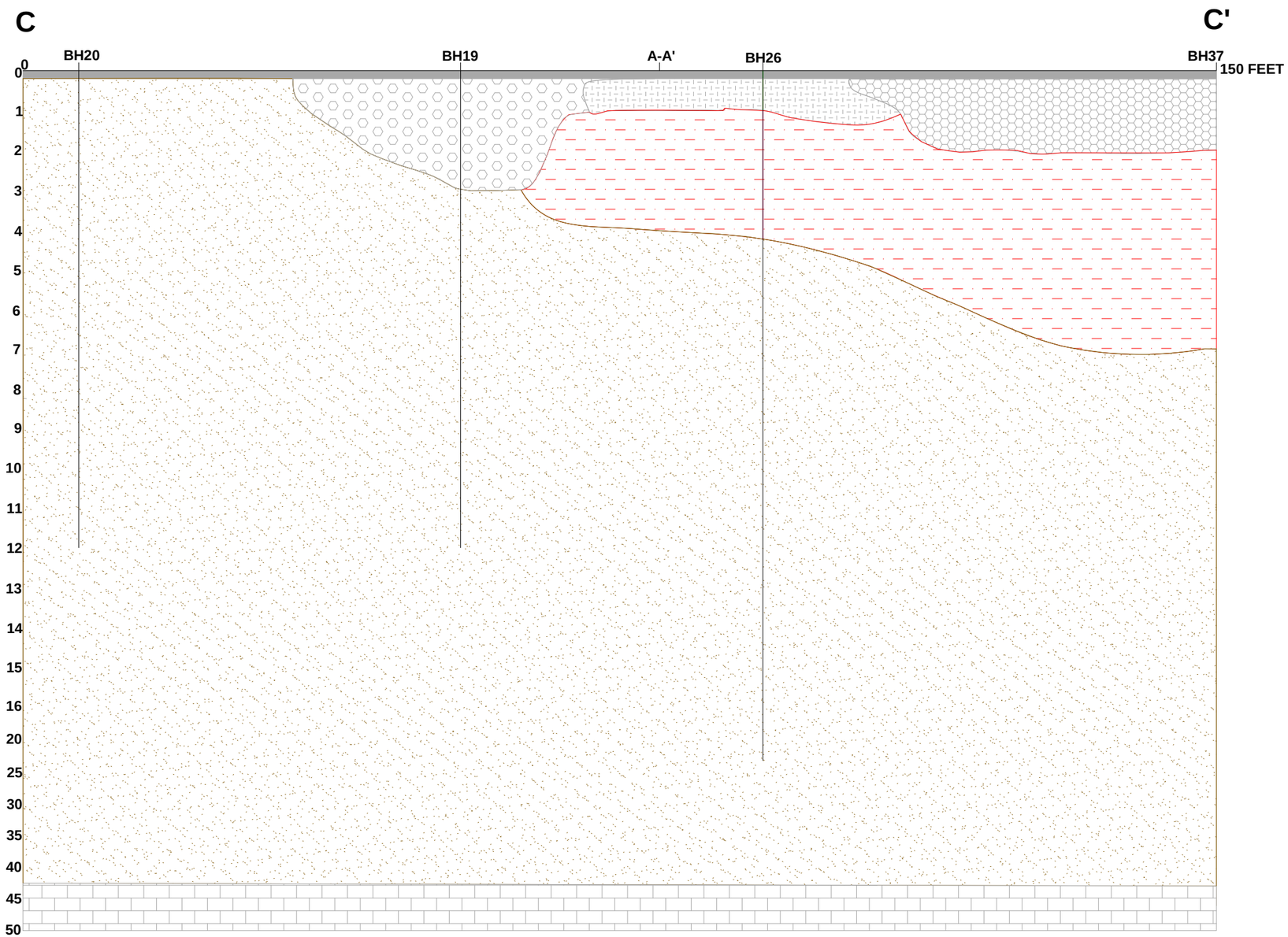
BCP ID C915271

FIGURE 10

CROSS-SECTION B-B' OF SHALLOW OVERBURDEN

250 DELAWARE AVENUE BUFFALO, NEW YORK

LCS INC.



REFER TO FIGURE 3 FOR TRANSECT LOCATION

FILL MATERIAL

ASPHALT
SANDY GRAVEL
GRAVEL

NATIVE SOILS

SILTY CLAY/CLAY
SAND

BEDROCK*

LIMESTONE

* CONTACT INFERRED FROM "GEOTECHNICAL EVALUATION REPORT FOR PROPOSED BUILDING AND PARKING GARAGE, 250 DELAWARE AVENUE, BUFFALO, NEW YORK," DATED DECEMBER 17, 2012, PREPARED BY EMPIRE GEOSERVICES, INC.

Drawn by: MP

Checked by: DBR

0 15 30
Approximate Scale in Feet

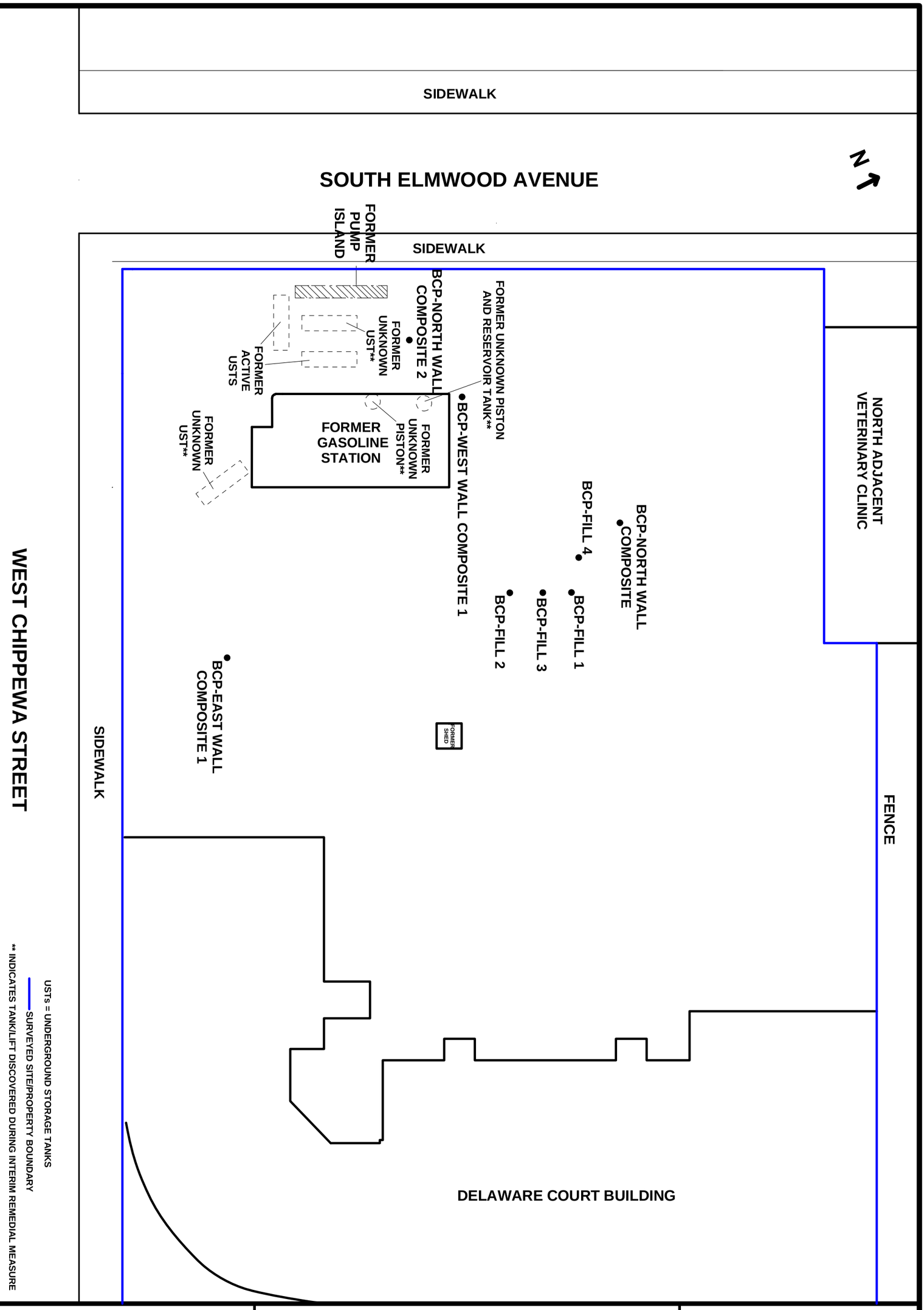
BCP ID C915271

FIGURE 11

CROSS-SECTION C-C' OF SHALLOW OVERBURDEN

250 DELAWARE AVENUE BUFFALO, NEW YORK

LCS INC.



LCS ,INC.

FIGURE 12

SAMPLE LOCATIONS FOR HISTORIC FILL MATERIALS AND NATIVE SOILS DIRECTLY UNDERLYING HISTORIC FILL MATERIALS

250 DELAWARE AVENUE
BUFFALO, NEW YORK

Drawn by: MP

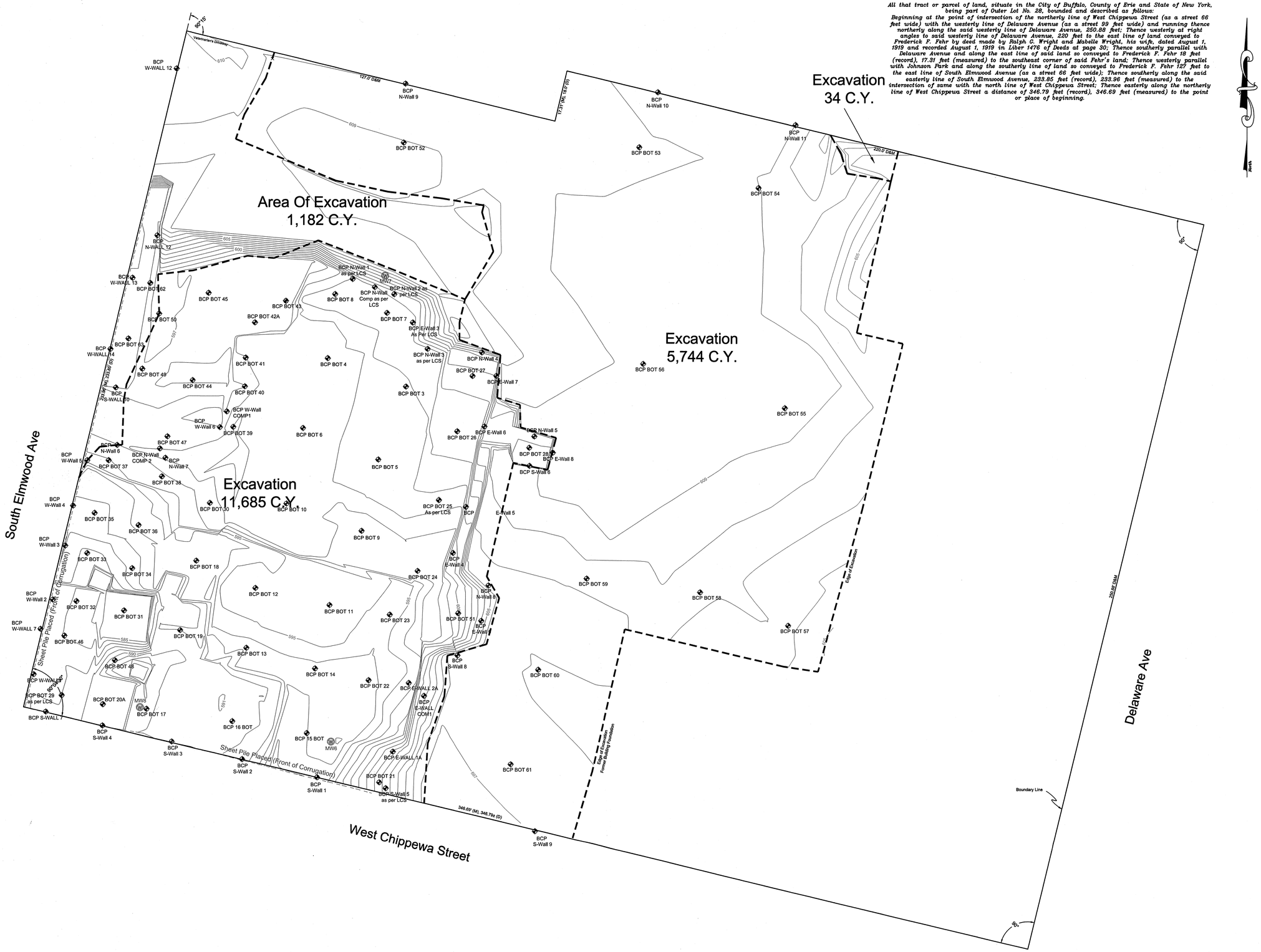
Checked by: DBR

Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

Record Legal Description
As Per L 11230 P 8408

All that tract or parcel of land, situate in the City of Buffalo, County of Erie and State of New York, being part of Outer Lot No. 28, bounded and described as follows:
Beginning at the point of intersection of the northerly line of West Chippewa Street (as a street 66 feet wide) with the westerly line of Delaware Avenue (as a street 99 feet wide) and running thence northerly along the said westerly line of Delaware Avenue, 250.88 feet; Thence westerly at right angles to said westerly line of Delaware Avenue, 220 feet to the east line of land conveyed to Frederick F. Fehr by deed made by Ralph C. Wright and Mabelle Wright, his wife, dated August 1, 1919 and recorded August 1, 1919 in Liber 1476 of Deeds at page 30; Thence southerly parallel with Delaware Avenue and along the east line of said land so conveyed to Frederick F. Fehr 18 feet (record), 17.31 feet (measured) to the southeast corner of said Fehr's land; Thence westerly parallel with Johnson Park and along the southerly line of land so conveyed to Frederick F. Fehr 127 feet to the east line of South Elmwood Avenue (as a street 66 feet wide); Thence southerly along the said easterly line of South Elmwood Avenue, 233.85 feet (record), 233.96 feet (measured) to the intersection of same with the north line of West Chippewa Street; Thence easterly along the northerly line of West Chippewa Street a distance of 346.79 feet (record), 346.69 feet (measured) to the point or place of beginning.



General Notes

Legend:

- Sample Point
- Monitoring Well
- 520 — Excavation Contour (ft)

Notes:

This survey was prepared for Uniland Development

This map of survey dated June 25, 2014, was prepared from an instrument survey, with field work completed on June 10, 2014. Portions of this map include areas previously surveyed.

This survey was prepared for the parties and purpose indicated hereon. Any extension of the use beyond the purpose agreed to, exceeds the scope of the engagement.

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Only copies of this survey marked with an original signature and an original embossed or ink seal are the product of the land surveyor.

This is not a boundary survey.

Vertical Datum: NAVD88
Horizontal Datum: NAD83(2011)EPOCH2010.00
NY West

Symbols are graphical representations and not to scale.

Only visible utility services and/or encumbrances were located and shown.

Remove not the ancient landmark, which thy fathers have set. Prov. 22:28
Cursed be he that removeth his neighbor's landmark. And the people shall say Amen. Deuteronomy 27:17

Survey by William J Tucker, II PLS #050369
Clear Creek Land Surveying, L.L.C.
P.O. Box 435, Springville, N.Y. 14141
Phone 716-592-5800 Fax 716-592-5566

STATE OF NEW YORK · WILLIAM J. TUCKER II · 050369 · LICENSED LAND SURVEYOR

STATE OF NEW YORK · PETER M. McKEE · 050068 · LICENSED PROFESSIONAL ENGINEER

Project
2014/Uniland/250 Delaware

Date
June 25, 2014

Purchase Order
#29346 & #29647

Firm Name and Address
Clear Creek Land Surveying, LLC
PO Box 435
Springville, NY 14141
ph. 716-592-5800
fax 716-592-5566

Project Name and Address
Topographical Survey of Excavation at the intersection of Elmwood Ave & Chippewa Street

City of Buffalo
Erie County
State of New York

GRAPHIC SCALE
15 0 7.5 15 30
1 inch = 15 ft.

Record Legal Description
As Per L 11230 P 8408

All that tract or parcel of land, situate in the City of Buffalo, County of Erie and State of New York, being part of Outer Lot No. 28, bounded and described as follows:
Beginning at the point of intersection of the northerly line of West Chippewa Street (as a street 66 feet wide) with the westerly line of Delaware Avenue (as a street 99 feet wide) and running thence northerly along the said westerly line of Delaware Avenue, 250.88 feet; Thence westerly at right angles to said westerly line of Delaware Avenue, 220 feet to the east line of land conveyed to Frederick F. Fehr by deed made by Ralph C. Wright and Mabelle Wright, his wife, dated August 1, 1919 and recorded August 1, 1919 in Liber 1476 of Deeds at page 30; Thence southerly parallel with Delaware Avenue and along the east line of said land so conveyed to Frederick F. Fehr 18 feet (record), 17.31 feet (measured) to the southeast corner of said Fehr's land; Thence westerly parallel with Johnson Park and along the southerly line of land so conveyed to Frederick F. Fehr 127 feet to the east line of South Elmwood Avenue (as a street 66 feet wide); Thence southerly along the said easterly line of South Elmwood Avenue, 233.85 feet (record), 233.96 feet (measured) to the intersection of same with the north line of West Chippewa Street; Thence easterly along the northerly line of West Chippewa Street a distance of 346.79 feet (record), 346.69 feet (measured) to the point or place of beginning.

General Notes

Legend:

- Sample Point
- Monitoring Well
- 520 — Asbuilt Stone Contour (ft)

Notes:

This survey was prepared for Uniland Development

This map of survey dated July 10, 2014, was prepared from an instrument survey, with field work completed on June 10, 2014. Portions of this map include areas previously surveyed.

This survey was prepared for the parties and purpose indicated hereon. Any extension of the use beyond the purpose agreed to, exceeds the scope of the engagement.

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This is not a boundary survey completed by Clear Creek Land Surveying, LLC. Boundaries shown are as per Ray Sonnenbergre map dated August 15, 2002 and have not been verified. This boundary is shown per the request of LCS.

Vertical Datum: NAVD88
Horizontal Datum: NAD83(2011)EPOCH2010.00
NY West

Symbols are graphical representations and not to scale.

Only visible utility services and/or encumbrances were located and shown.

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Cursed be he that removeth his neighbor's landmark. And the people shall say Amen. Deuteronomy 27:17

Survey by William J Tucker, II PLS #050369
Clear Creek Land Surveying, L.L.C.
P.O. Box 435, Springville, N.Y. 14141
Phone 716-592-5800 Fax 716-592-5566

STATE OF NEW YORK · WILLIAM J TUCKER II · 050369 · LICENSED LAND SURVEYOR

STATE OF NEW YORK · PETER M. KEE · #59924 · PROFESSIONAL ENGINEER

Project
2014/Uniland/Elmwood

Date
July 10, 2014

Purchase Order
#29647

Firm Name and Address
Clear Creek Land Surveying, LLC
PO Box 435
Springville, NY 14141
ph. 716-592-5800
fax 716-592-5566

Project Name and Address
Stone Asbuilt Survey of
250 Delaware Ave
City of Buffalo
Erie County
State of New York
2014/Uniland/Elmwood

GRAPHIC SCALE
15 0 7.5 15 30
1 inch = 15 ft.

FIGURE 14

LOCATIONS OF VERIFICATION SAMPLES, PID MEASUREMENTS, AND POST-EXCAVATION MONITORING WELLS

250 DELAWARE AVENUE
BUFFALO, NEW YORK

Drawn by: MP/JMR

Checked by: DBR

Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

LCS, INC.

N

SOUTH ELMWOOD AVENUE

SIDEWALK

SIDEWALK

NORTH ADJACENT VETERINARY CLINIC

FENCE

DELAWARE COURT BUILDING

BASEMENT

SHED

BCP MW-7

BCP MW-8

BCP MW-6

WEST WALL 12 | NORTH WALL 12 | WEST WALL 13 | WEST WALL 14 | SOUTH WALL 10 | WEST WALL 8 | WEST WALL 4 | WEST WALL 3 | WEST WALL 7 | WEST WALL 1 | SOUTH WALL 7 | SOUTH WALL 4 | SOUTH WALL 3 | SOUTH WALL 2 | SOUTH WALL 1 | SOUTH WALL 5 | SOUTH WALL 9 | EAST WALL 1A | EAST WALL 2A | EAST WALL 3 | EAST WALL 4 | EAST WALL 5 | EAST WALL 6 | EAST WALL 7 | EAST WALL 8 | NORTH WALL 1 | NORTH WALL 2 | NORTH WALL 3 | NORTH WALL 4 | NORTH WALL 5 | NORTH WALL 7 | NORTH WALL 9 | NORTH WALL 10 | NORTH WALL 11

BOTTOM 1 | BOTTOM 2 | BOTTOM 3 | BOTTOM 4 | BOTTOM 5 | BOTTOM 6 | BOTTOM 7 | BOTTOM 8 | BOTTOM 9 | BOTTOM 10 | BOTTOM 11 | BOTTOM 12 | BOTTOM 13 | BOTTOM 14 | BOTTOM 15 | BOTTOM 16 | BOTTOM 17 | BOTTOM 18 | BOTTOM 19 | BOTTOM 20 | BOTTOM 21 | BOTTOM 22 | BOTTOM 23 | BOTTOM 24 | BOTTOM 25 | BOTTOM 26 | BOTTOM 27 | BOTTOM 28 | BOTTOM 29 | BOTTOM 30 | BOTTOM 31A | BOTTOM 32 | BOTTOM 33 | BOTTOM 34 | BOTTOM 35 | BOTTOM 36 | BOTTOM 37 | BOTTOM 38 | BOTTOM 39 | BOTTOM 40 | BOTTOM 41 | BOTTOM 42A | BOTTOM 43 | BOTTOM 44 | BOTTOM 45 | BOTTOM 46 | BOTTOM 47 | BOTTOM 48 | BOTTOM 51 | BOTTOM 52 | BOTTOM 53 | BOTTOM 54 | BOTTOM 55 | BOTTOM 56 | BOTTOM 57 | BOTTOM 58 | BOTTOM 59 | BOTTOM 60 | BOTTOM 61

FILL 1 | FILL 2 | FILL 3 | FILL 4

SOIL WAS EXCAVATED UP TO THE SHEETS, AND THE SHEETS WERE SCRAPED. "SQUARES" ON SAMPLE GRID SHOWN FOR CLARITY.

WEST CHIPPEWA STREET

APPROXIMATE EXTENT OF GROUNDWATER REQUIRING REMEDIATION PRIOR TO THE IRM

APPROXIMATE EXTENT OF SOIL AND/OR GROUNDWATER REQURIING REMEDIATION PRIOR TO THE IRM

PETROLEUM-RELATED EXCAVATION

FILL-RELATED EXCAVATION

SITE BOUNDARY

0.0 PID MEASUREMENT IN SOIL, PARTS PER MILLION

SOUTH WALL 9 VERIFICATION SOIL/FILL SAMPLE

POST-IRM GROUNDWATER SAMPLE (MONITORING WELL)

SHEETPILE

N

NORTH ADJACENT VETERINARY CLINIC

FENCE

SIDEWALK

SOUTH ELMWOOD AVENUE

SIDEWALK

DELAWARE COURT BUILDING

APPROXIMATE EXTENT OF PETROLEUM-IMPACTED SOIL AND/OR GROUNDWATER REQUIRING REMEDIATION AFTER COMPLETION OF REMEDIAL INVESTIGATION

APPROXIMATE EXTENT OF GROUNDWATER REQUIRING REMEDIATION AFTER COMPLETION OF REMEDIAL INVESTIGATION

2A 2D 3A 3C

2B 2C 3D 3B

4B 4A 5A 5B 1A

5C

4D 4C 5D 1B

6B 6C 7D 7C

7A

6A 6D 7B 1C

1D

8A 8C

8B

9A 9B

BCP MW5

FORMER UNKNOWN PISTON AND RESERVOIR TANK**

FORMER SHED

BCP WC BH8

BCP WC BH7

FORMER UNKNOWN PISTON**

FORMER PUMP ISLAND

FORMER UNKNOWN UST**

BCP WC BH1

FORMER GASOLINE STATION

BCP WC BH9

TPMW16

FORMER ACTIVE USTS

BCP WC BH10

BCP WC BH2

FORMER UNKNOWN UST**

BCP WC BH3

BCP WC BH6

BCP WC BH5

BCP WC BH4

TPMW6

TPMW5

SIDEWALK

WEST CHIPPEWA STREET

USTs = UNDERGROUND STORAGE TANKS

- BOREHOLE COMPLETED FOR PETROLEUM-RELATED WASTE CHARACTERIZATION
- MONITORING WELL UTILIZED FOR PETROLEUM-RELATED WASTE CHARACTERIZATION
- BOREHOLE COMPLETED FOR HISTORIC FILL-RELATED WASTE CHARACTERIZATION

SITE BOUNDARY

** INDICATES TANK/LIFT DISCOVERED DURING INTERIM REMEDIAL MEASURE

Drawn by: MP

Checked by: DBR

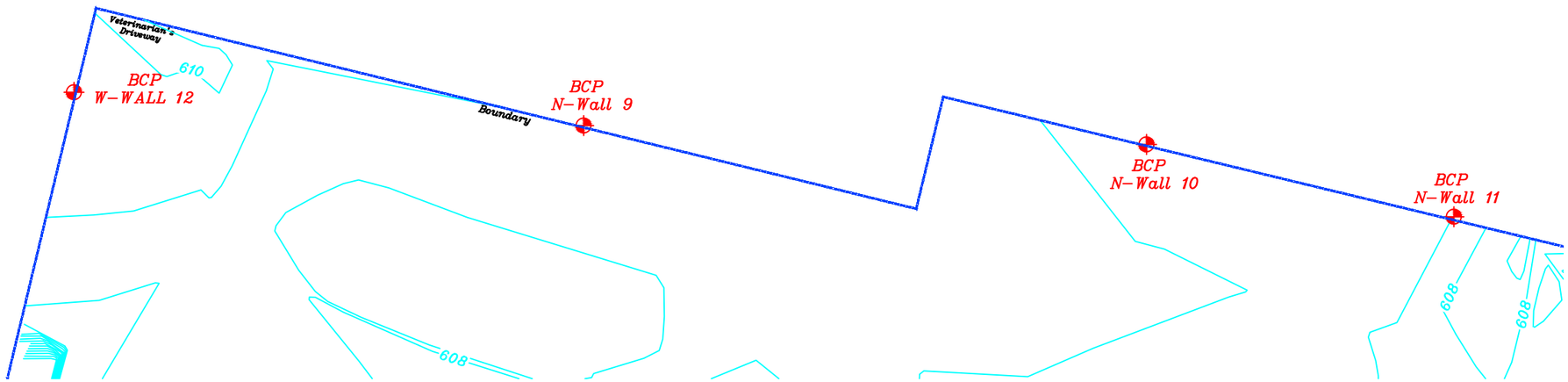
Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

FIGURE 15
WASTE CHARACTERIZATION SAMPLE LOCATIONS

250 DELAWARE AVENUE
BUFFALO, NEW YORK

LCS, INC.



Legend:

Sample Point

520 Excavation Contour (ft)

North

NOTES

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Vertical Datum: NAVD88
Horizontal Datum: NAD83(2011)EPOCH2010.00
NY West

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Symbols are graphical illustrations only and not to scale.

Figure 16A

Relationship of Verification Samples Collected from the Historic Fill-Related Excavation Sidewalls (North and West) to the Site Boundaries

GRAPHIC SCALE

20 0 10 20 40

1 inch = 20 ft.

Sample Points Exhibit

North Bounds of #250 Delaware Ave

City of Buffalo

Erie County, New York

Survey by William J Tucker II PLS#050369
dated August 1, 2014
Job No. 2014/UNILAND

606

606

Boundary Line as Per Sonnenberger Map

BCP
S-Wall 9

Limits of Excavation

Legend:

Sample Point

520 Excavation Contour (ft)

North

NOTES

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Vertical Datum: NAVD88
Horizontal Datum: NAD83(2011)EPOCH2010.00
NY West

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Symbols are graphical illustrations only and not to scale.

Figure 16B
Relationship of Verification Samples Collected from the Historic Fill-Related Excavation Sidewalls (South) to the Site Boundaries

GRAPHIC SCALE

5 0 2.5 5 10

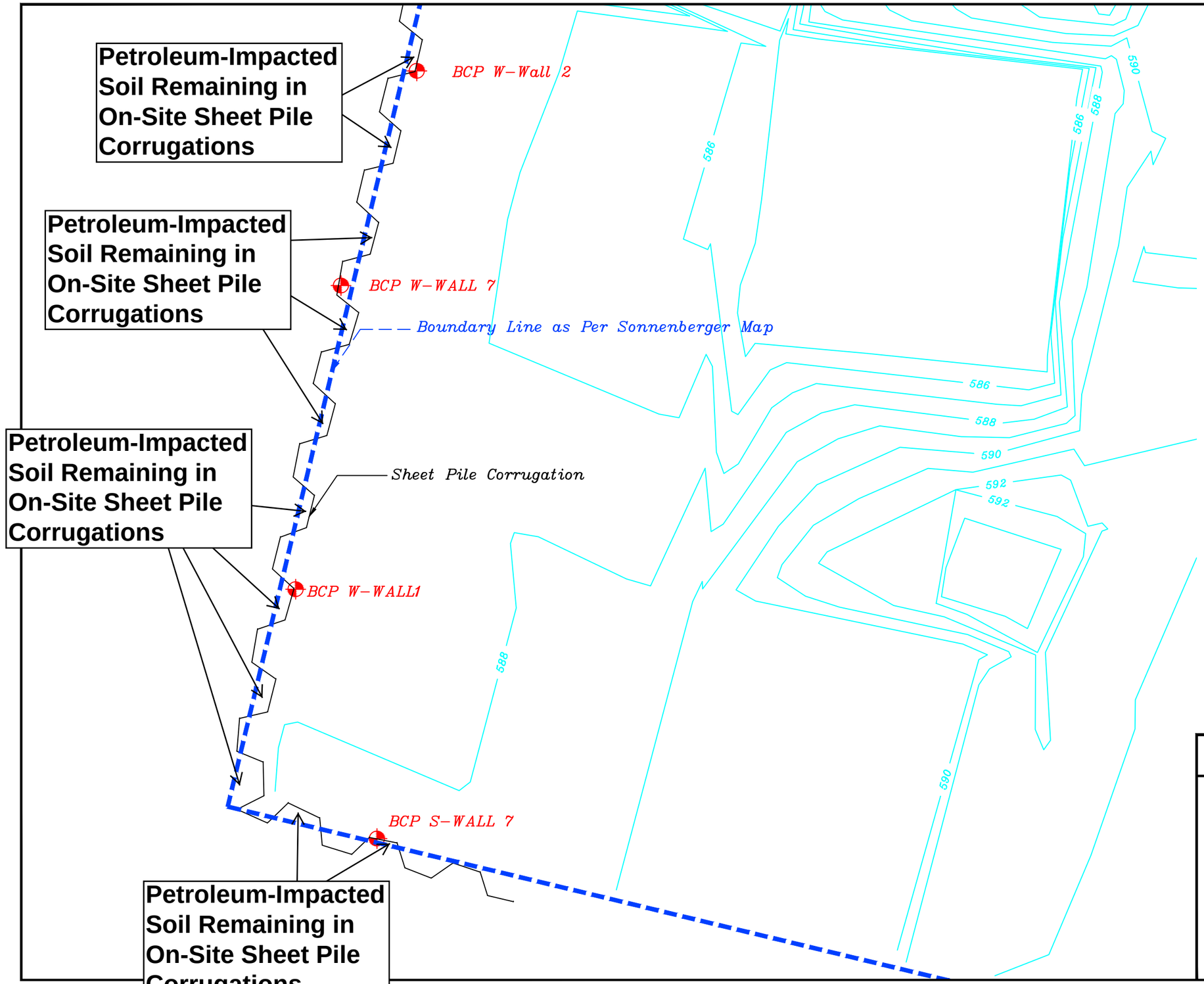
1 inch = 5 ft.

Sample Point Exhibit

Southwest Corner of #250 Delaware Ave

City of Buffalo
Erie County, New York

Survey by William J Tucker II PLS#050369
dated August 1, 2014
Job No. 2014/UNILAND



Legend:

Sample Point

520 Excavation Contour (ft)

NOTES

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Vertical Datum: NAVD88
Horizontal Datum: NAD83(2011)EPOCH2010.00
NY West

This is not a boundary survey completed by Clear Creek Land Surveying, LLC. Boundaries shown are as per Ray Sonnenbergre map dated August 15, 2002 and have not been verified. This boundary is shown per the request of LCS.

Symbols are graphical illustrations only and not to scale.

North

Figure 17
Relationship of Verification Samples Collected from the Petroleum-Related Excavation Sidewalls to the Site Boundaries and Sheet Pile Corrugations

GRAPHIC SCALE

5 0 2.5 5 10

1 inch = 5 ft.

Sample Points Exhibit

Southwest Corner of #250 Delaware Ave

City of Buffalo
Erie County, New York

Survey by William J Tucker II PLS#050369
dated August 1, 2014
Job No. 2014/UNILAND

N

SIDEWALK

SOUTH ELMWOOD AVENUE

SIDEWALK

NORTH ADJACENT VETERINARY CLINIC
(SOIL/FILL EXCAVATED UP TO FOUNDATION
AND BENEATH ON-SITE DRIVEWAY)

FENCE

FORMER DELAWARE COURT BUILDING
(SOIL/FILL EXCAVATED UP TO FOUNDATION)

REFER TO FIGURE 17
FOR LOCATIONS OF
PETROLEUM-
IMPACTED SOIL
REMAINING ON-SITE
IN SHEET PILE
CORRUGATIONS

WEST WALL 9

WEST WALL 7

WEST WALL 1

SOUTH WALL 7

BCP MW-8

BOTTOM 15

BCP MW-6

SIDEWALK

RESIDUAL GROUNDWATER IMPACTS
ABOVE NYSDEC CLASS GA CRITERIA

WEST CHIPPEWA STREET

SOIL MEETS PART 375 SOIL CLEANUP OBJECTIVES FOR UNRESTRICTED SITE USE AFTER THE INTERIM REMEDIAL MEASURE

SOIL DOES NOT MEET PART 375 SOIL CLEANUP OBJECTIVES FOR UNRESTRICTED SITE USE AFTER THE INTERIM REMEDIAL MEASURE

SITE BOUNDARY

SOUTH WALL 9 VERIFICATION SOIL/FILL SAMPLE

POST-IRM GROUNDWATER SAMPLE (MONITORING WELL)

SHEETPILE

Drawn by: MP/JMR

Checked by: DBR

Scale: Approx. 1 inch = 30 ft.

BCP ID C915271

FIGURE 18

RESIDUAL IMPACT THAT EXCEEDS PART 375 SOIL CLEANUP OBJECTIVES FOR UNRESTRICTED SITE USE

250 DELAWARE AVENUE BUFFALO, NEW YORK

LCS, INC.