PROPOSED REMEDIAL ACTION PLAN

Chemical Pollution Control
RCRA Corrective Action Program
State Superfund Project
Bay Shore, Suffolk County
Site No. 152015
December 2015

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

Chemical Pollution Control
Bay Shore, Suffolk County
Site No. 152015 EPA ID No.
NYD082785429 December 2015

SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or feasibility study (FS). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the RI indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the remedy proposed by this Proposed Remedial Action Plan (PRAP). A No Further Action remedy may include site management, which will include continued operation of any remedial system installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site. This PRAP identifies the IRM(s) conducted and discusses the basis for No Further Action.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment. The New York State Hazardous Waste Management Program (also known as the RCRA Program) requires corrective action for releases of hazardous waste and hazardous constituents to the environment. This facility is subject to both of these two programs and this document meets the RCRA program requirements for the draft Statement of Basis.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Parts 373 (RCRA) and 375 (State Superfund). This document serves as the RCRA Program draft Statement of Basis for the corrective action(s) completed at the site, as well as the State Superfund PRAP. This document is a summary of the information that can be found in the site-related reports and documents in the

document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Deer Park Public Library
44 Lake Avenue
Deer Park, NY
Phone: (631) 586-3000

A public comment period has been set from:

12/31/2015 to 2/11/2016

A public meeting is scheduled for the following date:

1/21/2016 at 7:00 PM

Public meeting location: Brentwood Public Library
34 Second Avenue
Brentwood, NY 11717

At the meeting, the findings of the remedial investigation (RI) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 2/11/2016 to:

George Momberger
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
george.momberger@dec.ny.gov

The Department may modify the proposed remedy presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The Chemical Pollution Control (CPC) Site is located at 120 South Fourth Street in a heavily developed portion of Bay Shore, Suffolk County, about 2,500 feet west of Sagtigos State Parkway. The site is surrounded by commercial and industrial properties, with public water and sewer available throughout the area. The Sonia Road Landfill, (Site Id# 152013), a class 4 inactive hazardous waste disposal site, is located approximately 500 feet to the south of this site.

Site Features:
The site occupies approximately 1 acre and is fenced and graded. The CPC facility was demolished in 2012.

Current Zoning: The site is vacant and zoned commercial.

Past Use(s) of the Site:
Prior to 1940, the site was agricultural land. From 1940 to 1960, the site was part of larger parcel occupied by the Hubbard Sand and Gravel quarry. From 1960 to 1975, the site was occupied by; a bus company, a truck service company, and a milk bottling and distribution facility.
In 1975, CPC leased the property and existing building for the operation of a facility for the treatment, storage, and transfer of hazardous wastes. CPC operated as a RCRA permitted hazardous waste storage facility under NYSDEC Permit Number 1-4728-00086-00002. There were twenty one SWMUs consisting of; eight storage cells (SC-1 through SC-8), four storage areas (FS-1, WA-I, WA-II, and NH-1), six storage tanks (ST-1, ST-2, ST-3, ST-5, ST-6, and ST-7), and three loading areas (LA-2, LA-3, and LA-4) permitted to store and/or treat hazardous wastes. The tanks were used to store and blend oils, non-halogenated solvents, other ignitable hazardous waste, various organic wastewaters, different types of acids, and alkalis of sodium hydroxide and calcium hydroxide. In 2012 CPC ceased operations at the site, RCRA clean closed the tanks, piping, and other appurtenances subject to the RCRA permit, and demolished the on-site building.

Site Geology and Hydrology:
The unconsolidated geologic deposits underlying Suffolk County consist of clay, sand, silt, and gravel overlying consolidated bedrock. The overlying unconsolidated sediments form, in ascending order, the Raritan and Magothy Formations. The Raritan Formation consists of the Lloyd Sand and Raritan Clay. The Lloyd aquifer consists of course sand, gravel, and lenses and

layers of silty and sandy clay. The Raritan Clay serves as a confining unit for the underlying Lloyd Sand. The saturated sands of the Lloyd, Magothy, and Upper Glacial deposits form Long Island's three major aquifers and constitute Long Island's Sole Source aquifer. Ground water flow is to the southeast. The depth to ground water is approximately 9' below grade.

A site location map is attached as Figure 1. Site map is included in Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) is/are being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include: Philips Services Corporation, PSC LLC, and CPC

CPCs current permit, DEC permit Number 1-4728-00002, expired on June 21, 2015. CPC has opted not to renew their permit. After the remedy is selected, the Department will approach the PRPs to implement the selected remedy. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,

- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

1,1 dichloroethene	DDT
tetrachloroethene (PCE)	silver
trichloroethene (TCE)	zinc
chromium	dieldrin
lead	1,2-dichlorobenzene
DDE	phenol

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

6.2: Interim Remedial Measures

An interim remedial measure (aka as an interim corrective measure for RCRA) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision/Statement of Basis.

The following interim remedial measures IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM - RCRA Interim Corrective Action

Prior to implementation of IRMs all on-site structures, tanks, and pads were RCRA clean closed, demolished, and disposed off-site. Twenty one SWMUs consisting of; eight storage areas (SC-1 through SC-8), four storage areas (FS-1, WA-I, WA-II, and NH-1), six storage tanks (ST-1, ST-2, ST-3, ST-5, ST-6, and ST-7), and three loading areas (LA-2, LA-3, and LA-4) were addressed under clean closure.

Excavation:
In the fall of 2012 a total of eleven pre-determined areas beneath and surrounding the demolished CPC building were excavated by CPC's contractor to pre-determined depths based on sampling data of two to eight feet below grade. Excavation and off-site disposal of contaminant source areas, including: removal of any underground storage tanks (USTs), soils which exceed the restricted residential soil cleanup objectives (RRSCOs), as defined by 6 NYCRR Part 375-6.8 for site contaminants were excavated and transported off-site for disposal. Post excavation confirmatory samples were collected to document that SCOs were achieved. Approximately 3,037 cubic yards of contaminated soil were removed from the site. On-site soil meeting the above excavation criteria was used to backfill the excavation. Figure 3 shows the locations of post excavation soils samples. Table 1 lists the results of the post excavation confirmatory soil sampling.

In-Situ Chemical Oxidation:
In the fall of 2013 in-situ chemical oxidation (ISCO) was implemented by CPC's contractor to treat chlorinated volatile organic compounds (CVOCs) in groundwater. Sodium permanganate solution was injected into the subsurface to destroy the contaminants in an approximately 10,100 square foot area located to the west and south of the former CPC building. Injections were conducted using a Geoprobe. Eighty injections were advanced to a depth of 20 feet (gw at eight feet) and approximately 250 gallons of sodium permanganate solution was injected in each injection point. Figure 4 shows the locations of the groundwater monitoring wells and the results from the April 2014 post ISCO groundwater monitoring analysis.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary.

Nature and Extent of Contamination:
This site has been remediated under an Interim Corrective Measure (ICM). No identified environmental or public health threats from this site remain unaddressed, as detailed below.

Interim Remedial Measures were completed in the fall of 2013 and the draft Final Corrective Measures Report was submitted in December 2013. All on-site structures, tanks, and pads were RCRA clean closed, demolished, and disposed off-site as detailed in the 2013 Interim Corrective Measures Report. As part of the remedial action approximately 3037 cubic yards (4693 tons) of contaminated soils were excavated and disposed off-site.

Soil: Post excavation sidewall and base confirmatory sampling verified that soils remaining on-site meet the Unrestricted SCOs for all target analyte list metals and all target compound list organics with the following exceptions: silver, chromium, lead, zinc, and dieldrin exceeded the unrestricted SCOs but are below the restricted residential SCOs.

Groundwater: Following excavation and site restoration an ISCO IRM was conducted to address CVOC contamination of ground water. As of the April 2014 groundwater sampling event the Ambient Water Quality Standards and Guidance Value of 5.0 ppb is exceeded only for tetrachloroethene at 6.5 ppb in one of the four downgradient monitoring wells. No other site related contaminants were found to exceed applicable groundwater standards.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Measures are in place to control the potential for coming in contact with subsurface soil and groundwater contamination remaining on the site. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. The potential exists for off-site migration of site-related contaminants via soil vapor intrusion into indoor air of an adjacent building.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site were:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

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

SECTION 7: SUMMARY OF PROPOSED REMEDY

No Further Action

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here, the Department is proposing No Further Action with institutional controls as the remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the IRM already completed and the institutional controls are detailed in Section 6.3 above. The following institutional controls will provide proper management of any contamination in soil or groundwater that remains at the site which may exceed unrestricted levels.

1 - Institutional Control

- Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

- allow the use and development of the controlled property for commercial use OR industrial use as defined by Part 375-1.8, although land use is subject to local zoning laws;

- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and

- require compliance with the Department approved Site Management Plan.

2 - Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

- a provision for evaluation of the potential for soil vapor intrusion in an off-site building to the southeast and in future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

- the steps necessary for the periodic reviews and certification of the institutional controls;

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring for vapor intrusion for any buildings developed on the site, or as may be needed in buildings to the southeast of the site, as may be required by the Institutional and Engineering Control Plan discussed above;
-
- monitoring of groundwater to assess the performance and effectiveness of the remedy; and

- a schedule of monitoring and frequency of submittals to the Department.

Exhibit A

Nature and Extent of Contamination

Waste/Source Areas

The waste/source areas identified at the site were addressed by the IRM(s) described in Section 6.2. The Interim Corrective Measures (ICM) Workplan was implemented from December 2012 through July 2013. All onsite structures, tanks, and pads were RCRA cleanclosed, demolished, and disposed offsite. Twenty one SWMUs consisting of; eight storage areas (SC-1 through SC-8), four storage areas (FS-1, WA-I, WA-II, and NH-1), six storage tanks (ST-1, ST-2, ST-3, ST-5, ST-6, and ST-7), and three loading areas (LA-2, LA-3, and LA-4) were addressed under clean closure.

Contaminated soils were excavated and disposed offsite. Post excavation confirmatory sampling verified that soils remaining on site meet the Restricted Residential SCOs. As part of the ICM, following excavation and site restoration, an ISCO program was conducted in July 2013 to address CVOC contamination of ground water.

Groundwater

There are five shallow groundwater monitoring wells on site; one upgradient and 4 downgradient. Two rounds of groundwater sampling have been conducted since ISCO; September 2013 and April 2014. In April 2014 only one contaminant; tetrachloroethene at 6.5ppb, exceeded its Ambient Water Quality Standards and Guidance Value of 5.0 ppb.

Table #1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Tetrachloroethene	ND-6.5	5.0	1 of 5
SVOCs			
None			
Inorganics			
None			
Pesticides/PCBs			
None			

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

Groundwater contamination identified during the RI was addressed during the IRM described in Section 6.2. Detailed information related to the remedial actions taken to address groundwater contamination can be found in the December 2013 Interim Corrective Measures Final Report.

Soil

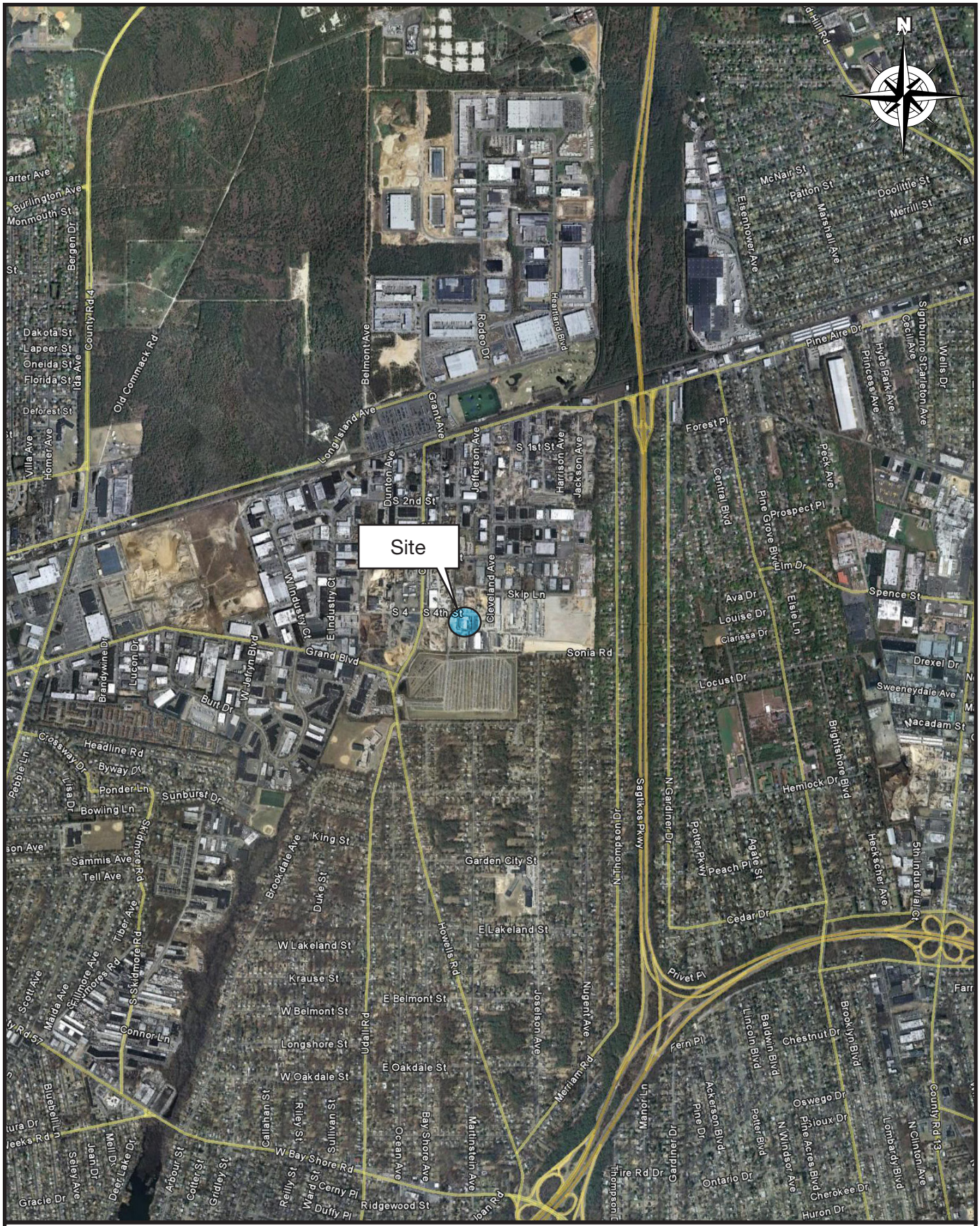
The Interim Corrective Measures (ICM) Workplan was implemented from December 2012 through July 2013. All onsite structures, tanks, and pads were RCRA cleanclosed, demolished, and disposed offsite. Contaminated soils were excavated and disposed offsite. Post excavation confirmatory sampling verified that 90% of the soils remaining on site meet the Unrestricted Residential SCOs and all soils remaining meet restricted residential SCOs.

Table #2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
VOCs					
None above USCG					
SVOCs					
Phenol	ND-0.46	0.33	1 of 104	100	0
Inorganics					
Ag - silver	ND-143	2.0	8 of 91	180	0
Cr - chromium	ND-132	30	3 of 91	180	0
Pb - lead	ND-9	2.0	3 of 91	400	0
Zn - zinc	ND-146	109	1 of 91	10,000	0
Pesticides/PCBs					
Dieldrin	ND-0.0063	0.005	1 of 70	0.2	0

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.

Soil contamination identified during the RI was addressed during the IRM described in Section 6.2. Detailed information related to the remedial actions taken to address soil contamination can be found in the December 2013 Interim Corrective Measures Final Report.



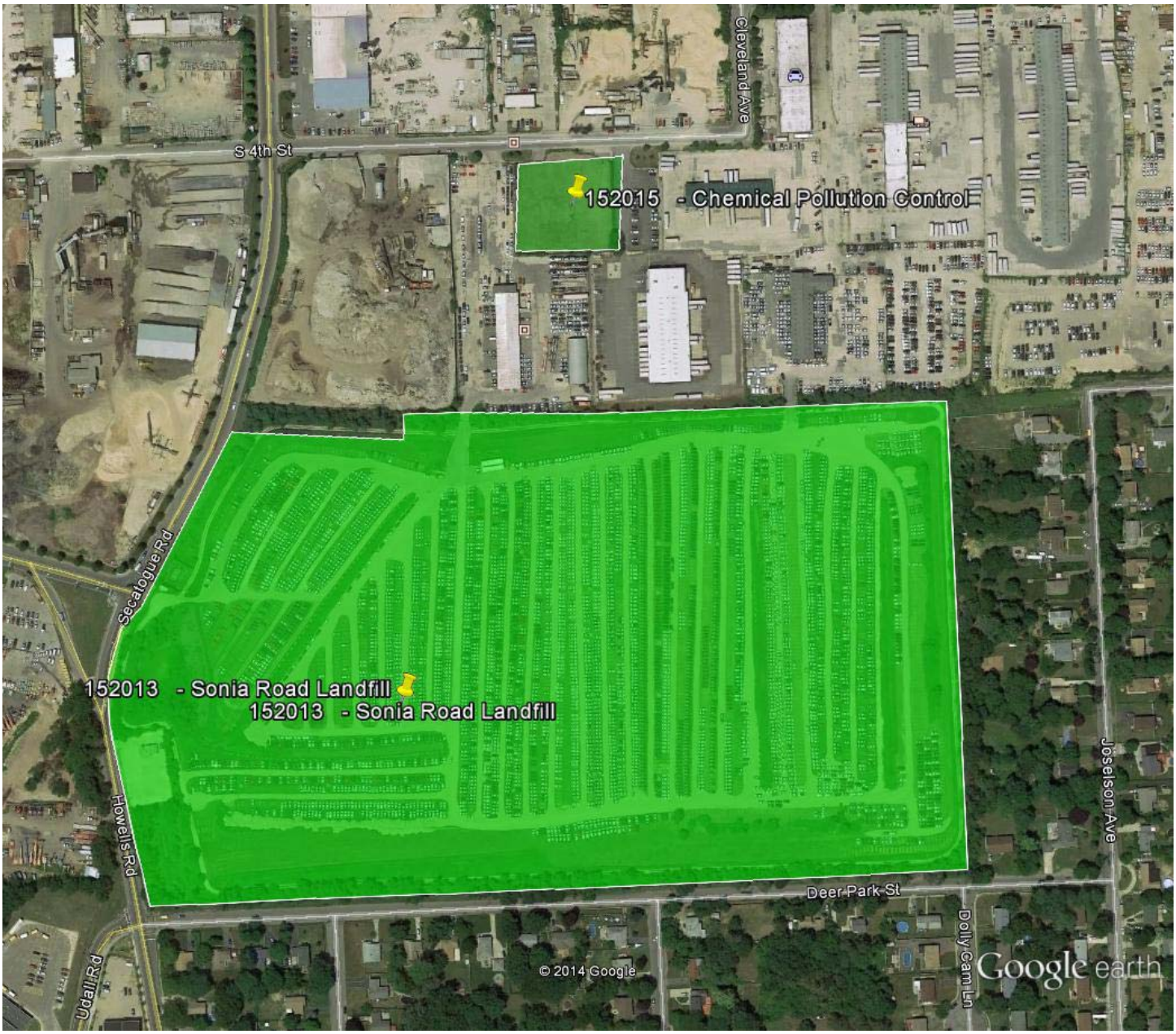
Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

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

SITE LOCATION MAP

FIGURE 1

2786-F - Site Location Map.indd (10/29/10 - 10:23 AM)

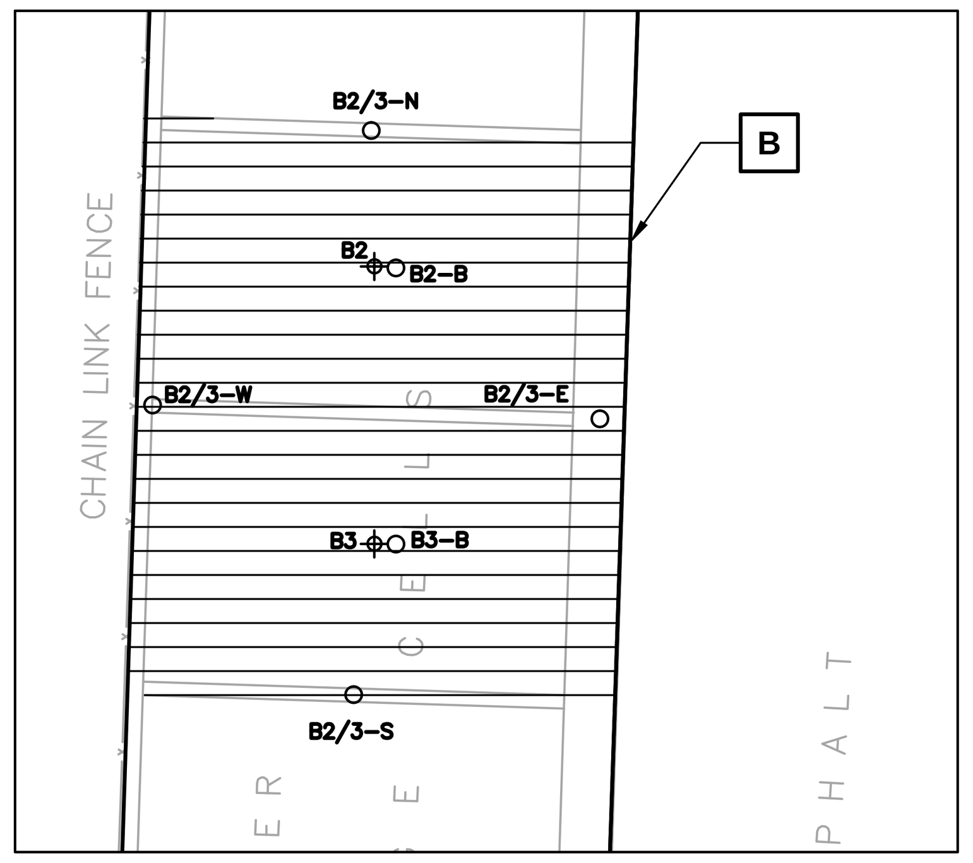


Google earth

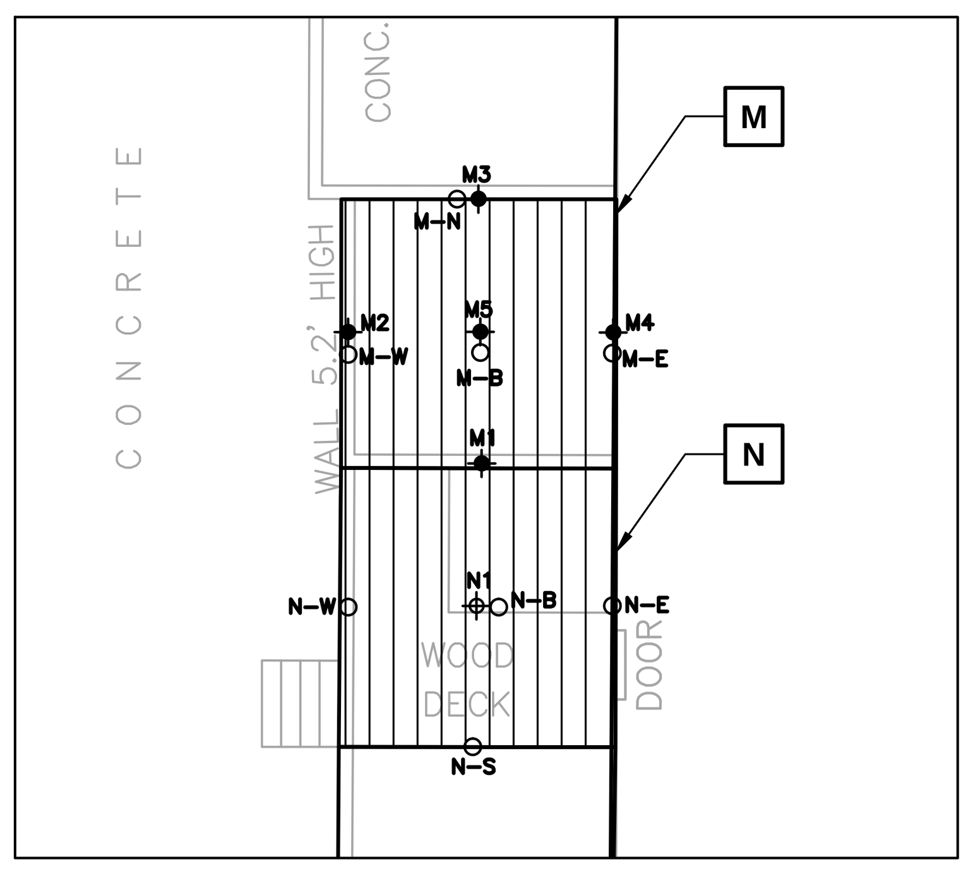
feet 1000
meters 400

Figure 2 Site Map

PHASE 2



AREA B2/B3
SCALE: 1"=10'



AREAS M AND N
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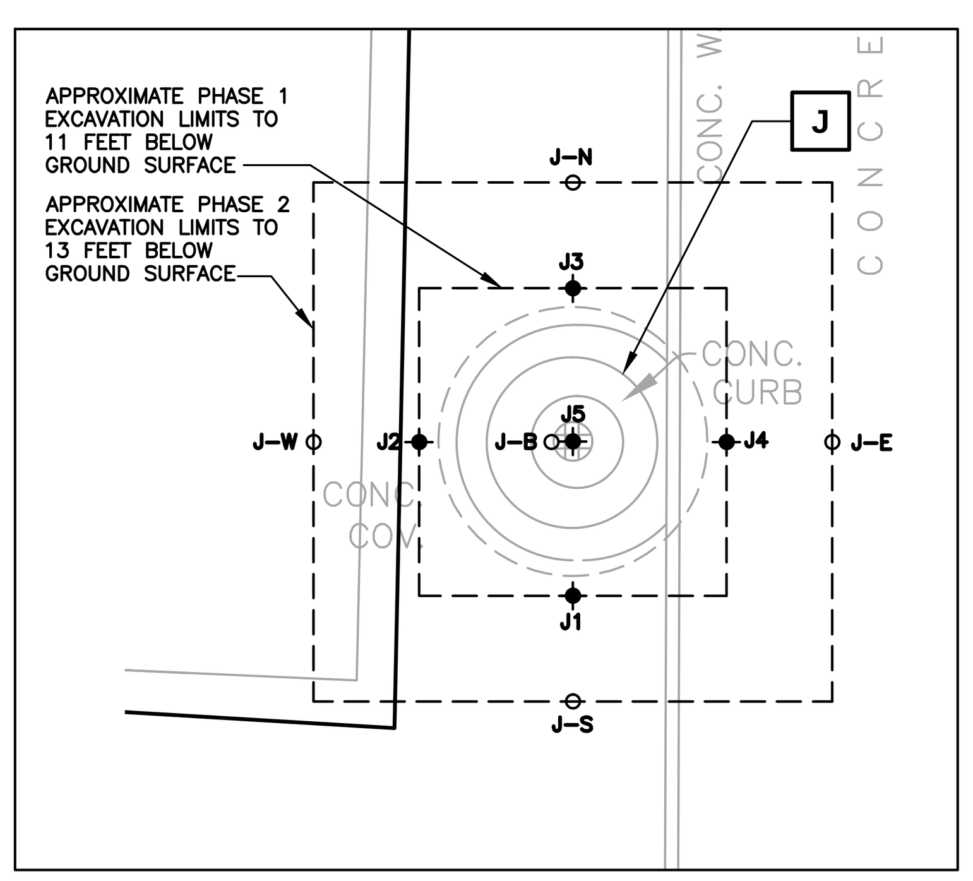
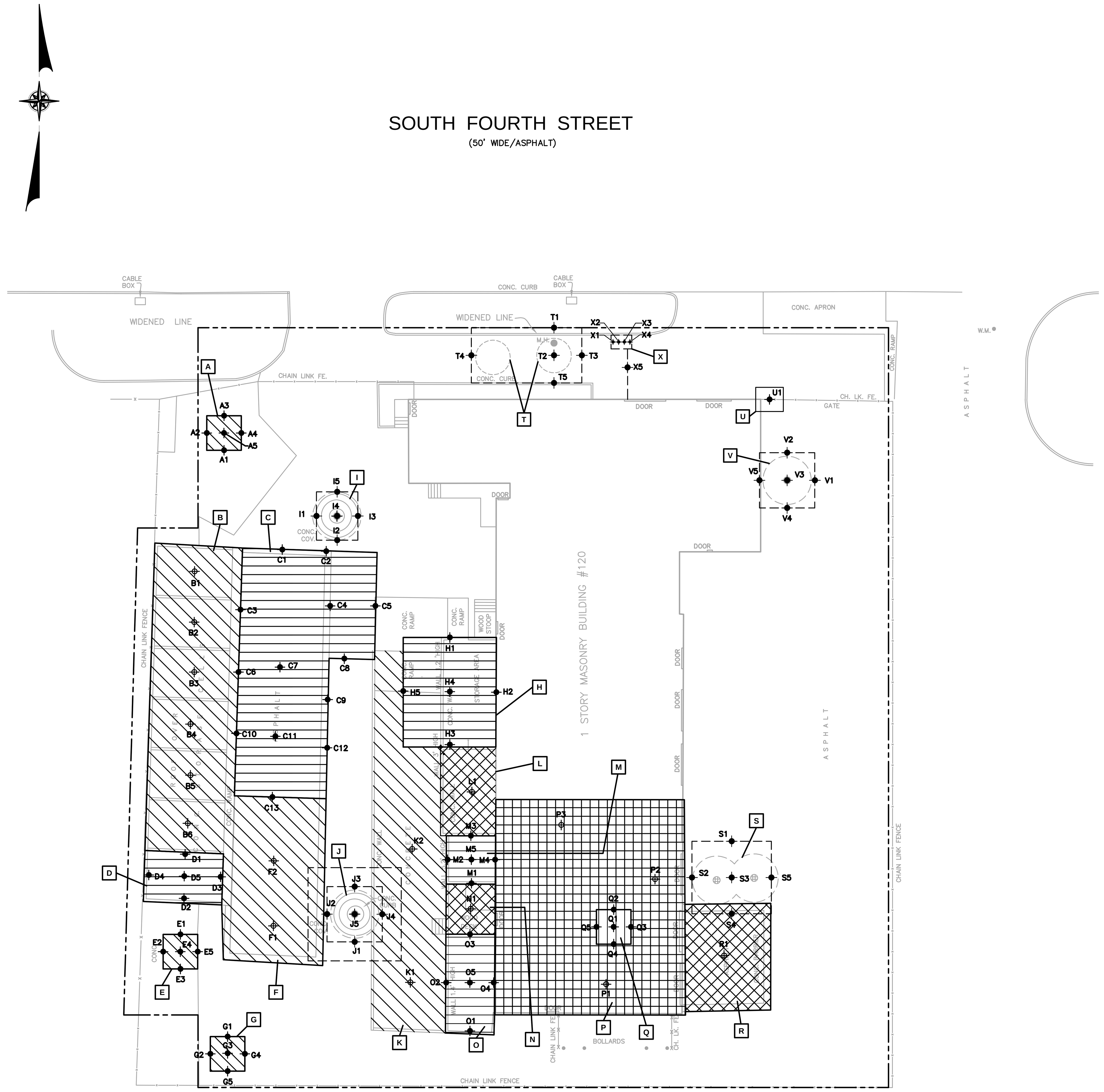


AREA J
SCALE: 1"=10'



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, 1,2-DICHLOROBENZENE, TOTAL XYLENE, ETHYLBENZENE, TOLUENE, CIS-1,2-DICHLOROETHENE
			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 site Boundary
- FENCE
- APPROXIMATE LIMITS OF EXCAVATION

NOTE:

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

Site boundary is same a property boundary

NO.	DATE	REVISION	INT.

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

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

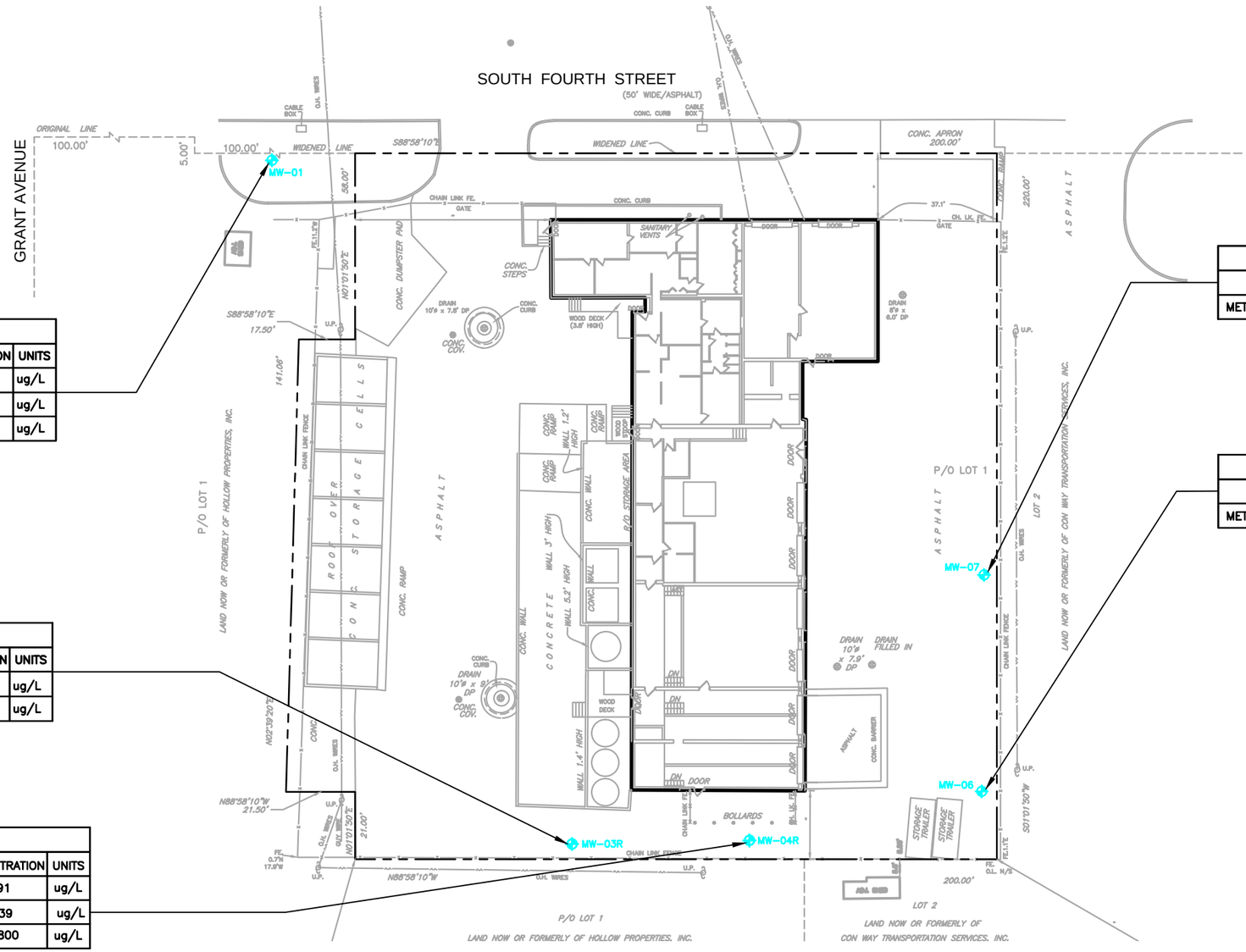
PSC - CHEMICAL POLLUTION CONTROL, LLC of NY BAY SHORE FACILITY

SUFFOLK COUNTY NEW YORK

INTERIM CORRECTIVE MEASURES PROGRAM

Figure 3
Post Excavation Confirmation Sample Locations

PROJECT NO.: 2786
DATE: DECEMBER 2013
SCALE: 1"=20'
DRAWING NO.: **2-1**



MW-01				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	IRON AND MANGANESE	500 ST	2,752	ug/L
	MANGANESE	300 ST	2,650	ug/L
	SODIUM	20,000 ST	78,000	ug/L

MW-03R				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
VOCs	TETRACHLOROETHENE	5 ST	6.5	ug/L
METALS	SODIUM	20,000 ST	29,300	ug/L

MW-04R				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	IRON AND MANGANESE	500 ST	991	ug/L
	IRON	300 ST	839	ug/L
	SODIUM	20,000 ST	28,800	ug/L

MW-07				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	SODIUM	20,000 ST	30,900	ug/L

MW-06				
	CONSTITUENT	SCG	CONCENTRATION	UNITS
METALS	SODIUM	20,000 ST	30,600	ug/L

LEGEND:

— — —	PROPERTY LINE /site boundary
- - - - -	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.

Figure4
SUMMARY OF GROUNDWATER EXCEEDANCES
APRIL 2014 SAMPLING EVENT

DVIRKA AND BARTILUCCI
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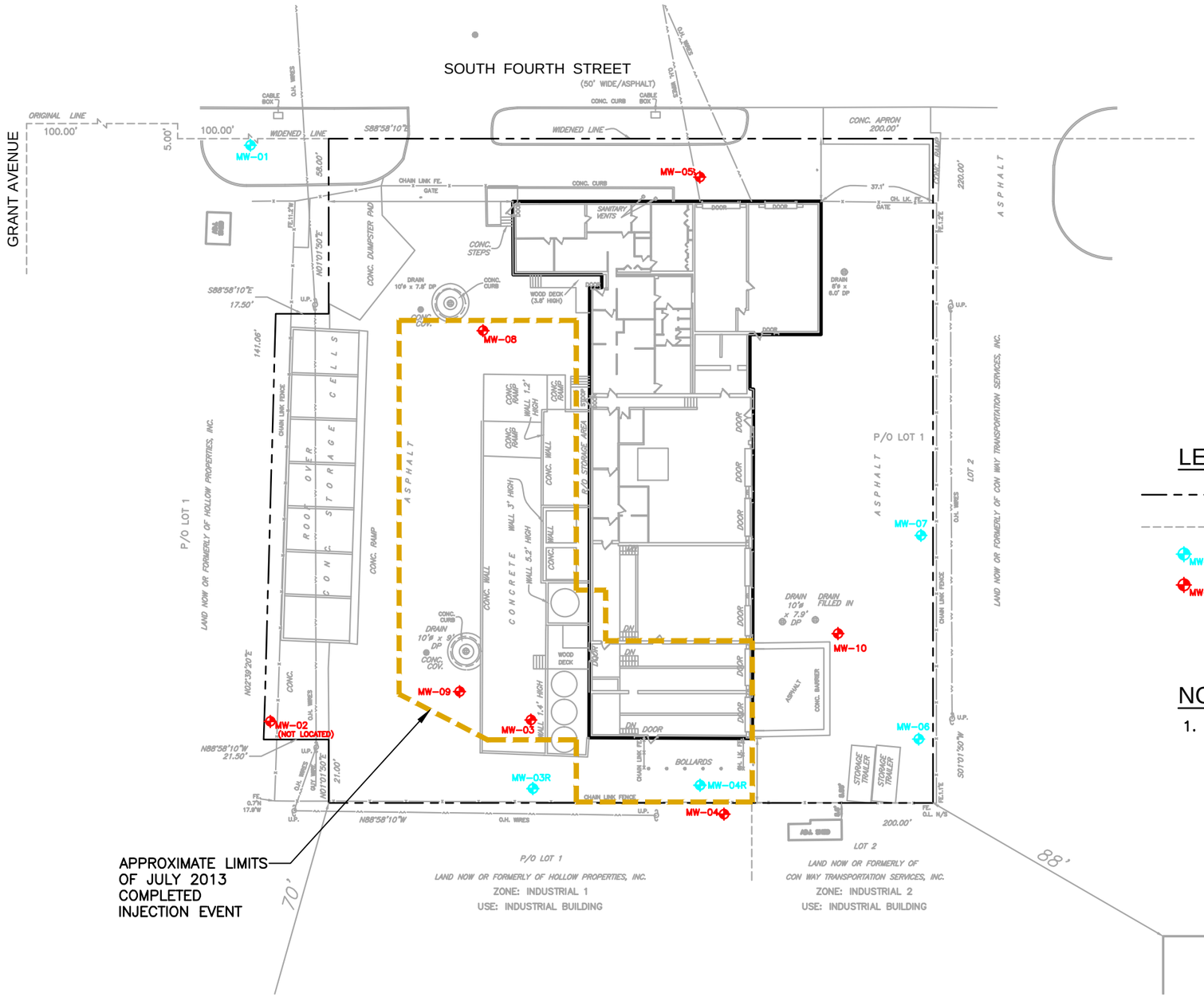
SCALE: 1" = 40'

FIGURE 4-1

F:\2786\2786-P\2786-DATA-SEPT FIG 4-1.dwg, FIG 4-1, 6/17/2014 3:15:12 PM, kalesius



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 AS PART OF THE COMPLETED INTERIM CORRECTIVE MEASURES WORK PLAN, AND ARE ONLY SHOWN FOR REFERENCE.

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
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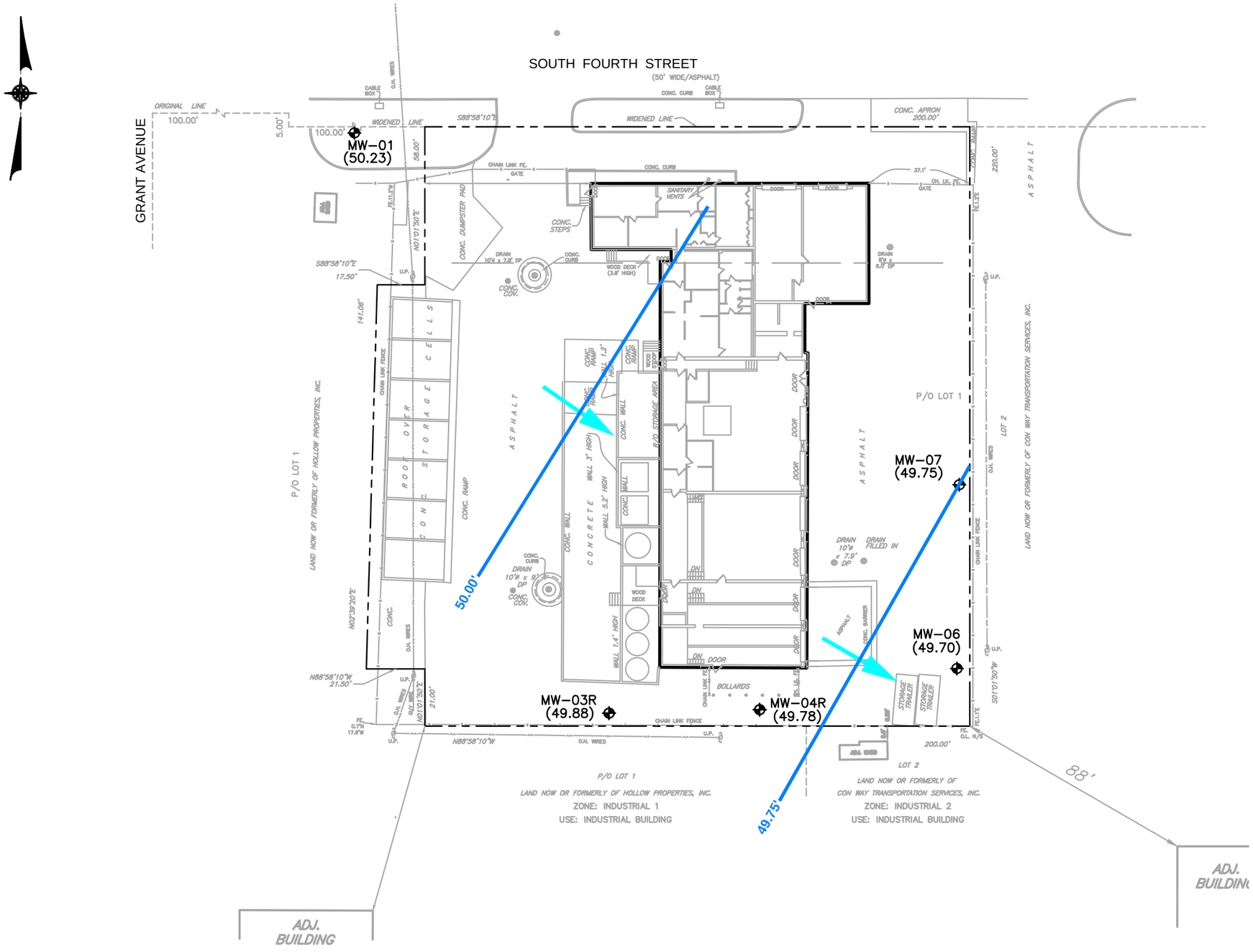
PSC - CHEMICAL POLLUTION CONTROL, LLC OF NEW YORK
SEMIANNUAL GROUNDWATER MONITORING PROGRAM

MONITORING WELL LOCATIONS

SCALE: 1" = 40'

FIGURE 2-1

F:\2786\2786-P\2786-II-PL01-FIG 2-1.dwg, FIG 2-1, 6/17/2014 3:15:12 PM, kalesius



LEGEND:

- PROPERTY LINE
- ADJACENT LOT LINES
- MW-01 (50.23) — LOCATION AND DESIGNATION OF MONITORING WELL AND GROUNDWATER ELEVATION ABOVE MEAN SEA LEVEL (MSL)
- 50.23' — LINE OF EQUAL GROUNDWATER ELEVATION IN FEET ABOVE MSL
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTES:

1. CONTOUR INTERVAL EQUALS 0.25 FEET
2. ON-SITE BUILDING AND STRUCTURES HAVE BEEN DEMOLISHED AND REMOVED AS PART OF THE COMPLETED INTERIM CORRECTIVE MEASURES WORK PLAN, AND ARE ONLY SHOWN FOR REFERENCE.

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SEMIANNUAL GROUNDWATER MONITORING PROGRAM

WATER TABLE CONTOUR MAP

APRIL 22, 2013

SCALE: 1" = 40'

FIGURE 6-1

F:\2786\2786-P\2786-WT-SEPT.dwg, 6-1, 6/17/2014 3:15:13 PM, kalesius