Chemical Pollution Control, LLC of New York

Site Management Plan

Bay Shore Facility
(Site ID No. 1-52-015)

March 2015
Revised November 2020

D&B Engineers and Architects, P.C.

CleanEarth

November 9, 2020

ELECTRONIC SUBMISSION

George Momberger, P.E., Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E, Section A
625 Broadway, 12th Floor
Albany, NY 12233-7017

Re: Chemical Pollution Control, LLC of New York
Bay Shore, New York
EPA ID No. NYD082785429
NYSDEC Permit No. 1-4728-00086/00002

Dear Mr. Momberger:

Enclosed please find an electronic copy of the document entitled:

"Site Management Plan
Chemical Pollution Control, LLC of New York
Bay Shore, New York
Site No. 1-52-015"

The Site Management Plan has been updated in accordance with your request.

If you have any questions and/or comments regarding the enclosed information, please do not hesitate to contact me at (215) 768-6470.

Sincerely,

Greg Fink
EHS Director

GF/MRHt\
Enclosurecc: B. Veith D&B)

SITE MANAGEMENT PLAN

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

SITE NO. 1-52-015

Prepared for:

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

Prepared by:

D&B ENGINEERS AND ARCHITECTS, P.C.
WOODBURY, NEW YORK

MARCH 2015
REVISED NOVEMBER 2020

SITE MANAGEMENT PLAN
CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK
SITE NO. 1-52-015

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EXECUTIVE SUMMARY

This Site Management Plan (SMP) was developed as an element of the RCRA Corrective Action program for the Chemical Pollution Control, LLC of New York (CPC) facility located at 120 South Fourth Street in Bay Shore, Suffolk County, New York. The term "Site," as referenced herein, shall refer to the entire approximately 1-acre sized parcel located at 120 South Fourth Street (Figure 1-1). The SMP documents the processes that will be followed for monitoring and managing contamination remaining at the Site.

The CPC Bay Shore facility was a commercial hazardous waste treatment, storage and disposal facility that accepted and managed a variety of hazardous and nonhazardous wastes including acids, alkalis, flammables, cyanides/sulfides, oxidizers, toxic waste, oily waste, photochemical waste, laboratory packaged waste, universal waste and polychlorinated biphenyl (PCB) waste under its Part 373/360 Permit (NYSDEC Permit No. 1 4728-00086/00002). Waste was received from both industrial and commercial generators, as well as from households. Following on-site processing, all waste was transported to authorized off-site treatment and disposal facilities. The facility operated continuously at this location from 1976 through December 2011.

CPC has closed all of the hazardous waste storage areas formerly located at the Bay Shore facility in accordance with the requirements of 6 NYCRR Part 373 and its approved RCRA closure plan, and has demolished and removed the facility building and support structures. CPC prepared and implemented the January 2012 NYSDEC-approved Interim Corrective Measures (ICM) Work Plan in order to satisfy the corrective action requirements contained in its former 6 NYCRR Part 373 Permit, remediate impacted soil discovered on-site during the RCRA Facility Investigation (RFI) and address residual groundwater contamination present beneath the facility. The overall goal of the remediation program for the facility was to satisfy the corrective action requirements presented in Module II of the facility's Part 373 Permit and allow the facility to be "delisted" from New York State's Registry of Inactive Hazardous Waste Disposal Sites (Site No. 1-52-015).

Remediation of the Site generally involved excavation and off-site disposal of impacted soil and treatment of residual groundwater contamination through in-situ chemical oxidation (ISCO) using sodium permanganate. Confirmation soil samples from certain portions of the Site collected upon completion of the ICM program indicated that a few semivolatile organic compounds (SVOCs), pesticides and metals remain in Site soil at concentrations above their respective unrestricted use soil cleanup objectives (UUSCOs). However analytical results from all confirmation soil samples met the restricted residential soil cleanup objectives (RRSCOs). This SMP provides a detailed description of the procedures to be followed for managing the remaining contamination at the Site, including: (1) implementation and management of the Engineering and Institutional Controls (ECs/ICs); (2) monitoring; (3) performance of periodic inspections; and, (4) submittal of Periodic Review Reports.

The following provides a brief summary of each portion of the SMP and the section of the plan where further details are provided:

Introduction and Summary of Site Conditions from the ICM Final Report (Section 1.0)

This section provides a description of the history of the site, the remedial activities completed and the contamination that remains post-remediation.

Engineering and Institutional Control Plan (Section 2.0)

This section describes the process for the implementation and management of ECs/ICs at the Site. Since site soil meets the RRSCOs, active recreational uses which are public uses with a reasonable potential for soil contact are allowed at the Site. As a result, this SMP does not include any ECs.

ICs for the Site include an Environmental Easement, which enforces the execution of this SMP and limits the Site from being used for unrestricted use or residential use, as defined by 6 NYCRR Part 375. Since the soil has been remediated to the RRSCOs, the Site remediation can be considered complete with respect to soil as long as institutional controls (e.g., an

Environmental Easement) are established restricting the Site from being used for vegetable gardens, single family housing or raising livestock or producing animals for human consumption. In addition, excavation activities within the limits of the Site will be restricted. A copy of the Environmental Easement that has been filed with the Suffolk County Clerk's office is provided in Appendix A. In addition, this SMP includes an Excavation Work Plan (EWP) to manage on-site excavations which may have the potential to encounter remaining low-level contamination on-site. The EWP is provided as Appendix B.

Monitoring Plan (Section 3.0)

This section describes the measures for evaluating the performance and effectiveness of the ICs in reducing or mitigating exposure to low-level contamination remaining at the Site. As detailed above, ICs at the Site include an Environmental Easement to prevent the Site from being used for vegetable gardens, single family housing or raising livestock or producing animals for human consumption. Annual monitoring of these ICs will be conducted for the first 5 years, unless a less frequent schedule is otherwise approved by the NYSDEC. After 5 years, the monitoring frequency will be reviewed with the NYSDEC to determine any change in frequency. Monitoring programs are summarized in Section 3.0.

Operation and Maintenance Plan (Section 4.0)

The Site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

Inspections, Reporting and Certifications (Section 5.0)

A Periodic Review Report will be submitted to the NYSDEC on an annual basis, beginning eighteen months after the "No Further Action" letter is issued by the NYSDEC. The Periodic Review Report will be prepared in accordance with NYSDEC DER-10 "Technical

Guidance for Site Investigation and Remediation" requirements. The report will include an assessment of the EC/IC Plan and Monitoring Plan, results of the annual Site inspections, a compilation of deliverables generated during the reporting period and a certification of the ECs/ICs. Periodic review certification and reporting requirements are outlined in Section 5.0.

If the property is sold by CPC, the new property owner will be responsible for ensuring proper implementation of this SMP.

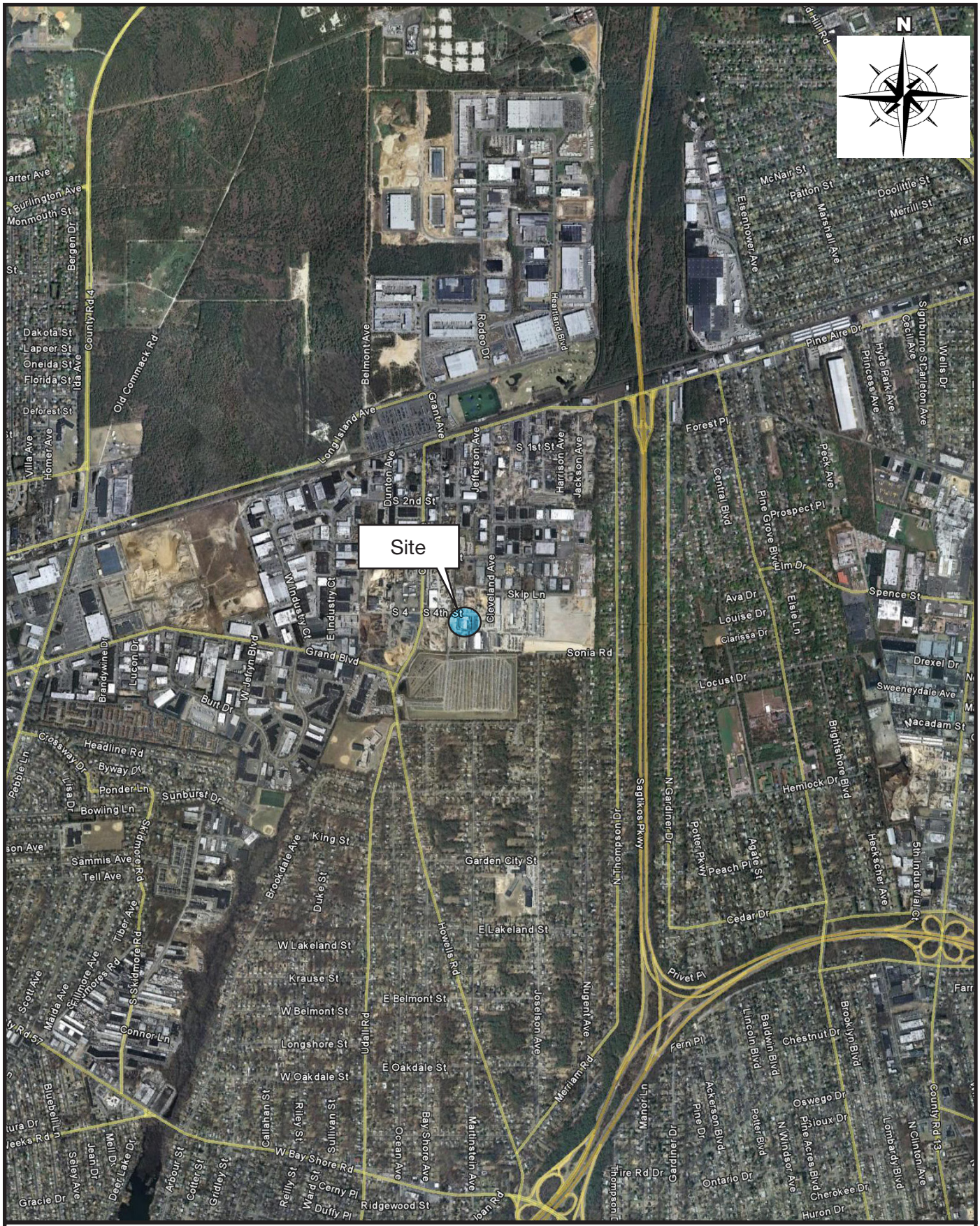
1.0 INTRODUCTION AND SUMMARY OF SITE CONDITIONS FROM THE ICM FINAL REPORT

1.1 Introduction

This SMP has been prepared for the 6 NYCRR Part 373 Permitted Chemical Pollution Control, LLC of New York (CPC) facility located at 120 South Fourth Street in Bay Shore, Suffolk County, New York (see Figure 1-1) (hereafter referred to as the "Site"). The Site was investigated during a RCRA Facility Investigation (RFI) as part of the requirements of the facility's New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 360/373 Permit (NYSDEC Permit No. 1-4728-00086/00002) and was remediated during a subsequent Interim Corrective Measures (ICM) Program. D&B Engineers and Architects, P.C. (D&B) (formerly Dvirka and Bartilucci Consulting Engineers) prepared an ICM work plan on behalf of CPC outlining the proposed ICM program. CPC received approval of the ICM Work Plan from the NYSDEC in January 2012. The purpose of the ICM was to remove impacted soil and treat groundwater at the facility to allow the Site to be "delisted" from the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites (Site No. 1-52-015), as well as to complete the subsurface RCRA closure and corrective action activities.

1.1.1 General

The field activities associated with the ICM were completed in November through December 2012, February 2013, June 2013, July 2013 and September 2013. During implementation of the work plan, CPC retained D&B to oversee the field activities and perform the soil and groundwater sampling specified in the NYSDEC-approved work plan. CPC submitted an ICM Final Report outlining the activities completed during the ICM program dated December 2013. In implementing the ICM Program, CPC intended to satisfy the corrective action requirements of its 6 NYCRR Part 373 Permit, remediate impacted soil detected on-site during the RFI, and address residual groundwater contamination located beneath the facility. A figure showing the Site location and boundaries is provided as Figure 1-2. The entire boundary of the Site is subject to this SMP and is more fully described in the metes and bounds Site description that accompanies the Environmental Easement (see Appendix A).



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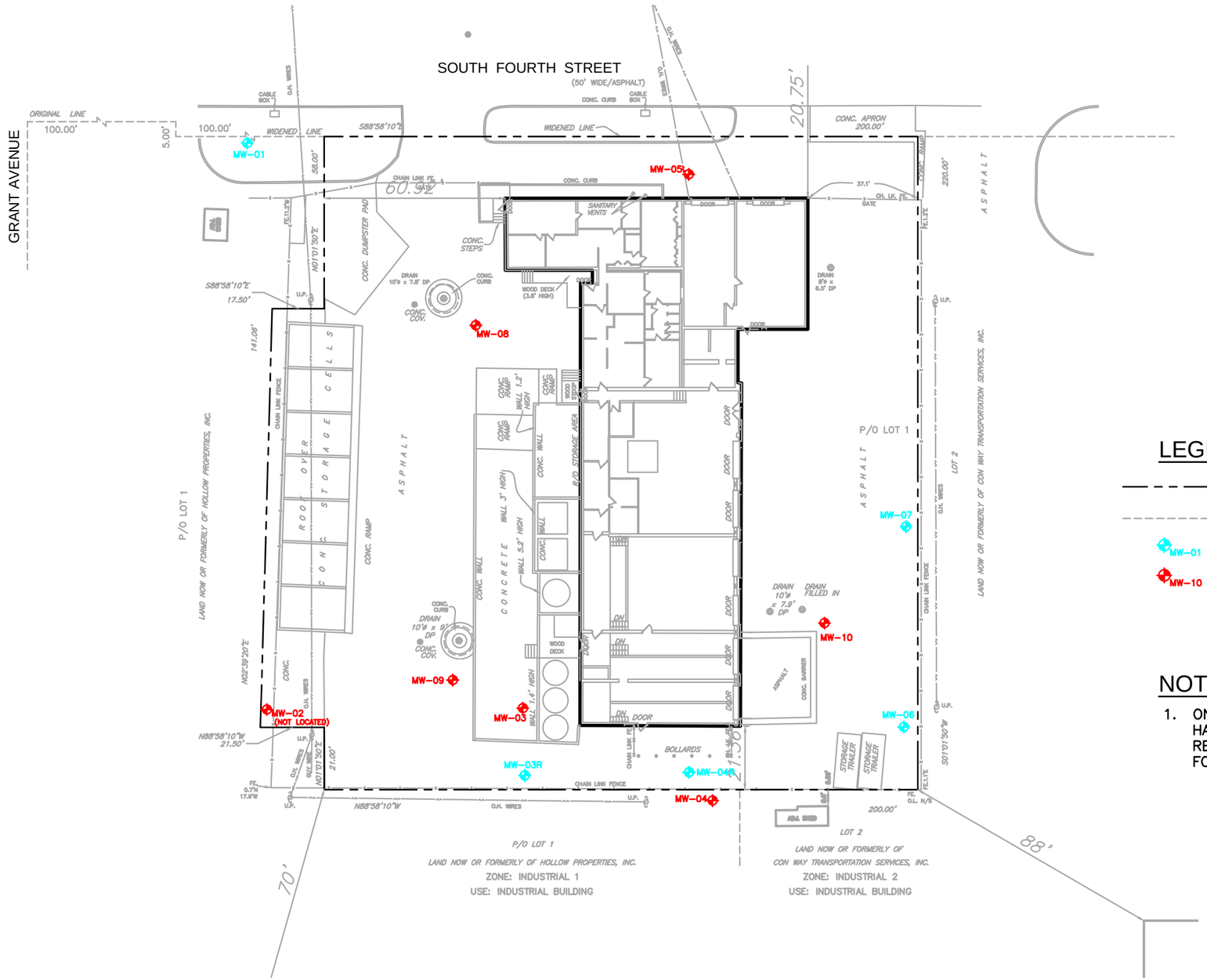
CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

SITE LOCATION MAP

FIGURE 1-1



LEGEND:

- PROPERTY LINE
- ADJACENT LOT LINES
- MW-01 MONITORING WELL
- MW-10 DECOMMISSIONED MONITORING WELL

NOTE:

1. ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED, AND ARE ONLY SHOWN FOR REFERENCE.

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CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
SITE MANAGEMENT PLAN

SITE PLAN

SCALE: 1" = 40'

FIGURE 1-2

As described in the ICM Report dated December 2013, low-level contaminants (metals, phenol and dieldrin) were observed in surface and subsurface soil at the Site following completion if the ICM program, which is hereafter referred to as "remaining contamination."

This Site Management Plan (SMP) was prepared to manage the remaining contamination at the Site in perpetuity or until extinguishment of the Environmental Easement in accordance with Environmental Conservation Law (ECL) Article 71, Title 36. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by D&B, on behalf of CPC, in accordance with the requirements of NYSDEC DER-10 "Technical Guidance for Site Investigation and Remediation," dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) that are required by the Environmental Easement that has been filed for the Site.

1.1.2 Purpose

Based on the results of the completed ICM, low levels of contaminants were observed at various locations throughout the Site. Since that time, the Site has been re-graded and covered with a 4-inch layer of topsoil and planted with grass seed. Institutional and Engineering Controls (ICs/ECs) provide appropriate controls for managing the Site to ensure the protection of public health and the environment. The Environmental Easement that has been filed for the Site accompanies this SMP to restrict Site use, and ensure proper maintenance, monitoring and reporting for the Site. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of the procedures required to manage remaining contamination at the Site after completion of the ICM program, including: (1) monitoring of the Site ECs/ICs; (2) the performance of periodic inspections and certification of results; and, (3) the submittal of Periodic Review Reports.

To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this SMP will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

1.2.1 Site Location and Description

The CPC facility is located at 120 South Fourth Street in Bay Shore, New York in an urban portion of the Town of Islip, Suffolk County, New York, approximately 2,500 feet west of the Sagtikos State Parkway. The CPC facility occupies a parcel approximately 1 acre in size. Primary access to the Site is from South Fourth Street, which borders the north side of the facility. A site location map is provided as Figure 1-1.

The areas adjoining and surrounding the CPC facility consist of developed industrial properties. The CPC facility is bound by South Fourth Street to the north and by industrial properties to the east, south and west. The property immediately south of the CPC facility was formerly used by the Town of Islip as a landfill (Sonia Road Landfill) in the late 1960's. The former landfill itself is approximately 500 feet to the south of the CPC facility.

The closed CPC facility was a commercial hazardous waste treatment, storage and transfer facility that formerly consisted of a one-story masonry building and an asphalt-paved exterior area. The building contained office and maintenance areas and waste treatment and storage areas. Seven individually bermed drum storage areas, a diked drum storage area and six aboveground storage tanks were located adjacent to the building. The six storage tanks were located within three separate diked containment areas. The tanks were used to store and blend non-halogenated solvents, ignitable hazardous waste, various organic wastewaters, and various acid and alkali mixtures. A pre-closure site plan for the CPC Bay Shore facility is provided as Figure 1-2.

CPC received and picked up hazardous waste and nonhazardous waste from a variety of waste generators and industries for shipment to off-site treatment and disposal facilities. This waste used to be transported to the facility in drum lots or as bulk loads primarily by CPC's transport vehicles and trained drivers. The CPC facility had a total of 12 container storage areas and six storage tanks. The facility accepted halogenated and non-halogenated hydrocarbons, organic wastewater, acids, caustics, ignitable hazardous waste, and listed hazardous waste for storage or consolidation in tanks. All waste was transported by CPC to authorized off-site treatment and disposal facilities. Toxic, flammable, corrosive and other various household wastes were accepted at the CPC facility from household waste generators. Lab-packed waste formerly accepted at the CPC facility for storage may have been repackaged without opening the individual inner containers. The CPC facility also treated photochemical waste fixer (e.g., spent silver bearing solution) on-site using automated electrolysis units and passive filter units to recover metallic silver. The CPC facility may have occasionally stored polychlorinated biphenyls (PCBs) in containers at a volume less than 495 gallons for up to 10 days in compliance with 40 CFR Part 761 without a separate Toxic Substances Control Act (TSCA) facility storage

permit. Specific storage requirements, procedures for consolidation in tanks and treatment processes were described in the facility's Part 373 Permit.

Based on the results of the RFI and subsequent semiannual groundwater sampling, the depth to groundwater at the Site is approximately 9 to 11 feet below grade.

It should be noted that, as part of the facility demolition program, the storage areas and tanks described above were closed in accordance with the facility's approved closure plan in February and March 2012. Approval of the above-grade closure activities was received in the NYSDEC's letter dated May 1, 2012. Subsequently, in November 2012, the entire facility building was demolished with the demolition debris properly managed at off-site facilities. Following the demolition, field activities associated with the ICM were completed in November through December 2012, February 2013, June 2013, July 2013 and September 2013.

1.2.2 Site History

The storage and treatment of hazardous waste and nonhazardous waste began at the CPC facility in 1975 and continued through December 2011. The history of the property is as follows:

- Prior to 1940 - Agricultural (unconfirmed);
- 1940 to 1960 - Hubbard Sand and Gravel (quarry);
- 1960 to 1965 - Bus company;
- 1965 to 1970 - Milk bottling and distribution (dairy company);
- 1970 to 1975 - Truck service company (tire company);
- 1975 to 2012 - Hazardous waste transfer facility;
- 2012 to present - Vacant.

The property is located in an area that was formerly the Hubbard Sand and Gravel quarry from the 1940's to the 1960's [Arcadis G&M, Inc. 2006. Current Conditions Report - CPC Facility, Bay Shore, New York. November 2006 (Arcadis 2006)]. The southern perimeter of the

quarry was used by the Town of Islip as the Sonia Road Landfill in the late 1960's. The use of the property prior to the quarry is unknown, but it is assumed to have been used for agricultural purposes.

A bus company and a milk bottling and distribution company were located on the property in the 1960's. A truck tire sales and service company was located at the property in the 1970's. Information regarding historical waste disposal practices at the property prior to CPC operations is unknown. The building was vacant at the time CPC took over the lease in 1975.

The building was constructed in the 1960's [XCG Consultants, Ltd. (XCG) due diligence assessment activities for the property in 1997 (XCG, 1997)]. According to XCG, the property was paved after the building was constructed and dry wells were installed at that time to provide drainage for the property. Otherwise, XCG indicated that there have been relatively few changes to the facility over the years. When CPC began operations, the truck maintenance pit in the garage was filled with concrete. In the early 1980's, concrete secondary containment areas were constructed in the drum storage and storage tank areas.

In December 2011, CPC ceased operations at the facility and initiated RCRA closure activities at the facility. CPC closed all of the hazardous waste storage areas formerly located at the Bay Shore facility in accordance with the requirements of 6 NYCRR Part 373 and its approved RCRA closure plan, and demolished and removed the facility building and support structures. In implementing the ICM Work Plan, CPC satisfied the corrective action requirements contained in its 6 NYCRR Part 373 Permit, including remediating impacted soil discovered on-site during the RFI and addressing residual groundwater contamination present beneath the facility. The overall goal of the remediation program for the facility was to satisfy the corrective action requirements presented in Module II of the facility's Part 373 Permit and allow the facility to be "delisted" from New York State's Registry of Inactive Hazardous Waste Disposal Sites (Site No. 1-52-015).

1.2.3 Geologic Conditions

Topography

The CPC facility is located in a relatively flat area, with a general topographic gradient sloping to the southeast. The elevation is approximately 60 feet above mean sea level (msl). There are no surface water bodies located on or in the vicinity of the facility. Precipitation percolates through the site soils and does not runoff from the site.

Geology

A general description of the geology of the area derived from Smolensky, D.A., Buxton, H.T., and Shernoff, P.K. [1989 Hydrologic Framework of Long Island, New York, U.S. Geologic Survey Hydrologic Investigations Atlas HA-709 (Smolensky, et al., 1989)], is provided below. The CPC facility is estimated to be underlain by approximately 1,550 feet of Cretaceous and Pleistocene-aged unconsolidated deposits overlying southward-sloping bedrock. The unconsolidated deposits immediately overlying bedrock were deposited during the Cretaceous age and form, in ascending order, the Raritan and Magothy Formations.

The Raritan Formation consists of the Lloyd Sand and the Raritan Clay. The Lloyd Sand (also known as the Lloyd aquifer) is approximately 350 feet thick beneath the CPC facility and consists of fine to coarse sand, gravel, commonly with a clayey matrix, and lenses and layers of silty and solid clay. The Raritan confining unit consists of silty and solid clay, and lenses and layers of sand, with a thickness of approximately 150 feet. Because of low permeability, the Raritan Clay serves as a confining unit for the underlying Lloyd Sand.

The Magothy Formation (also known as the Magothy aquifer) is a deltaic deposit consisting of fine to medium sand, clayey in part, interbedded with lenses and layers of coarse sand, silt, and sandy and solid clay. Gravel is common in the basal zone of the Magothy Formation. The Magothy Formation, which is approximately 900 feet thick beneath the CPC facility, is uncomfortably overlain by the Gardiner's Clay (an upper Pleistocene interglacial unit)

and by glacial deposits of Pleistocene age (the Upper Glacial aquifer). The overlying Gardiner's Clay, if present, is likely no more than approximately 10 to 20 feet thick and generally consists of clay, silt, and a few layers of sand and gravel.

The shallowest unconsolidated deposit beneath the CPC facility is the Upper Glacial aquifer, which consists primarily of glacial outwash deposits. In many areas of the CPC facility, thin recent fill deposits have replaced the Upper Glacial aquifer immediately below the ground surface. Depending on the presence of the underlying Gardiner's Clay and the thickness of any overlying recent fill deposits, the Upper Glacial aquifer may be as much as 150 feet thick at the CPC facility. All investigation activities historically completed at the Site were completed in the Upper Glacial aquifer and the fill deposits.

According to regional descriptions, the glacial deposits that form the Upper Glacial aquifer generally consist of fine to very coarse sand and pebble to boulder sized gravel. Site-specific investigations generally corroborate this regional description. The glacial deposits are generally described as a tan to light brown sand, which can range from fine to coarse and is often mixed with significant amounts of gravel. This native soil is well sorted and contains very little to no silt or clay. The water table is located in the unconfined Upper Glacial aquifer.

Fill deposits are present across most of the facility, overlying the glacial deposits. These artificial deposits are usually described as a poorly sorted, brown to dark brown sand and gravel, occasionally containing some asphalt or concrete pieces. The fill is generally thin, exhibiting a thickness of 4 feet or less. However, investigations completed at the Site indicate that the fill is as much as 8 feet thick in some areas of the Site.

Hydrology

Based on a review of Smolensky, et al., 1989, the Upper Glacial aquifer is the uppermost water-bearing unit at the Site. According to the NYSDEC, fresh groundwater at the Site would be classified as GA (New York State Codes, Rules and Regulations, Title 6, Chapter X,

Parts 700-705, effective March 1998). The best usage of GA water is as a source of potable water supply.

Based on a review of historical data, depth to groundwater at the CPC facility is approximately 9 to 11 feet below ground surface (bgs). Shallow groundwater flows in a southeasterly direction toward the Great South Bay. Published data indicate that the horizontal hydraulic conductivity of the Upper Glacial aquifer is relatively high at approximately 1,500 to 2,000 gpd/ft² [McClymonds, N.E. and O.L. Franke, 1992, Water-Transmitting Properties of Aquifers on Long Island, New York. U.S. Geologic Survey Professional Paper 627-E (McClymonds and Franke, 1972)].

1.3 Summary of Previous Investigation Findings

A Current Conditions Report (CCR) was prepared by Arcadis G&M, Inc. for Chemical Pollution Control, Inc., dated November 22, 2006. The CCR summarizes all known relevant information regarding the CPC facility. The findings of D&B's review of this document were presented in the NYSDEC-approved RFI Work Plan dated August 2010. As described in the RFI Work Plan, the following environmental investigations were previously completed at the CPC facility:

- Phase II Environmental Site Assessment - 1987
- Monitoring Well Installation and Groundwater Sampling - 1994 through 1995
- Phase II Environmental Site Assessment - 1997
- Quarterly Groundwater Monitoring - 2002
- Soil and Groundwater Investigation - 2007

A brief summary of the findings of these investigations with regard to soil and groundwater impacts is provided below.

Soil

The 1987 Phase II Environmental Site Assessment (ESA) involved collecting surface soil samples from five locations and subsurface soil samples from two soil borings. The surface soil samples were analyzed for volatile organic compounds (VOCs), inorganic compounds, phenols and PCBs, and the subsurface soil samples were analyzed for inorganic compounds and pesticides. All detected concentrations were below the NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs).

The 1997 Phase II ESA involved collecting soil samples from three 30-foot deep soil borings. The soil samples exhibiting the highest photoionization detector (PID) readings or evidence of visual impact were submitted to a laboratory and analyzed for VOCs. Trace concentrations of VOCs were detected in the soil samples, all below the NYSDEC's TAGM 4046 RSCOs.

The Soil and Groundwater Investigation performed in August 2007 involved the collection of subsurface soil samples from four dry wells and six soil borings, with laboratory analysis for VOCs, semivolatile organic compounds (SVOCs), inorganic compounds, PCBs and pesticides. The results indicated VOC and SVOC compounds detected in the subsurface soil samples at concentrations below the NYSDEC's Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs), which became effective December 14, 2006 and replaced the TAGM 4046 RSCOs. Chromium was detected at a maximum concentration of 180 mg/kg in subsurface soil sample SB-03 (1.5 to 3.5 feet), above its UUSCO of 30 mg/kg. In addition, silver was detected in SB-02 (5 to 7 feet) at a concentration of 3.4 mg/kg, which is above its UUSCO of 2 mg/kg. SB-02 and SB-03 were located in the central and southern portions of the truck load/unload area on the western side of the facility building, respectively.

One subsurface soil sample collected from a dry well, DW-04 (8 to 9 feet), exhibited concentrations of lead, silver, zinc and several pesticides above their respective UUSCOs. DW-04 was located on the east side of the facility building.

Groundwater

Between 1987 and 1997, 10 groundwater monitoring wells (i.e., MW-1 thorough MW-10) were installed at the CPC facility. The surveyed locations of these wells are indicated on Figure 1-2. It should be noted that monitoring well MW-2 was apparently destroyed sometime prior to 2007. The groundwater flow direction across the Site is generally to the southeast.

At least 13 rounds of groundwater sampling were performed at the CPC facility from 1987 through 2007. At a minimum, these samples were analyzed for VOCs. However, some samples were also analyzed for SVOCs, inorganic compounds, pesticides and/or PCBs. The groundwater results indicated that chlorinated VOCs (CVOCs) was the class of compounds most frequently detected in on-site groundwater at concentrations above the NYSDEC's Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Groundwater Standards and Guidance Values, including trichloroethene (TCE), cis-1,2-dichloroethene (1,2-DCE) and, to a lesser degree, tetrachloroethene (PCE) and 1,1,1-trichloroethane (1,1,1-TCA). Historically, these compounds were most frequently detected, and detected at the highest concentrations, in monitoring wells MW-3, MW-4 and MW-6, which were located on the southern downgradient side of the facility. Concentrations of these same CVOCs were elevated in monitoring well MW-9, which was located in the vicinity of and to the west of MW-3.

With the exception of the sampling round conducted in 1987, CVOCs had generally not been detected in upgradient wells MW-1 and MW-5 during the historical monitoring period. The groundwater sample results from the 1987 sampling round indicated that upgradient monitoring well MW-5 exhibited CVOC concentrations similar to that of downgradient monitoring wells MW-3 and MW-4. However, only low-level concentrations were detected in upgradient monitoring well MW-1.

During the August 2007 sampling event, MW-4 exhibited the maximum concentrations of TCE (330 ug/l), 1,2-DCE (320 ug/l) and PCE (14 ug/l) detected at the facility. The Class GA Standard for these compounds is 5 ug/l. Unlike previous sampling rounds, in August 2007, PCE

and 1,2-DCE were not detected in wells MW-3 and MW-6 above their respective Class GA Standards. However, TCE was detected at a concentration of 7 ug/l in these wells, and 6 ug/l in MW-9. 1,1,1-TCA was not detected above its Class GA Standard in any of the monitoring wells during the August 2007 sampling round.

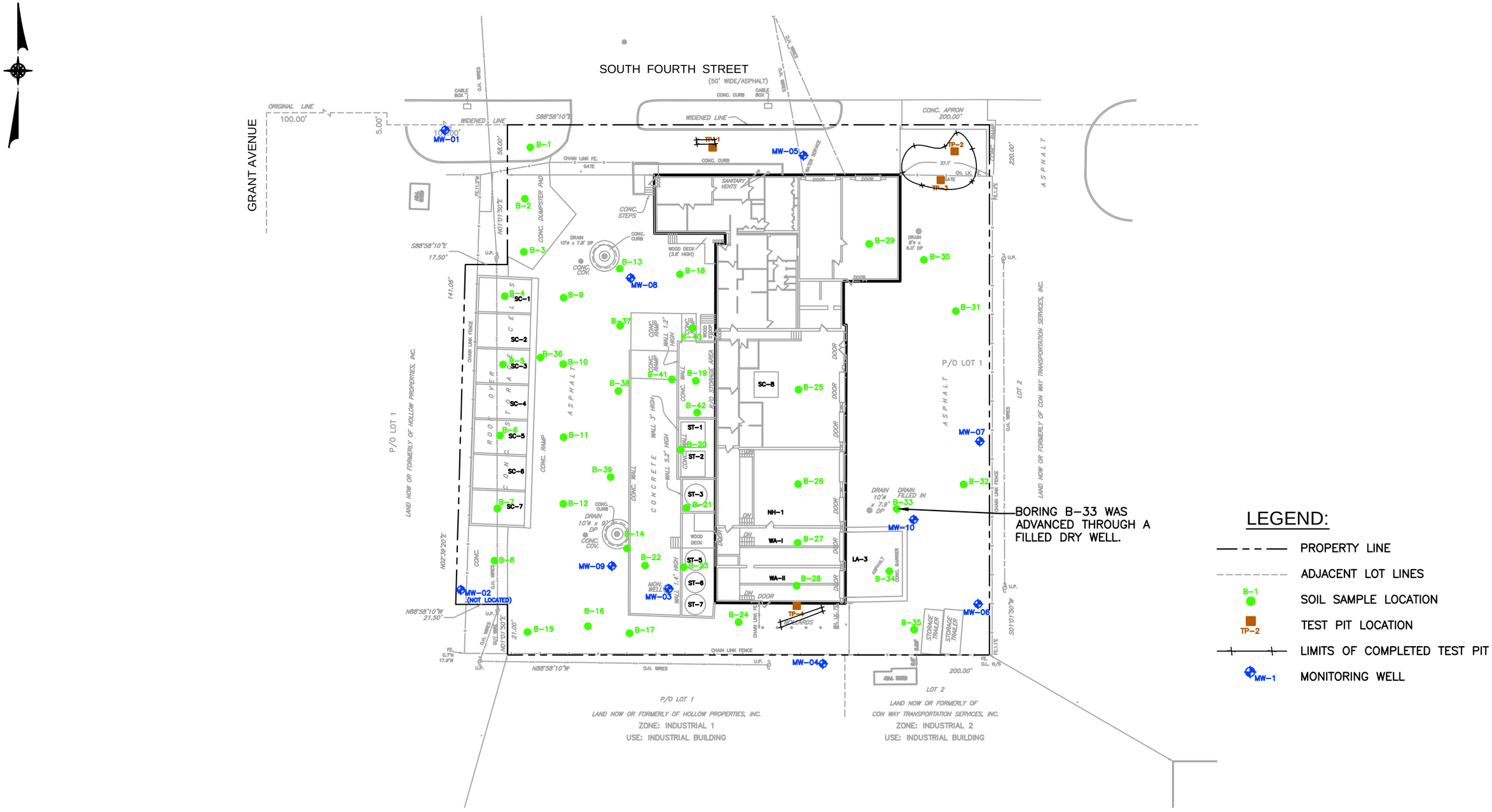
Although lead and chromium had occasionally been detected above their Class GA Standards in wells MW-2 and MW-3, these metals were not detected at elevated concentrations during the August 2007 sampling event. Iron and sodium were detected at concentrations above their respective Class GA Standards of 300 ug/l and 20,000 ug/l in several wells during the August 2007 sampling event. The maximum concentration of iron was 1,100 ug/l (MW-6) and the maximum concentration of sodium was 27,000 ug/l (MW-9).

Light non-aqueous phase liquid (LNAPL) was observed in monitoring well MW-3 in May 2002 at a thickness of less than 0.5 inches. The LNAPL was very light brown to tan colored, had a low viscosity and a mild organic odor. The analytical results indicated that the LNAPL contained fairly high concentrations of total sulfur and total halogens, but very low concentrations of the chlorinated compounds present in the groundwater samples collected from the facility monitoring wells. Subsequent groundwater sampling events conducted during 2002 and in August 2007 did not detect any LNAPL in monitoring well MW-3.

RCRA Facility Investigation

As previously indicated, D&B completed an RFI at the CPC Bay Shore facility. The field activities associated with this investigation were completed in August and September 2010, with a supplemental round of sampling completed in October 2010. The RFI Report was submitted to the NYSDEC in November 2010.

During the RFI, four test pits (TP-1 through TP-4) were excavated in the areas indicated on Figure 1-3 to determine the presence of suspected underground storage tanks. TP-1 was terminated at 1.2 feet below grade where a cement cover of an active leaching pool associated with the facility's waste disposal system was identified. Two single-walled steel USTs, each



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A DIVISION OF D&B ENGINEERS AND ARCHITECTS, P.C.

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
SITE MANAGEMENT PLAN

RCRA FACILITY INVESTIGATION SAMPLE LOCATION PLAN

SCALE: 1"=40'

FIGURE 1-3

estimated at 4,000 gallons in capacity, were encountered in test pits TP-2 and TP-3. Due to their proximity to each other and UST removal activities, test pits TP-2 and TP-3 became one large test pit, designated TP-2/3 for sampling purposes. Each UST was removed for proper off-site management in accordance with NYSDEC and Suffolk County requirements, except for the western end of the UST in TP-3. This portion of the UST was located in close proximity to the northeast corner of the facility building. As a result, the westernmost 6 feet of the tank was filled with concrete and left in-place to be excavated and removed during performance of the ICM Program. No USTs or other subsurface structures were identified during the excavation of TP-4. Evidence of contaminated soil was not identified in any of the test pits based on visual observations and field instrument measurements. Soil samples were collected and analyzed from the sidewalls and bottom of each test pit for Target Compound List (TCL) VOCs, TCL SVOCs and Target Analyte List (TAL) metals. One soil sample was collected from TP-1, nine soil samples were collected from TP-2/3 and five soil samples were collected from TP-4. The soil samples collected from the test pits did not contain any VOC, SVOC or metal concentrations exceeding the 6 NYCRR Part 375 UUSCOs.

In addition to the test pits, a total of 42 soil probes (i.e., B-1 through B-42) were advanced at the CPC facility at the locations shown on Figure 1-3 in order to characterize subsurface soil conditions. A total of 96 subsurface soil samples were selected from the 42 soil probes for chemical analysis. All subsurface soil samples collected from the soil probes were analyzed for one or more of the following: TCL VOCs, TCL SVOCs, TCL PCBs, TCL pesticides, TAL metals and cyanide. The nine existing monitoring wells (i.e., MW-1 and MW-3 through MW-10) were sampled for TCL VOCs, TCL SVOCs, TAL metals and cyanide. In addition, MW-1, MW-3, MW-4 and MW-6 were sampled for natural attenuation parameters. The results of the soil probe investigation and groundwater sampling completed during the RFI are summarized below.

The soil probe investigation completed during the RFI indicated the presence of VOCs in subsurface soil at concentrations above the UUSCOs, but below the Commercial Use Soil Cleanup Objectives (SCOs). The VOC soil contamination was primarily detected in soil probes completed to the west of the facility building, specifically B-9, B-10, B-11, B-19, B-37 and

B-41, from surface to a maximum depth of 4 feet below grade. The VOCs of concern include three CVOCs (i.e., TCE, 1,2-DCE and PCE), toluene, ethylbenzene, total xylene and 1,2-dichlorobenzene. CVOCs were detected in all of the above-referenced soil probes while the other contaminants were detected only in soil probes B-10 and B-19, at the same depths where elevated PID readings were recorded. In addition, acetone and xylene were detected in soil probe B-27, which was completed through the building floor in storage area WA-I, at a depth of 4 to 6 feet below ground surface exceeding the UUSCOs. The area of VOC-impacted soil was well delineated, with deeper soil samples in these probes and surrounding soil probes exhibiting VOC concentrations below the UUSCOs.

A few SVOCs, pesticides and metals were detected at concentrations above their respective UUSCOs in the shallow soil samples collected from the soil probes, including:

- Several PAHs, one pesticide (4,4'-DDT) and seven metals (chromium, cadmium, copper, lead, mercury, silver and zinc) were detected above their respective UUSCOs in soil sample B-33 (0 to 2 feet). Soil probe B-33 was completed through a filled dry well located on the east side of the facility building and the elevated concentrations are likely related to the nature of the material utilized to fill the last two feet of the dry well. The soil samples collected deeper than this 2-foot interval did not exhibit elevated concentrations of these contaminants.
- With the exception of B-33, pesticides exceeding the UUSCOs in shallow soil included 4,4'-DDT and 4,4'-DDE in B-36 (0 to 2 feet and 2 to 4 feet), and 4,4'-DDT in B-2 (0 to 2 feet) and B-7 (2 to 4 feet).
- With the exception of B-33, metals exceeding the UUSCOs in shallow soil included chromium, lead, silver and zinc. Chromium was detected above its UUSCO in all three soil samples collected from B-14.
- With the exception of chromium in B-14, the extent of shallow soil contamination is generally delineated with deeper soil samples and surrounding soil probes exhibiting contaminant concentrations below the UUSCOs.

Groundwater sampling of the nine existing monitoring wells located on the CPC facility indicated concentrations of four CVOCs above their respective Class GA Standards in three wells, specifically MW-3, MW-4 and MW-9. The CVOCs detected above their respective Class GA Standards were TCE and 1,2-DCE in all three wells, PCE in MW-4 and MW-9, and 1,1,1-TCA in MW-3. MW-4 exhibited the maximum concentrations of TCE (280 ug/l),

1,2-DCE (350 ug/l) and PCE (12 ug/l) at the facility, all above their Class GA Standard of 5 ug/l. These compounds are the same CVOCs detected above their respective UUSCOs in the subsurface soil samples. The other VOCs detected above their respective UUSCOs in soil were not detected in groundwater.

Iron, manganese and sodium were detected above their respective Class GA Standards in one or more of the nine groundwater monitoring well samples, including samples collected from the upgradient wells. Typically, these metals are naturally elevated in Long Island groundwater. In addition, the metals detected above the Class GA Standards in groundwater are not the same as those detected above the UUSCOs in shallow soil.

April 2011 Groundwater Sampling Event

In April 2011, D&B sampled the nine monitoring wells located at the Site for TCL VOCs, TCL SVOCs and priority pollutant metals. This sampling was conducted in accordance with the Groundwater Monitoring Plan dated January 2010 for the CPC Bay Shore facility, and as required by the facility's Part 373 Permit as part of the facility's Semiannual Groundwater Monitoring Program. Six of the nine groundwater samples collected from the monitoring wells exhibited detectable concentrations of VOCs. The detected VOCs consisted entirely of three CVOCs, specifically TCE, 1,2-DCE and PCE. Only the samples collected from wells MW-3, MW-4, MW-8 and MW-9 exhibited concentrations of these CVOCs above their respective Class GA Standards.

These CVOCs are the same contaminants detected during the August 2010 sampling conducted as part of the RFI, as well as available historical groundwater results for the Site. However, overall, total VOC concentrations were significantly lower than during the August 2010 Sampling Event.

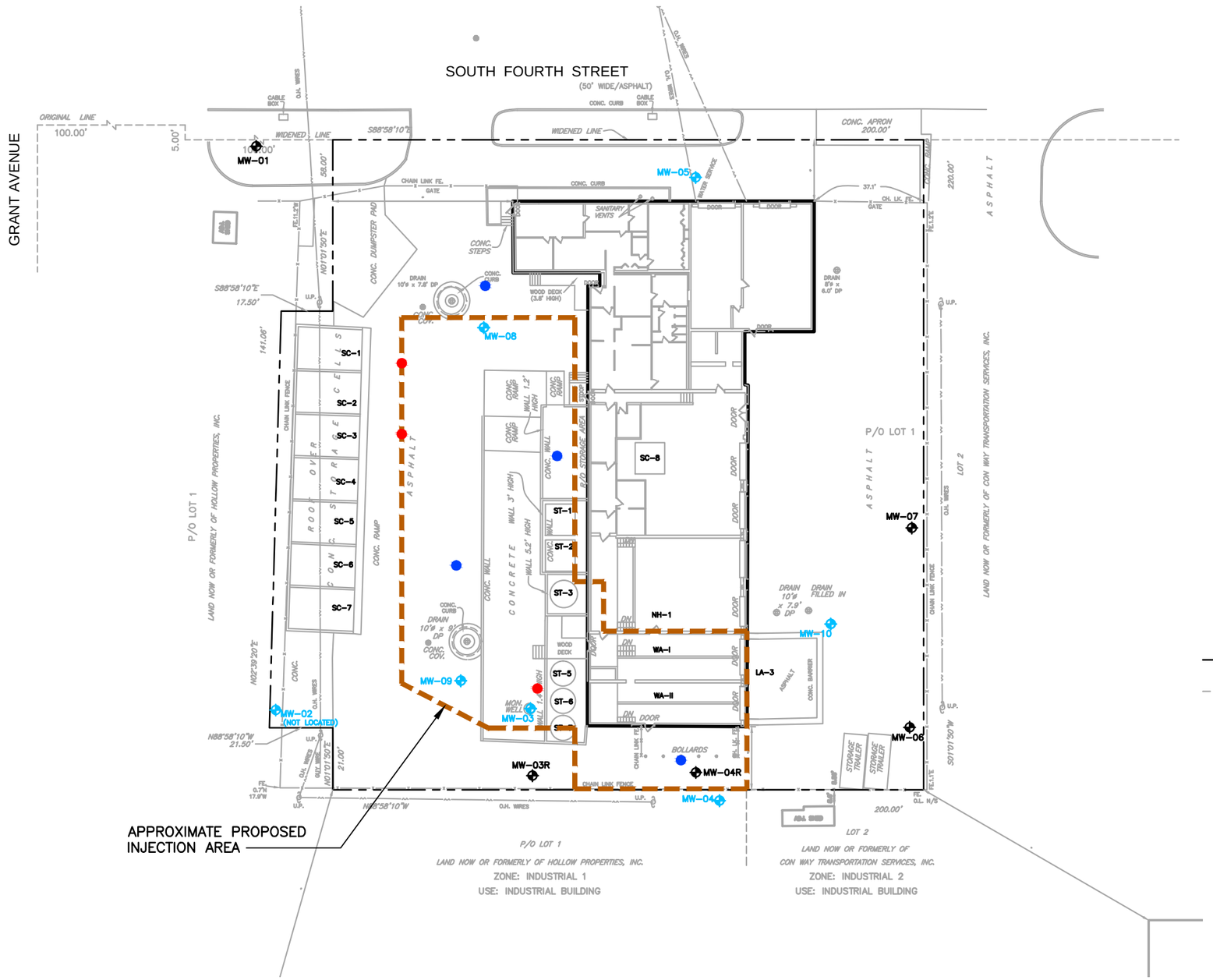
SVOCs were not detected in any of the groundwater samples collected during the April 2011 Sampling Event.

Priority pollutant metals were not detected at concentrations exceeding their respective Class GA Standards in any of the nine monitoring well samples, with the exception of iron in two wells (MW-7 and MW-8) and total chromium in one well (MW-3).

Pre-Design Investigation

The November 2010 Focused CMS recommended addressing groundwater contamination identified at the Site during the RCRA Facility Investigation through in-situ chemical oxidation. Additional environmental data was required to prepare a groundwater injection plan and estimate the quantity of oxidant required for injection. More specifically, this included determining site-specific permanganate natural oxidant demand (PNOD). Soil and groundwater naturally contain reactants other than the target contaminants that react with the oxidant injected and exhibit a natural oxidant demand. These naturally occurring reactants vary site to site. As a result, D&B collected soil samples within and upgradient of the injection zone at the water table interface for PNOD analysis. In addition, D&B collected additional soil samples for VOC analysis at the groundwater interface (capillary fringe) to determine the extent of any potential rebound. This data was used to further refine the injection plan and to determine the amount of oxidant required for injection.

The soil sampling took place on August 11, 2011 and consisted of seven soil probes advanced utilizing the direct-push method to 12 feet below ground surface. A sample location plan is provided as Figure 1-4. Soil samples were collected from the 8 to 10-foot depth interval (capillary fringe) from each boring for VOC analysis. In addition, soil samples were collected from four of the borings for PNOD analysis from the 10 to 12-foot depth interval. The results of this investigation determined a site-specific average PNOD of 0.4 g/kg, which is very favorable for in-situ chemical oxidation. In addition, all of the VOC samples collected at the capillary fringe were non-detect for VOCs, which is also favorable. This suggests that rebound from contaminants adsorbed to the soil particles at the groundwater interface dissolving into the groundwater after injection may be limited.



DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
A DIVISION OF D&B ENGINEERS AND ARCHITECTS, P.C.

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
SITE MANAGEMENT PLAN

PRE-DESIGN INVESTIGATION SAMPLE LOCATION PLAN

SCALE: 1"=40'

FIGURE 1-4

F:\2786\Dwg\2786-II-PL02.dwg, 3/17/2015 10:56:09 AM, jcausarano, DWG To PDF.pc3

September 2011 Groundwater Sampling Event

In September 2011, D&B sampled the nine monitoring wells located at the Site for TCL VOCs, TCL SVOCs and TAL metals in accordance with the Groundwater Monitoring Plan dated January 2010 for the CPC Bay Shore facility, and as required by the facility's Part 373 Permit as part of the Semiannual Groundwater Monitoring Program. Six of the nine groundwater samples collected from the monitoring wells exhibited detectable concentrations of VOCs. The detected VOCs consisted almost entirely of three CVOCs, specifically TCE, 1,2-DCE and PCE. Only the samples collected from wells MW-3, MW-4, MW-9 and MW-10 exhibited concentrations of these CVOCs above their respective Class GA Standards.

These CVOCs are the same contaminants detected during the April 2011 Sampling Event, as well as available historical groundwater results for the Site. However, overall, total VOC concentrations were higher than during the April 2011 Sampling Event.

SVOCs were not detected in any of the groundwater samples collected during the September 2011 Sampling Event.

All TAL metal concentrations were below their respective Class GA Standards, with the exception of iron in two wells (MW-3 and MW-8), manganese in one well (MW-7), total iron and manganese in three wells (MW-3, MW-7 and MW-8) and sodium in seven wells (MW-1, MW-4, MW-5, MW-6, MW-7, MW-9 and MW-10).

April 2012 Groundwater Sampling Event

In April 2012, D&B sampled the nine monitoring wells located at the Site for TCL VOCs, TCL SVOCs and TAL metals in accordance with the Groundwater Monitoring Plan dated January 2010 for the CPC Bay Shore facility, and as required by the facility's Part 373 Permit as part of the Semiannual Groundwater Monitoring Program. Six of the nine groundwater samples collected from the monitoring wells exhibited detectable concentrations of VOCs. The detected VOCs consisted almost entirely of three CVOCs, specifically TCE, 1,2-DCE and PCE. Only the

samples collected from wells MW-3 and MW-4 exhibited concentrations of TCE (MW-3 and MW-4) and 1,2-DCE (MW-4) above their respective Class GA Standards.

These CVOCs are the same contaminants detected during the September 2011 Sampling Event, as well as available historical groundwater results for the Site. However, overall, total VOC concentrations were lower than during the September 2011 Sampling Event.

SVOCs were not detected at concentrations exceeding the Class GA Standards in any of the groundwater samples collected during the April 2012 Sampling Event.

All TAL metal concentrations were below their respective Class GA Standards, with the exception of iron in five wells (MW-3, MW-6, MW-8, MW-9 and MW-10), manganese in three wells (MW-1, MW-5 and MW-7), total iron and manganese in six wells (MW-1, MW-5, MW-6, MW-8, MW-9 and MW-10) and sodium in nine wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10).

September 2012 Groundwater Sampling Event

In September 2012, D&B sampled the nine monitoring wells located at the Site for TCL VOCs, TCL SVOCs and TAL metals in accordance with the Groundwater Monitoring Plan dated January 2010 for the CPC Bay Shore facility, and as required by the facility's Part 373 Permit as part of the Semiannual Groundwater Monitoring Program. It should be noted that, in order to facilitate performance of the planned facility demolition activities, six monitoring wells (i.e., MW-3, MW-4, MW-5, MW-8, MW-9 and MW-10) were decommissioned and removed on September 24 and 25, 2012 since they were physically within the lines of the planned excavation activities or previously damaged (MW-4 only). In order to ensure that groundwater quality could be monitored downgradient of the facility, two new wells (i.e., MW-3R and MW-4R) were installed on the property along the southern property line on August 2, 2012. As a result, in order to get a baseline for the new wells at the time of installation, the two new wells, the six wells to be decommissioned and the three well to remain (11 wells total) were sampled in early September 2012 as part of this sampling event.

Eight of the eleven groundwater samples collected from the monitoring wells exhibited detectable concentrations of VOCs. The detected VOCs consisted almost entirely of three CVOCs, specifically TCE, 1,2-DCE and PCE. Only the samples collected from wells MW-3, MW-3R, MW-4, MW-4R and MW-8 exhibited concentrations of these CVOCs above their respective Class GA Standards.

These CVOCs are the same contaminants detected during the April 2012 Sampling Event, as well as available historical groundwater results for the Site. However, overall, total VOC concentrations were slightly higher than during the April 2012 Sampling Event.

SVOCs were not detected at concentrations exceeding the Class GA Standards in any of the groundwater samples collected during the September 2012 Sampling Event.

All TAL metal concentrations were below their respective Class GA Standards, with the exception of manganese in one well (MW-1), total iron and manganese in one well (MW-1) and sodium in six wells (MW-1, MW-4, MW-4R, MW-6, MW-7 and MW-10).

April 2013 Groundwater Sampling Event

In April 2013, D&B sampled the five monitoring wells located at the Site for TCL VOCs, TCL SVOCs and TAL metals in accordance with the Groundwater Monitoring Plan dated January 2010 for the CPC Bay Shore facility, and as required by the facility's Part 373 Permit as part of the Semiannual Groundwater Monitoring Program.

Four of the five groundwater samples collected from the monitoring wells exhibited detectable concentrations of VOCs. The detected VOCs consisted almost entirely of three CVOCs, specifically TCE, 1,2-DCE and PCE. Only the samples collected from wells MW-3R and MW-4R exhibited concentrations of these CVOCs above their respective Class GA Standards.

These CVOCs are the same contaminants detected during the September 2012 Sampling Event, as well as available historical groundwater results for the Site. However, overall, total VOC concentrations were slightly higher for MW-3R and slightly lower for MW-4R than during the September 2012 Sampling Event.

SVOCs were not detected in any of the groundwater samples collected during the April 2013 Sampling Event.

All TAL metal concentrations were below their respective Class GA Standards, with the exception of iron in four wells (MW-03R, MW-04R, MW-06 and MW-07), manganese in two wells (MW-1 and MW-07), selenium in one well (MW-07), sodium in all five wells and total iron and manganese in all five wells.

1.4 Summary of Remedial Actions

1.4.1 Phase 1 Soil Removal Activities

The NYSDEC-approved ICM Work Plan included a detailed excavation plan designed to remove impacted soil identified during the RFI to achieve the NYSDEC 6 NYCRR Part 375 UUSCOs. The detailed excavation plan divided the proposed excavation areas into several distinct areas of varying horizontal and vertical extents denoted Areas A through V. Phase 1 Soil Removal Activities generally included implementation of the removals shown on the detailed excavation plan included in the ICM Work Plan. The field activities associated with Phase 1 of the soil removal activities associated with the CPC ICM Program were performed November 28 through December 17, 2012. The soil removal activities were performed by Red Hook Construction Group, LLC (RHCG) with oversight and sampling performed by D&B. In addition, a representative of the NYSDEC was present on-site during these activities and assisted in determining the final excavation limits and confirmation soil sample locations.

Soil Excavation (Areas A, B, C, D, E, F, G, H, K, L, M, N, O, P, Q and R)

The surfacing materials (i.e., asphalt or concrete) were removed from atop each area with an excavator and placed in a roll-off container for off-site management. Next, each area was excavated to the horizontal limits established by the contractor's surveyor, as well as the vertical limits (as presented on Drawing EN-1 of the ICM Work Plan) established in the field by RHCG using a laser level. During the soil removal activities, D&B screened each excavation visually and with a photoionization detector (PID) and noted any odors. If visual evidence of potential impact (e.g., staining, discoloration, etc.) or PID readings above background concentrations were encountered at the excavation limits, then the excavation would be continued to remove these observed impacts. However, since these types of observations were not encountered during the soil removal activities in these areas at the final limits of excavation, the proposed excavation limits were not extended. The NYSDEC representative present on-site during the field activities approved the final limits of each excavation.

Dry Well and Leaching Pool Excavation (Areas I, J, S, T and V)

At each location, any liquid contained in the structure was removed with a vacuum truck for proper off-site transportation and disposal at the Bergen Point Wastewater Treatment Plant. It should be noted that liquid (i.e., storm water) was removed from the four storm water dry wells only; the sanitary leaching pools were found to be dry at the time of remediation.

Next, the asphalt was removed from atop each structure with an excavator and placed in a roll-off container for off-site management. The manhole and grate/cover were then removed and placed in a second roll-off container for off-site management as scrap metal. The concrete cover and pre-cast concrete rings of each structure were then removed and placed in a third roll-off container for off-site management. Next, approximately two feet of soil were removed horizontally from around the former rings of each structure followed by the removal of approximately one foot of soil from the bottom of each former structure in accordance with the January 2012 ICM Work Plan. However, following removal of the soil, it was discovered that the soil in the bottom of each former pool appeared stained from years of managing storm water

or sanitary waste. As a result, each excavation was extended down to the water table (approximately 11 feet below grade) to remove this stained soil. The soil at the groundwater interface did not exhibit staining. The NYSDEC representative present on-site during the field activities approved the final limits of each excavation, which are summarized as follows:

Structure	Horizontal Limits (north/south by east/west)	Depth
Area I	14' x 12'	Water Table
Area J	16' x 16'	Water Table
Area S	21' x 23'	Water Table
Area T	16' x 32'	Water Table
Area V	16' x 16'	Water Table

Note: The water table was located approximately 11 feet below previously existing grade on day of the excavation activities.

With regard to Area T, prior to initiation of the ICM Program, the Suffolk County Department of Health Services (SCDHS) requested that the sanitary system septic tank and associated leaching pool comprising this Area be sampled prior to SCDHS approving the demolition permit for the project. As a result, D&B sampled the sanitary system structures on July 19, 2012 with oversight by the SCDHS. During the sampling, it was discovered that what was believed to be the system's septic tank was actually the primary leaching pool of the system, the previously identified leaching pool was actually the secondary pool of the system, and that the system did not contain a septic tank. As a result, it was determined that the newly-discovered leaching pool within Area T would be remediated in the same manner as the other pool. However, due their close proximity, the individual excavations for each pool became one large excavation (as identified in the table above).

During the soil removal activities, D&B screened the excavation visually and with a PID and noted any odors. In locations exhibiting visual evidence of potential impact (e.g., staining, discoloration, etc.), the excavation was continued to remove these observed impacts. It should be noted that PID readings in excess of background conditions were not encountered during the excavation activities.

Underground Storage Tank Remains Excavation (Area U)

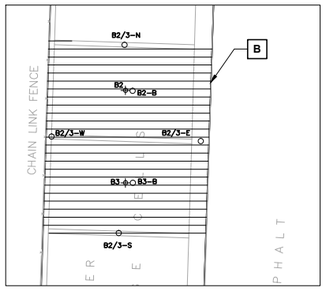
During the RFI performed in August through October 2010, two approximate 4,000-gallon single-walled steel underground storage tanks (USTs) were identified and removed near the northeast corner of the former facility building. However, due to the close proximity of one of the tanks to the facility building, the western portion of the tank was cut, left in-place and filled with concrete to avoid compromising the structural integrity of the former building. This approximate 6-foot long section of concrete-filled UST is identified as Area U and was proposed for removal during the ICM Program field activities.

First, the surfacing material (i.e., asphalt) was removed from atop this area with an excavator and placed in a roll-off container for off-site management. Next, the overburden was removed from the area and stockpiled adjacent to the excavation. The tank was then removed from the ground and broken up with the tank placed in a scrap metal roll-off container and the concrete placed in the concrete roll-off container. Following removal of the tank, D&B screened the excavation visually and with a PID and noted any odors, and directed the removal of any soil that appeared to be impacted based on these observations. In total, a few yards of soil were removed for proper off-site disposal. The NYSDEC representative present on-site during the field activities approved the final limits of this excavation.

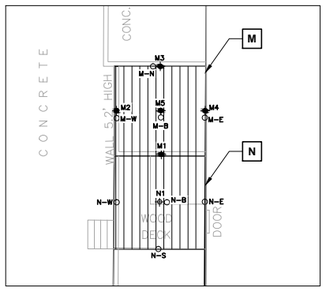
Confirmatory Soil Sampling

Following the soil removal activities, D&B collected confirmation soil samples from each excavation. The samples were collected at the frequency prescribed in the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation") to verify the satisfactory removal of the impacted soil. The location of each area remediated during Phase 1 of the ICM program along with its respective confirmation soil samples are presented on Figure 1-5.

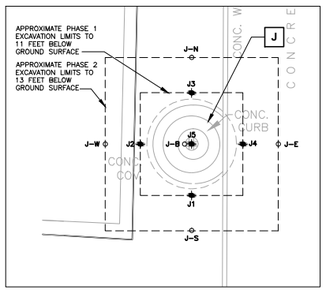
PHASE 2



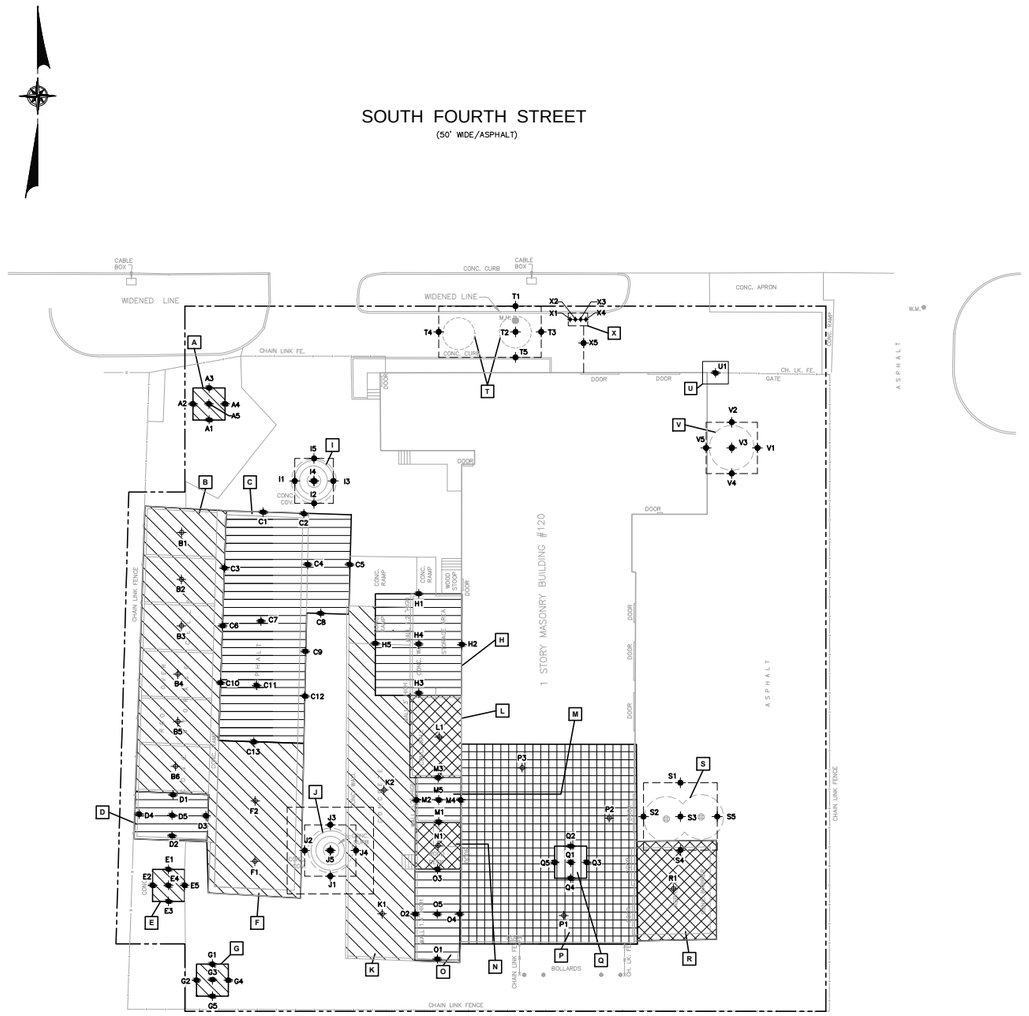
AREA B2/B3
SCALE: 1"=10'



AREAS M AND N
SCALE: 1"=10'



AREA J
SCALE: 1"=10'



PHASE 1

SAMPLE SUMMARY

AREA ID	PROGRAM	NO. OF CONFIRMATION SAMPLES	CONFIRMATION SAMPLE ANALYSES
A	CORRECTIVE ACTION	5	PESTICIDES: 4,4'-DDT
B	RCRA CLOSURE	6	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
C	CORRECTIVE ACTION	13	VOCs: CIS-1,2-DCE, TCE, ETHYLBENZENE, XYLENE, 1,2-DICHLOROBENZENE
			PESTICIDES: 4,4'-DDE, 4,4'-DDT
D	CORRECTIVE ACTION	5	PESTICIDES: 4,4'-DDT
E	CORRECTIVE ACTION	5	METALS: LEAD, ZINC
F	RCRA CLOSURE	2	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
G	CORRECTIVE ACTION	5	METALS: CHROMIUM (TOTAL AND CR(VI))
H	CORRECTIVE ACTION	5	VOCs: TRICHLOROETHENE, TETRACHLOROETHENE, 1,2DICHLOROBENZENE, TOTAL XYLENE, ETHYLBENZENE, TOLUENE, CIS-1,2DICHLOROETHENE
			SVOCs: PHENOL
			METALS: CHROMIUM
I	CORRECTIVE ACTION AND UIC	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
J	CORRECTIVE ACTION AND UIC	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS, CYANIDE AND CR(VI)
K	RCRA CLOSURE	2	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
L	RCRA CLOSURE	1	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
M	CORRECTIVE ACTION	5	METALS: SILVER
N	RCRA CLOSURE	1	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
O	CORRECTIVE ACTION	5	METALS: SILVER
P	RCRA CLOSURE	3	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
Q	CORRECTIVE ACTION	5	VOCs: XYLENE
R	RCRA CLOSURE	1	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
S	CORRECTIVE ACTION AND UIC	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
T	UIC	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
U	CORRECTIVE ACTION	1	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
V	CORRECTIVE ACTION AND UIC	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE
X	UST	5	TCL VOCs, TCL SVOCs, TCL PESTICIDES, TCL PCBs, TAL METALS AND CYANIDE

LEGEND:

- LIMITS OF SOIL EXCAVATED TO 2 FEET BELOW GROUND SURFACE
- LIMITS OF SOIL EXCAVATED TO 3 FEET BELOW GROUND SURFACE
- LIMITS OF SOIL EXCAVATED TO 3.5 FEET BELOW GROUND SURFACE
- LIMITS OF SOIL EXCAVATED TO 4 FEET BELOW GROUND SURFACE
- LIMITS OF SOIL EXCAVATED TO 6 FEET BELOW GROUND SURFACE
- PHASE 1 CONFIRMATION SOIL SAMPLE LOCATION FOR CORRECTIVE ACTION PROGRAM
- PHASE 1 CONFIRMATION SOIL SAMPLE LOCATION FOR RCRA CLOSURE PROGRAM
- PHASE 2 CONFIRMATION SOIL SAMPLE LOCATION
- PROPERTY LINE
- FENCE
- APPROXIMATE LIMITS OF EXCAVATION

NOTE:

ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED, AND ARE ONLY SHOWN FOR REFERENCE.

NO.	DATE	REVISION	INT.

PROJECT ENGINEER:	DRAWN BY:
BMV	LVG
DESIGNED BY:	CHECKED BY:
MRD	MRH

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
A DIVISION OF D&B ENGINEERS AND ARCHITECTS, P.C.

CHEMICAL POLLUTION CONTROL, LLC of NY
BAY SHORE FACILITY
SUFFOLK COUNTY — NEW YORK

SITE MANAGEMENT PLAN

PHASE 1 AND PHASE 2 SOIL REMOVAL ACTIVITIES
CONFIRMATION SOIL SAMPLE LOCATION PLAN

PROJECT NO.	DRAWING NO.
2786	1-5
DATE: DECEMBER 2013	
SCALE: 1"=20'	

Excavation Backfilling

Following email approval from the NYSDEC and SCDHS of the analytical results for the storm water dry wells (Areas I, S and V), the sanitary system leaching pools (Area T) and the UST remains (Area U), these areas were backfilled with surrounding soil and the overburden material from Area U for health and safety reasons since these excavations were deep.

None of the remaining excavation areas were backfilled at this time so that the final elevations within each area could be surveyed to verify the satisfactory removal of soil from each area.

1.4.2 Phase 2 Soil Removal Activities

The analytical results of some of the confirmation soil samples collected from Areas B2, B3, J, M and N during the Phase 1 soil removal activities exhibited concentrations of certain constituents in excess of the NYSDEC's Part 375 UUSCOs. As a result, and in consultation with the NYSDEC, it was determined that additional soil removal activities should be performed in these areas. In addition, these additional activities included the removal of an underground storage tank (UST) identified north of the former CPC facility building and immediately east of the former sanitary system during completion of a geophysical survey by the contractor in preparation for implementation of the ICM program. This UST area was identified as Area X.

The scope of work agreed upon with the NYSDEC for the additional soil and tank removal activities is as follows:

- Areas B2 and B3 (beneath former storage cells SC-2 and SC-3): An additional 2 feet of soil was removed vertically from these two adjacent areas (total area footprint is approximately 30 feet north-south by 23 feet east-west) for proper off-site transportation and disposal.

- Area J (former southwest storm water dry well): An additional 2 feet of soil was removed from the sidewalls of this excavation and the excavation bottom (previous excavation was approximately 16 feet square and 11 feet deep) for proper off-site transportation and disposal. It should be noted that, in accordance with direction

received from SCDHS, this excavation extended approximately 2 feet into the water table (interface approximately 11 feet below grade).

- Area M (beneath former tank ST-3 area): An additional 2 feet of soil was removed vertically from this area (total area footprint was approximately 15 feet square) for proper off-site transportation and disposal.

- Area N (beneath former tanks ST-5/ST-6/ST-7 area): An additional 2 feet of soil was removed vertically from this area (total area footprint was approximately 15 feet square) for proper off-site transportation and disposal.

- Area X (newly-discovered tank): The tank liquids were removed, the tank inerted, the tank interior cleaned and the tank removed from the ground for proper off-site management as scrap metal. Potentially impacted soil was removed from the tank grave for proper off-site transportation and disposal.

The Phase 2 soil removal activities associated with the CPC ICM Program were performed on the February 12 through 14, 2013. The soil removal activities were performed by Eastern Environmental Solutions, Inc. (Eastern) with oversight and sampling performed by D&B. In addition, a representative of the NYSDEC was present on-site during these activities and assisted in determining the final excavation limits and confirmation soil sample locations.

Each area was excavated to the horizontal limits specified above as measured in the field, as well as the vertical limits established by Eastern using a laser level. During the soil removal activities, D&B screened the excavation visually and with a PID and noted any odors. If visual evidence of potential impact (e.g., staining, discoloration, etc.) or PID readings above background concentrations were encountered at the excavation limits, then the excavation was continued to remove these observed impacts. Yellowish-green staining was observed in the soil on the east side of Area M, which is adjacent to the former building. As a result, the excavation limits were extended to encompass removal of this visual contamination. No other visual, olfactory or PID evidence of contamination was encountered during the Phase 2 excavation activities. The NYSDEC representative present on-site during the field activities approved the final limits of each excavation.

It should be noted that the additional excavation activities planned for Area J included removing an additional 2 feet of soil from each sidewall and 2 feet of soil from the excavation

bottom (extending approximately 2 feet into groundwater). However, due to slumping soil, the final excavation in this area measured approximately 27 feet square and 13 feet deep (initial excavation measured approximately 16 feet square and 11 feet deep).

It should also be noted that the tank removed from Area X was an approximate 550-gallon single-walled steel UST which was likely historically used to store fuel oil for on-site heating purposes (based on a mild petroleum odor in the tank). Based on the soil screening activities, no visual, olfactory or PID impacts were observed following removal of this tank. However, to ensure the confirmation soil samples from this area did not reveal any impact, the excavator removed a few yards of soil from the tank grave for proper off-site transportation and disposal. A total of approximately 548 gallons of liquid were removed from this tank for proper off-site transportation and disposal.

Following the soil removal activities, D&B collected confirmation soil samples from each excavation as required by the NYSDEC.

The location of each area remediated during Phase 2 of the ICM program along with its respective confirmation soil samples are presented on Figure 1-5.

1.4.3 Area J Additional Soil Removal Activities Requested by SCDHS

The SCDHS co-administers the USEPA's Underground Injection Control (UIC) program with the USEPA. Since the USEPA allows the SCDHS to take the lead on UIC projects within Suffolk County, approval from the SCDHS is necessary in order to complete a UIC project. Upon its review of the analytical results of the February 2013 confirmation soil sample collected from Area J, the SCDHS determined that further remediation was necessary to the south and east in order to satisfy the UIC Closure program requirements.

As a result, D&B performed additional investigation activities in April and May 2013 to define the extents of additional soil removal that would be required at Area J to fulfill SCDHS' requirements. On June 13, 2013, and following a delineation phase, the additional remediation

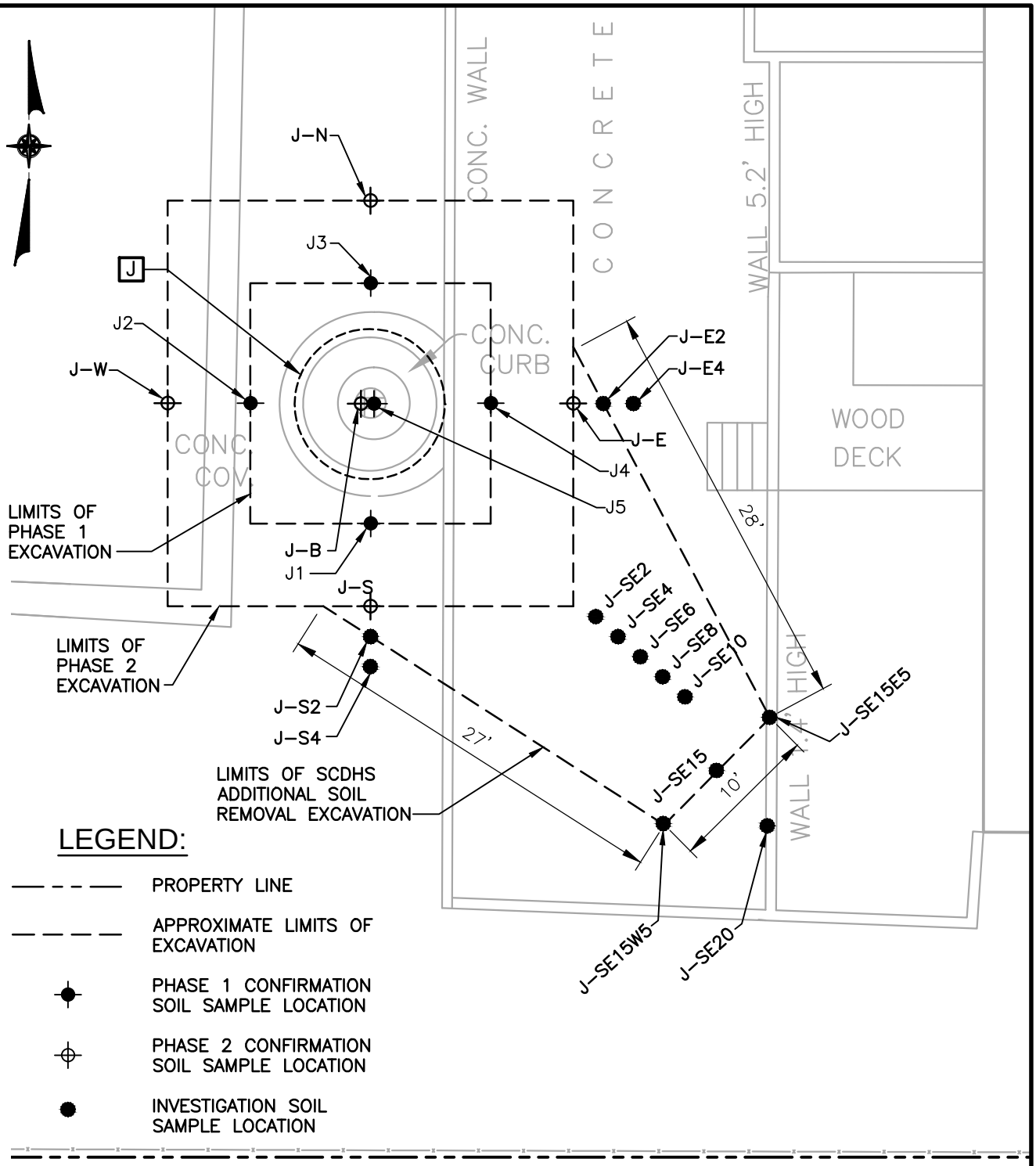
activities were undertaken on Area J. This phase of the closure activities was performed by Eastern with oversight performed by D&B. All activities performed were conducted in accordance with the SCDHS-approved remedial approach, as presented in a letter submitted by CPC to the SCDHS dated June 6, 2013.

Eastern excavated soil from the area of the dry well to the limits presented on Figure 1-6 down to the water table interface. The removed soil was transported by truck to near the entrance of the facility where it was temporarily staged on polyethylene sheeting to await loading for proper off-site transportation and disposal on June 14 and 20, 2014. During the soil removal activities, D&B screened the excavation visually and with a PID and noted any odors to determine if further excavation was necessary. However, since no visual, olfactory or PID evidence of impact was observed, the excavation terminated at the planned limits.

As indicated in the SCDHS-approved remedial approach presented in CPC's June 6, 2013 letter, since the investigation phase samples delineated the extent of soil removal necessary, confirmation soil sampling was not required. In order to ensure that soil had been removed from the area to the limits presented in CPC's June 6, 2013 letter, a representative of the SCDHS arrived on-site following the soil removal activities and approved the final limits of the excavation.

1.4.4 Non-Native Material

Following completion of the planned remediation activities, the Site was re-graded with surrounding material to create a smooth surface across the entire site to facilitate performance of the in-situ chemical oxidation (ISCO) program. During performance of the Site regrading activities on July 3, 2013, a non-native material was exposed on-site that consisted of a grey sludge-like material exhibiting a faint chemical odor. Hand delineation of the material revealed that the material was limited in areal extent to approximately 10 feet in diameter, and limited in depth to approximately 6 inches to 1 foot below existing grade.



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SITE MANAGEMENT PLAN

SCALE: 1"=10'

AREA J SCDHS
ADDITIONAL SOIL REMOVAL ACTIVITIES

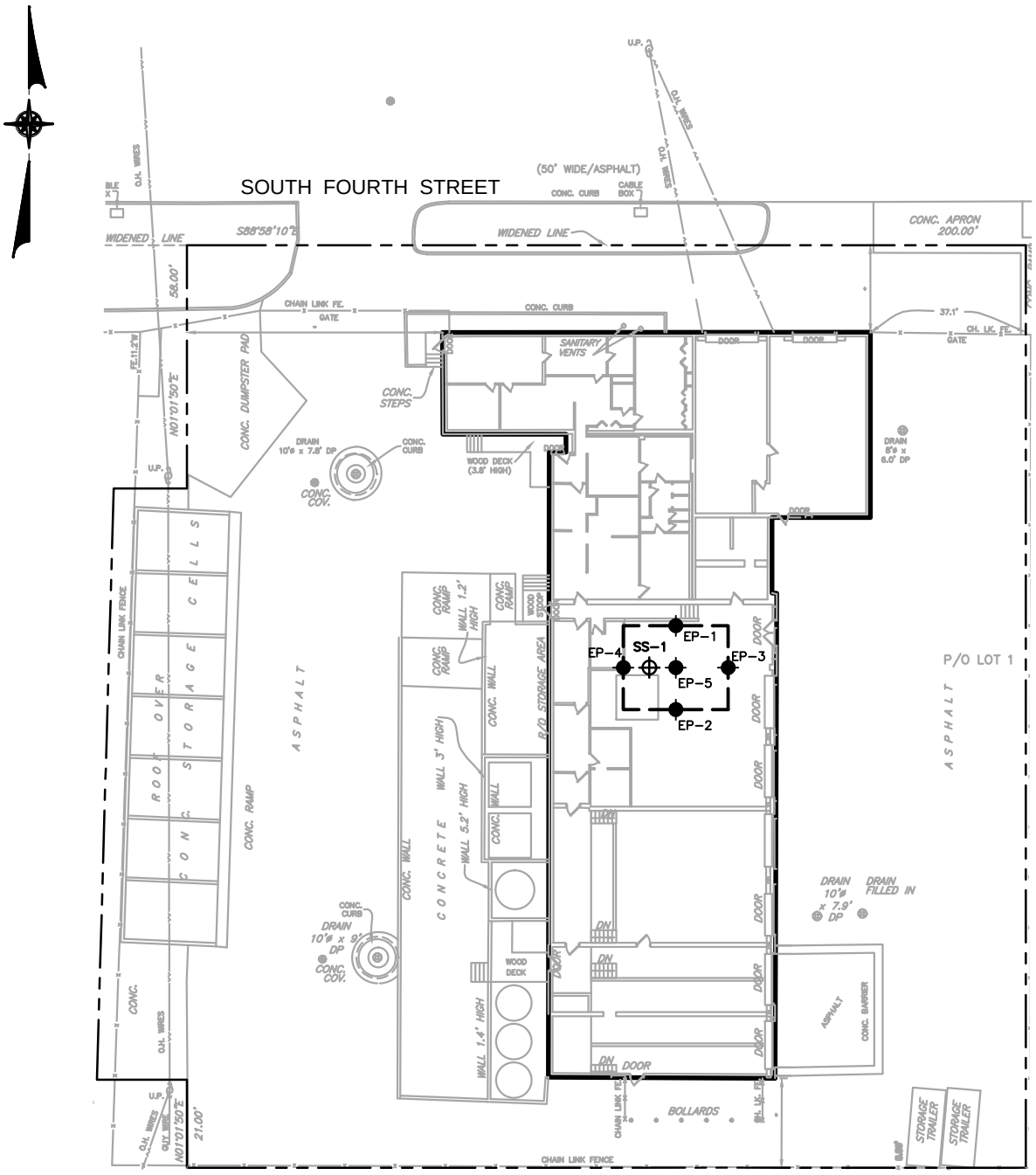
FIGURE 1-6

Based on the discovery of this material, it was determined that the material should be sampled to determine whether remediation of the material was necessary.

On July 8, 2013, D&B mobilized to the Site and utilized a new disposable polyethylene scoop to collect a sample of the material for laboratory analysis. The sample was collected from an area exhibiting the greatest visible discoloration and chemical odor. Since an exceedance of the UUSCOs was detected in this sample, it was determined that the non-native material should be excavated and transported off-site for proper disposal. This approach was discussed with and approved by the NYSDEC representative present on-site on July 11, 2013.

On July 24, 2013, D&B mobilized to the field with Eastern to perform the removal of the non-native material. Excavation initiated in the area of the non-native material in the location where the sample was collected and extended outward and downward to remove the material. During the removal activities, D&B screened the excavation visually and with a photoionization detector (PID) and noted any odors. If visual evidence of the material was present or PID readings above background concentrations were encountered at the excavation limits, then the excavation was continued to remove these observed impacts. Utilizing this approach, the final limits of the excavation were approximately 20 feet north-south by approximately 25 feet east-west and approximately 2 feet below existing grade. The excavated material was loaded into two roll-off containers for subsequent off-site transportation and disposal on August 26 and 28, 2013.

Following the removal activities, D&B collected confirmation soil samples from the excavation. The samples were collected at the frequency prescribed in the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation") to verify the satisfactory removal of the non-native material and any impacted soil. As a result, one confirmation soil sample was collected from each excavation sidewall and the excavation bottom. The locations from where each confirmation soil sample was collected are presented on Figure 1-7.



LEGEND:

- PROPERTY LINE
- LIMITS OF EXCAVATION
- $\oplus_{SS1}$ INVESTIGATION SAMPLE
- $\bullet_{EP-1}$ CONFIRMATION SOIL SAMPLE

NOTE:

1. ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED, AND ARE ONLY SHOWN FOR REFERENCE.

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SITE MANAGEMENT PLAN

NON-NATIVE MATERIAL SAMPLE LOCATION PLAN

SCALE: 1"=40'

FIGURE 1-7

1.4.5 ICM Program Removal Summary

In total, approximately 4,693 tons of soil (approximately 3,037 in-place cubic yards) were excavated for proper off-site transportation and disposal during the ICM Program.

1.4.6 Off-Site Leaching Pool

Although not part of the ICM Program, it should be noted that CPC properly closed a leaching pool identified during the geophysical survey completed by the contractor during site preparation for the ICM program beneath its neighbor's driveway directly to the east of the CPC facility that historically received discharges of sanitary waste from the CPC facility building. The leaching pool was investigated, remediated and closed in accordance with the USEPA's UIC Closure Program under direct oversight by the SCDHS. The SCDHS approved of the UIC closure of this pool, as well as the UIC Closure Program for the entire CPC facility, via correspondence dated July 26, 2013.

1.4.7 In-Situ Chemical Oxidation Program

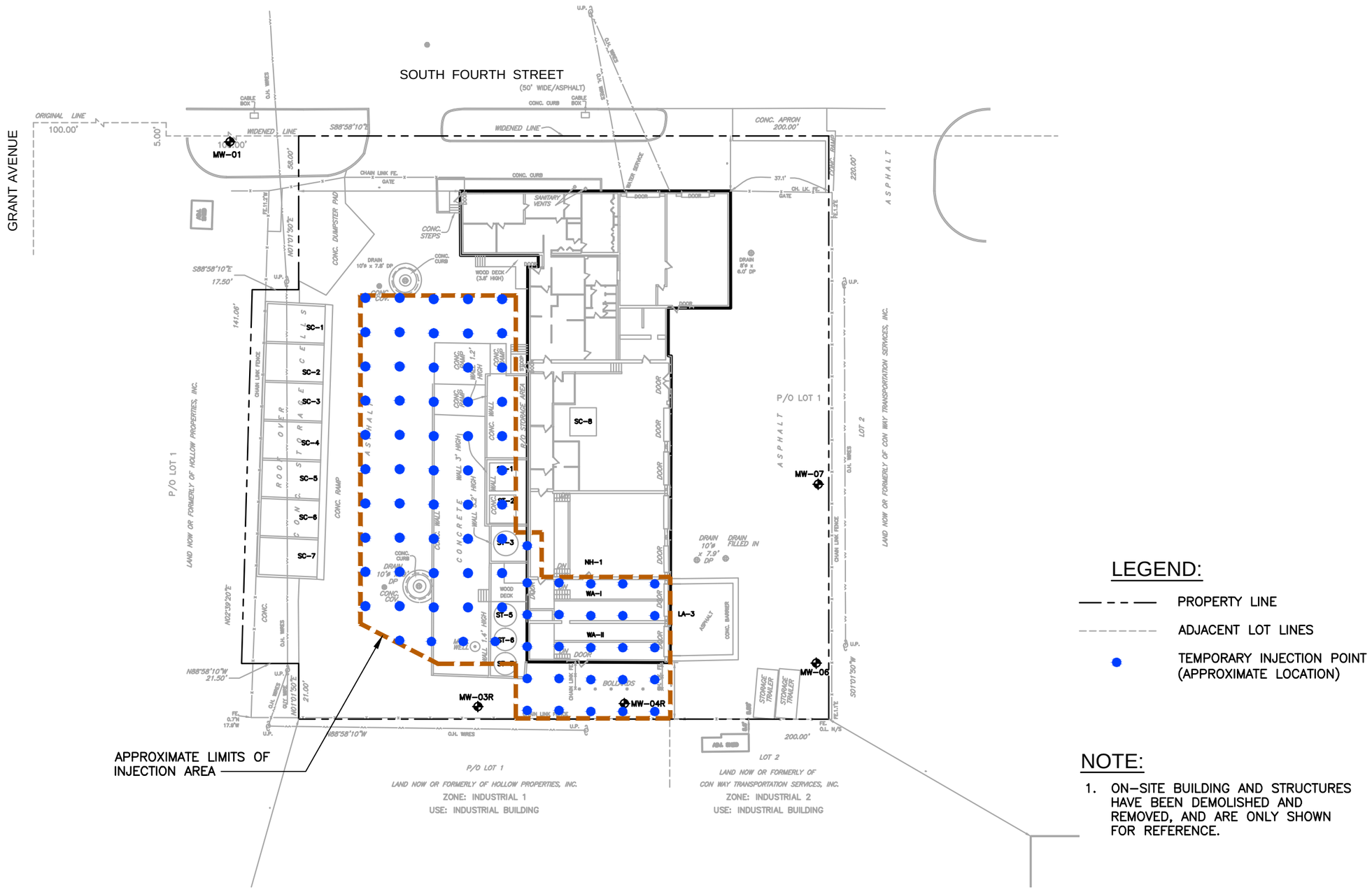
In order to address the residual chlorinated VOC concentrations detected in the groundwater located beneath the facility, an in-situ chemical oxidation (ISCO) injection program was performed on-site on July 8 through 14, 2013. The injection activities were performed by Geo-Cleanse International, Inc. (Geo-Cleanse) with oversight performed by D&B. Representatives of the NYSDEC were also present on-site to perform part-time oversight. Geo-Cleanse performed its operations out of a mobile trailer that contained mixing vessels, pumps and regulators. Drums of 40% sodium permanganate solution were delivered to the Site and placed inside a containment area constructed on-site by Geo-Cleanse of heavy duty polyethylene sheeting. The permanganate solution was pumped from the drum storage area into the trailer where it was diluted with water from a local fire hydrant (public water supply) to create a 2% permanganate solution. Once mixed, the solution was pumped through hoses to temporary injection points.

The treatment area was located to the west of the former building where certain chlorinated VOCs were detected during the RFI at concentrations exceeding the UUSCOs. A figure identifying the approximate limits of the injection area is provided as Figure 1-8 of this report. Within this approximate 10,100-square-foot area, the permanganate solution was injected at the nodes of an approximate 12-foot by 12-foot grid for a total of 80 injection points. In accordance with the ICM Work Plan, the two horizons to be treated at each point were the 10 to 14-foot and 16 to 20-foot horizons below former grade. In total, approximately 19,974 gallons of the 2% sodium permanganate solution were injected during the field program.

1.5 Post-Remediation Sampling

September 2013 Groundwater Sampling Event

Prior to undertaking the September 2013 Sampling Event of the Semiannual Groundwater Monitoring Program, in accordance with the ICM Work Plan, on-site downgradient monitoring wells were checked for pink/purple color and oxidation reduction potential (ORP) readings in late August (approximately 45 days following the injection activities) to determine whether the wells were suitable for sampling. Since none of the wells exhibited a pink/purple color and ORP readings were at pre-injection conditions, it was determined that the wells were suitable for sampling. In September 2013, D&B sampled five monitoring wells at the CPC Bay Shore facility as part of the Semiannual Groundwater Monitoring Program September 2013 Sampling Event. Each groundwater sample was analyzed for TCL VOCs, TCL SVOCs and priority pollutant metals. However, in order to support the groundwater remediation activities and consistent with the NYSDEC's approval of the January 2012 Interim Corrective Measures Work Plan, the list of metals utilized for the September 2013 Sampling Event was expanded to include TAL metals. In addition, each groundwater sample was analyzed for alkalinity. Based on a comparison of the April 2013 and September 2013 sample results, total VOC concentrations detected during the September 2013 Sampling Event decreased in wells MW-03R (30.2 ug/l to 8.2 ug/l) and MW-04R (106.5 ug/l to 50.01 ug/l), and increased in well MW-06 (9.21 ug/l to 22.9 ug/l). However, the total VOC concentrations observed in these wells during the September 2013 Sampling Event were consistent with the concentrations historically observed at the



LEGEND:

- PROPERTY LINE
- ADJACENT LOT LINES
- TEMPORARY INJECTION POINT (APPROXIMATE LOCATION)

NOTE:

1. ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED, AND ARE ONLY SHOWN FOR REFERENCE.

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CHEMICAL OXIDATION INJECTION PLAN

SCALE: 1"=40'

FIGURE 1-8

facility, and were generally much lower than those concentrations observed during the RFI sampling activities (August 2010), with the exception of well MW-06 where individual exceedances were detected for the first time. The elevated chlorinated VOC concentrations present in well MW-06 may have been due to rebound following the chemical oxidation injection program.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

Chromium was detected at concentrations above its respective Class GA Groundwater Standard (50 ug/l) in the samples collected from monitoring wells MW-03R (77.1 ug/l) and MW-04R (2,720 ug/l). This was the first time during performance of the Semiannual Groundwater Monitoring Program that chromium had been detected in these monitoring wells at concentrations exceeding its Class GA Groundwater Standard. According to USEPA guidance on in-situ chemical oxidation injection programs, it is not unusual for metals, such as chromium in particular, to become temporarily mobilized by chemical oxidation injections.

April 2014 Groundwater Sampling Event

In April 2014, D&B sampled the five monitoring wells at the CPC Bay Shore facility as part of the Semiannual Groundwater Monitoring Program. Again, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. Based on a comparison of the September 2013 and April 2014 sample results, total VOC concentrations detected during the April 2014 Sampling Event decreased in wells MW-04R (50.01 ug/l to 3 ug/l) and MW-06 (22.9 ug/l to non-detect). Total VOC concentrations for wells MW-01, MW-03R and MW-07 remained consistent between the September 2013 and April 2014 Sampling Events. Total VOC concentrations for these wells in April 2014 were non-detect, 8.5 ug/l and 2.9 ug/l, respectively.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, total iron and manganese.

Alkalinity ranged in concentration from 130 mg/l in monitoring well MW-04R to a maximum of 160 mg/l in monitoring well MW-07. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

September 2014 Groundwater Sampling Event

In September 2014, D&B again sampled the five remaining monitoring wells at the CPC Bay Shore facility as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of TCE and trichlorofluoromethane. TCE was detected at a concentration of 5.2 ug/l in sample MW-03R, which slightly exceeds its Class GA Groundwater Standard of 5 ug/l. Trichlorofluoromethane, which was detected at a concentration of 13 ug/l in sample MW-07 exceeding its Class GA Groundwater Standard of 5 ug/l, is likely due to an off-site source since it was also detected in upgradient monitoring well MW-01 and has not been previously detected at the Site at concentrations exceeding its Class GA Groundwater Standard. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of chromium, iron, manganese, sodium and total iron and manganese.

Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples. Chromium was detected at a concentration of 81.3 ug/l in monitoring well MW-04R, which exceeds its Class GA Groundwater Standard of 50 ug/l. As previously indicated, chromium has occasionally been detected above its Class GA Standard at the Site. Chromium concentrations increased during the September 2013 Sampling Event; however, this increase is likely a result of mobilization due to the chemical oxidation program. Chromium concentrations detected during the April 2014 Sampling Event were below its Class GA Standard. The chromium exceedance observed during the September 2014 Sampling Event was similar in magnitude to that occasional observed at the Site. Chromium is expected to decrease over time due to the recent removal of impacted soil and, as time passes, from the chemical oxidation event.

Alkalinity ranged in concentration from 87 mg/l in monitoring well MW-01 to a maximum of 130 mg/l in monitoring well MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

January 2015 Groundwater Sampling Event

Due to the chromium concentrations detected in the September 2014 Sampling Event, in January 2015, D&B again sampled the five remaining monitoring wells at the CPC Bay Shore facility as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs and SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of chromium, iron, manganese, sodium, and total iron and manganese.

Iron, manganese and sodium are naturally elevated in Long Island groundwater and have been observed in the facility's groundwater samples. Chromium was detected at a concentration of 53.7 ug/l in monitoring well MW-04R, which exceeds its Class GA Groundwater Standard of 50 ug/l. As previously indicated, chromium has occasionally been detected above its Class GA Standard at the Site. The chromium concentration detected during this sampling event is less than that obtained during the September 2014 Sampling Event, and may be a result of mobilization due to the chemical oxidation program.

Alkalinity ranged in concentration from 92 mg/l in monitoring well MW-01 to a maximum of 140 mg/l in monitoring well MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

April 2015 Groundwater Sampling Event

In April 2015, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of PCE. PCE was detected at a concentration of 7.8 ug/l in sample MW-03R, which slightly exceeds its Class GA Groundwater Standard of 5 ug/l. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 110 mg/l in monitoring wells MW-01 and MW-04R to a maximum of 130 mg/l in monitoring wells MW-06 and MW-07. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

September 2015 Groundwater Sampling Event

In September 2015, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of chromium, iron, manganese, sodium, and total iron and manganese.

Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples. Chromium was detected at a concentration of 60.3 ug/l in well MW-04R, which exceeds its Class GA Groundwater Standard of 50 ug/l. Chromium was not detected at a concentration exceeding its Class GA Groundwater Standard in any other sample collected during the September 2015 Sampling Event. Historically, chromium has been detected at low concentrations in samples collected from various wells, and was detected at concentrations exceeding its Class GA Groundwater Standard in MW-03 (66.5 ug/l in April 2011), MW-03R (77.1 ug/l in September 2013) and MW-04R (2,720 ug/l in September 2013, 81.3 ug/l in September 2014 and 53.7 ug/l in January 2015). The elevated chromium concentrations detected in MW-03R and MW-04R in September 2013 were attributed to temporary mobilization resulting from the in-situ chemical oxidation injection

program that was completed in July 2013. Chromium concentrations at the site have decreased significantly since the September 2013 Sampling Event. Although the concentration detected in MW-04R in September 2015 increased since April 2015, it is of the same approximate magnitude as those concentrations detected in September 2014 and January 2015.

Alkalinity ranged in concentration from 86 mg/l in monitoring wells MW-01 to a maximum of 150 mg/l in monitoring wells MW-03R and MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

January 2016 Groundwater Sampling Event

In January 2016, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of PCE. PCE was detected at a concentration of 6.6 ug/l in sample MW-03R, which slightly exceeds its Class GA Groundwater Standard of 5 ug/l. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 110 mg/l in monitoring well MW-01 to a maximum of 140 mg/l in monitoring well MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

April 2016 Groundwater Sampling Event

In April 2016, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of PCE. PCE was detected at a concentration of 9.9 ug/l in sample MW-03R, which slightly exceeds its Class GA Groundwater Standard of 5 ug/l. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 24 mg/l in monitoring well MW-06 to a maximum of 130 mg/l in monitoring well MW-04R. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

June 2016 Groundwater Sampling Event

In June 2016, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Semiannual Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of antimony, iron, sodium, thallium, and total iron and manganese.

Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples. Antimony and thallium were detected in the samples collected from wells MW-03R, MW-04R, MW-06 and MW-07 during the June 2016 Sampling Event at concentrations exceeding their respective Class GA Groundwater Standard/Guidance Value. Antimony and thallium have not been detected in these wells previously. However, both antimony and thallium have historically been detected in the groundwater samples collected from the site but qualified as non-detect during the data validation since they were also detected in the associated field blank. Since these constituents were not detected in the field blank during the June 2016 Sampling Event, their concentrations in the samples could not be qualified as non-detect. These metals were not detected at elevated concentrations in the soil samples collected and analyzed during the completion of the RFI. As a result, it appears that the concentrations of these metals in groundwater are not a result of these metals leaching from soil and, therefore, not attributable to the site.

Alkalinity ranged in concentration from 130 mg/l in monitoring wells MW-01, MW-03R and MW-06 to a maximum of 160 mg/l in monitoring well MW-04R. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

September 2017 Groundwater Sampling Event

In September 2017, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron and sodium. Iron and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 103 mg/l in monitoring well MW-01 to a maximum of 128 mg/l in monitoring well MW-07. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

April 2018 Groundwater Sampling Event

In April 2018, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at

concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of PCE. PCE was detected at a concentration of 16.4 ug/l in sample MW-03R, which exceeds its Class GA Groundwater Standard of 5 ug/l. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 100 mg/l in monitoring well MW-03R to a maximum of 144 mg/l in monitoring well MW-01. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

September 2018 Groundwater Sampling Event

In September 2018, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of sodium. Sodium is naturally elevated in Long Island groundwater and has historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 86.4 mg/l in monitoring well MW-01 to a maximum of 141 mg/l in monitoring well MW-04R. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

April 2019 Groundwater Sampling Event

In April 2019, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of PCE. PCE was detected at a concentration of 18 ug/l in sample MW-03R, which exceeds its Class GA Groundwater Standard of 5 ug/l. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 102 mg/l in monitoring well MW-01 to a maximum of 136 mg/l in monitoring well MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

September 2019 Groundwater Sampling Event

In September 2019, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 98 mg/l in monitoring well MW-01 to a maximum of 159 mg/l in monitoring well MW-07. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

Soil Vapor Intrusion Investigation - Con-way Freight, Inc.

As part of the NYSDEC's process of reclassifying the CPC facility on the Registry of Inactive Hazardous Waste Disposal Sites, the New York State Department of Health (NYSDOH) requested that soil vapor be investigated at off-site facilities located downgradient of the CPC facility. The only off-site building located immediately downgradient of the facility is the Con-way facility located at 130 South Fourth Street. As a result, a soil vapor investigation scope of work was prepared and forwarded to the NYSDEC for approval on February 19, 2015. The

scope of work included the collection of sub-slab soil vapor samples from three locations in the office area of the Con-way building (the portion of the building located nearest to the CPC facility) over a 30-minute period along with an outdoor ambient air sample for analysis for cis-1,2-dichloroethene (cis-1,2-DCE), tetrachloroethene (PCE) and trichloroethene (TCE), since these three compounds are the primary constituents of concern for groundwater at the CPC facility. It should be noted that indoor air samples were not included in the scope of work since Con-way would not approve the collection and analysis of indoor air samples on its property as a condition of the access agreement. The NYSDEC approved the scope of work on February 20, 2015.

The results of the 2015 soil vapor investigation were documented in a letter report dated April 9, 2015, which was forwarded to the NYSDEC and NYSDOH. Based on its review of the letter report, the NYSDOH requested that the investigation be repeated with the collection of indoor air samples in the vicinity of each sub-slab soil vapor sample, the analyte list not be limited to CPC's primary constituents of concern for groundwater but expanded to include all of the compounds included on USEPA's Method TO-15 list, and the samples be collected for over an 8-hour period. As a result, CPC immediately began coordinating an access agreement for the work with Con-way. Concurrently, D&B prepared a revised sampling protocol for the soil vapor intrusion investigation addressing the NYSDOH's requests and submitted the protocol to the NYSDEC for review and approval. Approval was received from the NYSDEC in its letter dated March 15, 2019. However, since an executed access agreement could not be obtained prior to March 31 (the end of the heating season), it was determined that the work had to be postponed until the following heating season. With the protocol approved and the access agreement signed, the work was scheduled in January 2020.

The field activities associated with the soil vapor intrusion investigation were performed on February 7, 2020. The work was performed in accordance with the NYSDOH's "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006, and the approved sampling scope of work.

The soil vapor intrusion investigation consisted of collecting three sub-slab soil vapor samples, three indoor air samples colocated with the sub-slab soil vapor samples and one outdoor ambient air sample. The three sub-slab soil vapor samples and indoor air samples were collected from accessible locations that provided spatial coverage across the footprint of the office area of the existing Site building. The outdoor ambient air sample was collected outside to the east of the building. The samples were collected in individually certified 6-liter SUMMA canisters fitted with laboratory calibrated low-flow regulators set to collect the samples over an 8-hour period. The sub-slab soil vapor samples were collected from beneath the building slab using a vapor pin, and the indoor air and outdoor ambient samples were collected from a height of approximately 3 to 5 feet above the finished floor (indoor air samples) or the ground surface outside the Site building (outdoor air sample). Following sample collection, the sample canisters were properly labeled and transported utilizing standard chain-of-custody procedures to an NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis for VOCs utilizing USEPA Method TO-15.

The analytical results of the soil vapor intrusion investigation did not indicate any exceedances of the NYSDOH's Air Guideline Values (AGVs) in the indoor air samples and only one exceedance of the NYSDOH's ranges of background concentrations. The only compound exceeding its range of background concentrations in the indoor air samples was isopropanol, a common chemical found in disinfectants and cleaning products. With regard to the primary constituents of concern (i.e., cis-1,2-DCE, PCE and TCE), none of their concentrations in the sub-slab soil vapor samples exceeded their respective AGVs or range of background concentrations, and none were detected in the indoor air samples. Comparison of the sub-slab soil vapor and indoor air sample results to the NYSDOH's Matrices A, B and C indicates that the indicated action is "no further action." As a result, it does not appear that soil vapor intrusion is occurring in the Con-way building office area, which is the closest portion of the building to the CPC facility.

The results of the soil vapor intrusion investigation were documented in a letter report dated May 29, 2020, which was forwarded to the NYSDEC and NYSDOH. Based on its review of the letter report, the NYSDOH indicated in its July 1, 2020 email that no additional soil vapor

intrusion evaluations are necessary at the referenced off-site property and that the CPC SMP should be updated to remove all references to performing an off-site soil vapor intrusion evaluation.

April 2020 Groundwater Sampling Event

In April 2020, the five monitoring wells located at the CPC Bay Shore facility were sampled as part of the Groundwater Monitoring Program. Similar to the previous sampling events, each groundwater sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals and alkalinity. All of the VOCs analyzed for were either not detected or were detected at concentrations not exceeding their respective Class GA Groundwater Standard/Guidance Value. In addition, the concentrations of site-related contaminants of concern are well below those detected prior to the ISCO injections.

All of the SVOCs analyzed for were not detected.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been detected in the facility's groundwater samples.

Alkalinity ranged in concentration from 105 mg/l in monitoring well MW-04R to a maximum of 139 mg/l in monitoring well MW-06. There is no Class GA Groundwater Standard or Guidance Value for alkalinity.

Groundwater Monitoring Cessation Demonstration

On behalf of CPC, D&B prepared a letter report requesting termination of the groundwater monitoring requirement for the CPC Bay Shore facility from the NYSDEC. The basis for demonstrating that groundwater monitoring can be terminated is outlined in the

NYSDEC's DER-10. As a result, following the DER-10 requirements, the letter report described that the remedial action objectives (RAOs) presented in the Proposed Remedial Action Plan (PRAP) for the site have been met through removal of contaminated soil from the site, performance of the in-situ chemical oxidation injection activities, implementation of an environmental easement and this SMP, the downgradient community being served by the public water supply system and performance of a soil vapor intrusion investigation.

Next, graphs were prepared showing the groundwater sample analytical results over time. The graphs demonstrate that the concentrations of the site's primary contaminants of concern (i.e., PCE, TCE and cis-1,2-DCE) have significantly decreased since performance of the in-situ chemical oxidation injection activities and that asymptotic concentrations have been reached in the monitoring wells located at the facility.

Based on the above, the letter report concluded that the DER-10 requirements allowing cessation of the groundwater monitoring requirements have been satisfied. The demonstration dated October 22, 2020 was submitted to the NYSDEC.

1.6 Remaining Contamination

Soil

In general, the analytical results of the confirmation soil samples collected following the soil removal activities were below the Unrestricted Use Soil Cleanup Objectives (UUSCOs). Following the initial round of remediation activities that occurred in December 2012, in places where the confirmation soil samples exceeded the Restricted Residential Soil Cleanup Objectives (RRSCOs), the NYSDEC requested that CPC perform additional remediation to remove these impacts. Following the additional remediation activities, additional confirmation soil samples were collected and compared to the UUSCOs. In this manner, the exceedances of the RRSCOs were removed, but the UUSCOs were not always met. As a result, the following table has been prepared to summarize all of the confirmation soil samples collected from the Site where the UUSCOs were exceeded, taking into account the additional soil remediation activities conducted

in February and June 2013. The table also presents a comparison of the confirmation soil sample results to some of the other soil cleanup objectives presented in Part 375 (i.e., the Residential, Restricted Residential and Commercial Use SCOs):

Sample ID	Parameter	Concentration (ppm)	UUSCO (ppm)	Residential SCO (ppm)	Restricted Residential SCO (ppm)	Commercial SCO (ppm)
Area E (remediated to approximately 2 feet below grade)						
CS-E1	Zinc	146	109	2,200	10,000	10,000
Area G (remediated to approximately 2 feet below grade)						
CS-G1	Chromium	58.4	30	36	180	1,500
Area H (remediated to approximately 4 feet below grade)						
CS-H2	Phenol	0.46	0.33	100	100	500
Area L (remediated to approximately 3 feet below grade)						
CS-L1	Chromium	32.5	30	36	180	1,500
	Silver	22.7	2	36	180	1,500
Area M (remediated to approximately 6 feet below grade)						
CS-M-N	Silver	4.6	2	36	180	1,500
CS-M-W	Silver	4.1	2	36	180	1,500
Area N (remediated to approximately 6 feet below grade)						
CS-N-W	Chromium	132	30	36	180	1,500
	Silver	6.5	2	36	180	1,500
CS-N-E	Silver	143	2	36	180	1,500
CS-N-B	Silver	7.2	2	36	180	1,500
Area O (remediated to approximately 4 feet below grade)						
CS-O3	Silver	8.7	2	36	180	1,500
Area P (remediated to approximately 3.5 feet below grade)						
CS-P2	Silver	9	2	36	180	1,500
Area V (remediated to approximately 10 feet below grade)						
CS-V1	Lead	76.9	63	400	400	1,000
Area X (remediated to approximately 6 feet below grade)						
CS-X1	Dieldrin	0.0063	0.005	0.039	0.2	1.4

Note: Shaded value indicates an exceedance of that SCO.

The locations from where the above confirmation soil samples were collected are indicated on Figure 1-5 of this report.

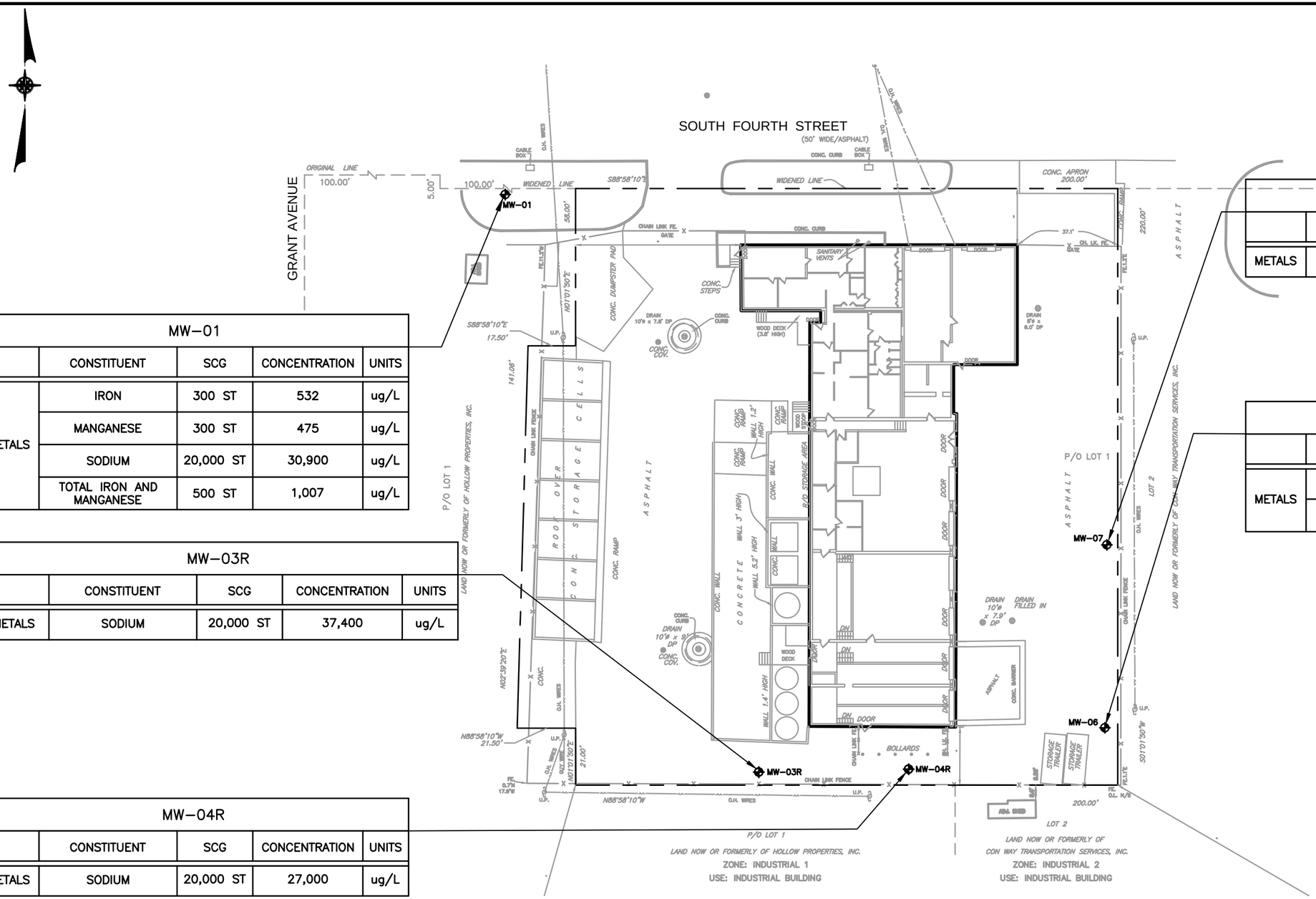
Groundwater

All remedial action objectives (RAOs) presented in the ICM Work Plan have been met for groundwater through the above referenced ISCO program and subsequent groundwater monitoring, and no further action is recommended at this time.

As previously indicated, CPC was required to perform semiannual groundwater sampling at the Site through the terms of its Part 373 Permit. The analytical results of the most recent groundwater samples collected from the monitoring wells were compared to the previous sampling results and the NYSDEC's Class GA Groundwater Standards and Guidance Values. Figure 1-9 presents a groundwater sample location map overlain with a summary of the groundwater data for the wells where exceedances of the Class GA Groundwater Standards/ Guidance Values were detected during the April 2020 Sampling Event. Provided below is a brief summary of the analytical results.

All of the VOCs and SVOCs analyzed for during the April 2020 Sampling Event were either not detected or were detected at concentrations not exceeding their respective Class GA Groundwater Standard/Guidance Value.

All of the metals analyzed for were either not detected or were detected at concentrations below their respective Class GA Groundwater Standard/Guidance Value, with the exception of iron, manganese, sodium, and total iron and manganese. Iron, manganese and sodium are naturally elevated in Long Island groundwater and have historically been observed in the facility's groundwater samples are attributable to the natural conditions in the aquifer.



MW-01				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	IRON	300 ST	532	ug/L
	MANGANESE	300 ST	475	ug/L
	SODIUM	20,000 ST	30,900	ug/L
	TOTAL IRON AND MANGANESE	500 ST	1,007	ug/L

MW-03R				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	SODIUM	20,000 ST	37,400	ug/L

MW-04R				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	SODIUM	20,000 ST	27,000	ug/L

MW-07				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	SODIUM	20,000 ST	23,000	ug/L

MW-06				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	IRON	300 ST	1,160	ug/L
	TOTAL IRON AND MANGANESE	500 ST	1,422	ug/L

LEGEND:

- PROPERTY LINE
- ADJACENT LOT LINES
- MW-1 MONITORING WELL

NOTES:

1. VOCs – VOLATILE ORGANIC COMPOUNDS
2. SCG – TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES
3. ST – STANDARD
4. GV – GUIDANCE VALUE
5. ONLY EXCEEDANCES OF THE SCG ARE SHOWN
6. ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED AS PART OF THE COMPLETED INTERIM CORRECTIVE MEASURE WORK PLAN, AND ARE ONLY SHOWN FOR REFERENCE.

D&B ENGINEERS AND ARCHITECTS, P.C.

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
GROUNDWATER MONITORING PROGRAM

SUMMARY OF GROUNDWATER EXCEEDANCES
APRIL 2020 SAMPLING EVENT

SCALE: 1" = 40'

FIGURE 1-9

F:\2786\2786-P7\2786-P7-FIG 4-1-April 2020.dwg, 4-1, 7/29/2020 2:07:23 PM, rferrell

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

Since remaining contaminated soil exists beneath the Site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by the NYSDEC.

2.1.2 Purpose

The purpose of this Plan is to provide:

- A description of all EC/ICs for the Site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work at the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs, as determined by the NYSDEC.

2.2 Engineering Controls

Remaining contaminated soil at the Site meets the Restricted Residential Soil Cleanup Objectives. The Restricted Residential Use category allows for active recreational uses which includes recreational activities with a reasonable potential for soil contact. As a result, Engineering Controls are not required to manage remaining contaminated soil. Section 2.3 describes the Institutional Controls in place to manage this remaining contamination.

2.3 Institutional Controls

A series of Institutional Controls (ICs) is required to: (1) prevent future exposure to remaining contamination by controlling disturbances of the remaining subsurface contamination; and, (2) limit the use and development of the Site to restricted residential use only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this Site Management Plan. These ICs are:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns; and
- Data and information pertinent to Site Management for the Site must be reported at the frequency and in a manner defined in this SMP.

ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The Site has a series of ICs in the form of site restrictions. Adherence to these ICs is required by the Environmental Easement. Restrictions that apply to the Site are:

- The property may be used for restricted residential, commercial or industrial use;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Suffolk County Department of Health Services to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.

- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on the survey provided in Appendix A, and appropriate actions to address exposures must be implemented; and
- Vegetable gardens and farming on the site are prohibited.

2.3.1 Excavation Work Plan

The Site has been remediated for restricted residential use. However, the majority of the Site has been remediated for residential use. Only two areas (Area G and Area N as shown on Figure 1-5) have remaining soil contamination that exceeds the Residential Use Soil Cleanup Objectives. In accordance with DER-10, any future intrusive work that may encounter or disturb the remaining contamination in these areas will be performed in compliance with the Excavation Work Plan (EWP) that is provided as Appendix B to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP), prepared for the site. A sample HASP is provided as Appendix C to this SMP that is in current compliance with DER-10, 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to state and federal health and safety requirements, and specific methods employed by future contracts, the example HASP and CAMP will be updated and resubmitted with the notification provided in Section B-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Inspections, Reporting and Certifications (see Section 5.0).

The Site owner and associated parties preparing the remedial documents and performing this work are responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of run-off for open excavations into areas containing remaining contamination, and structures that may be affected by excavations (such as building foundations and bridge footings). The Site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the ECs described in this SMP.

2.4 Inspections and Notifications

2.4.1 Inspections

A comprehensive site-wide inspection will be conducted annually for the first 5 years, unless a less frequent schedule is otherwise approved by the NYSDEC. After 5 years, the monitoring frequency will be reviewed with the NYSDEC to determine any change in frequency. The inspections will determine and document the following:

- Compliance with requirements of this SMP and the Environmental Easement;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the any ICs.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3.0). The reporting requirements are outlined in the Inspections, Reporting and Certifications section of this SMP (Section 5.0).

2.4.2 Notifications

Notifications by the property owner will be submitted to the NYSDEC, as needed, for the following reasons:

- Sixty-day advance notice of any proposed changes in Site use that are required under 6 NYCRR Part 375 and/or Environmental Conservation Law.

- Seven-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of all approved work plans and reports, including this SMP,

- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmental-related situation or unplanned occurrence requiring assistance, the Owner or Owner's representative(s) will contact the appropriate party from the contact list as provided in Table 2-1. For emergencies, appropriate emergency response personnel should be contacted. These emergency contact lists will be maintained in an easily accessible location at the Site, if the Site is developed. Otherwise, such information will be maintained in an easily accessible location at the Owner's corporate office.

2.5.2 Map and Directions to Nearest Health Facility

Site Location: Chemical Pollution Control, LLC of New York, Bay Shore, Suffolk County, New York

Table 2-1

EMERGENCY CONTACT NUMBERS

Agency	Phone Number
Police Department	911 or (631) 854-8300
Fire Department	911 or (631) 665-4227
Ambulance	911 or (800) 525-9788
Hospital	(631) 968-3000
One Call Center	(800) 962-7962
Region 2 EPA Hotline	(800) 424-8802
Poison Control Center	(516) 542-2323
National Response Center (NRC) for Oil/Chemical Spills	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

* Note: Contact numbers subject to change and should be updated as necessary.

Nearest Hospital Name: Southside Hospital

Hospital Location: 301 East Main Street, Bay Shore, New York

Hospital Telephone: (631) 968-3000

Directions to the Hospital: From the Site, head east on South 4th Street toward Cleveland Avenue. Turn left onto Cleveland Avenue. Turn right at Pine Aire Drive. Slight right to merge onto Sagtikos Parkway heading south. Take Exit S4 for Southern State Parkway East toward East Islip. Merge onto the Southern State Parkway. Take the exit towards Spur Drive South. Slight left at Spur Drive South. Turn right at Brentwood Road. Turn right at East Main Street/New York 27A West. The hospital will be on your right.

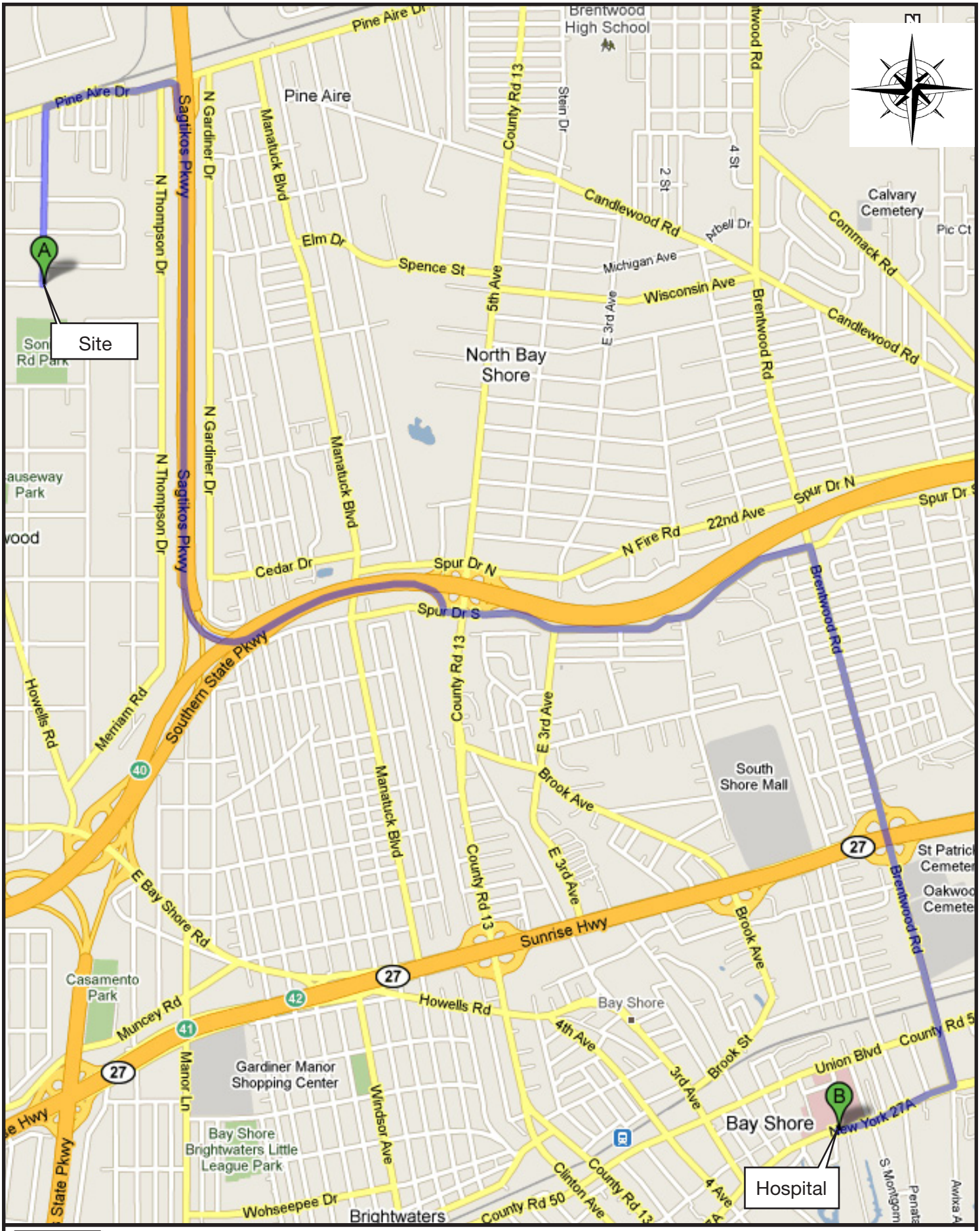
Total Distance: 6.5 miles

Total Estimated Time: 17 minutes

A map depicting the route to the hospital is provided as Figure 2-1.

2.5.3 Response Procedures

As appropriate, the Fire Department and other emergency response groups will be notified immediately by telephone of the emergency. The emergency telephone number list is provided on Table 2-1. The list will also be posted prominently at the Site and made readily available to all personnel at all times, if the Site is developed. Otherwise, such information will be maintained in an easily accessible location at the Owner's corporate office.



DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
A DIVISION OF D&B ENGINEERS AND ARCHITECTS, P.C.

CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

HOSPITAL ROUTE MAP

FIGURE 2-1

2786-F_Hospital Route Map.indd (11/12/14 - 10:03 AM)

3.0 MONITORING PLAN

3.1 Introduction

3.1.1 General

This Monitoring Plan describes the measure for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site. This Monitoring Plan may only be revised with the approval of the NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information regarding:

- Reporting requirements; and
- Annual inspection and periodic certification.

Annual monitoring of the ICs will be conducted for the first 5 years following approval of this SMP. The frequency thereafter will be determined by the NYSDEC. Since there are no Engineering Controls or ongoing remedial systems in operation at the Site, the only monitoring required consists of the site-wide inspections described in Section 3.2 below.

3.2 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once a year for the first 5 years, unless a less frequent schedule is otherwise approved by the NYSDEC. After 5 years, the monitoring frequency will be reviewed with the NYSDEC to determine any change in frequency. During these inspections, an inspection form, as provided in Appendix D, will be completed. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that Site records are up to date.

3.3 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be maintained on file at a central location on-site, if the Site is developed. Otherwise, such information will be maintained in an easily accessible location at the Owner's corporate office. All forms, and other relevant reporting formats used during the monitoring/ inspection events will be: (1) subject to approval by NYSDEC; and (2) submitted at the time of the Periodic Review Report, as specified in the Inspections, Reporting and Certifications of this SMP.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 Introduction

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3.0 (Monitoring Plan). Since there are no Engineering Controls or ongoing remedial systems in operation at the Site, the only monitoring required consists of site-wide inspections. At a minimum, a site-wide inspection will be conducted annually.

5.1.2 Inspection Forms, Sampling Data and Maintenance Reports

General site-wide inspection forms will be completed during the site-wide inspection (see Appendix D). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the Interim Corrective Measures Work Plan and Interim Corrective Measures Final Report.

5.2 Certification of Institutional Controls

After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification:

"For each institutional control identified for the site, I certify that all of the following statements are true:

- *The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement.*
- *The information presented in this report is accurate and complete.*
- *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, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative]"*

The signed certification will be included in the Periodic Review Report described below.

5.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department every year, beginning fifteen months after the Certificate of Completion is issued. The report will be prepared in

accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific Interim Corrective Measures Work Plan;
  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan;
  - The overall performance and effectiveness of the remedy; and
  - Comments, conclusions and recommendations based on data evaluation.

The Periodic Review Report will be submitted in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

APPENDIX A

ENVIRONMENTAL EASEMENT

CC # : C15-31013

COUNTY CLERK'S OFFICE

STATE OF NEW YORK
COUNTY OF SUFFOLK

I, JUDITH A. PASCALE, Clerk of the County of Suffolk and the Court of Record thereof do hereby certify that I have compared the annexed with the original **EASEMENT**

recorded in my office on **08/03/2015** under Liber **D00012826** and Page **369** and, that the same is a true copy thereof, and of the whole of such original.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of said County and Court this **08/03/2015** .

SUFFOLK COUNTY CLERK

Judith A. Pascale

JUDITH A. PASCALE

SEAL

SUFFOLK COUNTY CLERK
RECORDS OFFICE
RECORDING PAGE

Type of Instrument: EASEMENT
Number of Pages: 10
Receipt Number : 15-0103401
TRANSFER TAX NUMBER: 15-00031

Recorded: 08/03/2015
At: 10:34:49 AM

LIBER: D00012826
PAGE: 369

District:	Section:	Block:	Lot:
0500	198.00	07.00	011.031

EXAMINED AND CHARGED AS FOLLOWS

Deed Amount: $0.00

Received the Following Fees For Above Instrument

		Exempt			Exempt
Page/Filing	$50.00	NO	Handling	$20.00	NO
COE	$5.00	NO	NYS SRCHG	$15.00	NO
TP-584	$5.00	NO	Notation	$0.00	NO
Cert.Copies	$6.50	NO	RPT	$60.00	NO
Transfer tax	$0.00	NO			

Fees Paid $161.50

TRANSFER TAX NUMBER: 15-00031

THIS PAGE IS A PART OF THE INSTRUMENT
THIS IS NOT A BILL

JUDITH A. PASCALE
County Clerk, Suffolk County

THIS DOCUMENT IS RECORDED AS A COURTESY ONLY. FIRST AMERICAN TITLE INSURANCE CO. ASSUMES NO LIABILITY FOR SUFFICIENCY, VALIDITY OR ACCURACY

1 | 2

Number of pages 10

10

This document will be public record. Please remove all Social Security Numbers prior to recording.

RECORDED
2015 Aug 03 10:34:49 AM
JUDITH A. PASCALE
CLERK OF
SUFFOLK COUNTY
L D00012826
P 369
DT# 15-00031

Deed / Mortgage Instrument	Deed / Mortgage Tax Stamp	Recording / Filing Stamps

3 FEES

Page / Filing Fee	50		
Handling	20.00		
TP-584	5		
Notation			
EA-52 17 (County)		Sub Total	75
EA-5217 (State)			
R.P.T.S.A.	60.00		
Comm. of Ed.	5.00		
Affidavit			
Certified Copy	6.50		
NYS Surcharge	15.00	Sub Total	86.50
Other		Grand Total	161.50

Mortgage Amt. _____
1. Basic Tax _____
2. Additional Tax _____
Sub Total _____
Spec./Assit. or Spec. /Add. _____
TOT. MTG. TAX _____
Dual Town _____ Dual County _____
Held for Appointment _____
Transfer Tax _____
Mansion Tax _____

The property covered by this mortgage is or will be improved by a one or two family dwelling only.
YES _____ or NO _____
If NO, see appropriate tax clause on page # _____ of this instrument.

4 Dist. 050 2971176 0500 19800 0700 011031

Real Property Tax Service Agency Verification

PTS R SMI A 31-JUL-15

5 Community Preservation Fund

Consideration Amount $ _____

CPF Tax Due $ _____

Improved _____
Vacant Land _____
TD _____
TD _____
TD _____

6 Satisfactions/Discharges/Releases List Property Owners Mailing Address
RECORD & RETURN TO:

Van Ness Feldman
Attn: Susan A. Shyne
719 Second Avenue
Suite 1150
Seattle, WA 98104-1728
(NCS-697442)

Mail to: Judith A. Pascale, Suffolk County Clerk
310 Center Drive, Riverhead, NY 11901
www.suffolkcountyny.gov/clerk

7 Title Company Information

Co. Name First American Title

Title # 3019-744026

8 Suffolk County Recording & Endorsement Page

This page forms part of the attached Enviornmental Easement Granted Pursuan to Article 71 Title 36 of NY State Enviornmental Conservation Law (SPECIFY TYPE OF INSTRUMENT) made by:

Chemical Pollution Control, LLC of New York

TO

The People of the State of New York

The premises herein is situated in SUFFOLK COUNTY, NEW YORK.

In the TOWN of Islip

In the VILLAGE or HAMLET of _____

BOXES 6 THRU 8 MUST BE TYPED OR PRINTED IN BLACK INK ONLY PRIOR TO RECORDING OR FILING.

(over)

First American Title Insurance Company 2019-744026
333 Earle Ovington Boulevard
Uniondale, N.Y. 11553

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 30th day of June, 2015, between Owner(s) Chemical Pollution Control, LLC of New York, having an office at 5151 San Felipe, Suite 1100, Houston, Texas 77056, County of Harris, State of Texas (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 120 South 4th Street in the Hamlet of Bay Shore, Town of Islip, County of Suffolk and State of New York, known and designated on the tax map of the County Clerk of Suffolk as tax map parcel numbers: District 0500 Section 198.00 Block 07.00 Lot 011.031, being the same as that property conveyed to Grantor by deed dated November 10, 1994 and recorded in the Suffolk County Clerk's Office in Liber and Page 11704/124. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.073 +/- acres, and is hereinafter more fully described in the Land Title Survey dated November 20, 2014 prepared by Smith, Jung and Gillis, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: C01-20111110-1, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Suffolk County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 152015
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Chemical Pollution Control, LLC of New York:

By: _____

Print Name: Charles A. Alutto

Title: President Date: 6/12/15

Grantor's Acknowledgment

STATE OF ~~NEW YORK~~ Illinois)
) ss:
COUNTY OF Lake)

On the 12 day of June, in the year 20 __, before me, the undersigned, personally appeared Charles A. Alutto, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that (he)/she/they executed the same in (his)/her/their capacity(ies), and that by (his)/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of ~~New York~~ Illinois

Official Seal
Kelly Ipjian
Notary Public State of Illinois
My Commission Expires 01/03/2017

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 30th day of June, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2016

SCHEDULE "A" PROPERTY DESCRIPTION

All that certain piece or parcel of land situate, lying and being at Brentwood (Bay Shore Post Office), Town of Islip, County of Suffolk, State of New York, known and designated as part of Lot 1 as shown on a certain map entitled "Minor Subdivision Map of Edgewood Trucking Terminal" and filed in the office of the Clerk of Suffolk County on December 9, 1991, as #9178, being more particularly bounded and described as follows:

Beginning at a point on the southerly widening line of South Fourth Street (Fourth Street), distant the following three courses and distances from the intersection of the southerly side of South Fourth Street and the easterly side of Grant Avenue (not open):

1) Easterly along the southerly side of South Fourth Street 100.00 feet;
2) Southerly 5.00 feet to the southerly widening line of South Fourth Street;
3) Easterly along the southerly widening line of South Fourth Street 160.00 feet;

Running thence South 88°-58'-10" East along the southerly widening line of South Fourth Street 200.00 feet to Lot 2;

Thence the following seven (7) courses and distances:

1) South 1°-01'-50" West a distance of 220.00 feet to a point;
2) North 88°-58'-10" West a distance of 200.00 feet to a point;
3) North 1°-01'-50" East a distance of 21.00 feet to a point;
4) North 88°-58'-10" West a distance of 21.50 feet to a point;
5) North 2°-39'-20" East a distance of 141.06 feet to a point;
6) South 88°-58'-10" East a distance of 17.50 feet to a point;
7) North 1°-01'-50" East a distance of 58.00 feet to the southerly widening line of South Fourth Street and the point or place of beginning.

Containing 1.073 Acres.
SCTM 0500-198-07-011.31

TAX MAP (REF ONLY): District 0500 Section 198 Block 07 Lot 011.31

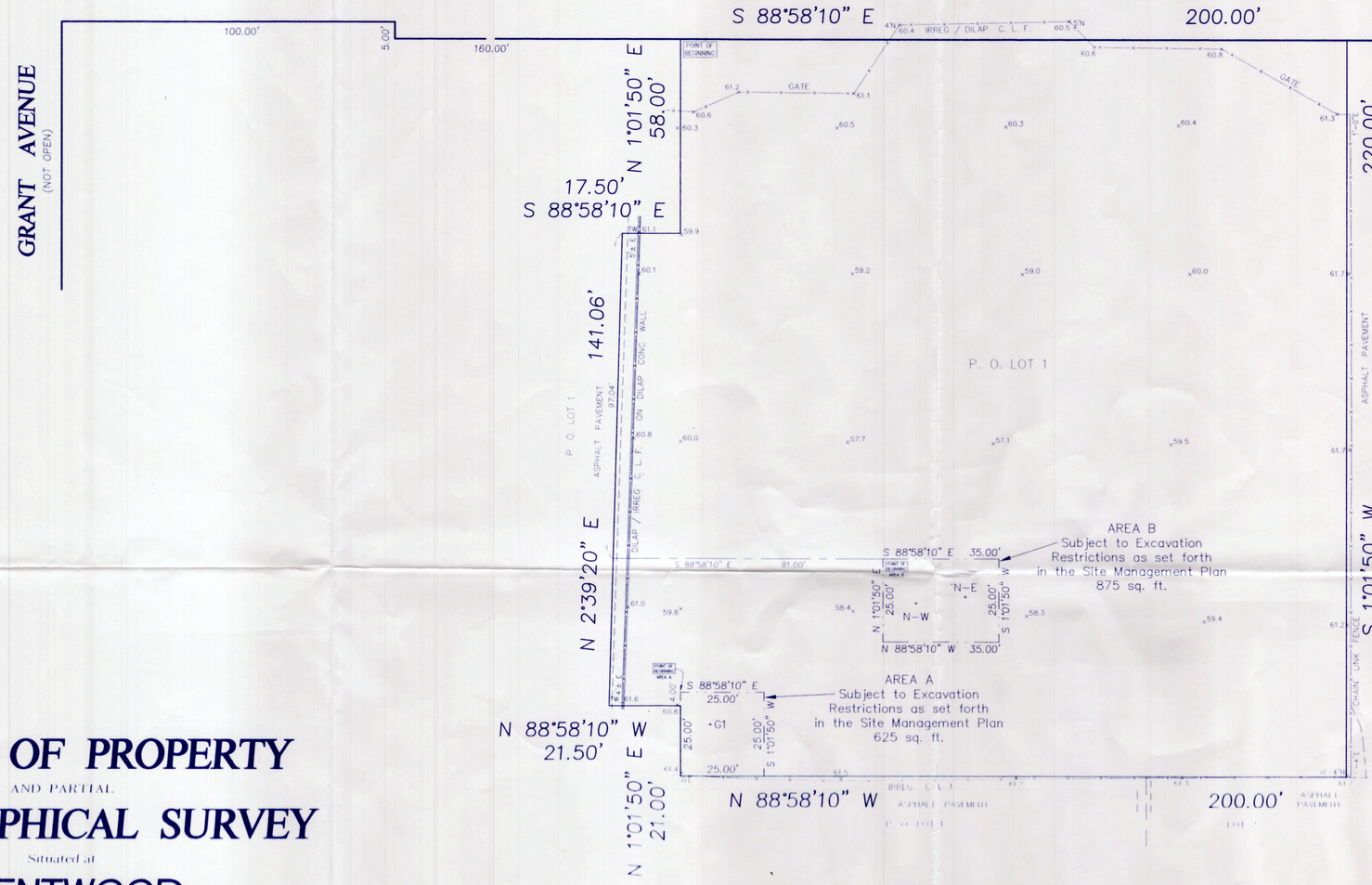
SEC: 92 JOB: 11933

S. FOURTH STREET

(FOURTH ST.)

120 South Fourth Street

(as per Certificate of Occupancy provided to Surveyor)



SURVEY OF PROPERTY

AND PARTIAL

TOPOGRAPHICAL SURVEY

Situated at

BRENTWOOD (BAY SHORE P.O.)

TOWN OF ISLIP

SUFFOLK COUNTY

NEW YORK

DRAFTING REVISIONS MAY 31, 2015

I hereby certify that this survey was completed November 20, 2014, by me or under my direct supervision and is true and complete to the best of my knowledge and belief.

Smith, Jung & Gillis

Scott A. Gillis

Professional Land Surveyor #50399

120 Medford Avenue

Patchogue, NY 11772

Phone: 631-475-3192

DATUM: NGVD 1929 (T.O.I. BM)

AREA: 1.073 Ac

Lot numbers shown hereon refer to Minor Subdivision Map of Edgewood Trucking Terminal, filed December 9, 1991, as No. 9178.

G1, N-W & N-E SHOWN ARE REFERENCE POINTS SCALED FROM PRIOR SURVEY

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.

6 0 3 6 12

(IN METERS)

SYMBOL LEGEND

-x- CHAIN LINK FENCE (C.L.F.)
X SPOT ELEVATION POINT
TW TOP OF WALL
DILAP DILAPIDATED
IRREG IRREGULAR
CONC CONCRETE
O.L. ON LINE
N NORTH
S SOUTH
E EAST
W WEST
P.O. PART OF (LOTS)

Legal Description - Overall Site
SCTM 0500-198-07-011.31

All that certain piece or parcel of land situate, lying and being at Brentwood (Bay Shore Post Office), Town of Islip, County of Suffolk, State of New York, known and designated as part of Lot 1 as shown on a certain map entitled "Minor Subdivision Map of Edgewood Trucking Terminal" and filed in the office of the Clerk of Suffolk County on December 9, 1991, as #9178, being more particularly bounded and described as follows:

Beginning at a point on the southerly widening line of South Fourth Street (Fourth Street), distant the following three (3) courses and distances from the intersection of the southerly side of South Fourth Street and the easterly side of Grant Avenue (not open):
1) Easterly along the southerly side of South Fourth Street 100.00 feet;
2) Southerly 5.00 feet to the southerly widening line of South Fourth Street;
3) Easterly along the southerly widening line of South Fourth Street 160.00 feet;

Running thence South 88°-58'-10" East along the Southerly widening line of South Fourth Street 200.00 feet to Lot 2;

Thence the following seven (7) courses and distances:

1) South 1°-01'-50" West a distance of 220.00 feet to a point;
2) North 88°-58'-10" West a distance of 200.00 feet to a point;
3) North 1°-01'-50" East a distance of 21.00 feet to a point;
4) North 88°-58'-10" West a distance of 21.50 feet to a point;
5) North 2°-39'-20" East a distance of 141.06 feet to a point;
6) South 88°-58'-10" East a distance of 17.50 feet to a point;
7) North 1°-01'-50" East a distance of 58.00 feet to the southerly widening line of South Fourth Street and the point or place of beginning.

Containing 1.073 Acres

Legal Description - Area A subject to Excavation
Restrictions as set forth in the Site Management Plan.
Part of SCTM 0500-198-07-011.31

All that certain piece or parcel of land situate, lying and being at Brentwood (Bay Shore Post Office), Town of Islip, County of Suffolk, State of New York, known and designated as part of Lot 1 as shown on a certain map entitled "Minor Subdivision Map of Edgewood Trucking Terminal," and filed in the office of the Clerk of Suffolk County on December 9, 1991, as #9178, being more particularly bounded and described as follows:

Beginning at a point distant the following courses and distances from the intersection of the southerly side of South Fourth Street and the easterly side of Grant Avenue (not open):

1) Easterly along the southerly side of South Fourth Street 100.00 feet;
2) Southerly 5.00 feet to the southerly widening line of South Fourth Street;
3) Easterly along the southerly widening line of South Fourth Street 160.00 feet;
4) South 1°-01'-50" West 58.00 feet;
5) North 88°-58'-10" West a distance of 17.50 feet;
6) South 2°-39'-20" West a distance of 141.06 feet;
7) South 88°-58'-10" East a distance of 21.50 feet;
8) North 1°-01'-50" East a distance of 4.00 feet;

Running thence the following four (4) courses and distances:

1) South 88°-58'-10" East a distance of 25.00 feet;
2) South 1°-01'-50" West a distance of 25.00 feet;
3) North 88°-58'-10" West a distance of 25.00 feet;
4) North 1°-01'-50" East a distance of 25.00 feet to the point or place of beginning.

Containing 625 square feet

Legal Description - Area B subject to Excavation
Restrictions as set forth in the Site Management Plan.
Part of SCTM 0500-198-07-011.31

All that certain piece or parcel of land situate, lying and being at Brentwood (Bay Shore Post Office), Town of Islip, County of Suffolk, State of New York, known and designated as part of Lot 1 as shown on a certain map entitled "Minor Subdivision Map of Edgewood Trucking Terminal," and filed in the office of the Clerk of Suffolk County on December 9, 1991, as #9178, being more particularly bounded and described as follows:

Beginning at a point distant the following courses and distances from the intersection of the southerly side of South Fourth Street and the easterly side of Grant Avenue (not open):

1) Easterly along the southerly side of South Fourth Street 100.00 feet;
2) Southerly 5.00 feet to the southerly widening line of South Fourth Street;
3) Easterly along the southerly widening line of South Fourth Street 160.00 feet;
4) South 1°-01'-50" West 58.00 feet;
5) North 88°-58'-10" West a distance of 17.50 feet;
6) South 2°-39'-20" West a distance of 97.64 feet;
7) South 88°-58'-10" East a distance of 81.00 feet;

Running thence the following four (4) courses and distances:

1) South 88°-58'-10" East a distance of 35.00 feet;
2) South 1°-01'-50" West a distance of 25.00 feet;
3) North 88°-58'-10" West a distance of 35.00 feet;
4) North 1°-01'-50" East a distance of 25.00 feet to the point or place of beginning.

Containing 875 square feet

This property is subject to environmental easement(s) held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov .

G:\Land Projects 3\11933.dwg, 8/5/2015 08:01:16, 1:1

APPENDIX B

EXCAVATION WORK PLAN

APPENDIX B – EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or its representative will notify the NYSDEC. Currently, this notification will be made to:

Mr. George Momberger, P.E.
Environmental Engineer
NYSDEC Central Office
Albany, NY

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed, estimated volumes of contaminated soil to be excavated and any work that may impact remaining contamination exceeding the Residential Use Soil Cleanup Objectives;
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix C of this document;
- Identification of disposal facilities for potential waste streams;
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is conducted and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

B-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC, if the Site is developed. Otherwise, such information will be maintained in an easily accessible location at the Owner's corporate office.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate federal, state, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, state, and federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes will depend upon the ultimate disposal facility and shall be subject to the approval of the NYSDEC and submitted with the 15-day notification described in Section B-1 of this EWP. All trucks loaded with Site materials will exit the vicinity of the Site using only the approved truck routes. The route must and take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, state (including 6 NYCRR Part 360) and federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from the Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, e.g. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Only soil meeting the unrestricted use and residential use soil cleanup objectives specified in 6 NYCRR Part 375.6 may be reused on-site. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, state, and federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

B-9 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are the unrestricted use soil cleanup objectives. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives

for this Site, will not be imported onto the Site without prior approval by the NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-10 STORM WATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

B-11 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals, TCL volatiles and TCL semivolatiles, TCL pesticides and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to the NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC Spills Hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5.0 of the SMP.

B-12 COMMUNITY AIR MONITORING PLAN

A sample Community Air Monitoring Plan is included in the sample Health and Safety Plan provided as Appendix C of the SMP.

B-13 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis are described below. If nuisance odors are identified at the Site boundary, or if odor complaints are received,

work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on-site and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-14 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.

- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

APPENDIX C

SAMPLE HEALTH AND SAFETY PLAN

PSC – CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

HEALTH AND SAFETY PLAN
FOR
CORRECTIVE MEASURES PROGRAM

Prepared for:

PSC – CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
120 SOUTH FOURTH STREET
BAY SHORE, NEW YORK

Prepared by:

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

AUGUST 2011
REVISED JANUARY 2012

HEALTH AND SAFETY PLAN
PSC – CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

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1.0 INTRODUCTION

This Site-Specific Health and Safety Plan (HASP) was developed for safe completion of field work to be completed at the PSC – Chemical Pollution Control, LLC of New York (CPC) facility located in Bay Shore, New York. This plan must be re-evaluated should the project conditions change from those that are discussed below.

The procedures and protocols presented in this plan have been established to ensure that a mechanism is in place to assist project personnel in the event that hazards from site contamination are encountered. This plan addresses typical on-site activities such as soil and groundwater sampling and associated activities that will be completed by Dvirka and Bartilucci Consulting Engineers (D&B) and its subcontractors. The Building Contractor and In-Situ Chemical Oxidation Contractor will be required to prepare their own HASPs to cover their project personnel. This HASP is not designed to address each and every health and safety scenario that could be encountered during implementation of a typical project. However, this HASP addresses the specific health and safety situations resulting from actual or potential contact with contaminated materials consistent with the requirements pursuant to OSHA 1910 General Industry Standards, OSHA 1926 Construction Standards, and specifically, the OSHA Standard for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120), where applicable.

Compliance with this HASP is required from all authorized D&B project personnel, project support personnel and visitors who enter the work areas of this project. Under no circumstances will any person enter an established restricted area or exclusion zone without first complying with the requirements of this HASP.

The contents of this HASP may change or undergo revision based upon field monitoring results, modifications to the technical scope of work or additional information made available to health and safety personnel. Any proposed changes must be reviewed and approved by CPC and the New York State Department of Environmental Conservation (NYSDEC), and reviewed by designated D&B personnel.

1.1 Project Location

SITE NAME: *PSC – Chemical Pollution Control, LLC of New York*

SITE LOCATION: *Bay Shore, Suffolk County, New York*

1.2 Project Personnel

This section specifically refers to D&B operations personnel, project management personnel and project support personnel. Project Personnel are divided into three categories including Contact Project Personnel, Non-Contact Project Personnel and Project Support Personnel.

Contact Project Personnel - Refers to project personnel who have a reasonable potential to come into contact with contaminated soil, groundwater or vapors. The specific job tasks will be evaluated to determine personnel classifications. The Health and Safety Coordinator (HSC) or his/her designee (i.e., Field Operations Manager [FOM]) will assist with this determination.

Non-Contact Project Personnel - Refers to Project Personnel who are not reasonably expected to come into contact with contaminated soil, groundwater or vapors. The specific job tasks will be evaluated to determine personnel classifications. The HSC or his/her designee (i.e., FOM) will assist with this determination.

Project Support Personnel - Refers to all other persons who may enter the project work zone such as truck drivers, utility workers and emergency crews (e.g., police, fire, ambulance, etc.), as well as any other personnel designated as a project visitor by D&B.

Project Personnel Assignments

Environmental Services
Dvirka and Bartilucci Consulting Engineers

Title	Name	Phone number
Project Director	Brian M. Veith	516-364-9890
Project Manager	Mike Hofgren	516-364-9890
Field Operations Manager	Keith Robins	516-364-9890
Corporate Health and Safety Coordinator	Stephen Tauss	516-364-9890
On-Site Health and Safety Representative	Keith Robins	516-364-9890

Other Project Support Organizations

Health and Safety Consultant

Emilcott Associates	Bruce Groves, President	973-765-0991

Building Contractor

[To Be Determined]

In-Situ Chemical Oxidation Contractor

[To Be Determined]

Laboratory Services

Mitkem Laboratories	Agnes Huntley	401-732-3400

Corporate Physician

Plainview Medical Group, P.C.	Dr. Moskowitz	516-822-2541

1.3 Emergency Phone Numbers

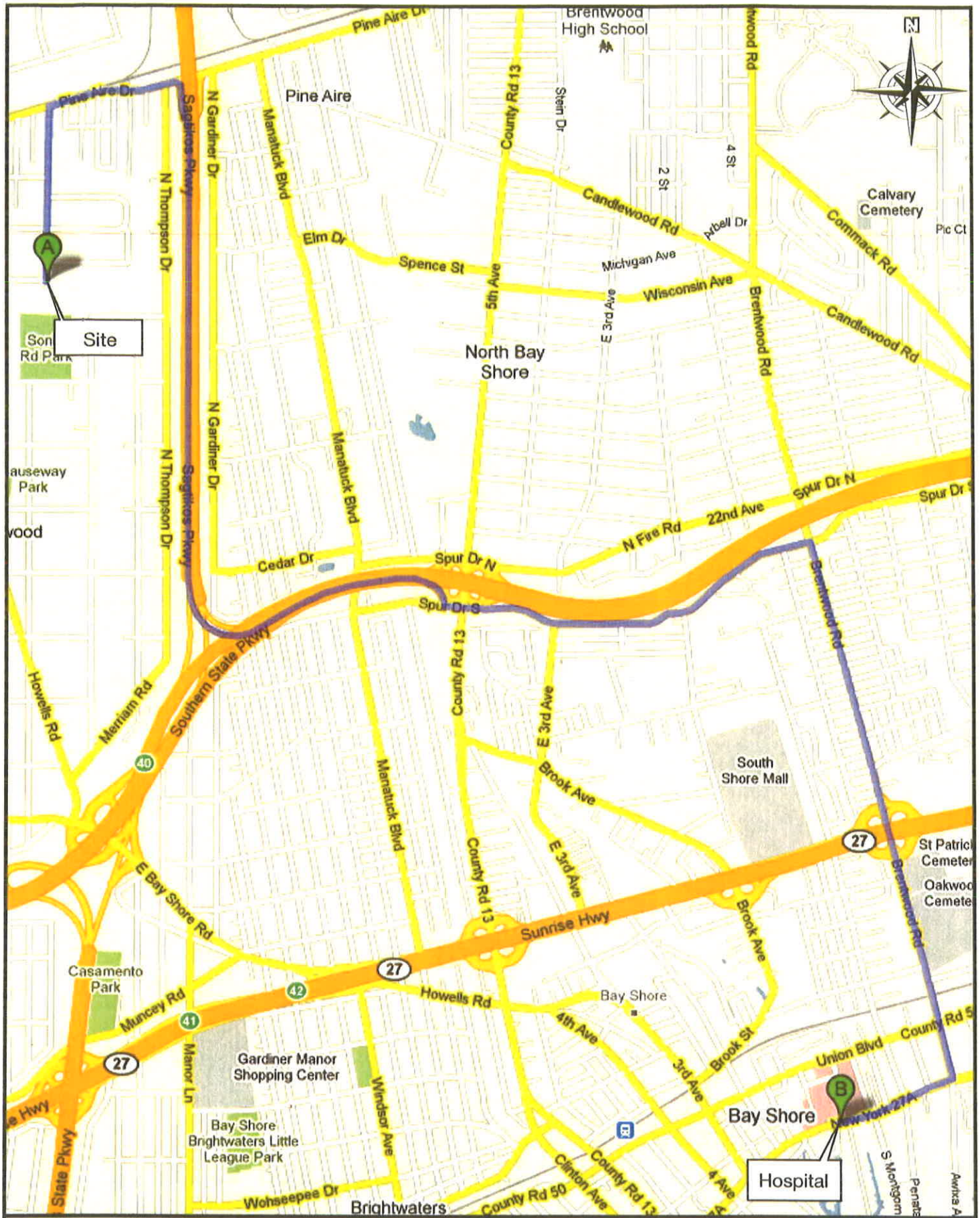
CPC Emergency Phone Line:		631-586-0333
Fire Department:	Bay Shore Fire Department	911 or 631-665-4227

Police Department:	East Islip Police Department	911 or 631-854-8300
Ambulance:	Bay Shore Ambulance	911 or 800-525-9788
Hospital:	Southside Hospital 301 East Main Street Bay Shore, New York	911 or 631-968-3000
Poison Control Center:		516-542-2323
USEPA Region 2 Hotline:		800-424-8802
National Response Center (NRC) for Oil/Chemical Spills:		800-424-8802

1.4 Hospital Route

From the project location, head east on South 4th Street toward Cleveland Avenue (South 4th Street turns left and becomes Cleveland Avenue). Turn right at Pine Aire Drive. Slight right to merge onto Sagtikos Parkway heading south. Take Exit S4 for Southern State Parkway East toward East Islip. Merge onto the Southern State Parkway. Take the exit towards Spur Drive South. Slight left at Spur Drive South. Turn right at Brentwood Road. Turn right at East Main Street/New York 27A West. The hospital will be on your right.

A map depicting the route to the hospital is provided in Figure 1-1.



Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

PSC - CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
BAY SHORE, NEW YORK

HOSPITAL ROUTE MAP

FIGURE 1-1

2786-F_Hospital Route Map.indd (05/10/10 - 2:26 PM)

2.0 HEALTH AND SAFETY PERSONNEL

The following briefly describes the health and safety designations and general responsibilities for this project.

2.1 Project Director - D&B

The Project Director (PD) has overall executive responsibility for all activities and personnel on the site during all project activities described in this HASP.

2.2 Corporate Health and Safety Coordinator - D&B

The D&B Corporate Health and Safety Coordinator (HSC) or designee has overall responsibility for the development, implementation and enforcement of this HASP. He/she will also approve any changes to this plan due to modification of procedures or newly proposed site activities.

The HSC or designee is responsible for the development of safety protocols and procedures, consistent with the hazardous waste aspects of this project, and will also be responsible for the resolution of any outstanding health and safety issues that arise during the performance of site work. Health and safety-related duties and responsibilities will be assigned only to qualified individuals by the HSC.

The HSC or designee will provide technical assistance for high hazard or other project tasks as required. He/she may periodically conduct audits of the health and safety procedures implemented at the site. Before personnel may work in designated exclusion zones, the status of medical clearance and applicable health and safety training must be presented to the HSC or designee, pursuant to those requirements specified in 29 CFR 1910.120.

2.3 Health and Safety Representative – D&B

The Health and Safety Representative (HSR) or designee will be on-site for all site activities that have the reasonable potential for bringing workers into contact with contaminated materials. The HSR will obtain and review applicable health and safety training and medical surveillance documents for personnel who may work in designated exclusion zones. The HSR has "stop-work authorization," which will be executed upon determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation, such as extreme weather conditions. Authorization to proceed with work will be issued by the HSR after such action. The HSR or designee will initiate and execute all contact with support facilities, such as hospitals, NYSDEC representatives and emergency response organizations.

2.4 Health and Safety Consultant

D&B's Health and Safety Consultant, Emilcott Associates, Inc., will be available to provide health and safety consulting services as needed for this project.

3.0 HAZARD ASSESSMENT

3.1 Introduction

At this project location, there may be areas where contaminated soil or groundwater are encountered. The probability of worker exposure to a chemical hazard varies with the job task. Site workers may be exposed to chemicals by inhalation, ingestion, and/or dermal contact. To protect personnel from being potentially exposed, the work zone may be divided into zones by a degree of contamination. Dust control measures may be implemented, respirators and personal protective equipment may be worn, real time and instantaneous air monitoring may be conducted and proper decontamination procedures will be followed.

3.2 Task Specific Hazard Assessment

At this site, potential exposure to contamination is dependent principally on the type of activity being undertaken. Those work tasks that involve significant disturbance and contact with subsurface soil and groundwater (e.g., excavation and groundwater sampling) have the highest project personnel exposure potential. As such, this plan has established two categories of work tasks based on worker exposure to potential site contaminants:

- Non-Contact - Work activities that have little or no reasonable potential for contact or exposure to hazardous site contaminants.
- Contact - Work activities that have some reasonable potential for contact or exposure to hazardous site contaminants.

3.2.1 Non-Contact Personnel

It is anticipated that the following activities involve minimal soil and groundwater contact, and should not result in contact with potentially contaminated soil, groundwater or soil gas and vapors. These tasks will include:

- site preparation;
- surface restoration;
- air monitoring activities; and
- project administration.

Potential exposure to contaminated soil or groundwater is not anticipated; however, the operations will be evaluated and monitored as necessary. In the event that contaminated materials are encountered, all project personnel involved in such areas will stop work until further instructions from the HSC.

Initially, exclusion zones will not be established for such activities. However, exclusion zones will be established if visual evidence of contamination is observed and/or instrument readings exceed the action levels detailed in Section 6.0. In the event that non-contract personnel must enter the exclusion zone, all intrusive work will be halted and will not continue until all non-contract personnel have exited the exclusion zone.

3.2.2 Contact Personnel

It is anticipated that personnel performing the following tasks have some reasonable potential to come into contact with potentially contaminated soil, groundwater and/or vapors:

- excavating;
- handling or sampling of soil and groundwater;
- equipment and personnel decontamination;
- liquid transfer activities; and
- material handling.

These activities will be evaluated and monitored by the HSR or designee. Construction exclusion zones will be established as required.

A hazard analysis was developed for the work activities that involve potential exposure to contamination at the site (contact work). The analysis was based on the potential for the hazard regardless of the contaminant concentrations. For example, the potential for an individual to come in contact with liquids or sediments during equipment decontamination is moderate to high. However, the actual hazard may be low if the liquids or sediments are not contaminated. Table 3-1 outlines the hazard analysis for the Contact Work Activities.

The following is a general discussion of the hazards that may be encountered on-site. Additional information on any contaminants encountered during this project may be found in standard health and safety references, such as the NIOSH "Pocket Guide to Chemical Hazards."

3.3 Chemical Hazards

Based on the results of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) completed by D&B in the Fall 2010, site soil and/or groundwater contains the following constituents at concentrations exceeding applicable SCGs:

- In soil: cis-1,2-dichloroethene, trichloroethene, ethylbenzene, total xylene, 1,2-dichlorobenzene, acetone, toluene, tetrachloroethene, ethylbenzene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, 4,4'-DDT, 4,4'-DDE, cadmium, chromium, copper, lead, mercury, silver and zinc.

- In groundwater: cis-1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, chromium, iron, manganese and sodium.

Activities associated with excavation and soil and groundwater handling for sampling or disposal present a potential for personnel chemical exposure. Precautions should be taken to continuously assess the workplace environment by observation and use of real-time, direct reading instruments during site operations where there exists a potential for contact with contaminants. Measures must be taken to prevent an uncontrolled release or exposure to vapor,

Table 3-1

HAZARD ANALYSIS

Potential Hazard	Excavation	Sample Collection	Waste Handling (soil, groundwater)	Equipment Decontamination
Inhalation of volatiles	moderate to high	low to moderate	low to moderate	low
Skin and eye contact	moderate to high	moderate to high	moderate to high	moderate to high
Ingestion	low	low	low	low to moderate
Inhalation of dust	moderate to high	low	low	low to moderate
Heat stress	depends on temperature	depends on temperature	depends on temperature	depends on temperature
Cold stress	depends on temperature	depends on temperature	depends on temperature	depends on temperature
Confined space	not expected/ not allowed	not expected/ not allowed	not expected/ not allowed	not expected/ not allowed
Heavy equipment	moderate to high	low to moderate	low to moderate	low to moderate
Noise	moderate	low	low	moderate
Tripping	low	low	low	low
PPE	low	low	low	low to moderate
Utilities	high	low	low	low
Other physical hazards	moderate	moderate	moderate	moderate
Biological hazards	low	low	low	low
Flammable hazards	low	low	low	low

liquid or solid contaminants by workers and/or the general public. Assessment and prevention strategies are discussed below and must be practiced on a continual basis by all on-site personnel throughout this project. Table 3-2 contains the OSHA Permissible Exposure Limits and Primary Health Hazards associated with the materials found in the soil and groundwater.

A brief discussion of potential exposure pathways and exposure control methods is presented below.

Inhalation - An inhalation exposure to volatile organic compounds and other gases or vapors would typically occur from exposure to gases/vapors present in the interstitial soil via the installation of probeholes and excavations.

Contact with Skin and Eyes - Contaminated groundwater, soil and sediments may come into contact with skin and eyes during work activities. Cotton coveralls, work gloves and eye protection will be used, as necessary, to minimize and/or prevent skin and eye exposures.

Ingestion - Ingestion of contaminated materials may occur as a result of a hand-to-mouth contact (e.g., eating, drinking and smoking) in contaminated areas or prior to appropriate personal decontamination. Frequent and thorough washing of hands and face, prohibiting eating, drinking and smoking in the work area, proper use of work clothing and personal decontamination will control the potential for ingestion of contaminated soils.

3.4 Biological Hazards

The location of the CPC site is such that a limited number of biological hazards may exist. These hazards may include, but are not limited to: ticks, plants such as poison ivy, poison oak and poison sumac, and animals and rodents that may inhabit the site.

Table 3-2

PERMISSIBLE EXPOSURE LIMITS AND HEALTH HAZARDS OF CONTAMINANTS OF CONCERN

Chemical	OSHA Permissible Exposure Limits	IDLH	Primary Health Hazard (Target Organs)
Chromium	0.5 mg/m^3	250 mg/m^3	Eyes, skin, respiratory system (RS)
Lead	0.05 mg/m^3	100 mg/m^3	Eyes, gastrointestinal (GI) tract, central nervous system (CNS), kidneys, blood, gingival tissue
cis-1,2-dichloroethene	200 ppm	1,000 ppm	Eyes, RS, CNS
Trichloroethene	100 ppm	1,000 ppm	Eyes, skin, RS, heart, liver, kidneys, CNS
Ethylbenzene	100 ppm	800 ppm	Eyes, skin, RS, CNS
Total Xylene	100 ppm	900 ppm	Eyes, skin, RS, CNS, GI tract, blood, liver, kidneys
1,2-Dichlorobenzene	50 ppm	200 ppm	Eyes, skin, RS, CNS, liver, kidneys
Acetone	1,000 ppm	2,500 ppm	Eyes, skin, RS, CNS
Toluene	200 ppm	500 ppm	Eyes, skin, RS, CNS, liver, kidneys
Tetrachloroethene	100 ppm	150 ppm	Eyes, skin, RS, CNS, liver, kidneys
1,1,1-Trichloroethene	350 ppm	700 ppm	Eyes, skin, CNS, Cardiovascular system (CVS), liver
Bis(2-chloroethyl)ether	15 ppm	100 ppm	Eyes, RS, liver
Benzo(a)anthracene	--	--	--
Chrysene	0.2 mg/m^3	80 mg/m^3	RS, skin, bladder, kidneys
Benzo(b)fluoroanthene	--	--	--
Benzo(k)fluroanthene	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--
Dibenzo(a,h)anthracene	--	--	--
4-4'-DDT	1 mg/m^3	500 mg/m^3	Eyes, skin, CNS, kidneys, liver, Peripheral nervous (PNS)
Zinc	15 mg/m^3	--	Eyes, skin, RS
Silver	0.01 mg/m^3	10 mg/m^3	Nasal septum, skin, eyes
Cadmium	0.005 mg/m^3	9 mg/m^3	RS, kidneys, prostate, blood
Copper	1 mg/m^3	100 mg/m^3	Eyes, skin, RS, CNS, liver, kidneys

Table 3-2 (continued)

PERMISSIBLE EXPOSURE LIMITS AND HEALTH HAZARDS OF CONTAMINANTS OF CONCERN

Chemical	OSHA Permissible Exposure Limits	IDLH	Primary Health Hazard (Target Organs)
Mercury	0.01 mg/m^3	10 mg/m^3	Eyes, skin, RS, CNS, liver, PNS, kidneys
Iron	--/0.1 ppm (NIOSH)	--	Eyes, skin, RS, liver, GI tract
Manganese	5 mg/m^3	500 mg/m^3	RS, CNS, blood, kidneys
Sodium	--	--	--

IDLH: Immediately Dangerous to Life and Health
--: Not established

3.5 Physical Hazard Analysis

Potential hazards that are most likely to be encountered at the CPC site during field operations include, but are not limited to:

- Weather conditions (e.g., lightning, rain, excessive heat, excessive cold, high winds, etc.);
- Slips, trips and falls on uneven/overgrown surfaces;
- Heavy equipment traffic;
- Striking and struck-by (heavy equipment);
- Moving or rotating machinery;
- Flying debris from probing;
- Overhead power lines and underground utilities (e.g., water, gas and sewer) and related equipment.

Below is a summary of guidelines that may be used to eliminate/reduce the potential risk of physical hazards. A copy of the appropriate D&B standard operating procedure (SOP) is referenced where necessary, and included in Appendix A.

3.5.1 Weather

If severe weather occurs that may affect the safety of site workers, the D&B HSC or designee shall stop affected field operations. The HSC or designee will resume operations when weather conditions improve.

3.5.2 Heat and Cold Stress

Depending on the time of year and weather conditions, cold or heat stress may present a potential concern. The HSC or HSR will ensure that the heat and cold stress programs are implemented and that adequate rest breaks and liquid consumption is maintained.

Proposed work/rest schedules will be dependent upon the weather conditions encountered and the level of personal protective equipment being utilized by on-site personnel. The HSC will use his judgment to establish and adjust work/rest schedules.

3.5.3 Noise

Excessive noise can be a problem during certain activities on-site, such as probing, excavating or the use of machinery. If necessary, as designated by the HSC, earplugs or other hearing protection equipment will be made available for personnel use.

3.5.4 Illumination

If work activities occur before sunrise and/or after sunset, lighting will be provided at each work area to meet the requirements of 29 CFR 1910.120(m). This standard states that while any work is in progress, the general site areas shall be lighted to not less than 5 foot-candles[1]. In addition, any excavation areas, waste management areas, access ways, active storage areas, loading platforms and field maintenance areas shall be lighted to not less than 3 foot-candles. First aid areas should be lighted to not less than 30 foot-candles.

3.5.5 Slip, Trip and Fall Hazards

As in any work area, it is expected that the ground may be uneven, the surface may be unreliable due to settling, surface debris may be present, and wet or muddy areas may exist. Therefore, the potential for slipping, tripping and falling is present, especially considering the safety equipment that may be used which can impede vision. Severe trip hazards will be identified in site meetings and demarcated by flags or caution tape.

[1]One foot-candle equals 10.764 lux ($E=I/D^2$).

3.5.6 Electrical Hazards

Above and below ground electric hazards are present at the site. Note that prior to the initiation of work, One-Call utility mark outs will be conducted. To control the potential for hazardous electrical situations, operating heavy equipment will not be allowed within 15 feet of any live overhead electrical wires or equipment, unless prior CPC approval is granted. Ground fault circuit interrupters shall be used on portable electric-powered hand tools and gasoline generators.

3.5.7 Lockout/Tagout

A Lockout/Tagout Program has been established to protect employees from injuries that could result from the unexpected or unplanned start-up or movement of machinery or equipment during maintenance, installation, adjustment or servicing operations. This policy sets forth procedures, which will be used to ensure that employees are provided with the information and equipment they need to perform these tasks safely.

For more detailed requirements and procedures regarding lockout/tagout, refer to D&B SOP #C0018 provided in Appendix A.

3.5.8 Dust Control

During all activities, control measures will be implemented if visible dust at the perimeters of the construction exclusion zones is observed. Dust control measures may include wetting the soil and/or covering stockpiled soils.

3.5.9 Excavations

The safety requirements for each excavation must be determined by a competent person who is capable of identifying existing and predictable hazards and work conditions that are hazardous or dangerous to employees. The competent person must also have the authorization to take prompt corrective measures to eliminate unsatisfactory conditions.

Under no circumstances will any D&B personnel enter an excavation. Soil excavation will be conducted with excavators operated by the Building Contractor. All samples associated with open excavations will be collected from outside the excavation with hand tools and/or the bucket of the excavator. Building Contractor and/or In-Situ Chemical Oxidation Contractor personnel may be required to enter excavation areas. However, these contractors will be required to prepare their own HASPs to cover their project personnel.

The following are general requirements for work activities in and around excavations:

- Prior to initiation of any excavation activity, the location of underground utilities will be determined through One-Call utility mark outs and a private markout. The one-call center will be contacted by the Building Contractor a minimum of 72 hours prior to excavation activities.
- All excavations will be inspected daily and documented by the competent person prior to commencement of work activities. Evidence of cave-ins, slides, sloughing or surface cracks of excavations will be cause for work to cease until necessary precautions are taken to safeguard employees.
- Materials or equipment that could fall or roll into the excavation shall be placed at least 5 feet from the edge of open excavations.

3.5.10 Odor Control

Odors are not expected to be a significant issue due to excavation activities; however, in the event that odors of significance are detected due to excavation activities, excavation activities will be halted temporarily and air monitoring will be performed. Excavation work will continue in another area. The area identified as the source of the odors of significance will be temporarily

covered with plastic, and upwind or downwind air monitoring will be performed. In the event that air monitoring action levels are exceeded, appropriate actions will be taken. Excavation activities will resume in this area after the air monitoring levels indicate acceptable conditions, and any odors of significance are mitigated via work method changes and/or the application of foaming agents.

4.0 SITE CONTROLS

A Site Control Plan has been established to restrict access to work areas where potential contamination may be present, to select appropriate Personal Protective Equipment (PPE) for personnel working in each control zone and to prevent the accidental spread of contaminated material. As part of this plan, a number of separate zones may be used at this site. These zones are identified as: (1) the Work Zone (WZ); (2) the Exclusion Zone (EZ); (3) the Contamination Reduction Zone (CRZ); and (4) the Support Zone (SZ). Zone classifications may change as circumstances warrant. The WZ is the project work area. The EZ may be established within the WZ, if the air monitoring action levels will exceed the levels established for this project (refer to Section 6.0). The CRZ will be established within the WZ between the EZ and the SZ as determined by the HSR.

For more detailed procedures on work zones and site control, refer to SOP #HW002 provided in Appendix A.

4.1 Work Zone

The Work Zone (WZ) is the project work area. All physical project work activities will be conducted within the WZ. This zone is restricted to project (contact and non-contact) personnel, project support personnel and visitors as defined in this document. Access to the site will be controlled by fencing and/or caution tape and safety cones around the equipment and work area. In addition, equipment will be secured, covers will be placed over any open probeholes, and staged soil will be covered at the end of each work day and when not in use. Only authorized personnel will be permitted to enter the WZ.

All personnel entering the construction work zone will be briefed by the HSC or HSR prior to their initial entry. All Contact Project Personnel entering the WZ must meet the training and medical requirements as outlined below. Appropriate work clothing and equipment will be worn. All Contact Project Personnel and equipment exiting the WZ must be adequately cleaned

before leaving the site or as required by the HSC or HSR or his/her designee. The HSR will monitor non-contact activities performed within the construction work zone.

4.2 Exclusion Zone

An Exclusion Zone (EZ) may be established at active work sites where contamination is anticipated, observed or measured. The HSR will make the determination to establish an EZ based upon work activities, work conditions, visual evidence of contamination, air monitoring or sample results and/or other knowledge of the site that indicates an increase in the probability of worker exposure.

If implemented, the EZ will consist of an area with a 15 to 20-foot buffer area around the work area. However, the HSR will determine the extent of the EZ, depending on the potential hazards and site activities. The area will be marked using a physical barrier (e.g., flagging tape) or other means to readily identify the boundary of the zone.

Access to the EZ will be limited to Contact Project Personnel that meet the training and medical requirements as outlined below. All Contact Project Personnel entering the construction exclusion zones will be briefed by the HSR prior to initial entry.

Appropriate protective work clothing and equipment will be worn in the EZ. All personnel and equipment exiting the EZ will be decontaminated in the CRZ or as the HSC or HSR determines is necessary. Once the operations have been completed, the EZ will be removed by the HSR.

4.3 Contamination Reduction Zone

The Contamination Reduction Zone (CRZ) is the area just outside of the EZ where Contact Project Personnel undergo decontamination. If implemented, this zone will be contiguous with the EZ. The area will be marked using flagging tape or other means to readily identify the boundary of the zone. Access to this zone will be limited to Contact Project

Personnel exiting the EZ and personnel assisting with decontamination. A separate equipment decontamination area will be established as determined by the HSC, HSR or designee.

4.4 Support Zone

The Support Zone (SZ) is the area in which administrative and other support functions essential to site operations are conducted. Any function that need not or cannot be performed in a hazardous or potentially hazardous area is performed here. Personnel may wear normal work clothes within this zone because any potentially contaminated clothing, equipment and/or samples must remain in the CRZ until decontaminated.

5.0 WORK CLOTHING AND LEVELS OF PROTECTION

5.1 Work Clothing

The HSC or HSR will recommend appropriate levels of protective clothing to be worn in the event that hazardous materials are encountered. The levels of protection planned for this project are identified in Table 5-1. In general, typical work clothing will be worn on this project.

5.2 Levels of Protection

The level of protection to be worn by field personnel will be defined and controlled by the HSC or HSR (in consultation with the Corporate Health and Safety Consultant). Table 5-1 below contains a list of tasks and the respective levels of protection when working inside a project exclusion zone.

Definition of Levels of Protection:

Respirators:

Level D: A respirator is not required.

Level C: Full-face or half-face Air Purifying Respirator (APR) with combination HEPA - P,O,N 100 series (dusts, fumes, aerosols) and organic vapor cartridges (yellow).

PPE:

Level D: Long pants and/or work coveralls/uncoated tyvek

Nitrile gloves

Appropriate steel-toe work boots

Hardhat

Safety glasses, with side shields as needed

Table 5-1

PERSONAL PROTECTION LEVELS

Task	Level of Protection			
	Respirators		PPE	
	Initial	Contingent	Initial	Contingent
Sample Collection	D	C	D	C
Excavation	D	C	D	C
Waste Handling	D	C	D	C
Decontamination	D	C	D	C
Groundwater Sampling	D	C	D	C

Level C: Poly-coated Tyvek disposable coveralls or equal substitute vinyl, neoprene, nitrile rubber or butyl rubber outer gloves

Nitrile inner gloves

Appropriate leatherwork boots with chemically resistant outer boots or chemically resistant rubber boots

Hardhat

Safety glasses, with side shields as needed

Note: Modified Level D is used in this plan to refer to personnel using Level C PPE with no respirator.

5.3 Donning and Doffing

Manufacturer's recommended procedures for donning and doffing of PPE ensembles will be followed in order to prevent damage to PPE, reduce or eliminate migration of contaminants from the work area and reduce or eliminate transfer of contaminants to the wearer or others.

5.4 Storage and Inspection

Since storage facilities will not be readily available, only minimal quantities of protective equipment will be maintained on-site. Items such as gloves, protective suits and hearing protection will be kept within a suitable storage area. Respirators will be stored in plastic bags when not in use.

Employees are responsible for inspecting personal protective equipment prior to donning, during use and at the end of the shift. Defective equipment shall be removed from service and reported to the HSC or HSR. All reusable equipment will be maintained in a sanitary condition, in accordance with the manufacturer's recommendations.

6.0 AIR MONITORING PROCEDURES

6.1 Air Monitoring During Site Operations

As previously indicated, the Building Contractor and In-situ Chemical Oxidation Contractor will be required to prepare their own HASPs to cover their project personnel. The Building Contractor's HASP will include an Air Monitoring Program (AMP) to determine that the proper level of personnel protective equipment is used, to document that the level of work protection is adequate and to assess the migration of contaminants to off-site receptors as a result of site operations. The Building Contractor will be required to include real-time and documentation air monitoring in its AMP and establish action levels for organic vapors and dust. It is assumed that the In-situ Chemical Oxidation Contractor will not be required to conduct any air monitoring since their operations will be confined to chemical oxidant injection, and these activities are not anticipated to generate significant dust or organic vapor emissions that could not be adequately addressed through the Community Air Monitoring Plan described below.

6.2 Community Air Monitoring Plan

In addition to the monitoring of the work zone by the Building Contractor as outlined above, D&B will implement a Community Air Monitoring Plan (CAMP) during all demolition activities and any contractor work involving the handling of soil or groundwater. The CAMP will include continuous monitoring for VOCs and particulates using one upwind and two downwind air monitoring stations. Each monitoring station will include an aerosol monitor for the measurement of dust and particulate matter and a photoionization detector (PID) equipped with an 11.7 eV lamp for the measurement of VOCs.

The following outlines the action levels that will be enforced during implementation of the CAMP as part of the corrective measures to be implemented at the CPC facility:

1. If the downwind particulate level is 100 micrograms per cubic meter (ug/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed by the Building

Contractor. Work will continue with dust suppression techniques provided that downwind particulate levels do not exceed 150 ug/m^3.

2. If, after implementation of dust suppression techniques, downwind particulate levels are greater than 150 ug/m^3 above the upwind level for the 15-minute average at the perimeter of the work area, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing downwind particulate concentrations to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

3. If the ambient air concentration of total organic vapors exceeds 5 ppm above background for the 15-minute average at the perimeter of the work area, work activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities will resume with continued monitoring.

4. If the total organic vapor levels are greater than 5 ppm over background but less than 25 ppm, work activities will be halted, the source of the vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided:

    a. The total organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

5. If the organic vapor level is above 25 ppm at the perimeter of the work area, work activities will be shutdown.

The Building Contractor will be required to implement engineering controls to comply with the action levels specified in this CAMP.

6.3 Background Air Monitoring

Background air monitoring for VOCs and particulates will occur at a location upwind of the work zone prior to the initiation of work and continuously during performance of the CAMP described in Section 6.2. Background levels will be established prior to conducting air monitoring in any work area.

6.4 Instrument Calibration and Maintenance

All air monitoring equipment will be calibrated at the beginning of each workday and as needed during the day, if applicable. All calibration results will be recorded. Monitoring

equipment will be maintained on a schedule corresponding to the manufacturer's suggested maintenance schedule.

6.5 Dust and Organic Vapor Suppression Measures

Dust and organic vapor suppression measures will be implemented during remedial activities, as necessary based upon the results of the Building Contractor's AMP or D&B's CAMP. Dust and organic vapor suppression measures to be implemented, as required, include:

- Application of wetting agents to soil, stockpiles, excavation faces, buckets and equipment during excavation work.
- Installing gravel pads at vehicle egress points.
- Restricting vehicle speeds to 5 miles per hour.
- Application of foam suppressants to the excavation and/or stockpile.
- Covering of excavations or stockpiles after work activities and keeping wet as a measure to control wind-blown erosion, dust generation and odors.
- Direct loading excavated material to hauling vehicles and minimization of material stockpiling on-site.
- Construction of wind screens using solid wood fences or solid durable fabric attached to a construction fence to block the passage of wind and reduce dust.

7.0 TRAINING

7.1 Hazard Communication

The HSC or HSR is responsible for site-specific training and notifying employees and contractors of the hazards associated with non-routine tasks. The HSC shall inform D&B personnel of the potential hazards that may be encountered in the area where he/she will be working, should the HSC have such knowledge of these hazards.

For more detailed requirements and procedures regarding hazard communication, refer to D&B SOP # C002 provided in Appendix A.

7.2 Initial Site Training

The initial site briefing will be provided on-site by the HSC or his/her designee for all Project Personnel (Contact and Non-Contact) and Project Support Personnel prior to initial entry into the Work Zone of the site. Site training will also be provided as needed to address the specific activities, procedures, monitoring and equipment for the site operations. Such training will include site and facility layout, potential and recognized hazards and emergency services at the site, and will detail all provisions contained within this HASP. This training will be documented.

7.3 Contact Project Personnel Training

All Contact Project Personnel designated to work in the Exclusion Zone are required to have successfully met the initial and refresher training requirements pursuant to 29 CFR 1910.120(e).

8.0 MEDICAL SURVEILLANCE

All Contact Project Personnel engaged in on-site activities associated with this project must have baseline physical examinations and participate in their employer's medical surveillance program. This program must meet the requirements of 29 CFR 1910.120(f). Medical procedures beyond baseline physical and routine medical surveillance are not planned for this project. Medical records for employees are maintained at the corporate office and by the company's medical group. Medical records are maintained in accordance with the record keeping requirements of 29 CFR 1910.120. In addition, any employee required to wear a respirator for Level C PPE will be approved by a licensed health care provider for respirator use as defined in the OSHA Respiratory Standard 29 CFR 1910.134.

In the unlikely event of an exposure, the affected employee will be sent for any evaluation and treatment that may be needed to either the Corporate physician or the designated hospital. See Figure 1-1 for a hospital route map and Section 1.4 for written directions to the designated hospital.

9.0 COMMUNICATIONS

A means of communication will be provided at the project site. This may include two-way radios, portable telephones or existing nearby telephones. Project personnel will be informed of the communication procedures during site briefings.

10.0 DECONTAMINATION PROCEDURES

10.1 General

All personnel and equipment that have entered established exclusion zones shall be decontaminated. Decontamination activities may also occur for operations outside of the established exclusion zones. Such decontamination is part of typical monitoring and sampling, construction, and other support operations.

10.2 Personnel Decontamination

Personnel field decontamination will take place in the contamination reduction zones (CRZs). Based on the extent of personnel contamination, the HSR will establish site-specific decontamination procedures. Based on the expected activities, it is anticipated that limited personnel decontamination will be necessary.

Full field decontamination procedures, if utilized, would require all personnel exiting exclusion zones to undergo a wash and a rinse process and remove their PPE. This will consist minimally of two tubs: one wash tub and one rinse tub, placed on plastic sheeting. Personnel exiting the exclusion zone(s) will be required to wash their outer boots, outer gloves and protective clothing. This will be accomplished with an Alconox/water solution and scrub brushes in the first tub. Personnel will then proceed to the next tub, which will consist of a clean water rinse and subsequent spray-down with clean water. Personnel will stand in the tub and spray off their gloves, boots and protective clothing with clean water from the sprayer. After the rinse, personnel will then remove their outer boots, outer gloves, protective clothing and respiratory protection, if worn.

Once removed, disposable PPE will be collected at the field decontamination site in a large plastic bag. The plastic bag will be secured in order to prevent the accidental spread of contamination. Disposable PPE that has been worn in an exclusion zone must be removed and placed in the disposal container before leaving the CRZ. Disposable PPE may not be re-used.

All used PPE, disposable sampling equipment and decontamination water will be drummed for proper off-site disposal.

10.3 Instrument Decontamination

Instruments will be decontaminated whenever they have come into contact with soil, groundwater or dust. Instrument decontamination will occur in the same area for personnel decontamination and will consist of the removal of any dust or soil from the surface of the instruments.

10.4 Equipment Decontamination

Equipment utilized for this project may include:

- Support trucks for excavation activities;
- Guzzler units;
- Excavators; and
- Pumps.

Equipment decontamination will take place as needed. Water generated as part of decontamination will be drummed for proper off-site disposal. All field equipment that has been contaminated will be decontaminated before leaving the project site. The HSC, HSR or designee will be responsible for ensuring that equipment is decontaminated as needed.

For more detailed containment and disposal procedures, refer to SOP #HW005 provided in Appendix A.

11.0 EMERGENCY PLAN

Emergency situations can be characterized as a fire or explosion, environmental release, or accident or injury to the field personnel. For incidents other than minor injuries to on-site personnel, work will be halted and the situation will be evaluated. Emergency procedures appropriate to the situation will be implemented. The HSC will be notified immediately in the event of an evacuation.

Emergency telephone numbers and directions to the designated hospital are listed in Sections 1.3 and 1.4, respectfully, and a hospital route map is included as Figure 1-1. This information will be available to all workers on-site.

It is important to ensure the rapid and accurate transfer of information to appropriate personnel in the event of an emergency situation. To simplify the procedure, emergency situations can be reported by dialing **911**. This includes incidents requiring police, fire department or medical assistance. In the event that such an emergency occurs, CPC will be notified immediately following the report to 911 via the CPC emergency telephone number included in Section 1.3.

When reporting an emergency, be sure to provide the following information to the dispatcher:

1. Caller's full name;
2. The nature of the incident (e.g., "fire");
3. The location of the incident (i.e., "PSC - Chemical Pollution Control, LLC of New York, 120 South Fourth Street, Bay Shore, New York"). The more specific the better;
4. What you need (e.g., "fire department and first aid");
5. If you are able, where you will meet emergency responders (e.g., "at entrance of the facility on South Fourth Street");
6. If applicable, your cell phone number (e.g., "I'll be at the scene; my cell phone number is 123-4567");

7. Status of the situation. (e.g., is the situation stabilized or "I have the fire under control");

8. If anyone is injured or in need of emergency assistance (e.g., "a mechanic working on a pump was burned").

11.1 Evacuation

In the event of an emergency situation, all personnel will evacuate and assemble at a designated meeting area. For efficient and safe area evacuation and assessment of the emergency situation, the HSC, HSR or FOM will have the authority to initiate proper action if outside services are required. Access to emergency equipment will be provided and all combustion apparatus (e.g., operating machinery) will be shut down once an emergency situation has been identified.

11.2 Personnel Injury

In the event of an emergency situation, the local emergency response group will be called. Emergency first aid may be applied on-site as deemed necessary. If possible, the individual should be decontaminated and then transported to the nearest medical facility if needed.

The local rescue squad shall be contacted for transport as necessary in an emergency. Since some situations may require transport of an injured party by other means, transportation by automobile may be required.

11.3 Personnel Exposure

Skin Contact:	Use copious amounts of soap and water. Wash and/or rinse affected area thoroughly, then provide appropriate medical attention. Eyes should be thoroughly flushed with water for at least 15 minutes.

Inhalation:	Move to fresh air and, if necessary, decontaminate and transport to emergency medical facility.
Ingestion:	Decontaminate and transport to emergency medical facility.
Puncture Wound or Laceration:	Decontaminate, if possible, and transport to emergency medical facility.

11.4 Safety Equipment

Basic emergency and first aid equipment will be made available at the Project Work Zone and/or the CRZ, as appropriate. This shall include a first aid kit, an eye wash station and a fire extinguisher.

12.0 RECORD KEEPING

The HSC, HSR or designee will maintain health and safety information records for the site. The following information will be recorded as needed:

- Weather conditions (temperature, wind speed and direction);
- Air monitoring equipment calibration records;
- Air monitoring results (date, time, location, data, instrument and person conducting sampling);
- Training records;
- Medical surveillance records;
- Health and safety audit records;
- Description of operation(s);
- Description of accident(s), if any; and
- Non-compliance with the HASP, if any.

13.0 AUTHORIZATIONS

The HSC, HSR or designee must approve all personnel authorized to enter the project work zones and exclusion zones at the site. Authorization will involve completion of appropriate training courses and medical examination requirements as outlined by this HASP, as well as the signature of the individual on the Acknowledgement Form recognizing a complete understanding of this HASP.

14.0 APPROVALS

The undersigned certify that this Site Health and Safety Plan (HASP) is approved and will be utilized by Dvirka and Bartilucci Consulting Engineers for the CPC facility located in Bay Shore, New York.

For Dvirka and Bartilucci Consulting Engineers:

Title	Name	Signature	Date
Project Manager	Mike Hofgren		
Corporate Health and Safety Coordinator	Stephen Tauss		
Site Field Operations Manager	Keith Robins		

APPENDIX A

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
CORPORATE STANDARD OPERATING PROCEDURES

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1.0 PURPOSE

Lockout/Tagout guidelines have been established to protect D&B/WFC employees from injuries that could result from the unexpected or unplanned start-up or movement of machinery or equipment during inspections, maintenance, installation, adjustment, or servicing operations. These guidelines provide D&B/WFC personnel with information regarding the hazards and control measures associated with the release of such hazardous energy pursuant to OSHA Standard 29 CFR 1910.147.

If D&B/WFC is expected to take measures to control hazardous energy for site-specific operations, then a written Energy Control Procedure must be prepared for each site. Such procedures will include steps for equipment shutdown, isolation, application of locks and tags,

dissipation of stored energy, verification of equipment isolation, removal of locks and tags, and restoration of energy to machines.

The components of the Lockout/Tagout Program include:

a. Energy Control Procedures, if applicable

b. Employee notification

c. Contractor activities

d. Employee training

e. Periodic audits of the Energy Control Procedures, if applicable

2.0 SCOPE

These guidelines apply to all D&B/WFC employees who perform activities (such as surveying, construction, installation, set-up, adjustment, inspection, maintenance, and repair) where a hazardous energy release potential exists. This applies to any source of electrical, hydraulic, pneumatic, potential (stored), chemical, thermal, or other energy.

3.0 DEFINITIONS

Affected Employee - an employee who performs job duties in an area in which lockout or tagout is performed. An affected employee **does not** perform servicing or maintenance on machines or equipment and **is not** responsible for implementing energy control procedures or applying locks or tags.

Authorized Employee - an employee who performs servicing or maintenance on machines or equipment and who implements energy control procedures, including the application of locks or tags. (Note: A single employee may be both authorized and affected if he/she performs servicing or maintenance under Lockout/Tagout on a machine or equipment he/she normally operates).

Capable of Being Locked Out - an energy isolating device is considered to be capable of being locked out if it meets **one** of the following criteria:

- it is designed in such way so that a lock can be attached
- it is designed with any other integral part through which a lock can be affixed
- it has a locking mechanism built into it

- it can be locked without dismantling, rebuilding, or replacing the energy isolating device or permanently altering its energy control capability. (For example, although many valves are not designed with an integral locking device, they can be secured with chains, blocking braces, or wedges, which can then be locked).

Energized - machines and equipment are energized when they are connected to an energy source or they contain residual or stored energy.

Energy-Isolating Device - a mechanical device that physically prevents the transmission or release of energy -- including, but not limited to: manually operated circuit breakers; disconnect switches; valves, and blocks. The term does not apply to pushbuttons, selector switches, or other control circuit devices.

Energy Source - any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Energy Control Procedure - a written procedure which contains the information and steps an Authorized Employee needs to follow in order to safely isolate equipment to perform servicing or maintenance under Lockout/Tagout. Note, only Authorized Employees are permitted to use the Energy Control Procedures.

Lockout - the act of padlocking and tagging an energy-isolating device in the off or safe position. In cases where more than one employee is involved, provision will be made so that each Authorized Employee can affix his/her own lock and tag.

"Other" Employees - all D&B/WFC employees who are not Authorized or Affected Employees.

Tagout - the act of placing an energy-isolating device in the off or safe position and placing a tag on it to indicate that the equipment **may not** be operated until the tag is removed.

4.0 RESPONSIBILITIES

The ***Health and Safety Coordinator (HSC)*** has an overall responsibility for the Lockout/Tagout Program. The HSC will coordinate Lockout/Tagout training for all authorized and affected employees, if necessary, and assess authorized employee's knowledge of the Lockout/Tagout Program.

The ***On-Site Health and Safety Representative (HSR)*** will:

- Be knowledgeable about the types and magnitude of hazardous energy sources and the hazards associated with the unexpected or unplanned start-up or

movement of machinery or equipment during maintenance, installation, adjustment, or servicing operation.

- Be knowledgeable in the methods to control hazardous energy, verify that each authorized and affected D&B/WFC personnel has received Lockout/Tagout training before they begin work in an area where Energy Control Procedures are used
- Ensure that D&B /WFC personnel correctly obtain, review and apply the appropriate Energy Control Procedures, when required, and maintain adequate supply of Lockout devices and equipment
- Be responsible for developing new or modify existing Energy Control Procedures for each job site, if required, and attached them to the Site-Specific Health and Safety Plan (HASP)
- Coordinate Lockout/Tagout operations which, involve outside contractors.

Authorized Employees – D&B/WFC Authorized Employees, if designated, are responsible to correctly apply Energy Control Procedures, including the application of locks or tags. Authorized employees will:

- Be knowledgeable about the types and magnitude of hazardous energy and the hazards employed with the unexpected or unplanned start-up or movement of machinery or equipment during maintenance, installation, adjustment, or servicing operations
- Be knowledgeable in the methods used to control hazardous energy (Energy Control Procedures)
- Notify affected employees prior to application of Lockout/Tagout devices and after the devices are removed
- Coordinate the Lockout/Tagout activities when a Lockout/Tagout operation continues beyond one (1) shift.

Affected and "other" employees are generally responsible for operating or working near machines upon which Lockout/Tagout operations are performed. Affected employees will:

- Understand the purpose of Energy Control Procedures and the importance of not attempting to start-up or use machines that have been locked or tagged.
- Recognize when Energy Control Procedures are being implemented.

5.0 GUIDELINES FOR LOCKOUT/TAGOUT

5.1 General

It is anticipated that for most jobs, D&B/WFC personnel will not be responsible for developing Energy Control Procedures. However, when working in the areas of potential hazardous energy release, each employee must recognize the types and magnitudes of hazardous energy sources and the hazards associated with the unexpected or unplanned start-up or movement of machinery or equipment. They must also observe safe work practices.

Only authorized employees are permitted to implement the Energy Control Procedures.

5.2 Work Practices

Following is a typical sequence to implement the Lockout/Tagout procedures.

a. *Prepare for Shutdown* - Authorized employees must review the applicable Energy Control Procedure. If a specific Energy Control Procedure does not exist for a machine then the HSC or designee must ensure that a procedure is developed

b. *Notify Affected Employees* - Authorized employees must verbally notify affected employees prior to application of lockout or tagout devices

c. *Shut Down Machinery or Equipment*

d. *Isolate Machinery or Equipment from Energy Source* - Place manually operated circuit breakers, disconnect switches, valves and related equipment into the "off" or safe position. Place blocks where necessary to physically isolate the machinery or equipment from its energy source to prevent the transmission or release of energy.

e. *Apply Lockout and/or Tagout Devices* - Each authorized employee or outside contractor involved in the work which requires the use of Lockout/Tagout must personally place his/her lock and identification tag on each identified energy isolating device. The tag must be filled out with the authorized employee's name, the date it was placed, and the reason for the Lockout/Tagout operation. Each authorized employee must maintain possession of the key to his/her lock during the entire work operation. Where an energy-isolating device is not designed to accept a lock, a signed and dated tag may be used according to procedures specified in Section 5.4. After applying locks and tags, the energy isolating devices must be tested to make certain they cannot be moved into the "on" position.

f. *Release Stored Energy* in air lines, water lines, etc by bleeding off excess pressure. Bleed-off valves must be locked and/or tagged out in the open position. Disconnected lines must be tagged out. Restrain potential energy using safety blocks.

g. *Verify that Machinery or Equipment is De-energized* - Using normal operating controls, attempt to start the machinery or equipment to make sure that it has been completely de-energized.

5.3 Release from Lockout/Tagout

Upon completion of work requiring the use of Lockout/Tagout procedures, the following sequence can be used to restore machinery or equipment to service:

a. *Check Equipment* - Following completion of the work, the authorized employees who performed the work must inspect the area around the machinery or equipment to ensure that all tools or other nonessential items have been removed, machine guards have been reinstalled, and the machinery or equipment components are operationally intact and safe to energize.

b. *Check Work Area* - The authorized employees who performed the work must inspect the work area to make certain all employees are safely positioned away from the machinery or equipment.

c. *Removal of Lockout/Tagout Devices* - Locks and/or tags must be removed from each energy isolating device by the authorized employee or outside contractor who placed it. If the authorized employee or outside contractor is not available to remove his/her own lockout/tagout device, use the Emergency Lock or Tag Removal Procedures described in Section 5.7.

d. *Restore Energy to Machinery/Equipment* - Place manually operated circuit breakers, disconnect switches, valves, etc. into the "on" position. Remove safety blocks

e. *Notify Affected Employees* - Authorized employees must verbally notify affected employees following removal of locks and tags and the re-energization of the machinery or equipment.

5.4 Use of a Tagout System Only

In cases where machinery or equipment **is not** capable of being locked out, it will be necessary to use a completed "Do Not Operate" tag to provide the highest level of safety available without the use of locks. The tag must be filled out with the authorized employee's name, the date it was placed, and the reason for the Tagout operation. Note that tags alone **may not** be used as a

substitute when the use of locks is specified in the applicable Energy Control Procedure. Only authorized employees are permitted to implement tagout. The following conditions apply to the use of tags without locks:

a. Only authorized D&B/WFC employees are permitted to place a "Do Not Operate" tag;

b. The tag must be placed at the same location that a lock would have been attached with a self-locking plastic or nylon tie wrap capable of withstanding at least 50 pounds of force;

c. The lockout tag can only be removed by the authorized employee who installed it. If the authorized employee is not available to remove his/her own tag, use the emergency lock or tag removal procedures in section 5.7.

5.5 Energy Control Procedures

Generally, Energy Control Procedures are developed by the client or the owner of the equipment and made available to D&B/WFC project personnel. If such procedures are not available, D&B/WFC can develop, if required, a site-specific written Energy Control Procedure, which will contain the steps and techniques to be used by authorized employees to properly de-energize machinery and equipment prior to the initiation of work.

When the operations involves more than one (1) authorized employee or outside contractor, provision must be made to ensure that each individual can place his/her lock and tag on each energy isolating device identified in the applicable Energy Control Procedure.

5.6 Shifts or Personnel Change

When Lockout/Tagout must continue beyond one (1) shift or when there is personnel change, the following procedures apply:

a. At the end of the shift, each authorized employee who is leaving work must remove his/her "Do Not Operate" tag(s) from each energy isolating device. Each oncoming authorized employee must affix his/her own personal "Do Not Operate" tag(s) on the padlock(s) to which his/her key corresponds and maintain possession of the padlock key(s)

b. Verify that machinery or equipment is de-energized using the procedures described in Section 5.2 g

c. Proceed with operations.

5.7 Emergency Lock or Tag Removal

In the event that the authorized employee or outside contractor who attached a lock or tag is not available to unlock or remove a lock or tag, the HSC, HSR or a designee may remove the lock or tag only using the following procedures:

a. Verify that the authorized employee or outside contractor who placed the lock or tag is not at the facility

b. Attempt to contact the authorized employee or outside contractor whose lock is still in place

c. Ensure that all work has been completed and the equipment machinery is safe to return to service

d. The HSC, HSR or a designee may cut the lock off using a saw or bolt cutters. Where tagout only is being used, tags may be removed by designated personnel using appropriate methods

e. Ensure that the authorized employee or outside contractor whose lock or tag has been removed is informed before he/she returns to work

f. Review the lockout/tagout requirements with the authorized employee or outside contractor who left their lock or tag on the isolated equipment

5.8 Testing and Positioning of Machines and Equipment

In some situations, it may be necessary for authorized employees to operate equipment for testing or positioning before it is ready to be used. These situations require the temporary removal of Lockout/Tagout devices only during the limited time necessary for the testing or positioning. Use the following procedures for testing and positioning of machines or equipment:

a. Release the machine, equipment or component from Lockout/Tagout

b. Perform the testing and positioning

c. De-energize and re-apply locks and tags.

5.9 Hardware and Tags

If Logout/Tagout will be employed by D&B/WFC authorized employees, the HSC is responsible for providing the resources to ensure that an adequate supply of Lockout/Tagout devices and

equipment will be maintained for each project site. Lockout/Tagout hardware is issued to all authorized employees for use with this program. The HSC or his/hers designee will maintain a master list of all lockout padlocks and keys.

6.0 EMPLOYEE TRAINING

An initial training program will be provided to all authorized and affected employees, as required. The HSC has overall responsibility for coordinating employee training, including as needed "refresher" training.

Each HSR must verify that all employees have received initial lockout/tagout training prior to starting work involving the control of hazardous energy. The HSC must identify any employees who require re-training when there is a change in Energy Control Procedures, a change in equipment or processes which presents a new hazard, or when observations reveal that there are inadequacies in employees' knowledge or use of Energy Control Procedures.

Authorized employees will receive site specific training in the recognition of hazardous energy, the sources, types and magnitudes of energy and the elements of the Energy Control Procedures. Affected employees will receive training in the purpose and use of Energy Control Procedures.

7.0 CONTRACTORS/SUBCONTRACTORS

Outside contractors and subcontractors performing operations which require the use of Lockout/Tagout must use ***THEIR OWN*** Energy Control Procedures

8.0 PERIODIC INSPECTIONS OF ENERGY CONTROL PROCEDURES

D&B/WFC will conduct periodic evaluations of the Lockout/Tagout Program including a review of Energy Control Procedures, as applicable. Authorized Employee(s) (other than those utilizing the Energy Control Procedure) will perform periodic inspections.

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1.0 PURPOSE

The purpose of these guidelines is to provide general reference information regarding the establishment of site control procedures and work zones for hazardous waste sites.

2.0 SCOPE

These guidelines are applicable to D&B/WFC activities at hazardous waste sites. Additional precautions may be identified during the development of the site-specific HASP.

3.0 DEFINITIONS

Contaminated Materials - Contaminated materials are defined as any by-products of a field investigation that are suspected or known to be contaminated with hazardous substances. These by-products include such materials as decontamination solutions, disposable equipment and clothing, drilling muds, well-development fluids and spill-contaminated materials.

Exclusion Zone - Zone that contains or may contain contamination.

Contamination Reduction Zone - Zone located between the exclusion zone and the support zone that provides a transition between contaminated and clean zones.

Support Zone - A non-contaminated or clean part of the site.

4.0 RESPONSIBILITIES

The *Health and Safety Coordinator (HSC)* - The HSC is responsible for ensuring that these guidelines are incorporated in the Site-Specific HASP and that training is available to D&B/WFC site personnel in delineation of work zones.

The *Health and Safety Representative (HSR)* – The HSR or a designee is responsible for implementing/enforcing/designating zones on-site.

The *Employees* – all employees working at the site and visitors must comply with the requirements of the site zones, such as proper PPE and limited personnel access, as determined by the HSC or HSR.

5.0 GUIDELINES

5.1 Work Zones

5.1.1 Introduction

To reduce the accidental spread of hazardous substances by workers from the contaminated areas to non-contaminated or clean areas, work zones for specific types of operations should be delineated, and the flow of personnel and equipment among the zones should be controlled. Established work zones will ensure that personnel and equipment are properly protected against

the hazards present in their work area(s); that work activities and contamination are confined to appropriate areas; and that the personnel can be quickly located and evacuated in an emergency. Hazardous waste sites may be divided into as many zones as needed to meet operational and safety objectives. The typical work zones found at hazardous waste site are:

- Exclusion or Hot Zone - the contaminated or potentially contaminated area
- Contaminant Reduction Zone - the area where decontamination takes place
- Support Zone - The non-contaminated area where workers should not be exposed to site contaminants.

5.1.2 Exclusion Zone

The exclusion or hot zone contains or may contain contamination. The outer boundary of the Exclusion Zone is called the Hotline. It should be established following the guidelines below:

- The location of hazardous substances and surface drainage
- The data from the initial site survey
- The results of soil and water sampling
- The physical area necessary for site operations
- Meteorological conditions and the potential for contaminants to be carried by wind from the contaminated area.

The Hotline should be clearly marked by lines, placards, hazard tape, or signs and should be enclosed by physical barriers such as chains, fences, or ropes. Access control points on the periphery of the Exclusion Zone regulate the flow of personnel and equipment from zone to zone and ensure that proper procedures for entering and exiting the site are followed. Separate entrances and exits help to segregate movement into and out of the Exclusion Zone.

The Exclusion Zone can be subdivided into different areas of contamination based on known or anticipated hazard type and degree, or on the compatibility of waste streams. Such subdivision allows flexibility in health and safety requirements, operations, decontamination procedures, and use of resources. The level of PPE required in each subdivision may vary, as may the level of PPE required for different job assignments within a subdivision. The level of protection must be

specified and posted for each job assignment with each subdivision. When appropriate, different levels of PPE within the Exclusion Zone promote flexibility, effective and cost-effective operation while maintaining a higher degree of health and safety

5.1.3 Contaminant Reduction Zone (CRZ)

The Contaminant Reduction Zone or Decontamination Zone is the transition area between the contaminated and clean areas. The distance between the Exclusion and Support Zones provided by the CRZ and the proper decontamination of workers and equipment, limit the physical transfer of hazardous substances into the clean areas.

Decontamination procedures take place in a designated area within the CRZ, called the Contamination Reduction Corridor (CRC) that begins at the Hotline. Two decontamination areas may be set up within the CRC, one for personnel and small equipment and the other for heavy equipment. Access into and out of the CRZ and to and from the Exclusion Zone is through specified Access Control Points.

The boundary between the Support Zone and the CRZ is called the Contamination Control Line. This boundary separates the possibly low contamination area from the clean or non-contaminated Support Zone. Access to the CRZ from the Support Zone can be achieved through two Access Control Points, one for personnel and one for equipment. Personnel entering the CRZ must wear personnel protective clothing and equipment, as required by the Site-Specific HASP. To reenter the Support Zone, workers should remove any protective clothing and equipment and exit through the designated Access Control Point.

The CRZ must be designed to accommodate the following activities:

- Decontamination of equipment, personnel and samples;
- Emergency response, such as transport for injured personnel (safety harness, stretcher), first-aid equipment (bandages, blankets, eye wash, splints, water, etc.), containment equipment (absorbent, fire extinguisher, etc.);
- Equipment resupply, such as air tanks, personnel protective clothing and equipment (booties, gloves, chemical suits, etc.), sampling equipment (bottles, soil augers, coolers, drum thiefs, etc.), and tools;
- Sample packaging and preparation for on-site and off-site analysis;

- Worker temporary rest area, including toilet facilities, benches, chairs, liquids, shade and/or shelter. Water and other potable liquids should be clearly marked and stored properly to ensure that all glasses and cups are clean. Wash facilities should be located near drinking facilities to allow employees to wash before drinking. Drinking, washing, and toilet facilities should be located in a safe area where protective clothing can be removed. Facilities should be cleaned and inspected regularly. Maintenance workers should take appropriate protective measures; and

- Drainage of water and other liquids used during decontamination.

5.1.4 Support Zone

The Support Zone is the location in which administrative and other support functions essential to site operations are conducted. Any function that need not or cannot be performed in a hazardous or potentially hazardous area is performed here. Personnel may wear normal work clothes within this zone because any potentially contaminated clothing, equipment, and samples must remain in the CRZ until decontaminated.

Support Zone personnel must alert the proper agency in the event of an emergency. All emergency telephone numbers, change for telephones (if necessary), evacuation route maps, hospital route maps, and vehicle keys should be kept in an accessible location within the Support Zone.

Facilities located in the Support Zone should be placed after considering factors such as:

- Accessibility (topography, open space available, location of highways and railroad tracks, ease of access for emergency vehicles)

- Resources (adequate roads, power lines, telephones, shelter, and water)

- Visibility (line-of-sight to activities in the Exclusion Zone)

- Wind direction (upwind of Exclusion Zone, if possible)

- Distance (as far from the Exclusion Zone as practical).

5.2 Site Security

Effective site security prevents the exposure of unauthorized/unprotected people to site hazards, protects against increased risk from vandals or persons illegally abandoning waste on the site, prevents theft, and promotes safe working procedures.

Site security during working hours can consist of the following:

- Maintain security in the Support Zone and at Access Control Points
- Establish an identification system to identify authorized persons and limitations to their approved activities
- Assign responsibility for enforcing authority for entry and exit requirements
- Erect a fence or other physical barrier around the site, if possible
- If the site is not fenced, post signs around and have guards patrol the perimeter. Guards must be fully apprised of the hazards involved and be trained in emergency procedures
- Approve all visitors to the site. Make sure each has a valid purpose for entering the site. Have trained site personnel accompany site visitors at all times and provide them with appropriate PPE.

Site security after hours can consist of the following:

- If possible, assign trained in-house technicians for site surveillance. They should be familiar with the site, the nature of work, the site's hazards, and respiratory protection techniques.
- If necessary, use security guards to patrol the site boundaries. Such personnel may be less expensive than trained technicians, but may require additional training in safety procedures relative to hazardous waste sites;
- Enlist public enforcement agencies, such as the local police department if the site presents a significant risk to local health and safety; and
- Secure equipment

5.3 Site Control Methods

When site hazards and/or work activities may potentially create exposure to site workers and the public, control measures should be implemented. Control measures should be initiated at any time when air monitoring indicates the potential for migration of emissions off-site or outside the immediate work area. The procedures should be designed to control emissions before off-site migration, through implementation of engineering and work practice controls as well as defensive measures. Listed below are examples of control measures.

- Limit the area of open excavation or intrusive activities
- Areas excavated are backfilled or covered with a minimum 6 mil impermeable membrane
- Working face of excavation is a moderate slope in compliance with excavation regulations
- Exposed sides of excavation or intrusive activities where work is not conducted are covered
- Use fine mist to keep down dust as well as VOC's
- Keep haul distance of excavated materials to as short a distance as possible
- Immediately cover excavated material stockpile.

6.0 REFERENCES

1. CFR 29 1910.120

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1.0 PURPOSE

To provide guidance for the implementation of a comprehensive Hazard Communication Program in order to effectively communicate the chemical hazards to be encountered at D&B/WFC office and project locations.

2.0 SCOPE

Applies to all D&B/WFC sites.

3.0 DEFINITIONS

Affected Employees - an employee who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies.

4.0 RESPONSIBILITIES

Employees - Observe label warning and adhere to established safety procedures.

Health and Safety Coordinator (HSC) - The HSC is responsible for the implementation of the Hazard Communication Program and compliance with the OSHA Hazard Communication Standards, 29 CFR 1910.1200 and 29 CFR 1926.

On-Site Health and Safety Representative (HSR) - The HSR is responsible for maintaining and updating site-specific chemical inventory list, assuring labeling is adequate, obtaining and maintaining MSDS, notifying D&B/WFC personnel of the hazards associated with specific assignments, and reviewing areas with D&B/WFC personnel where a potential hazard may be encountered.

5.0 GUIDELINES

5.1 Introduction

These guidelines should be used to communicate chemical hazards to be encountered at D&B/WFC work sites, assure personnel access to information on chemical hazards, and familiarize them with procedures for the safe handling of hazards in the workplace.

5.2 Hazard Determination

Hazard assessment of chemicals used by D&B/WFC are made by the suppliers and manufacturers of these chemicals and communicated to D&B/WFC via Material Safety Data Sheets.

5.3 Chemical Inventory List

A list of potentially hazardous materials will be included with the site-specific HASP or other applicable project documents and shall contain, at a minimum, the following:

- Product names
- Hazardous components
- Manufacturer's identification
- Location used

After the initial determination, the Hazard Communication inventory list will be updated annually. New chemicals shall be added to the list when received.

5.4 Labels

5.4.1 Incoming Products

Products arriving from chemical manufacturers and/or distributors shall be inspected by receiving personnel to assure that:

1. The labels and warnings are appropriate, legible, in English, and prominently displayed on each container.

2. The existing labels have not been removed or defaced.

The HSC or HSR must be notified if a container arrives without a label; the label is illegible; or the label does not identify the chemical, supply the name and address of the manufacturer or list hazard warnings.

This is to be completed before the product is used so that its contents may be assessed and marked appropriately.

5.4.2 Transfer Containers

When a hazardous chemical is transferred from its primary container to a new one, the transfer container must be adequately labeled.

5.5 Material Safety Data Sheets

Copies of material safety data sheets (MSDS) for all chemicals being used on each site shall be accessible to employees working at that site. Each MSDS shall be in English and will contain the following information:

1. Manufacturer's name, addresses and telephone number

2. Name and signature of sheet's preparer

3. The date of preparation or revision of the MSDS

4. Product identification using chemical, common, and trade names (must include the same name on the label)

5. Chemical Abstract Service (CAS) Number

6. Chemical formula

7. Chemical family

8. Hazardous ingredients of products as defined by OSHA according to toxicity, flammability, and reactivity. If the hazardous chemical has not been tested as a whole, the chemical and common name(s) of all ingredients which have been determined to be a health hazard, and which comprise 1% or greater of the composition shall be listed (except the chemicals identified as carcinogens shall be listed if the concentration is 0.1% or greater).

9. Physical data including vapor pressure, flash point, specific gravity, and boiling point.

10. Fire and explosion data including flammable limits in air, autoignition temperature, specific recommendations on the types of fire extinguisher(s) to be used and/or avoided, and special fire fighting procedures.

11. Health hazard information including the primary route(s) of exposure, established exposure limits (listed as the permissible exposure limit (PEL) or the threshold limit value (TLV)), potential adverse health effects of exposure, signs and symptoms of exposure, and medical conditions aggravated by exposure and whether the chemical is listed as a carcinogen by the National Toxicology Program (NTP) or the International Agency for Research on Cancer (IARC) or by OSHA.

12. Precautions for safe handling and use including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for clean up of spills and leaks.

13. Control measures including engineering controls, work practices and personal protective equipment.

14. Emergency and first aid procedures.

Requests for copies of MSDS by any employee will be honored within 72 hours.

5.6 Training

All D&B/WFC employees, who may be exposed to chemicals, shall be trained regarding the characteristics and safe handling of hazardous chemicals in the workplace at the time of initial assignment, periodically thereafter, prior to assignment of non-routine tasks, and whenever a new hazard is introduced into the workplace environment.

The following information shall be provided in the training course:

1. Requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200)
2. Location and availability of the D&B/WFC Hazard Communication Program
3. Details of the D&B/WFC Hazard Communication Program including:
    a. An explanation of the labeling system and how to read labels
    b. An explanation of the MSDS and how to obtain and use them to find the appropriate hazard information
    c. The location of toxic chemicals to which employees may be exposed
    d. The name(s) of toxic substances present in the work area including generic, chemical, common, and trade names
    e. The physical and chemical properties of toxic substances to which employees may be exposed
    f. Definition of terms (e.g. exposure, TLV, PEL, etc.)
    g. Short and long term health effects of exposure to the hazardous materials
    h. Symptoms of exposure
    i. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the workplace (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance, or odor of hazardous materials when released)
    j. Safe handling of hazardous materials

k. Emergency procedures to follow if exposed to hazardous materials

l. How to lessen or prevent exposure to hazardous chemicals through safe work practices and personal protective equipment (PPE).

5.7 Non-Routine Tasks

In the event that an employee may be required to perform tasks that are not part of normal duties the employee will be given information about hazards involved with such activities. This information shall include:

1. Specific chemical hazards
2. Protective measures the employee can take
3. Measures that D&B/WFC has taken to lessen the hazards including ventilation, respirators, presence of another employee, and emergency procedures.

5.8 Recordkeeping

The following records must be maintained:

1. A record of Hazard Communication Employee Training Program and attendance
2. The chemical inventory list
3. MSDSs locations

5.9 Informing Contractors and Subcontractors

Each contractor and subcontractor will be provided with the following information as part of their initial contract:

1. List of hazardous substances they may encounter while on the job
2. MSDS for each chemical on the list

Each contractor and subcontractor shall be informed of:

1. Hazardous chemicals to which they may be exposed

2. Measures that may be taken to lessen the possibility of exposure

3. First aid/emergency procedures

The contractor and subcontractor will sign a statement confirming that they have reviewed the above information.

Contractors and subcontractors should provide MSDS for any chemicals brought into a D&B/WFC site and should ensure that appropriate labels are on all containers. D&B/WFC employees will be informed of any potential hazards with which they might be expected to come into contact with.

5.10 Informing Visitors

Visitor access shall be restricted. All visitors are required to check in with the appropriate authority. Visitors should be provided with any necessary PPE and the following information:

1. Hazardous chemicals to which he/she may be exposed

2. Measures the visitor may take to lessen the possibility of exposure including the proper use of the PPE

3. D&B/WFC policies and procedures to be followed to reduce the risks

4. First aid/emergency procedures.

6.0 REFERENCES

1. OSHA 29 CFR 1910.1200
2. OSHA 29 CFR 1926.59

APPENDICES

Appendix A –Contractor Sign-Off Form

Project/Name:

Date

I, _____, as an authorized representative of _____ have received a copy of the following information from the D&B/WFC project representative:

1. List of hazardous substances that may be encountered while on the job
2. MSDS sheet for each chemical on the list.

The D&B/WFC project representative has informed me of:

1. Hazardous chemicals to which we may be exposed
2. Measures I may take to lessen the possibility of exposure
3 First aid/emergency procedures.

I will ensure that the other representatives from our company receive this information before beginning work on the project.

If we bring any chemicals onto the D&B/WFC project site, we will ensure MSDS are available on site and that the appropriate labels are on all containers. We will alert any D&B/WFC employees working with us of the potential hazards if there is a chance that they will come into contact with such hazards.

Name

Title

_____

Signature

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1.0 PURPOSE

The objective of these guidelines is to provide general reference information regarding the control and disposal of contaminated materials generated during site investigation activities.

2.0 SCOPE

Applies to all D&B/WFC work sites.

3.0 DEFINITIONS

Contaminated Materials - Contaminated materials are defined as any by-products of field operations that are known or suspected to be contaminated with hazardous substances. These by-products include materials such as decontamination solutions, disposable equipment and clothing, drilling debris, well-development fluids and spill-contaminated materials.

4.0 RESPONSIBILITIES

Health and Safety Coordinator (HSC) is responsible for revising these guidelines to include new OSHA updates. The HSC is also responsible for ensuring that proper training is available to D&B/WFC employees regarding proper disposal procedures and that a Site-Specific HASP incorporates these guidelines.

Health and Safety Representative (HSR) or his/her designee (such as Field Operations Manager) is responsible for the correct implementation of these procedures in the field.

5.0 GUIDELINES

Field investigation activities often result in the production or movement of contaminated material that must be properly managed to protect field personnel, the public and the environment. These guidelines address the proper management of this material.

5.1 General

As a general policy, it is wise to select site investigation methods that minimize the generation of contaminated material. Until sample analysis is complete, it must be assumed that all produced material suspected to be contaminated would always require containment. The Site-Specific HASP for a site investigation activities should include control procedures for contaminated material. It should address the type of contamination, estimated amounts that would be produced, containment equipment and procedures and storage or disposal methods.

5.2 Sources of Contaminated Material and Containment Methods

5.2.1 Decontamination Solutions

All decontamination solutions and rinses must be assumed to contain hazardous chemicals associated with the site, unless there is analytical or other data to the contrary. The solution volumes could vary from a few gallons to several hundred gallons in some cases.

The decontamination solutions are typically generated from:

- Personnel decontamination
- Sampling equipment decontamination
- Large equipment decontamination.

Depending upon site conditions, contamination type and site requirements, the decontamination solutions may be allowed to be drained back into the contaminated portion of the site. In some situations the decontamination solutions must be disposed off site. The Site-Specific HASP must include whether the fluids from personnel and equipment decontamination activities should be contained and disposed of, contained and left on the site for future disposal, or allowed to be drained back into the soil.

The DOT approved drums only should be used for the transportation of decontamination fluids.

5.2.2 Disposable Equipment and Clothing

Disposable equipment that could be contaminated during the site investigation typically includes protective suits, gloves, boots, broken sample containers, paper towels, and spent respirator cartridges. These items can be temporarily stored in plastic bags and transferred to 55-gallon drums (with lids) at the end of the day. These containers shall be secured at the end of each workday.

5.2.3 Drilling Fluids and Well Development Fluids

Drilling, well development and well evacuation fluids are generated during or as a result of groundwater monitoring, well installation and sampling activities. Since these fluids are potentially contaminated they are also required to be contained for eventual treatment or disposal.

The volumes of drilling, well development and well evacuation fluids depend on the well diameter and depth, groundwater characteristics, geologic formations, and drilling methods utilized. There are no simple mathematical formulas available to accurately predict these volumes. It is best to rely on the experience of reputable well drillers familiar with local conditions and the selected well installation techniques.

Drilling fluid (mud) is stored in a container commonly referred to as a mud pit (tub). This mud pit consists of a suction section from which drilling fluid is pumped to the drill pipe and back to the settling section of the mud pit. In the settling section, the well cuttings are allowed to settle. If the mud pit is lined to prevent leaks, it can also be used to contain possibly contaminated drilling fluids. Spent drilling fluids can then be pumped directly from the mud pit to 55-gallon drums for treatment and/or disposal. The sediments that accumulate in the settling section are transferred into drums or other similar containers.

If ground pits are used, they shall not extend into the natural water table. They should be lined with a bentonite-cement mixture followed by a layer of flexible impermeable material such as plastic

sheeting compatible with the wastes. Depending on site conditions and the size of the pit, it may be advantageous to excavate the entire pit for disposal and backfill the excavation with clean fill.

When the above ground tank or the inground pit is used, a reserve tank or pit should be located at the site as a backup system in the event of leaks, spills, and overflows. In addition, surface drainage shall be planned so that any leaks, spills, and overflows can be controlled within the immediate area of the drill site.

The containment procedure for well development fluids is similar to that for drilling fluids. The volume of contaminated fluid will be determined by the method of development. Bailing a new well usually generates less fluid volume than processes using backwashing. When bailing, the removed fluids can be directly placed in drums. For backwashing, a T-section can be fitted on the well casing to direct the overflow to the drums.

5.2.4 Soil Cuttings

Contaminated soil cuttings, generated while performing field investigation activities, typically consist of cuttings from borings, test pit excavations, and discarded soils from sampling activities. These soils should be contained in drums for further treatment or disposal.

5.2.5 Spill-Contaminated Materials

A spill is always possible when a site investigation involves opening and moving containers of liquids. Contaminated sorbents and soils resulting from spills must be containerized for disposal. Small quantities of spill-contaminated materials are typically contained in drums, while larger quantities can be placed in lined pits or other impermeable structures. In some cases onsite containment may not be feasible, in which case, the immediate transport to an approved disposal site will be required.

5.3 Disposal of Contaminated Materials

Actual disposal techniques for contaminated material are the same as those for any hazardous substance: incineration, landfill, treatment, etc. All involved parties must agree on determining who is responsible for disposal before the fieldwork starts. Without any previous agreement, the contractor must provide for the disposal of wastes resulting from field activities. Therefore, the contractor is responsible for subcontracting with reputable waste transporters and for assuring compliance with RCRA requirements whenever it is necessary to containerize and remove

hazardous wastes. To expedite the disposal process the following should be completed prior to field activities:

1. Identify authorized, permitted facilities for proper treatment, storage, and/or disposal of wastes
2. Obtain generator identification numbers
3. Prepare the required manifests.

Another consideration in selecting disposal methods for contaminated materials is whether the disposal can be incorporated into subsequent site cleanup activities. In this case, the contaminated material generated during the investigation activities can be stored at the site for future disposal with other contaminated site materials. If the contaminated material will be stored onsite, then containment suitable for long-term storage must be provided. Site conditions, such as surface drainage, security and soil type as well as meteorological conditions must be considered to design proper storage.

APPENDIX B

FIELD SIGN-OFF FORM

FIELD SIGN-OFF FORM

Each field team member shall sign this section after the site-specific training has been completed and before being permitted to work on-site.

I have read and understand this Site-Specific Health and Safety Plan. I will comply with all of its provisions.

Project: PSC – Chemical Pollution Control, LLC of New York (CPC)

Name (Print)	Signature	Date

APPENDIX D

ENGINEERING AND INSTITUTIONAL CONTROL INSPECTION FORM

ENGINEERING AND INSTITUTIONAL CONTROL INSPECTION FORM

I. Site Background Information

A. Site Name and Location:

Site name as it appears on the Environmental Easement*:* _____

Name of the current property owner(s): _____

Site Street Address: _____

Municipality (-ies): _____ County (-ies): _____

Blocks: _____

Lots: _____

Source information obtained from: _____

B. Person responsible for preparing Engineering and Institutional Control Evaluation Form:

Person's Name: _____

Person's Title: _____

Company Name: _____

Relationship to the Site (check as appropriate): Owner _____ Operator_____

Lessee _____ Person Who Conducted the Cleanup _____
Other (describe)_____

Street Address: _____

City: _____ State: _____

Telephone Number: (___) ___-____

Fax Number: (___) ___-____

E-mail Address:_____

C. Case Specific Information (**Complete all that apply**)

- Site Name: _____
- Site Registry Number: _____
- Date of final Remediation Report and/or Certificate of Completion:_____
- Name and program of assigned Project Manager at issuance of Environmental Easement:
  _____

D. Existing Site Conditions

- Describe the physical characteristics of the site (features, topography, drainage, vegetation, access, etc.). If necessary, attach additional sheets.

_____
_____
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- Describe the current site operations/use. If necessary, attach additional sheets.

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- Describe visual integrity/condition engineering control. If necessary, attach additional sheets.

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II. Protectiveness Evaluation

A. Environmental Easement and Engineering Control Information (Complete below)

- Provide the following information for the recorded Environmental Easement:

  Book Number: _____

  Page Number: _____

  Date the date the Environmental Easement was filed in the office of the county recording officer: _____

- Have any amendments and/or additional filings been recorded that may modify or supersede the Environmental Easement?

Yes ____ No ____

If "Yes", provide an explanation. If necessary, attach additional sheets.

_____

_____

_____

_____

_____

B. Evaluation of Engineering and Institutional Controls

1. Zoning or Land Use Changes (Complete below)

a. Land use at the time the Environmental Easement was filed (check all that apply):

Non-Residential ____ Residential _____ Agricultural _____ Other _____

b. Current land use (check all that apply):

Non-Residential ____ Residential _____ Agricultural _____ Other _____

c. Has there been an actual or pending zoning or land-use change?

Yes ____ No ____

2. Inspections (Complete below)

Have periodic inspections of the site identified any excavation or other disturbance activities that have taken place within the restricted areas?

Yes____No_____

Date(s) of Disturbance: _____

Duration of Disturbance: Years ____ Months ____ Days ____

Date the NYSDEC was notified: _____

Date Work Plan Approved: _____

Description of the disturbance and methods to address the disturbance. If necessary, attach additional sheets.

_____

_____

_____

Name of Contact Person Relative to the Disturbance:

_____

Title: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Telephone Number: _____

Email Address: _____

3. Changes to Laws and Regulations (Complete below)

a. Are there any subsequently promulgated or modified environmental laws or regulations, which apply to the site?

Yes ____No ____

b. If "Yes", has the evaluation also determined that the Environmental Easement and engineering control, as applicable, meets the requirements of the new laws and regulations?

Yes____No_____

c. The Environmental Easement and engineering control, as applicable that did not meet the requirements of the new laws and regulations has been addressed in the following manner to bring them into compliance. If necessary, attach additional sheets.

_____

_____

_____