FORMER GATEWAY FRENCH DRY CLEANERS KINGS COUNTY, BROOKLYN, NEW YORK

Remedial Action Work Plan

NYSDEC BCP Number: C224151

Prepared for:

Coney Island Site 4-A-1 Housing Company 70 East 55th Street – 7th Floor New York, NY 10022

Prepared by:

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DECEMBER 2014

CERTIFICATIONS

I, Kathleen Cyr, certify¹ that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

067143

<u>12/19/2014</u> Date

athle Signature

NYS Professional Engineer #

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¹ - Certify is not intended to mean or imply a guarantee or warranty; rather it is defined as a statement of a professional opinion based on the information, data and/or facts gathered and reviewed as part of the investigation.

FINAL REMEDIAL ACTION WORK PLAN

TABLE OF CONTENTS

CERTIFICA	TIONS	i
FINAL REM	EDIAL ACTION WORK PLAN	ii
TABLE OF O	CONTENTS	ii
LIST OF AC	RONYMS	. vi
EXECUTIVE	E SUMMARY	1
Site Des	cription/Physical Setting/Site History	1
Summar	y of the Remedial Investigation	. 1
Off-Site	Remedial Measures Conducted Prior to the BCP	3
Qualitat	ive Human Health Exposure Assessment	3
Summar	y of the Remedy	3
REMEDIAL	ACTION WORK PLAN	. 5
1.0 INTRO	ODUCTION	. 5
1.1 SIT	E LOCATION AND DESCRIPTION	. 5
1.2 CON	NTEMPLATED REDEVELOPMENT PLAN	. 6
1.3 DES	SCRIPTION OF SURROUNDING PROPERTY	. 6
2.0 DESC	RIPTION OF REMEDIAL INVESTIGATION FINDINGS	. 7
2.1 SUN	MMARY REMEDIAL INVESTIGATIONS PERFORMED	. 7
2.1.1	RI Activities and Samples Collected	. 7
2.1.2	Chemical Analytical Work Performed	. 8
2.1.3	Geophysical and Well Surveys	. 8
2.1.4	Tidal Monitoring	. 8
2.1.5	Documentation	. 9
2.2 SIG	NIFICANT THREAT	9
2.3 SIT	E HISTORY	9
2.3.1	Past Uses and Ownership	10
2.3.2	Phase I and Phase II Reports	10
2.3.3	Sanborn Maps	12
2.4 GEC	DLOGICAL AND HYDROGEOLOGICAL CONDITIONS	12
2.4.1	Soil and Rock Conditions	13
2.4.2	Groundwater Conditions	13
2.5 CON	NTAMINATION CONDITIONS	14
2.5.1	Description of Areas of Concern	15
2.5.2	Identification of Standards, Criteria and Guidance	15
2.5.3	Summary of Soil/Fill Data	15
2.5.4	Summary of Groundwater Data	16
2.5.5	On-Site and Off-Site Sub-Slab Vapor and Subsurface Soil Gas Contamination	16
2.6 ENV	VIRONMENTAL AND PUBLIC HEALTH ASSESSMENTS	17
2.6.1	Site Setting	17
2.6.2	Exposure Assessment	17

2.6.3	Exposure Conceptual Site Model	. 18			
2.6.4	Potential Sources of Constituent of Potential Concern	. 18			
2.6.5	Potential Release Mechanisms	. 18			
2.6.6	Potential Human Receptors and Exposure Pathways	. 19			
2.6.7	Potential Ecological Impacts				
2.6.8	QHHEA Conclusions	. 20			
2.7 OF	F-SITE REMEDIAL ACTION	. 20			
2.7.1	Sub-Slab Vapor Delineation	. 20			
2.7.2	Sub-Slab Depressurization System Installation and Delineation	. 21			
2.8 RE	MEDIAL ACTION OBJECTIVES	. 22			
2.8.1	Groundwater	. 22			
2.8.2	Soil	. 22			
2.8.3	Soil Vapor	. 22			
3.0 DESC	CRIPTION OF REMEDIAL ACTION PLAN	. 23			
3.1 EV.	ALUATION OF REMEDIAL ALTERNATIVES	. 23			
3.1.1	Protection of Human Health and the Environment	. 26			
3.1.2	Compliance with Standards, Criteria, and Guidelines (SCGs)	. 26			
3.1.3	Short-Term Effectiveness and Impacts	. 26			
3.1.4	Long-Term Effectiveness and Permanence	. 27			
3.1.5	Reduction of Toxicity, Mobility, or Volume of Contaminated Material	. 28			
3.1.6	Implementability	. 28			
3.1.7	Cost Effectiveness	. 29			
3.1.8	Community Acceptance	. 29			
3.2 SEI	LECTION OF THE PREFERRED REMEDY	. 30			
3.3 LA	ND USE FACTOR EVALUATION	. 31			
3.3.1	Zoning	. 31			
3.3.2	Applicable Comprehensive Community Master Plans or Land Use Plans	. 31			
3.3.3	Surrounding Property Uses	. 31			
3.3.4	Citizen Participation	. 32			
3.3.5	Environmental Justice Concerns	. 32			
3.3.6	Land Use Designations	. 32			
3.3.7	Population Growth Patterns	. 32			
3.3.8	Accessibility to Existing Infrastructure	. 32			
3.3.9	Proximity to Cultural Resources	. 32			
3.3.10	Proximity to Natural Resources	. 33			
3.3.11	Off-Site Groundwater Impacts	. 33			
3.3.12	Proximity to Floodplains.	. 33			
3.3.13	Geography and Geology of the Site	. 33			
3.3.14	Current Institutional Controls	. 33			
3.4 SU	MMARY OF SELECTED REMEDIAL ACTIONS	. 33			
4.0 REM	EDIAL ACTION PROGRAM	. 35			
4.1 GO	VERNING DOCUMENTS	. 35			
4.1.1	Site Specific Health & Safety Plan (HASP)	. 35			
4.1.2	Quality Assurance Project Plan (QAPP)	. 36			
4.1.3	Construction Quality Assurance Plan (CQAP)	. 36			

4.1.5	Stormwater Pollution Prevention Plan (SWPPP)	41
4.1.6	Community Air Monitoring Plan (CAMP)	42
4.1.7	Contractors Site Operations Plan (SOP);	43
4.1.8	Citizen Participation Plan	44
4.2 GI	ENERAL REMEDIAL CONSTRUCTION INFORMATION	44
4.2.1	Project Organization and Oversight	44
4.2.2	Remedial Engineer	45
4.2.3	Remedial Action Construction Schedule	45
4.2.4	Work Hours	46
4.2.5	Site Security	46
4.2.6	Worker Training and Monitoring	46
4.2.7	Agency Approvals	46
4.2.8	NYSDEC BCP Signage	47
4.2.9	Pre-Construction Meeting with NYSDEC	47
4.2.10	Emergency Contact Information	47
4.2.11	Remedial Action Costs	47
4.3 SI	TE PREPARATION	47
4.3.1	Mobilization	47
4.3.2	Utility Marker and Easements Layout	47
4.3.3	Equipment and Material Staging	48
4.3.4	Demobilization	48
4.4 RI	EPORTING	49
4.4.1	Daily Reports	49
4.4.2	Monthly Reports	49
4.4.3	Other Reporting	50
4.4.4	Complaint Management Plan	50
4.4.5	Deviations from the Remedial Action Work Plan	50
5.0 THE	ERESIDUAL CONTAMINATION TO REMAIN ON-SITE	52
6.0 ENC	SINEERING CONTROLS: COMPOSITE COVER SYSTEM	53
7.0 ENC	SINEERING CONTROLS: TREATMENT SYSTEMS	54
8.0 CRI	FERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF	
REM	IEDIAL SYSTEMS	56
8.1 CO	OMPOSITE COVER SYSTEM	56
8.2 SU	JB-SLAB DEPRESSURIZATION SYSTEM (SSDS)	56
9.0 INS	ΓΙΤUTIONAL CONTROLS	57
9.1 EN	VVIRONMENTAL EASEMENT	57
9.2 SI	TE MANAGEMENT PLAN	59
10.0 FINA	AL ENGINEERING REPORT	62
10.1	CERTIFICATIONS	63
11.0 SCH	EDULE	65

LIST OF TABLES

SOIL ANALYTICAL DATA SUMMARY
GROUNDWATER ANALYTICAL DATA SUMMARY
SOIL GAS ANALYTICAL DATA SUMMARY
SUB-SLAB SOIL VAPOR AND AIR ANALYTICAL DATA SUMMARY

LIST OF FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE PLAN AND EXPLORATION LOCATIONS
FIGURE 3	SOIL ANALYTICAL DATA
FIGURE 4	GROUNDWATER ANALYTICAL DATA
FIGURE 5	PCE SOLVENT PLUME MAP AND SOIL VAPOR ANALYTICAL DATA
FIGURE 6	CROSS-SECTION A-A'
FIGURE 7	CROSS-SECTION B-B'
FIGURE 8	GROUNDWATER CONTOUR MAP
FIGURE 9	QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT
	CONCEPTUAL SITE MODEL
FIGURE 10	CURRENT SSDS AND PROPOSED EXPANSION

LIST OF APPENDICES

- APPENDIX A LIMITATIONS
- APPENDIX B METES AND BOUNDS
- APPENDIX C REVISED REMEDIAL INVESTIGATION REPORT-FORMER GATEWAY FRENCH DRY CLEANERS, 3375 NEPTUNE AVENUE, BROOKLYN NEW YORK, NYSDEC SITE NO. C224151. JULY 2014.
- APPENDIX D NYSDEC AND NYSDOH NOTIFCATION OF NO SIGNFICANT THREAT
- (FACT SHEET)
- APPENDIX E GOVERNING DOCUMENTS

LIST OF ACRONYMS

Acronym	Definition				
AOC	Area of Concern				
AGV	Air Guidance Values				
ASTM	American Society for Testing and Materials				
AWQS	Ambient Water Quality Standards				
BCA	Brownfield Clean-up Agreement				
BGS	Below Ground Surface				
BOA	Brownfield Opportunity Area				
CAMP	Community Air Monitoring Plan				
CHASP	Construction Health and Safety Plan				
Cr ⁶⁺	Hexavalent Chromium				
CSOP	Contractors Site Operation Plan				
CVOCs	Chlorinated Volatile Organic Compounds				
DCR	Declaration of Covenants and Restrictions				
DER	Department of Environmental Remediation				
DNAPL	Dense Non-Aqueous Phase Liquid				
DUSR	Data Usability Summary Report				
ECs/ICs	Engineering and Institutional Controls				
EPA	Environmental Protection Agency				
ESA	Environmental Site Assessment				
FER	Final Engineering Report				
ft	Feet				
ft ²	Square Feet				
GC	General Contractor				
GPS	Global Positioning System				
GZA	GZA GeoEnvironmental of New York				
HASP	Health and Safety Plan				
HAZWOPER	Hazardous Waste Operations and Emergency Response				
IRM	Interim Remedial Measure				
LNAPL	Light Non-Aqueous Phase Liquid				
MCG/M ³	Micrograms per Cubic Meter				
NOC Notice of Completion					
NYC VCP New York City Voluntary Clean-up Program					
NYC DEP	New York City Department of Environmental Protection				
NYC DOB	New York City Department of Buildings				
NYC DOF	New York City Department of Finance				
NYC OER	New York City Office of Environmental Remediation				

NYCRR	New York Codes Rules and Regulations
NYS DEC	New York State Department of Environmental Conservation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
NYS ELAP	Environmental Laboratory Accreditation Program
ORP	Oxygen Release Compound
OSHA	United States Occupational Health and Safety Administration
PBS	Petroleum Bulk Storage
PCBs	Polychlorinated Biphenols
PCE	Tetrachloroethene
PE	Professional Engineer
PID	Photo Ionization Detector
PPE	Personal Protective Equipment
PPM	Parts Per Million
QA/QC	Quality Assurance/ Quality Control
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAWP	Remedial Action Work Plan
RECs	Recognized Environmental Condition
RI	Remedial Investigation
RIR	Remedial Investigation Report
RMZ	Residual Management Zone
Sanborn	Sanborn Fire Insurance Map
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SHWS	Solid Hazardous Waste Site
SMMP	Soil/ Materials Management Plan
SQ FT	Square Feet
SVI	Soil Vapor Intrusion (Guideline)
SVOC	Semi-Volatile Organic Compound
TCE	Trichloroethene
TOGS	Technical and Operational Guidance Series
UST	Underground Storage Tank
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Coney Island Site 4-A-1 Housing Company has enrolled as a Participant in the New York State, Department of Environmental Conservation, Brownfield Cleanup Program (NYSDEC BCP) to investigate and remediate the former Gateway French Cleaners located at 3375-3377 Neptune Avenue, in Brooklyn, New York (Site). The Site is designated by NYSDEC as BCP Site No. C224151. A remedial investigation (RI) was conducted in accordance with a NYSDEC approved Revised Remedial Investigation Work Plan dated September 24, 2013. The remedial action described in this document addresses the findings of the remedial investigation and provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria, and guidance, and conforms to applicable laws and regulations.

Site Description/Physical Setting/Site History

The Site is located at 3375-3377 Neptune Avenue, in Brooklyn, New York and is identified as Block 6979 and a portion of Lot 100. Please refer to **Figure 1** for the Site Location Map. The Site is currently occupied and is being operated as a dental office. The Site is approximately 1,400 square feet in area and is bordered to the south by Neptune Avenue, to the east by commercial space, to the west by a grocery store and residential building, and to the north by a residential building.

The Former Gateway French Dry Cleaners (aka Charles French Cleaners) operated within the western portion of commercial-retail space, located at the above address, between 1985 and 1996. The United Stated Environmental Protection Agency (USEPA) Facility Identification Number (ID No.) is NYD981080799. Previous Site investigation activities at the Former Gateway French Cleaners documented the presence of volatile organic compounds (VOCs), particularly tetrachloroethene (PCE), in soil vapor beneath the concrete floor slab of the retail tenant spaces at the Site. Additional investigation activities indicated that VOCs were also present under the ground floor residential apartments located north of the Site and under the commercial spaces to the east of the Site.

Summary of the Remedial Investigation

RI activities were conducted between November 12 and 18, 2013. GZA collected additional off-Site samples on July 7, 2014. RI activities included the following scope of work: (i) delineation of the horizontal and vertical extent of impacted soils, groundwater, and soil vapor in the Site vicinity; (ii) assessment of the potential fate and transport of contaminants as they currently exists in the subsurface; and (iii) data collection to allow for evaluation of potential remedial alternatives for exposure mitigation.

The following is a brief presentation of the RI findings:

- 1. Topography in the immediate area of the Site ranges from approximately 5 to 7 feet above the Brooklyn Highway datum (BHD).
- 2. Depth to groundwater ranges from 9 to 10 feet below ground surface (-2.9 to -2.3 BHD) at the Site and flows generally to the southeast beneath the Site.
- 3. Tidal influences on groundwater are not evident.
- 4. The stratigraphy of the Site consists of asphalt or concrete surface cover, fill material to approximately six feet, and native unconsolidated sediments consisting of fine to coarse sands with silts.
- 5. Soil samples collected during the RI showed no herbicides or cyanide at detectable concentrations. Hexavalent chromium (Cr⁶⁺) was detected above the laboratory method detection limit but below the laboratory reporting limit at one location. No samples analyzed contained constituents above the NYS Part 375 Commercial Use Soil Cleanup Objectives (SCOs). One soil sample contained constituents above the Residential Use SCOs. No VOCs were detected at concentrations above the NYS Part 375 Unrestricted Use SCOs during this RI; however, historically, VOCs have been detected above Unrestricted Use SCOs. One sample contained concentrations of semi-volatile organic compounds (SVOCs), 4,4'-DDT, and lead above the Unrestricted Use SCOs. A second sample contained the pesticides 4,4'-DDT and dieldrin, the PCB Aroclor 1268, lead, and mercury at concentrations above the Unrestricted Use SCOs.
- 6. Analysis of groundwater samples collected during the RI showed no detectable concentrations of pesticides, PCBs, Cr⁶⁺, or cyanide. No sample concentrations exceeded the NYSDEC Ambient Water Quality Standards (AWQS) for VOCs or SVOCs in this RI; however, historically, VOCs have been detected above AWQS. All on-Site groundwater samples contained metals, most commonly iron, and sodium, at concentrations exceeding AWQS. Arsenic, magnesium, selenium and thallium, were also detected at concentrations exceeding the AWQS in one or more samples.
- 7. Sub-slab soil vapor samples contained concentrations of many VOCs; PCE and trichloroethene (TCE) were detected above the New York State Department of Health (NYSDOH) Air Guidance Values (AGVs). 1,2,4-Trimethylbenzene, 1,3-dichlorobenzene, o-xylene, and tetrahydrofuran were also detected at concentrations above other published

guidance values. Analysis of collocated indoor air samples collected concurrently with the sub-slab vapor samples showed poor correlation of VOCs between the each set of soil vapor samples and indoor air samples, suggesting that soil vapor intrusion was limited or not occurring.

8. Soil gas samples collected around the exterior of the building footprint contained many VOCs above published guidance values, including PCE and TCE above the respective AGVs.

Off-Site Remedial Measures Conducted Prior to the BCP

Hurricane Sandy impacted the New York City Metropolitan Area, and inundated large areas of Coney Island, on October 29, 2012. All ground floor residential spaces at the property were gutted and renovated during the latter part of 2012 and early 2013. During that time, GZA installed several sub-slab vapor delineation/monitoring points and installed a sub-slab depressurization system (SSDS) at the residential apartment building immediately adjacent to and north of the Site. The SSDS consisted of seven suction pits below the concrete floor slab and was operational as of April 22, 2013. Monitoring of stack effluent emissions indicated that the emissions were at concentrations that do not require treatment; please refer to our September 26, 2013 SSDS Installation and Startup Report.

Qualitative Human Health Exposure Assessment

The QHHEA identified soil, groundwater, and air as impacted media and a possible source of contaminants of potential concern (COPCs). Residents, commercial workers, and business patrons are not a likely receptor population for dermal or ingestion pathways; however; inhalation in the commercial space could be a potential exposure pathway. The operating SSDS is mitigating subsurface soil vapors in the adjacent residential area. Construction or utility workers conducting intrusive subsurface activates could be exposed to PAHs and metals in historic urban fill, and Site-specific COPCs in soils, groundwater, and soil gas.

Summary of the Remedy

The proposed remedial action for the Site is a two-fold approach: 1) institutional and engineering controls; and 2) periodic indoor air monitoring.

The proposed remedial action will consist of the following:

1. Establishment of Track 4 SCOs as Part 375 Restricted-Residential SCOs;

- 2. Maintenance of a engineered composite cover over the entire Site, consisting of the existing Site-building concrete floor slab, to prevent human exposure to residual contaminated soil/fill remaining under the Site;
- 3. Expansion of a currently operating sub-slab depressurization system into the Site to mitigate potential soil vapor intrusion into occupied spaces;
- 4. Publication of a Site Management Plan for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
- 5. Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to residual contamination remaining at the Site [a copy of the Environmental Easement will be provided in the Site Management Plan ("SMP")];
- 6. Submittal of a Final Engineering Report (FER) that describes the remedial activities, certifies that the remedial requirements have been achieved, describes all Engineering and Institutional Controls to be implemented at the site, and describes any deviation from the RAWP;
- 7. All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

REMEDIAL ACTION WORK PLAN

1.0 INTRODUCTION

Coney Island Site 4-A-1 Housing Company entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on April 10, 2013, to investigate and remediate a 1,400-square foot (sq. ft) property located at 3375-3377 Neptune Avenue in the Coney Island neighborhood of Brooklyn, New York (Site). Coney Island Site 4-A-1 Housing Company is a Participant in the Brownfield Cleanup Program. Continued Site usage as commercial space is proposed for the property. When completed, the Site will contain a dental office. Please refer to the Brownfield Cleanup Program (BCP) application for additional details.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed between November 13 and 18, 2013 and July 7, 2014, and is subject to the limitations described in **Appendix A**. It provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10 and complies with applicable standards, criteria, and guidance. The remedy described in this document also complies with applicable Federal, State, and local laws, regulations, and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined this Site does not pose a significant threat to human health and the environment. The RI for this Site did not identify fish and wildlife resources.

A formal Remedial Design document will not be prepared.

1.1 SITE LOCATION AND DESCRIPTION

The Site is located in the County of Kings, Brooklyn, New York and is identified as Block 6979 and a portion of Lot 100 on the New York City Tax Map. Lot 100 is also known as Bay Park One. Please Refer to **Figure 2** for a Site plan depicting the location of the Former Gateway French Cleaner and the boundary of the NYSDEC accepted Brownfield Area. Currently the complex in which the Site is operating is a mixed-use development. There are five store fronts, including the Site. The Site is currently used as a dental clinic. The Site is approximately 1,400 square feet in size and is bordered to the south by Neptune Avenue, to the east by commercial space, to the west by a grocery store and residential building, and to the north by a residential

building. A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419 (**Appendix B**). The property is fully described in **Appendix B**. A global positioning system coordinate for the starting point is included.

1.2 CONTEMPLATED REDEVELOPMENT PLAN

The Remedial Action to be performed under the RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The end use is described here to provide the basis for this assessment. As the end use of this Site will not change from its current use, nor is any redevelopment being completed; a redevelopment plan has not been included in this RAWP.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The Site is commercial space and the vicinity is a mixed-use development with residential apartments and retail space. The building complex consists of several residential towers spread over approximately three city blocks. The development is north of Neptune Avenue, west of 33rd Street, east of 37th Street, and south of Canal Avenue. During the Site development in 1973, 35th Street and 36th Street were eliminated within the Site footprint; it appears that 34th Street has not historically been present in the vicinity of the Site. The current commercial-retail space (including the Site) is located along a promenade with ground floor units, and set back approximately 40 feet from the historic store fronts and sidewalk line. In addition, the grade has been increased by approximately four vertical feet, through the placement of fill material, from pre-redevelopment elevations to the current elevation. The commercial-retail space is five store fronts: a dental clinic (Site), a stationary/convenience store, a pharmacy, and two empty restaurant spaces. The Site, stationary/convenience store, and pharmacy are currently operating businesses.

South of Neptune Avenue, between West 35th, 36th and 37th Streets, are single or multifamily townhouses. Some of the dwellings have been converted to include businesses; such as another dental clinic and an Islamic Center. Public School (PS) 188 is located southeast of the Site between West 33rd and West 35th Streets. Coney Island Child Care Center (alternately listed as Sunshine Daycare Center) is located northwest of the Site at 2757 West 33 Street, and 123's and ABC's Day Care is east of the Site at 3705 Laurel Avenue. Additionally, Head Start Daycare is located at 3415 Neptune Avenue, northeast of the Site; however, this center is under renovation due to extensive damage sustained during Hurricane Sandy.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The Site was investigated in accordance with the scope of work presented in the NYSDECapproved revised Remedial Investigation (RI) Work Plan. The investigation was conducted between November 13 and 18, 2013, and on July 7, 2014. The RIWP was submitted to NYSDEC on July 31, 2013 and approved by NYSDEC on September 30, 2013. Additionally, GZA had previously performed a number of investigations at and around the Site. The findings from those investigations were summarized in the September 2013 RIWP and are provided below in **Section 2.3.2**. The Remedial Investigation Report (RIR) has is included in **Appendix C** for reference.

2.1 SUMMARY REMEDIAL INVESTIGATIONS PERFORMED

The remedial investigation summarized here was conducted between November 13 and 18, 2013, and on July 7, 2014.

2.1.1 RI Activities and Samples Collected

The following remedial investigation activities were performed at the Site:

- Geophysical survey;
- Tidal monitoring;
- Advancement of three soil borings and the collection of twelve grab soil samples;
- Installation of two temporary groundwater wells adjacent to the soil borings described above, and an additional off-Site temporary groundwater well with the collection of seven grab groundwater samples;
- Collection of four groundwater samples from four existing monitoring wells;
- Installation of six subsurface soil gas points and the collection of six sub-surface soil gas samples;
- Installation of two sub-slab soil vapor points and the collection of two sub-slab soil vapor samples and two collocated indoor air samples; and
- Collection of one ambient air sample and one indoor air sample.

2.1.2 Chemical Analytical Work Performed

		Monitoring Well	Soil Boring/Temp Well		Soil Vapor Intrusion		
		Groundwater	Soil	Groundwater	Indoor/ Ambient	Soil Vapor ¹	Soil Gas ²
	VOCs Method TO-15	-	-	-	4	2	6
	TCL VOCs Method 8260	4	12	7	-	-	-
Analytical Method	TCL SVOCs Method 8270	4	4	2	-	-	-
	TAL Metals Method 6010/7470	4	4	2	-	-	-
	Pesticides Method 8081	4	4	2	-	-	-
	PCBs Method 8080	4	4	2	-	-	-
	Cyanide Method 9014	4	4	2	-	-	-
	Hexavalent Chromium Method 7196	4	4	2	-	-	-
	Herbicides Method 8151	4	4	2	-	-	-

The following chemical analyses were performed on the samples collected during the RI:

¹Soil vapor samples collected from building sub-slab locations

² Soil gas samples collected from subsurface soil gas locations

2.1.3 Geophysical and Well Surveys

On November 12, 2013, Nova Geophysical Services performed a geophysical survey consisting of Ground Penetrating Radar (GPR), and Electromagnetic (EM) measurements at proposed subsurface exploration locations to pre-clear subsurface obstructions and/or utilities. No obstructions or subsurface anomalies were detected during the geophysical survey.

Mercator Land Surveying, LLC (Mercator) surveyed the pavement/ground locations and PVC rims of each of four permanent monitoring wells that were installed nearby during earlier investigations. Mercator provided the Northings and Eastings relative to NAD83 (CORS Epoch 2011) NY Long Island Projection, and the elevations relative to the Brooklyn Highway Datum (2.5 feet above NGVD29).

2.1.4 Tidal Monitoring

To assess the influence of tidal fluctuations at the Site, GZA deployed a pressure transducer in an existing groundwater monitoring well, MW-2. The pressure transducer collected data logged pressure and temperature readings in MW-2 at 15-minute intervals between November 15 and 18, 2013. Concurrent tidal data was obtained from the *National Oceanic and Atmospheric Administration (NOAA)* for the Coney Island Tidal Station No. 8517741. The Coney Island Station data is relative to Mean Lower Low Water (MLLW) at Sandy Hook (Fort Hancock, New

Jersey) Station No. 8531680. MLLW is approximately 6.48 feet below the Brooklyn Highway Datum.

2.1.5 Documentation

GZA developed the following environmental work plans and reports for the Site and some adjoining property:

- Phase II Environmental Site Assessment Report Bay Park, 3325 Neptune Avenue, 2750-2770 West 33rd Street, Brooklyn New York. September 10, 2009.
- Vapor Intrusion Assessment Letter Report. July 2, 2010.
- Supplemental Fuel Tank Investigation Report Bay Park One Tower Apartments, 3325 Neptune Ave, 2750-2770 West 33rd Street, Brooklyn, New York. December 2010.
- Vapor Delineation and Mitigation Design Interim Report. March 30, 2012.
- Brownfield Cleanup Application. GZA, August 28, 2012.
- Remedial Investigation Work Plan Former Gateway French Cleaners, 3375 Neptune Avenue, Brooklyn New York, NYSDEC Site No. C224151. August 2012, revised September 2013.
- Remedial Investigation Report– Former Gateway French Dry Cleaners, 3375 Neptune Avenue, Brooklyn New York, NYSDEC Site No. C224151. April 2014, revised July 2014.

A summary of RI findings can be found in **Table 1**, **2**, and **3**, and on **Figure 3**, **4**, and **5**. For more detailed results, consult the RIR included in **Appendix C**.

2.2 SIGNIFICANT THREAT

The NYSDEC and NYSDOH have determined that this Site does not pose a significant threat to human health and the environment. Notice of that determination has been provided for public review. A copy of the notice is included in **Appendix D.**.

2.3 SITE HISTORY

The following sections outline the Site History, including previous environmental assessments of the Site and surrounding area.

2.3.1 Past Uses and Ownership

As stated above, the Site is part of a development covering three city blocks. Prior to development in 1973-1974, the three city blocks contained residential and commercial buildings. Commercial businesses were primarily located along the northern side of Neptune Avenue.

2.3.2 Phase I and Phase II Reports

A Phase I Environmental Site Assessment of 3325 Neptune Avenue, 2750 West 33rd Street, and 2770 West 33rd Street Brooklyn, New York (Phase I ESA) was completed in June 2010 by Velocity Consulting Incorporated (Velocity). The Phase I ESA indicated that a dry cleaner, known as the Gateway French Cleaners, formerly operated on-site at 3375-3377 Neptune Avenue. A City Directory Search of 3375-3377 Neptune Avenue lists Charles French Cleaners as the former occupant. Reportedly, Gateway French Cleaners operated from about 1984 to 1995. After 1995, the retail space was occupied by Neptune Dental and AFAM Medical until approximately 2009. A new tenant, also operating the space as a dental practice, has occupied the retail space since early 2012.

The Phase II investigation reports listed in **Section 2.1.5** are summarized here.

In May 2009, GZA performed a limited subsurface investigation in the vicinity of the former Gateway French Dry Cleaners. The results of the investigation were summarized in the September 2009 Phase II Environmental Site Assessment Report, which was submitted to the NYSDEC. Petroleum constituents above NYS Part 375 Soil Cleanup Objectives (SCOs) were detected in the soil, and PCE above the NYS Ambient Groundwater Water Quality Standard (AWQS) was detected in one shallow groundwater sample.

After discovery of groundwater and soils contaminated with petroleum constituents and PCE in May 2009, a supplemental subsurface investigation of the Gateway French Dry Cleaners operating space was performed in July 2009. Relatively low levels of semi-volatile organic compounds (SVOCs) were detected in Site soils at the sampling locations. PCE was detected in shallow groundwater samples, but at concentrations below the PCE AWQS. Several additional VOCs were also detected in shallow groundwater samples. MTBE was identified in samples from deeper monitoring wells. A sub-slab soil vapor sample collected in July 2009 contained six VOCs at concentrations above one or more of the background values listed New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH SVI).

Due to the presence of petroleum impacts to soil and groundwater, Spill Case No. 09-06360 was opened and additional assessments conducted at the Site; including the collection of indoor and

outdoor air ambient air and sub-slab soil vapor samples in accordance with the NYSDOH SVI. Results of this investigation can be found in the Supplemental Fuel Tank Investigation Report. As part of that assessment, two sub-slab soil vapor samples were collected on February 4, 2010, from beneath the former dry cleaning tenant space (GZA, July 2010). PCE and trichloroethene (TCE) were detected in both sub-slab vapor samples at concentrations above the NYSDOH Air Guideline Values (AGV). In general, PCE concentrations were found to be much greater than TCE concentrations at the Site.

In November of 2010, GZA collected soil samples downgradient and in the vicinity of the 25,000 gallon fuel oil UST; additionally, GZA installed a downgradient monitoring well (GZA, December 2010). Laboratory analytical results of soil samples collected at the soil/groundwater interface did not indicate the detectable presence of VOCs and SVOCs below NYSDEC TAGM Soil Cleanup Objectives (SCOs). Further, VOCs and SVOCs were not detected at concentrations above reporting limits. These data did not show any significant fuel oil impacts to soil or groundwater from the UST. However, the Spill Case remains open due to VOC impacts.

In October of 2011, additional assessment was conducted at and around the Site. GZA subcontracted a mobile gas chromatograph (GC) laboratory to screen vapor samples on Site for PCE and TCE (GZA, 2012). GZA also collected confirmation and correlation summa canister samples for fixed-laboratory analysis. The screening and confirmation results indicated that vapor VOC concentrations were highest on the southern side of the former dry cleaning tenant space and tapered off to the north or rear of the former dry cleaner tenant space. The concentrations increased again to the north on the opposite side of a common-wall within the apartment space. GZA also conducted a soil boring investigation beneath the building floor slab of the dry cleaner tenant space. GZA observed soil staining and odors, and measured slightly elevated PID readings in soils above the water table and extending to a depth of at least 12 feet below the building slab. Soil samples from two borings contained VOC concentrations that exceeded the NYSDEC Unrestricted Use SCOs.

On October 29, 2012, Hurricane Sandy inundated large areas of Coney Island. Approximately three to four feet of water covered the ground level residential apartments and the commercial spaces at the Bay Park One complex. The displacement of ground-floor tenants, demolition, and subsequent renovations provided an unprecedented opportunity to delineate sub-slab vapors under the residential apartments located adjacent to the former dry cleaner tenant space and to install a sub-slab depressurization system (SSDS) as a mitigation system. GZA also collected three sub-slab vapor samples at this time, which also indicated elevated PCE concentrations. The SSDS was installed by Clean Vapor, LLC. of Blairstown, New Jersey. Construction was initiated

on January 21, 2013. The SSDS is currently operating; the effluent is being periodically sampled according to the Operation and Maintenance Plan for this SSDS.

2.3.3 Sanborn Maps

Available Sanborn Maps for this Site were reviewed prior to preparation of the RAWP. According to Sanborn Maps, there were no buildings in the Site vicinity in 1906. The next available Sanborn dated 1930, depicts significant urban development in the area. Both the 1930 and the 1950 maps lack property use descriptions in the Site area. The 1966 and 1968 Sanborn Maps depict a dry cleaning businesses located at 3503 to 3505 Neptune Avenue, which lies southeast of the Site, and another dry cleaner located approximately 300 feet west of the Site at 3607 to 3609 Neptune Avenue. A City Directory Search of these addresses did not identify dry cleaning businesses at these locations; however, another potential user of solvents was listed at 3523 Neptune Avenue, which is 150 feet west of the Site.

2.4 GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS

The Site and the surrounding area are relatively flat. Based on a review of the U.S. Geological Survey (USGS) Topographic Map for the Coney Island Quadrangle dated 1979 and The Narrows dated 1981, the Site has a ground surface elevation of approximately seven feet above Mean Sea Level (MSL) based on the National Geodetic Vertical Datum (NGVD). Mercator performed a survey of Site features relative to northing and easting, and the Brooklyn Highway Datum (BHD). The Site promenade is at an approximate elevation of 7 feet BHD with the street level at approximately 3.5 feet BHD. Based on review of a pre-development drawing¹, the predevelopment Site grade was approximately 5.8 feet BHD.

Coney Island is a sand spit peninsula along the southern Atlantic Ocean coast line of Brooklyn and extends southwest into the outer New York Harbor. This area of Brooklyn is relatively low lying and at one time consisted of sand dunes and scrub brush. The Site is located approximately 1,000 feet south of Gravesend Bay and Coney Island Creek and 2,000 feet north of the Atlantic Coast line. The Site is also located approximately 3,000 feet from the western tip of Coney Island.

¹ GZA performed a search of the available structural and construction design documents from the Site redevelopment activities in the early 1970s. The drawings were prepared for the Urban Development Corporation, Coney Island Site 4A, by architects Hoberman & Wasserman and originally issued February 7 1972; these dates are the last drawing revision date. The New York State Professional Engineer (NYS PE) of record was Robert Rosenwasser (NYS PE No. 21905), and elevations presented in the drawings are referenced to the Brooklyn Highway Datum (BHD).

2.4.1 Soil and Rock Conditions

According to the USGS Reconnaissance of the Groundwater Resources of Kings and Queens Counties, New York, dated 1981, native Site overburden soils were deposited during the Pleistocene epoch. Holocene beach deposits make up most of the Rockaway Peninsula and Coney Island; these deposits are expected to extend to a depth of approximately 100 feet below ground surface (bgs). Beneath the beach deposits, are the Cretaceous period Gardiners Clay and Jameco Gravel. The Magothy Formation occurs beneath theses formations. The Raritan Clay and the Lloyd Sand underlie the Magothy Formation and sit above bedrock. Bedrock beneath the Site is schist, gneiss, and amphibolite with pegmatite intrusions typical of the Cambro-Ordovician Hartland Formation and is present at depths greater than 800 feet bgs.

Site-specific subsurface conditions consist of a relatively thick sequence of unconsolidated material. The deepest borings presented in pre-development drawings extended approximately to an elevation of -120 feet BHD. Two cross sections traverse through or near the Site; soil borings B-19 and B-20 are nearest to the Site. In the Site vicinity, fill material consisting of "silty sand, wood, bricks, cinder" was identified in boring B-19 to approximate elevation 3 feet BHD. Below the fill material was medium compact gray brown silty sand to an elevation of -10 feet BHD underlain by a relatively continuous one to two-foot thick layer of soft dark gray organic silt. Between -10 and -58 feet BHD were compact gray brown silty sands, and between -58 and -95 was a soft to stiff dark gray organic silt. Below the silt was compact gray brown silty gravelly sand; bedrock was not encountered.

Soils observed in borings completed for the RI (P-9 and GZA-14, see **Figure 2** for locations) included fill material down to approximately 3 to 4 feet BHD. Below the fill, fine to medium grained brown sand with some thin, dark grey silt layers was observed to around -9 feet BHD. Below these layers, a dark grey fine to medium grained sand was observed. Groundwater was encountered around -3 BHD.

Two cross sections, A-A' and B-B', were developed for the RI based on the environmental investigations to date. Please refer **Figure 6** and **Figure 7** for cross-sectional profiles of soil and groundwater conditions parallel and perpendicular to groundwater flow, respectively.

2.4.2 Groundwater Conditions

According to the USGS *Reconnaissance of the Groundwater Resources of Kings and Queens Counties, New York*, dated 1981, the water table in the area of the Site is expected to be about ten feet below ground surface. Groundwater levels were measured at permanent groundwater monitoring wells on June 30, 2009, November 13, 2010, and November 13 and December 10, 2013. Please refer to **Figure 8** for a groundwater contour map and elevation data.

Based on the four rounds of groundwater level measurements, the calculated groundwater flow path is approximately to the east-southeast. The groundwater elevation has ranged between -2.91 BHW (MW-4 on November 13, 2013) and -1.93 BHD (MW-3 on June 30, 2009). The measured hydraulic fluctuation at each well between measurements is approximately 0.5 feet. The hydraulic gradient has ranged between 0.0027 and 0.0031. No field estimates of hydraulic conductivity have been made at the Site to date. Based on published hydraulic conductivity data (Fetter, C.W., *Applied* Hydrogeology, 1994) for fine sands (0.028 and 2.8 feet per day), and assuming that aquifer porosity is 20%, the Darcy Velocity is estimated between 3.8×10^{-4} and 4.3×10^{-2} feet per day, or 0.1 and 20 feet per year, respectively.

We note that localized groundwater gradients in the Site vicinity may vary due to subsurface utilities, irrigation and infiltration, seasonal variations, precipitation events, local pumping wells or sump pumps, and heterogeneous subsurface conditions. Stormwater in the Site area is collected in a dedicated stormwater sewer system. There is a 60-inch stormwater sewer (New York City Department of Environmental Protection [NYCDEP] sewer number CI-602) that runs approximately south to north along 33rd Street. There is also a 42-inch diameter sewer south, and down-gradient, of the Site that is in Neptune Avenue. The invert elevation of the stormwater sewer at the corner of 33rd Street and Neptune Avenue is -0.56 feet BHD. At the outfall at Gravesend Bay (Corner of Bay View Avenue and 33rd Street), the invert is at -2.54 feet BHD. Although the condition of these sewers are unknown, it is likely that the sewers and backfill, located partially below the apparent water table, are acting as preferential pathways of migration and controlling local groundwater flow.

The tidal monitoring pressure transducer data was imported into Excel for comparison with the NOAA Cony Island Station No. 8517741 tidal data; both data sets were converted to elevation relative to the BHD. Tidal fluctuations ranged between 3.91 and 5.93 feet in height, with elevation ranging between -6.75 and -0.78 feet BHD. The groundwater elevation ranged between -2.60 and -2.50 feet BHD. The groundwater elevation was predominantly recorded at an elevation above sea level, except during high tide. There are slight fluctuations in the recorded data at MW-2. The groundwater temperature did not change much, and the recorded pressure fluctuations are very similar to relative changes in atmospheric temperature recorded at John F. Kennedy Airport. Based on the collected data, groundwater at the Site is not significantly impacted by tidal fluctuations during normal conditions.

2.5 CONTAMINATION CONDITIONS

The following sections detail the contamination conditions that exist at the Site in soil, groundwater, and air.

2.5.1 Description of Areas of Concern

The Former Gateway French Dry Cleaners (aka Charles French Cleaners) operated between 1985 and 1996. The United Stated Environmental Protection Agency (USEPA) Facility Identification Number (ID No.) is NYD981080799. Previous Site investigation activities at the Former Gateway French Dry Cleaners documented the presence of volatile organic compounds (VOCs), particularly tetrachloroethene (PCE), in soil, groundwater, and soil vapor beneath the concrete floor slab of the retail tenant spaces at the Site. Additional investigation activities indicated that VOCs are also present in the soil vapor under the ground floor residential apartments located north of the Site and under the commercial spaces to the east of the Site. Further, soil analysis revealed elevated levels of PAHs, lead, pesticides, and PCBs associated with urban historic fill above the NYSDEC Unrestricted Use SCOs, but below Commercial SCOs; however, only one sample contained constituents above the Restricted-Residential Use SCOs.

2.5.2 Identification of Standards, Criteria and Guidance

The following Standards, Criteria, and Guidance documents were used to assess contamination conditions:

- CP-51 Soil Cleanup Guidance;
- 6 NYCRR Part 375 Environmental Remediation Programs;
- TOGS 1.1.1 Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations; and
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York

2.5.3 Summary of Soil/Fill Data

Soil samples collected during the RI showed no herbicides or cyanide at detectable concentrations. Hexavalent chromium (Cr⁶⁺) was detected above the laboratory method detection limit but below the laboratory reporting limit at one location. No VOCs were detected at concentrations above the NYS Part 375 Unrestricted Use SCOs during the RI; however, historically, VOCs have been detected above Unrestricted Use SCOs. One sample contained concentrations of semi-volatile organic compounds (SVOCs), 4,4'-DDT, and lead above the NYS Part 375 Unrestricted Use SCOs. A second sample contained the pesticides 4,4'-DDT and dieldrin, the PCB Aroclor 1268, lead, and mercury at concentrations above the NYS Part 375 Unrestricted Use SCOs, and a third sample had exceedances of the PCB Aroclor 1268 and of mercury.

A summary of soil contaminant detections can be found in **Table 1**. **Figure 3** shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill.

2.5.4 Summary of Groundwater Data

Analysis of groundwater samples collected during the RI showed no detectable concentrations of pesticides, PCBs, Cr^{6+} , or cyanide. No sample concentrations exceeded the NYSDEC AWQS in the most recent RI for VOCs or SVOCs; however, historically, VOCs have been detected above AWQS. All on-Site groundwater samples contained metals, most commonly iron and sodium, at concentrations exceeding NYSDEC AWQS. Arsenic, magnesium, selenium and thallium, were also detected at concentrations exceeding the AQWS in one or more samples. A summary of groundwater contaminant detections can be found in **Table 2**. A map that indicates the locations of and summarizes exceedances from AQWS groundwater standards prior to the remedy is shown in **Figure 4**.

2.5.5 On-Site and Off-Site Sub-Slab Vapor and Subsurface Soil Gas Contamination

Six soil gas samples were collected in the Site vicinity during the RI. Soil gas samples collected around the exterior of the building footprint contained many VOCs above published guidance values, including PCE and TCE above the respective AGVs. PCE was identified in all six sampling locations at concentrations ranging between $3.12 \ \mu g/m^3$ and $6,920 \ \mu g/m^3$. TCE was identified in two samples at concentrations above the respective AGV, with a maximum detected concentration of $29.3 \ \mu g/m^3$.

The sub-slab soil vapor sample designated SV-20 and the collocated indoor air sample (SV-20IA) had four analytes that were detected in both samples, including PCE. The indoor air concentration of PCE (0.61 μ g/m³) was 0.0086% of the sub-slab soil vapor concentration (7,050 μ g/m³). In the indoor air sample, 1,4-Dichlorobenzene was detected at concentrations above the guidance or background values.

Seven VOCs were detected in both sub-slab soil vapor (SV-21) and indoor air (SV-21IA) at the commercial tenant space east of the Site. A comparison of these data indicates that there is moderate to poor correlation between the two data sets. All sub-slab soil vapor concentrations are greater than indoor air concentrations and the relative percentages range between 0.5% and 53%, suggesting that soil vapor intrusion was limited or not occurring. No individual analyte exceeded the guidance or background values in the indoor air sample.

The indoor air sample (IA111513) collected at the Site did not have any concentrations of VOCs above the guidance or background values. PCE was detected at a concentration of 1.38 μ g/m³; which is below the AGV of 30 μ g/m³. Nearly every analyte detected in indoor air was also

detected in the ambient (outdoor) air sample (AA111513), except isopropanol, which was only detected in indoor air. Two compounds were detected in the indoor air at greater concentrations than the ambient air, including trichlorofluoromethane (65.7 μ g/m³ versus1.48 μ g/m³), and 2,2,4-trimethylpentane (5.79 μ g/m³ versus1.13 μ g/m³).

A table of subsurface soil gas data and sub-slab soil vapor data collected are shown in **Table 3A** and **3B**, respectively. A map that indicates the locations of and summarizes soil gas and sub-slab vapor data in exceedance of NYSDOH guidance values prior to the remedy is shown in **Figure 5**.

2.6 ENVIRONMENTAL AND PUBLIC HEALTH ASSESSMENTS

A Qualitative Human Health Exposure Assessment (QHHEA) for the Site has been prepared in accordance with the requirements of DER-10/Technical Guidance for Site Investigation and Remediation, Appendix 3B, May 2010, and is presented in the following subsections. The QHHEA characterizes the exposure setting, identifies potentially complete exposure pathways, and qualitatively evaluates potential fate and transport of constituents from one medium to another (i.e., soil-to-air or soil-to-groundwater).

2.6.1 Site Setting

The Site is located at 3375-3377 Neptune Avenue, in Brooklyn, New York. Please refer to **Figure 1** for a Site location map. The Site is a residential development with commercial tenants on the ground floor along Neptune Avenue. The Site area is primarily residential; however a public school, PS-188, is located approximately 175 feet southeast of the Site, and there is a daycare center (Coney Island Daycare) located approximately 500 feet northwest of the Site.

Subsurface soils are completely covered by an impervious surface, both on- and off-Site. Groundwater beneath the Site is not used as potable drinking water, nor does it feed recreational water bodies at the Site or its vicinity. The potable water for the Site and surrounding area is supplied by municipal water. General Site use, a description of previous investigations, and the results of subsurface investigations can be found in **Sections 1.0** and **2.0**.

2.6.2 Exposure Assessment

An exposure pathway is the way that humans, or the environment, come into contact with chemicals of potential concern (COPC). An exposure pathway is considered complete when the following five conditions are met:

1. Source (i.e., chlorinated volatile organic compounds);

- 2. Release and transport mechanism from source to environmental media (i.e., into the subsurface or volatilization to the air of an overlying building);
- 3. Point of human exposure (i.e., an occupied building or surface soil);
- 4. A route of exposure (ingestion, dermal contact, or inhalation); and
- 5. A receptor population (i.e., on-site workers or residents).

An exposure assessment will identify these pathways and includes a review of the potential sources of COPC and their release mechanisms, and identification of potential human receptors.

2.6.3 Exposure Conceptual Site Model

A conceptual site model has been developed based on the findings of the Site subsurface investigations described in **Section 2.0** and from the anticipated future use of the Site. **Figure 9** depicts the conceptual site exposure model.

2.6.4 Potential Sources of Constituent of Potential Concern

For the purposes of this assessment, constituents detected above NYSDEC and NYSDOH standards and guidelines for soil, groundwater, and air in Site media are defined as constituents of potential concern (COPCs). These COPCs are identified in **Figures 3**, **4** and **5** and **Tables 1**, **2**, and **3**. Certain COPCs at the Site have been attributed to the historical handling, storage, and use of chlorinated solvents by the Former Gateway French (Dry) Cleaners. The Gateway French Cleaners operated at the Site from 1975 and 1996. Previous Site investigations have also identified low levels of petroleum constituents that were attributed to historical fuel oil use on the Site, and low levels of contaminants attributed to historic fill. No source area of chlorinated VOCs has been identified from record searches, field investigations, or analytical sampling. SVOCs, particularly PAHs, PCBs, pesticides, and metals in soils are likely attributed to historic urban fill material.

2.6.5 Potential Release Mechanisms

Analysis of soil and groundwater shows very low levels of Site-specific COPCs. There are three possible explanations as to the occurrence of elevated VOCs in soil gas and vapors under the Site and adjacent structural slab. These scenarios are:

1. PCE vapors were released from Site operations and equipment, entered the subsurface due to a density gradient, but did not significantly impact soil or groundwater;

- 2. Isolated piping or features under impervious surfaces (no precipitation leaching) at the Site continue to contribute to sub-slab vapors; and/or
- 3. PCE Vapors are trapped below the slabs by grade beams and the source was removed or has dissipated.

2.6.6 Potential Human Receptors and Exposure Pathways

Ingestion, dermal contact, and inhalation are all possible routes of exposure to potential receptors. Subsurface soils are completely covered by impervious surfaces (asphalt or concrete), both on- and off-Site. Groundwater beneath the Site is not used as a water supply for commercial or industrial use or as potable drinking water to residents or businesses. The potable water for the Site and surrounding area is supplied by municipal water. Soil vapors do have the potential to become an inhalation hazard if vapor intrusion conditions exist. Sub-slab soil vapors could impact occupied spaces if the occupied spaces are under negative atmospheric pressures relative to the sub-surface, and penetrations (cracks, joints, holes, or damaged/degraded piping) exist in the concrete slab.

Based on the current use and the anticipated future use of the Site, the following potential human receptors have been identified: (i) residents; (ii) workers/employees; (iii) patrons; and (iv) construction workers.

2.6.6.1 *Residents, Workers/Employees, and Patrons.*

Current and future on-Site and off-Site residents, employees, and patrons will not be exposed to soil or groundwater. As stated above, Site soils are covered by impervious surfaces and groundwater is not utilized; therefore, there are no exposure concerns to ingestion or dermal contact. Although, sub-slab soil vapor concentrations on and off-Site are at concentrations which NYSDOH Matrix 2 requires mitigation, no indoor air samples contained compounds above the NYSDOH AGVs or background values that were also detected at elevated concentrations in sub-slab soil vapors. Therefore, the potential for a complete exposure pathway for these receptor populations, while possible, is unlikely. Currently, an SSDS is operating at the residential apartments north of and adjacent to the Site.

2.6.6.2 *Current or Future On-Site Construction Worker.*

Current or future on-Site and off-Site construction workers, involved with disturbance of subsurface soils or groundwater may be exposed to COPCs through incidental ingestion, dermal contact, and inhalation of subsurface soil gas during subsurface disturbance or excavation. Therefore, this receptor population has the potential for a complete exposure pathway.

2.6.7 Potential Ecological Impacts

Based upon the investigations conducted at the Site, it does not appear that a Fish and Wildlife Impact Analysis (FWIA) is necessary. The Site is located in an urban area consisting of commercial and residential areas with minimal ecological habitat. Only trace amounts COPCs have been identified in subsurface soil and groundwater. Soils are covered by impervious surfaces reducing the potential for precipitation infiltration leaching COPCs. In addition, detected groundwater concentrations directly correlated to previous activities at the Site are relatively low. Discharge of COPCs to surface water bodies dilute concentrations further reducing potential impacts. Therefore, the potential for Site related COPCs to migrate to potential fish and wildlife resources is considered minimal. Further, no surface water bodies, wetlands or other ecologically significant areas are located in the immediate vicinity of the Site.

2.6.8 QHHEA Conclusions

The QHHEA identified soil, groundwater, and air as impacted media and a possible source of COPCs. Residents, commercial workers, and business patrons are not a likely receptor population for dermal or ingestion pathways; however; inhalation in the commercial space is a potential exposure pathway. The operating SSDS is mitigating subsurface soil vapors in the adjacent residential area. Construction or utility workers conducting intrusive subsurface activates could be exposed to PAHs and metals in historic urban fill and Site-specific COPCs in soils, groundwater, and soil gas.

2.7 OFF-SITE REMEDIAL ACTION

On October 29, 2012, Hurricane Sandy inundated large areas of Coney Island. Approximately three to four feet of water covered the ground level residential apartments and the commercial spaces at the Bay Park One complex, including the Site. The displacement of ground-floor tenants, demolition, and subsequent renovations provided an unprecedented opportunity to delineate sub-slab vapors under the residential apartments located adjacent to the Site and to install a mitigation system. These interim remedial measures are described in the following sections.

2.7.1 Sub-Slab Vapor Delineation

During renovation of the residential area, thirteen temporary sub-slab vapor sampling points, VS-1 through VS-14, were installed. While installing the sampling points with a drill, it was noted that there appeared to be a gap between the bottom of the slab and the underlying soils at many of the locations. GZA then obtained photo-ionization detector (PID) readings from the sampling locations as a field screening and delineation method. The PID measured parts per million (ppm) estimates of total organic vapors. Please note that PID readings are a relative measure of the total volatile organics in soil vapor and may differ by an order of magnitude or more from laboratory analytical results.

GZA also collected three sub-slab vapor samples for laboratory analysis between December 19 and 20, 2013. Samples had PCE concentration between 28.4 μ g/m³and 92.2 μ g/m³. Two additional sub-slab samples were collected from adjacent buildings. These samples had PCE concentrations of 6.35 μ g/m³ and non-detect.

2.7.2 Sub-Slab Depressurization System Installation and Delineation

The installation of the SSDS was coordinated with the NYSDEC via e-mails and telephone conversations on December 13, 2012. Prior to implementation of the SSDS in the residential section north of the Site, a pilot test was conducted. Vacuum influence was monitored at the sub-slab vapor sampling points. Although vacuum under the concrete floor slab occurred, numerous plumbing and electrical penetrations in the concrete slab and the air gap between the slab and underlying soil did not allow for the optimal vacuum influence. However, field PID readings and the laboratory sampling results indicate that the blower apparatus was effective in removing organic vapors from below the slab.

The SSDS was installed by Clean Vapor, LLC. of Blairstown, New Jersey. Initial construction was begun on January 21, 2013; however, due to other construction activities, SSDS installation activities were dependent on access and other craftsmen work. A total of seven suction points were installed by coring five-inch holes in the concrete floor slab and installing a riser pipe. A roof-mounted Cincinnati Fan PB-14A direct drive radial blower was installed to create vacuum for all seven suction pits. The blower is controlled by a variable frequency drive (VFD). The VFD is currently being controlled by a program logic controller and a third-party proprietary dynamic control system. The dynamic controls system is currently set to maintain a sub-slab vacuum level at sub-slab vapor monitoring point PT-5 (the lowest measured pressure probe) of 0.01 inches of water column.

The SSDS is currently operating; the effluent is being periodically sampled according to the Operation and Maintenance Plan for this SSDS. A system startup total effluent TO-15 VOCs laboratory sample was collected on September 16, 2013. The sample was collected via tubing placed into the effluent air stack and connected to a laboratory-supplied six-liter SUMMA canister. The effluent sample was collected over a two-hour collection time using a 0.0125 L/min flow regulator.

2.8 REMEDIAL ACTION OBJECTIVES

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

2.8.1 Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

2.8.2 Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota due to ingestion/direct contact with contaminated soil that would cause toxicity or bioaccumulation through the terrestrial food chain.

2.8.3 Soil Vapor

• Mitigate impacts to public health resulting from existing, or potential, soil vapor intrusion into buildings at the Site.

3.0 DESCRIPTION OF REMEDIAL ACTION PLAN

3.1 EVALUATION OF REMEDIAL ALTERNATIVES

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended, and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria, and guidance values (SCGs). A remedy is then developed based on the following criteria:

- Protection of human health and the environment;
- Compliance with standards, criteria, and guidelines (SCGs);
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community acceptance; and
- Land use.

The following Remedial Action standards, criteria, and guidance used to develop these remedial alternatives are described below:

• 6 NYCRR Part 375-6 Soil Cleanup Objectives

These soil cleanup objectives are used to develop and implement remedial programs for soil and other media in the BCP

• NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations – TOGS 1.1.1

This document provides a compilation of ambient water quality guidance values for use when there are no standards and includes the standards in 6 NYCRR 703.5; it was used to develop remedial alternatives.

• NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, May 2010

This guidance document provides an overview for the remediation process for the NYSDEC remedial programs, including the BCP.

• NYSDEC DER-31 Green Remediation, August 2010

This guidance document provides an approach to remediating sites in the context of the larger environment and to promote the use of more sustainable remediation practices and technologies.

• New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006

This guidance document provides an approach to identifying and addressing current and potential exposure to VOC contamination.

• New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan

This document describes the protocol for real-time monitoring for VOCs and particulates at and around designated work areas when certain activities are in progress at contaminated sites.

Alternative 1

- Track 1 Part 375 Unrestricted Use SCOs;
- Removal of concrete slab and excavation of soils to the water table to remove all soils above Unrestricted Use SCOs.
- Injection of Electron Donor Compound to reduce contaminant concentrations to the established SCOs in the soil and groundwater through chemical and biological processes;
- Implementation of a groundwater monitoring program to monitor dissolved chlorinated solvent contaminant mass decreases with time and VOCs do not migrate off-Site. This monitoring program includes installation of three additional monitoring wells; and
- Establishment of an approved Site Management Plan (SMP) to provide short-term (less than five years) management of these engineering and institutional controls, including the performance of periodic inspections and certification that the controls are performing as they were intended.

Alternative 2

- Establishment of Track 4 SCOs as Part 375 Restricted-Residential SCOs; Sub-slab soil vapor extraction and air sparging to physically treat and remove volatile contaminants of concern from the soil and groundwater down to the established SCOs for VOCs;
- Maintenance of a surface covers over the entire Site to prevent exposure to remaining contaminated soil/fill, if present;
- Implementation of a groundwater monitoring program to monitor dissolved chlorinated solvent contaminant mass decreases with time and VOCs do not migrate off-Site. This monitoring program includes installation of three additional monitoring wells;
- Establishment of an approved SMP to provide long-term management of these engineering and institutional controls, including the performance of periodic inspections and certification that the controls are performing as they were intended; and
- Placement of an environmental easement to memorialize the remedial action and the Engineering and Institutional Controls to document that future owners of the site continue to maintain these controls as required.

Alternative 3

- Establishment of Track 4 SCOs as Part 375 Restricted-Residential SCOs;
- Expansion of a currently operating sub-slab depressurization system to mitigate potential soil vapor intrusion into occupied spaces;
- Maintenance of a surface covers over the entire Site to prevent exposure to remaining contaminated soil/fill, if present;
- Establishment of use restrictions including prohibitions on the use of groundwater from the Site and prohibitions on other sensitive Site uses, such as farming or vegetable gardening, to prevent future exposure pathways;
- Establishment of an approved Site Management Plan (SMP) to provide long-term management of these engineering and institutional controls, including the performance of periodic inspections and certification that the controls are performing as they were intended; and
- Placement of an environmental easement to memorialize the remedial action and the Engineering and Institutional Controls to document that future owners of the site continue to maintain these controls as required.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

3.1.1 Protection of Human Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of the way risks posed through each existing or potential pathway of exposure are prevented, reduced, or controlled through the removal, treatment, and implementation of Engineering Controls or Institutional Controls (ECs/ICs). Protection of public health and the environment must be achieved for all approved remedial actions.

The three alternatives proposed will protect human health and the environment by eliminating or reducing levels of contamination, and/or reducing potential pathways of exposure. It should be noted that it is planned to leave the existing building in place, therefore, no soil excavation, disposal or dewatering is proposed.

3.1.2 Compliance with Standards, Criteria, and Guidelines (SCGs)

The proposed remedies for the Site aim to ultimately achieve relevant and/or applicable standards and soil cleanup objectives. **Alternative 1** has demonstrated effectiveness for removing contaminated soils and treating VOCs and may treat contamination associated with petroleum impacts. **Alternative 2** may entail air discharges; all appropriate air emission standards will be met through engineered controls/treatment. In addition, any on-Site air discharges will meet applicable state and local standards. Engineering controls, such as surface covers over the entire Site to prevent exposure to remaining contaminated soil/fill, if present. With **Alternative 3**, any potential groundwater contamination above standards may remain for long periods. Engineering controls, such as surface covers over the entire Site to prevent exposure to remaining contaminated soil/fill, if present exposure to remaining contaminated soil/fill, if present.

3.1.3 Short-Term Effectiveness and Impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Alternative 1 will have substantial short term impacts related to disturbance of an occupied tenant space, removal of the concrete floor slab and excavation of soils. Alternative 2 will have moderate short-term impacts related to installation of SVE and air sparging points. The SVE and air sparging includes the installation of surface piping and headers, construction disturbance of subsurface soils, and potential for contaminant emissions to the atmosphere. Alternative 3 will have negligible short-term impacts.

3.1.4 Long-Term Effectiveness and Permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of ECs/ICs that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to prevent exposures to contaminants, and longterm reliability of EC.

Each of the proposed on-Site remedies has the potential to effectively and permanently reduce subsurface contamination associated with the VOCs; however, the duration of **Alternative 3** is unknown. Confirmatory monitoring is included in each of the proposed remedies. **Alternative 1** would achieve long-term effectiveness and permanence related to on-Site contamination by treating some contaminants of concern and removing urban historic fill. Further, with injection of electron donor compound, several injections may be required. Degradation of chlorinated hydrocarbons will lead to long term improvements to groundwater quality. Rapid remediation may only occur in more permeable layers within the aquifer. Diffusion will transport nutrients more slowly to less permeable zones. Degradation of petroleum-related compounds may be achieved concurrently, or post-VOC degradation, but only if the subsurface becomes aerobic.

With **Alternative 2**, SVE and air sparging, engineered controls will need to be maintained over time. Volatilization and removal of contaminants from the soil zone will lead to long-term improvements to groundwater quality. However, stratified soils below the Site will likely reduce effectiveness.

The long-term efficacy of **Alternative 3** is unknown. Contaminants may remain above standards in groundwater for the foreseeable future. Migration of the plume further from the site may occur.

3.1.5 Reduction of Toxicity, Mobility, or Volume of Contaminated Material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to reduce contaminants at a Site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

The proposed remedies reduce toxicity, mobility, and/or volume of contamination via removal, treatments, or natural biodegradation. Alternative 1 would remove the toxicity, mobility, and volume of Site-specific contaminants through physical removal and biological breakdown of contaminants. Alternative 2 would accomplish these objectives through physical removal of VOCs. However, SVE and air sparging have the potential for inducing migration of contaminants. Alternative 3 would result in long-term reduction in toxicity through natural degradation of VOCs; however, there is likely to be little effect in the short-term.

3.1.6 Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

All these proposed remedial options can be implemented at the Site. Pilot testing or treatability studies are likely needed for the options considered. Local permits may be required prior to implementing these remedies. It should be noted however, that without knowing where or even if there is a source plume of PCE, designing an effective remediation system to directly treat the soil and groundwater will be challenging.

The implementability of **Alternative 1** is poor. This alternative requires removal of an existing floor slab, excavation within a building footprint and substantial support of excavation. In addition it will require advancement of injection points and installation of additional monitoring wells and would require the Site to remain unoccupied in the short-term. Groundwater at the Site has the characteristics of being anaerobic and a reducing environment. Working with existing conditions is preferable to attempting to convert the aquifer to an aerobic environment.
Degradation of low concentrations of chlorinated VOCs in groundwater could be enhanced by remedial amendments specifically designed for anaerobic environments. Degradations of petroleum related constituents would not likely benefit directly from anaerobic augmentation; though, petroleum compounds could possibly be degraded post-electron donor amendment once metabolic activity of microorganisms in the subsurface increases.

Alternative 2 requires installation of air sparge points and SVE equipment. This alternative would require detailed pilot testing and ongoing equipment maintenance. Further, **Alternative 2** requires the installation of wells and piping under the Site slab. Therefore, the implementability of this remedial alternative is moderate to poor.

Alternately, the implementability of **Alternative 3** is excellent as it is easily implemented and is low impact.

3.1.7 Cost Effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, disposal costs, and engineering expenses) and Site management costs (costs incurred after remedial construction is complete) necessary to meet the continued effectiveness of a remedial action.

The remedial options identified were quantitatively compared to one another in terms of overall costs including capital costs (e.g. equipment) and longer-term operation and maintenance costs (e.g. monitoring and system inspections).

The capital costs for **Alternative 1** are much higher than **Alternative 2** or **Alternative 3**. Higher costs are driven by material, construction, and energy expenditures. Total costs for **Alternative 1** is estimated at \$600,000 to \$850,000, for **Alternative 2** is between \$350,000 and \$550,000, and for **Alternative 3** is between \$150,000 and \$250,000.

3.1.8 Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Similar remedial actions to the ones proposed in this Work Plan have been used elsewhere in New York State and/or at similar sites, with acceptance by local communities and regulatory authorities. The NYSDEC will notify the public that this BCP Remediation Work Plan is available for comment for a 30-day period through notice in the Environmental Notice Bulletin (ENB).

Alternative 1 is expected to have major potential community impacts, including Site activities disruption and increased traffic around the Site during the short-term of implementation. Community may be exposed to subsurface soil during construction and air emissions during implementation. Alternative 2 is expected to have moderate community impact and the community may be exposed to air emission and subsurface soil during implementation. The remediation system off-gas control will need to be monitored, and noise exceedances will need to be considered and controls implemented. During the construction of Alternative 2, some disruption of and traffic increase is expected. Alternative 3 is expected to have little or negligible impact to the community.

3.2 SELECTION OF THE PREFERRED REMEDY

The preferred remedial alternative is **Alternative 3**. This alternative effectively protects human health, is the most implementable, and is most cost effective. Recently collected data indicates that groundwater has met the AWQS criteria.

Mitigation of soil vapor is required for concentrations in the range encountered at the Bay Park One (PCE levels greater than 1,000 μ g/m³). The protection of human health is the paramount concern at the Site. Although the source of the sub-slab soil vapors was not identified, mitigation of the potential vapor intrusion conditions at the Site is required.

The current SSDS is operating, creating a negative pressure atmosphere under the residential apartments, and is protective of occupant health. The SSDS was designed such that expansion was possible to other areas of the building. The remaining portions of the building without SSDS influence, including the Site, are comprised of two structural slabs with vertical grade beams. In order to effectively create a negative atmosphere, additional suction pits should be installed in each of the two concrete floor slabs. Please refer to **Figure 10** for a depiction of area of the currently operating SSDS as well as the proposed expansion of the system.

Operation of an expanded SSDS system could reduce the concentrations of soil gas migrating beyond the Site. Additionally, the SSDS will reduce the concentrations of soil gas and sub-slab soil vapors that can potentially cause vapor intrusion issues. As stated above, there are four scenarios considered here that attribute to COC vapors. Conservatively, it is anticipated that the source exists, although unidentified, and that the conditions will persist requiring indefinite operation of the mitigation system. Should the sub-slab soil vapors and soil gas be residual and no source exists, it is possible that the mitigation techniques could lower concentrations to a point where mitigation techniques are no longer required.

3.3 LAND USE FACTOR EVALUATION

The following land use factor evaluation examines whether **Alternative 3** is acceptable based on the following criteria as required by Article 27, Title 14 of the Environmental Conservation Law 27-1415. This evaluation addresses the proposed use of the property and has considered reasonably anticipated future uses of the Site.

3.3.1 Zoning

The current land use category for the Site is "Mixed Use". Currently the retail space is being used by a dental professional. The former dry cleaner usage of the retail space was terminated in approximately 1995. The proposed post-remediation usage will continue to be "Mixed Use", and is consistent with historic usage since the 1970s when the building was completed. The owners wish to continue leasing the space for local medical professional or general neighborhood services.

3.3.2 Applicable Comprehensive Community Master Plans or Land Use Plans

The 2003 Strategic Plan calls for a Multi-Cultural Center to be constructed in western Coney Island and south of Mermaid Avenue. The Strategic Plan also calls for improvements along Mermaid Avenue. There do not appear to be any zone or other changes proposed along Neptune Avenue in western Coney Island as part of the Strategic Plan. The Approved Coney Island Comprehensive Rezoning Plan calls for rezoning of area to the east of West 24th Street and south of Mermaid Avenue, an area that is approximately ½ mile to the southeast. The parcel is not within or adjacent to any Brownfield Opportunity Area. This entire area of Coney Island is within the Coastal Zone Boundary of the Waterfront Revitalization Program. The proposed remediation strategy will not impact any proposed or current Land-Use Plans.

3.3.3 Surrounding Property Uses

The Site is commercial space and the vicinity is a mixed-use development with residential apartments and retail space. South of Neptune Avenue, between West 35th, 36th and 37th Streets, are single or multifamily townhouses. Some of the dwellings have been converted to include businesses; such as another dental clinic and an Islamic Center. Public School (PS) 188 is located southeast of the Site between West 33rd and West 35th Streets; West 34th Street does not exist. West of the Site is a Key Foods Grocer while east of the Site are commercial spaces in the same building. North of the Site are residential apartments. The proposed remedial strategy will not affect the surrounding property uses.

3.3.4 Citizen Participation

A Citizen Participation Plan was submitted to NYSDEC in June 2013 and accepted in July 2013. The Plan outlines the activities that will be undertaken to address public interests/concerns about the project. The Plan is being kept at the Coney Island Branch of the Brooklyn Public Libraries, which has agreed to act as repository for this and other public notification documents. The proposed remedial strategy is compatible with the current Citizen Participation Plan.

3.3.5 Environmental Justice Concerns

The remedial program for this site has been selected with due consideration of the current, projected and reasonably anticipated future land uses of the parcel and adjacent surroundings, per ECL 27 1415, which stipulates the remediation and land use must meet the requirements of this section including the extent to which the proposed use may reasonably be expected to cause or increase a disproportionate industrial burden on the community in which the site is located. To this end, the proposed usage is not changing from its existing and historic usage and is not viewed as an increased burden of industrial usage on the community.

3.3.6 Land Use Designations

The parcel is not related to any state or federal designation including special purpose and limited height districts, Restrictive and Environmental Declarations, historic and scenic boundaries, historic Homes, landmarked locations, or green spaces.

3.3.7 Population Growth Patterns

The proposed plan to continue using the Site for commercial space is not expected to have a bearing or be a factor relative to population growth.

3.3.8 Accessibility to Existing Infrastructure

The property is accessible to existing infrastructure including underground power supplied by Con Edison, public water, sewer, and stormwater, which are available along Neptune Avenue and 33rd Street. Neptune Avenue connects with the main thoroughfare that enters Coney Island which connects to the Belt Parkway. This accessibility will not be affected by the proposed remediation strategy.

3.3.9 Proximity to Cultural Resources

There are no identified historic and or scenic boundaries, historic homes, or landmarked locations within ¹/₂ mile of the site.

3.3.10 Proximity to Natural Resources

Coney Island Beach is located about ¹/₂ miles to the southeast, and unnamed beaches and parkland and natural area are located about ¹/₄ miles to the north along Coney Island Creek. These areas are also New York City Department of Planning Open Space. There are National Wetlands U.S. Fish & Wildlife Service Estuary and Marine Wetlands to the north about 1,500 feet away and to the southwest about 2,000 feet away. A community garden exists between West 29th and 28th Street about ¹/₂ miles from the site. Playgrounds exist along the "Boardwalk West" that is to the southeast of the Site and between West 30th Street and West 27th Street. There are no identified wildlife refuges or critical habitats of endangered or threatened species identified within ¹/₂ miles of the site. These natural resources are not expected to be impacted by the proposed remedial strategy.

3.3.11 Off-Site Groundwater Impacts

The groundwater in the vicinity of the Site has been sampled and these data are presented in **Table 2** and **Figure 4**. All permanent groundwater monitoring wells are proposed off-Site. Recently collected data indicates that groundwater has met the AWQS criteria

3.3.12 Proximity to Floodplains

The Site is in Flood Zone AE 10' elevation.

3.3.13 Geography and Geology of the Site

Site geography and geology is consistent with surrounding area. See Section 2.4.

3.3.14 Current Institutional Controls

There currently are no Institutional Controls on the site.

3.4 SUMMARY OF SELECTED REMEDIAL ACTIONS

- 1. Establishment of Track 4 SCOs as Part 375 Restricted-Residential SCOs;
- 2. Maintenance of a engineered composite cover over the entire Site, consisting of a currently existing concrete slab, to prevent human exposure to residual contaminated soil/fill, if present, remaining under the Site;
- 3. Expansion of a currently operating sub-slab depressurization system to mitigate potential soil vapor intrusion into occupied spaces;

- 4. Publication of a Site Management Plan for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
- 5. Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site [a copy of the Environmental Easement will be provided in the Site Management Plan (SMP)];
- 6. Submittal of a FER that describes the remedial activities, certifies that the remedial requirements have been achieved, describes all Engineering and Institutional Controls to be implemented at the site, and describes any deviation from the RAWP;
- 7. All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP and the Department-issued Decision Document. All deviations from the RAWP and/or Decision Document will be promptly reported to NYSDEC for approval and fully explained in the FER.

4.0 **REMEDIAL ACTION PROGRAM**

The remedial action program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and Site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials that would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes that balance ecological, economic, and social goals; and
- Integrating the remedy with the end-use where possible and encouraging green and sustainable re-development.

4.1 GOVERNING DOCUMENTS

Copies of governing documents are included in full in **Appendix E**. These documents are described below.

4.1.1 Site Specific Health & Safety Plan (HASP)

The Site-Specific Health and Safety Plan is provided in **Appendix E**. The Site Safety Coordinator has not yet been selected. A resume will be provided to NYSDEC prior to the start of remedial construction. All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA. The Participant and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance

of work according to that plan and applicable laws. The Health and Safety Plan (HASP) and requirements defined in this Remedial Action Work Plan pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion.

4.1.2 Quality Assurance Project Plan (QAPP)

A QAPP has been prepared the DER-10 that describes the quality control components and will ensure the proposed remedy accomplishes the remedial action objectives. The QAPP is attached in **Appendix E.**

4.1.3 Construction Quality Assurance Plan (CQAP)

A CQAP has not been prepared as the proposed remedial action will not involve construction activities.

4.1.4 Soil/Materials Management Plan (SoMP)

It is not anticipated that any soils will be removed from the Site. Materials generated while installing additional monitoring wells and expanding the SDDS will be addressed as described here.

4.1.4.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional or experienced field geologist under the direction of the Remedial Engineer during all remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the Final Engineering Report.

Screening will be performed by qualified environmental professionals. Resumes will be provided for all personnel responsible for field screening (i.e. those representing the Remedial Engineer) of invasive work for unknown contaminant sources during remediation and development work.

4.1.4.2 Materials Excavation and Load Out

The Remedial Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The Participant 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 has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan 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).

The Participant and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. The survey information will be shown on maps to be reported in the Final Engineering Report.

4.1.4.3 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.

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

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loosefitting 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.

4.1.4.4 Materials Disposal Off-Site

The disposal locations will be established at a later date will be reported to the NYSDEC Project Manager.

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 1 Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Participant to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2

Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Materials Management (DMM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DMM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-Site or off-Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The Final Engineering Report will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the Final Engineering Report.

Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

4.1.4.5 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this RAWP prior to receipt at the Site.

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

The Final Engineering Report will include the following certification by the Remedial Engineer: "I certify that all import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC approved backfill or cover soil quality objectives are the lower of the protection of groundwater or the protection of public health soil cleanup objectives for residential use as set forth in Table 375-6.8(b) of 6 NYCRR Part 375. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved Remedial Action Work Plan or its approval by NYSDEC should be construed as an approval for this purpose.

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 NYSDEC. Nothing in this Remedial Action Work Plan should be construed as an approval for this purpose.

Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

4.1.4.6 *Contingency Plan*

If underground tanks or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs). These analyses will not be limited to STARS parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

4.1.4.7 Community Air Monitoring Plan

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report. Please refer to **Section 4.1.6** for the CAMP.

4.1.4.8 Odor, Dust and Nuisance Control Plan

The Final Engineering Report will include the following certification by the Remedial Engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

4.1.4.8.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-Site. If nuisance odors are identified, 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 all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Participant's Remedial Engineer, who is responsible for certifying the Final Engineering Report.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (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.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

4.1.4.8.2 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-Site work, will include, at a minimum, dust suppression through available on-Site water at suitable supply and pressure for use in dust control.

4.1.5 Stormwater Pollution Prevention Plan (SWPPP)

A SWPPP has not been prepared as the proposed remedial action will not create the potential for erosion or migration of Site soils.

4.1.6 Community Air Monitoring Plan (CAMP)

Periodic monitoring for VOCs will be performed during non-intrusive activities, such as the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the CAMP will be reported to the NYSDEC Project Manager and included in the Daily Report.

4.1.6.1 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.
- All 15-minute readings will be recorded and be available for NYSDEC personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

4.1.6.2 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) 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. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, 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 the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.
- All readings will be recorded and be available for NYSDEC personnel to review.

4.1.7 Contractors Site Operations Plan (SOP);

The Remedial Engineer will review all plans and submittals for this remedial project (including those listed above and contractor and sub-contractor document submittals) prior to commencement and will confirm that they are in compliance with this RAWP. The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, are in compliance with this RAWP. All remedial documents, including the SSDS design package, will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.8 Citizen Participation Plan

The proposed Citizen Participation Plan (CPP) for this project is attached in **Appendix E**. **Appendix E** is the standard form for the CPP but the Participant will only be implementing those steps relating to approval and implementation of the RAWP at the Site.

A certification of mailing will be sent by the Participant to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (specific date) and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

Document repositories have been established at the following locations and contain all applicable project documents:

Brooklyn Public Library - Coney Island Branch

1901 Mermaid Avenue, Brooklyn, NY 11224

718.265.3220

10:00 AM – 6:00 PM, Monday through Friday, and until 8:00 PM Wednesday.

On April 11, 2014 notification letters were sent to the tenants of 2770 West 33rd Street and to the proprietors of the commercial space abutting the Site. The letter contained information about the constituent of concern (PCE) and the SSDS currently operating under the Site. Certificates of receipt can be found in **Appendix E.**

4.2 GENERAL REMEDIAL CONSTRUCTION INFORMATION

4.2.1 Project Organization and Oversight

Principal personnel who will participate in the remedial action include staff of GZA GeoEnvironmental as the Environmental Consultant. Subcontractors will be identified upon acceptance of the RAWP:

The Professional Engineer (PE) and Qualified Environmental Professional (QEP) for this project are Kathleen Cyr and David Winslow, respectively. Both Ms. Cyr and Dr. Winslow are

professionals with GZA. Resumes of key personnel involved in the Remedial Action will be provided upon acceptance of the RAWP.

4.2.2 Remedial Engineer

The Remedial Engineer for this project will be Kathleen Cyr. The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for the Former Gateway French Dry Cleaner Site (NYSDEC BCA Site No. C224151). The Remedial Engineer will certify in the Final Engineering Report that the remedial activities were observed by qualified environmental professionals under her supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer will coordinate the work of other contractors and subcontractors involved in all aspects of remedial construction including, air monitoring and emergency spill response services. The Remedial Engineer will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this Remedial Action Work Plan and will certify compliance in the Final Engineering Report.

The Remedial Engineer will provide the certifications listed in Section 10.1 in the Final Engineering Report.

4.2.3 Remedial Action Construction Schedule

The proposed Remedial Action schedule presented below is contingent upon concurrence of this RAWP by the NYSDEC and NYSDOH in October 2014.

Task	Description	Estimated Date
1.	SSDS pilot test, design, and instillation	February 2015
2.	1 st quarterly SSDS monitoring report	May 2015
3.	Site Management, and SSDS OM&M Plans	May 2015
4.	2nd quarterly SSDS monitoring report	August 2015
5.	3rd quarterly SSDS monitoring report	November 2015
6.	4th quarterly SSDS monitoring report	February 2016

4.2.4 Work Hours

The hours for operation of remedial construction will be from 7 a.m. to 5 p.m., Monday through Friday. These hours conform to the New York City Department of Buildings (NYCDOB) construction code requirements. Any deviations to this schedule may require additional permitting from the NYCDOB.

The hours for operation of remedial construction will conform to the New York City Department of Buildings construction code requirements or according to specific variances issued by that agency. DEC will be notified by the Participant of any variances issued by the Department of Buildings. NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

Site access will be controlled by secured, locking Site building doors.

4.2.6 Worker Training and Monitoring

Site workers will be required, at a minimum, to have completed 29 CFR 1910.120 HAZWOPER, Site safety training, and medical monitoring for Site workers.

4.2.7 Agency Approvals

The Participant has addressed all SEQRA requirements for this Site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site is in conformance with the current zoning for the property as determined by New York City Department of Planning. A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

A complete list of all local, regional, and national governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work, which will contain a citation of the law, statute or code to be complied with, the originating agency, and a contact name and phone number in that agency, will be included in the Final Engineering Report.

No planned remedial or construction work will occur in regulated wetlands or adjacent areas.

4.2.8 NYSDEC BCP Signage

A project sign will be erected at the main entrance to the Site prior to the start of any remedial activities. The sign will indicate that the project is being performed under the New York State Brownfield Cleanup Program. The sign will meet the detailed specifications identified and provided by the NYSDEC Project Manager.

4.2.9 **Pre-Construction Meeting with NYSDEC**

A pre-construction meeting with the NYSDEC will take place prior to the start of any major construction activities or as required by the NYSDEC.

4.2.10 Emergency Contact Information

An emergency contact sheet with names and phone numbers will be provided upon acceptance of this RAWP. That document will define the specific project contacts for use by the NYSDEC and NYSDOH in case of a day or night emergency.

4.2.11 Remedial Action Costs

The total estimated cost of the Remedial Action is between \$150,000 and \$250,000. The estimated cost will be revised and provided upon acceptance of the RAWP. The final actual costs and will submitted as an Appendix to the FER.

4.3 SITE PREPARATION

4.3.1 Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for monitoring), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

4.3.2 Utility Marker and Easements Layout

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy

of the Mark-out Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

The Participant and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Participant and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Participant and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the Site will be investigated by the Remedial Engineer to determine that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

4.3.3 Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations. The location of proposed equipment and material staging areas and other pertinent remedial management features will remain on-Site or in the allotted space designated by the NYCDOB or the New York City Department of Transportation (NYCDOT) permitting.

4.3.4 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Equipment decontamination, and;

• General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. In addition, all investigation and remediation derived waste will be appropriately disposed.

4.4 **REPORTING**

All daily and monthly Reports will be included in the Final Engineering Report.

4.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by the end of each day following the reporting period and will include:

- An update of progress made during the reporting day;
- Locations of work;
- References to alpha-numeric map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP finding, including excursions;
- An explanation of notable Site conditions; and
- Photograph of notable Site conditions and activities.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to an alpha-numeric map for the Site that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

The NYSDEC assigned project number will appear on all reports.

4.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers within one week following the end of the month of the reporting period and will include:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed;
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

4.4.3 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital (JPEG) format. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any Remedial Actions will be provided. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. Photos will be included in the daily reports as needed, and a comprehensive collection of photos will be included in the Final Engineering Report.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

4.4.4 Complaint Management Plan

All complaints from citizens will be promptly reported to the NYSDEC. Complaints will be addressed and outcomes will also be reported to NYSDEC in daily reports. Notices to NYSDEC will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

4.4.5 Deviations from the Remedial Action Work Plan

All changes to the RAWP will be reported to the NYSDEC Project Manager and will be documented in daily reports and reported in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from NYSDEC noting the following:

• Reasons for deviating from the approved RAWP;

- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

5.0 THE RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Since residual contaminated soil, groundwater, and soil vapor will exist beneath the Site after the remedy is complete, Engineering and Institutional Controls (ECs and ICs) are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site specific Site Management Plan (SMP) that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have two primary EC systems. These are an expanded SSDS and concrete building slabs.

The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances of both Track 1 and Track 4 sites.

6.0 ENGINEERING CONTROLS: COMPOSITE COVER SYSTEM

Exposure to residual contaminated soils will be prevented by an engineered, composite cover system that will be maintained on the Site. A Site cover currently exists and will be maintained to allow for restricted-residential use of the Site. Any Site redevelopment will maintain a Site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the Site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted-residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

A Soil and Underground Utilities Management Plan will be created and included in the Site Management Plan and will be provided upon the acceptance of this RAWP. The Soil Management Plan will outline the procedures to be followed in the event that the composite cover system and underlying residual contamination are disturbed after the Remedial Action is complete. Maintenance of this composite cover system will be described in the Site Management Plan in the FER.

7.0 ENGINEERING CONTROLS: TREATMENT SYSTEMS

Previous investigations confirmed the presence of VOC-contaminated sub-slab soil vapor at the Site. Sub-slab soil vapor samples at the Site contained PCE and TCE at concentrations above the NYSDOH AGV. Contaminated soil vapor will be mitigated through the expansion of an active sub-slab depressurization system.

A SSDS will be installed at any buildings where VOC concentrations in soil vapor and/or indoor air exceed NYSDOH SVI Decision Matrix guideline values for implementing a mitigation system. This will include the Site and the adjacent retail spaces: Stationary Store, Pharmacy, and the two restaurant spaces (**Figure 5**). The suction pits will be created by removing one cubic foot of soil. Gun-grade urethane caulking and backer rod will act as a preliminary seal below the concrete, followed by self-leveling urethane to seal the suction pipe flush with the concrete floor. Vapors will exit the suction pits through Schedule 40 steel suction point riser pipes to cast iron overhead piping in accordance with New York City fire codes. The piping will run to a roof mounted blower with a variable frequency drive motor. A Magnehelic pressure gauge will monitor sub-slab pressure at strategically placed pressure probe points. Dynamic controls will maintain a minimum of 0.01 inches of water column vacuum at the lowest measured pressure probe. Prior to initial start-up of the SSDS, system commissioning will be performed. All as-built drawings, diagrams, calculation, and manufacturer documentation for treatment systems will be presented in the FER. Additionally, all reports or other relevant information generated during the testing of the SDS will be included in the FER.

To confirm the effectiveness of the engineering control, the sub-slab pressures will be monitored at the Site on a semi-annual basis for the first year, then once every year during the SSDS operation. The pressure will be checked with a system manometer that can be monitored remotely and an alert will be generated if there is a system malfunction. The SSDS system effluent will be sampled quarterly for the first year, then semiannually thereafter to monitor effluent levels. Should the PCE concentrations in the SSDS effluent appear to be below NYSDOH AGVs, grab soil gas samples will be collected while the system is operating. In the event that the soil gas samples are below mitigation levels, as presented in the NYSDOH Decision Matrices I and II, the system will be turned off after written approval by the NYSDEC and NYSDOH. After which, soil gas will be sampled quarterly to assess rebound for one year; sampling will be conducted semiannually for three years, biannually for two years, then once every four years thereafter, or as determined by NYSDEC and/or NYSDOH.

System OM&M requirements will be established for the Site Management Plan. Any future buildings within area indicated on **Figure 2** will be required to have a sub-slab depressurization

system, or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater.

8.0 CRITERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF REMEDIAL SYSTEMS

8.1 COMPOSITE COVER SYSTEM

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

8.2 SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS)

The active SSDS will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the active SSDS may be submitted by the property owner based on confirmatory data that justifies such request. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH. A proposal for the termination of the SSDS will be based on post-remediation contaminant levels in the sub-slab soil vapor, indoor air (as appropriate), collected from sub-slab soil vapor probes and building interiors, respectively. The proposal will be based upon several factors, including:

- Residual contamination effects on indoor air quality;
- Residual contamination effects on indoor air quality when the SSDS is turned off; and
- Rebound effects observed on system pilot shut-down.

9.0 INSTITUTIONAL CONTROLS

After the remedy is complete, the Site will have residual contamination remaining in place. Engineering Controls (ECs) for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and a Site Management Plan.

All as-built drawings, diagrams, calculation and manufacturer documentation for treatment systems will be presented in the FER. A Site -specific Environmental Easement will be recorded with Kings County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all Engineering and Institutional Controls (ECs/ICs) placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

9.1 ENVIRONMENTAL EASEMENT

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with the Kings County Office of the City Register. The Environmental Easement will be submitted as part of the Final Engineering Report.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with the Kings County Office of the City Register before the Certificate of Completion can be issued by NYSDEC. A series of Institutional Controls are required under this remedy to implement, maintain and monitor these Engineering Control systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to commercial or residential use(s) only. These Institutional Controls are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. Institutional Controls can, generally, be subdivided

between controls that support Engineering Controls, and those that place general restrictions on Site usage or other requirements. Institutional Controls in both of these groups are closely integrated with the Site Management Plan, which provides all of the methods and procedures to be followed to comply with this remedy.

The Institutional Controls that support Engineering Controls are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- A composite cover system consisting of concrete building slabs must be inspected, certified and maintained as required in the SMP;
- A soil vapor mitigation system consisting of a sub-slab depressurization system under the impacted building structures must be inspected, certified, operated and maintained as required by the SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-Site environmental monitoring devices, including but not limited to, groundwater monitor wells and soil vapor probes, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP; and
- Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these Institutional Controls for the Site is mandated by the Environmental Easement and will be implemented under the Site Management Plan (discussed in the next section). The Controlled Property (Site) will also have a series of Institutional Controls in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

• Vegetable gardens and farming on the Controlled Property are prohibited;

- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the Site Management Plan;
- The Controlled Property may be used for restricted residential or commercial use(s) only, provided the long-term Engineering and Institutional Controls included in the Site Management Plan are employed;
- The Controlled Property may not be used for a higher level of use, such as unrestricted use without an amendment or extinguishment of this Environmental Easement; and
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This time period must be certified by an expert that the NYSDEC finds acceptable.

9.2 SITE MANAGEMENT PLAN

Site Management is the last phase of remediation and begins with the approval of the Final Engineering Report and issuance of the Certificate of Completion (COC) for the Remedial Action. The Site Management Plan is submitted as part of the FER but will be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the Site Management Plan are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including,

where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

The Institutional and Engineering Control Plan will identify all use restrictions and engineering controls for the site and detail 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.

Engineering controls:

- The site cover discussed above; and
- The sub-slab depressurization system discussed above.

This SMP will include, but may not be limited to:

- Excavation plan which details the provision for management of future excavations in area of remaining contamination;
- Description of the provision of the environmental easement including any land use, and groundwater use restrictions;
- Provision for management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notification; and
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- Monitoring of site cover to assess the performance and effectiveness of the remedy; and
- A schedule of monitoring and frequency of submittals to the Department.

The Operation and Maintenance (O&M) plan will ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- Compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- Maintaining Site access controls and Department notification; and
- Providing the Department access to the site and O&M records.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be biennially. The Site Management Plan will be based on a calendar year and will be due for submission to NYSDEC by March 1 of the year following the reporting period.

The Site Management Plan in the Final Engineering Report will include a monitoring plan for groundwater at the down-gradient Site perimeter to evaluate Site-wide performance of the remedy. No exclusions for handling of residual contaminated soils will be provided in the Site Management Plan (SMP). All handling of residual contaminated material will be subject to provisions contained in the SMP.

10.0 FINAL ENGINEERING REPORT

A Final Engineering Report (FER) will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The Final Engineering Report will include as-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete Site Management Plan (formerly the Operation and Maintenance Plan). The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the Site Management Plan and Environmental Easement. This determination will be made by NYSDEC in the context of the Final Engineering Report review.

The Final Engineering Report will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action for all soil/fill remaining at the Site after the Remedial Action for all soil/fill remaining at the Site after the Remedial Action for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of

Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The Final Engineering Report will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).

10.1 CERTIFICATIONS

The following certification will appear in front of the Executive Summary of the Final Engineering Report. The certification will be signed by the Remedial Engineer Kathleen Cyr who is a Professional Engineer registered in New York State. This certification will be appropriately signed and stamped. The certification will include the following statements:

I, _____, am currently a registered professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the Former Gateway French Dry Cleaner Site (NYSDEC BCA Site No. C224151).

I certify that the Site description presented in this FER is identical to the Site descriptions presented in the Environmental Easement, the Site Management Plan, and the Brownfield Cleanup Agreement for the Former Gateway French Dry Cleaner Site and related amendments.

I certify that the Remedial Action Work Plan dated July 30 2014 approved by the NYSDEC were implemented and that all requirements in those documents have been substantively complied with.

I certify that the remedial activities were observed by qualified environmental professionals under my supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and all operation and maintenance requirements applicable to the Site are contained in an Environmental Easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded. A Site Management Plan has been submitted by the Participant for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the NYSDEC.

I certify that the export of all contaminated soil, fill, water or other material from the property was performed in accordance with the Remedial Action Work Plan, and were taken to facilities licensed to accept this material in full compliance with all Federal, State and local laws.

I certify that all import of soils from off-Site, including source approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan.

I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology and soil screening methodology defined in the Remedial Action Work Plan.

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education Law.
11.0 SCHEDULE

Our anticipated schedule is:

Task	Description	Estimated Date
1.	SSDS pilot test, design, and instillation	February 2015
2.	1 st quarterly SSDS monitoring report	May 2015
3.	Site Management, and SSDS OM&M Plans	May 2015
4.	2nd quarterly SSDS monitoring report	August 2015
5.	3rd quarterly SSDS monitoring report	November 2015
6.	4th quarterly SSDS monitoring report	February 2016

FIGURES



2:25pm miguel.torres I 2014 GZA GeoEnvironmental, Inc. GZA-J:/76000's\12.00/Figures\CAD\Task 03\FiGURES 1-2:dwg [FIGURE 1] March 28, I 2012 õ



	LEGEND
SG-1	2009 & 2010 SOIL VAPOR POINT (PREVIOUS INVESTIGATION)
SV-4	2011 SOIL VAPOR POINT (PREVIOUS INVESTIGATION)
P-1●	2011 SOIL BORING LOCATION
VS-1	2012 SOIL VAPOR POINT
W-1 🔶	MONITORING WELL LOCATION
ZA-1 🖲	PHASE II BORING LOCATION (AND GRAB GROUNDWATER)
IA	2013 INDOOR AIR SAMPLE LOCATION
P-9	SOIL BORING AND GRAB GROUNDWATER SAMPLING LOCATION
SG-2 🗙	EXTERIOR SOIL GAS SAMPLE LOCATION
AA 🚫	AMBIENT AIR SAMPLE LOCATION
SV-20	2013 SOIL VAPOR POINT
	BCP SITE NO. C224151

CONCRETE EXPANSION JOINT

NOTES:

- THE BASE MAP WAS DEVELOPED FROM AN ELECTRONIC FILE PROVIDED BY: STARRETT CORPORATION, ENTITLED: FINAL SURVEY, DATED: OCTOBER 22, 1976, ORIGINAL SCALE: 1" = 30'.
- 2. THE LOCATION OF THE SAMPLING LOCATIONS WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.







1	Jul-09	NYS AWQS	GZA-10 (GW)
1	SVOCs	ug/L	
	Napthalene	10	63.8

Nov-13	NYS AWQS	P-9 (14-18')
METALS	ug/L	
Iron, Total	300	7360
Magnesium, Total	35000	387000
Sodium, Total	20000	3620000
Thallium, Total	0.5	0.76

Nov-13	NYS AWQS	MW-4
METALS	ug/L	
Iron, Total	300	4480
Magnesium, Total	35000	198000
Selenium, Total	10	16.2
Sodium, Total	20000	1860000



LEGEND

MONITORING WELL LOCATION

PHASE II BORING LOCATION (AND GRAB GROUNDWATER)
 SOIL BORING AND GRAB GROUNDWATER SAMPLING

LOCATION

BCP SITE NO. C224151

- CONCRETE EXPANSION JOINT

(ND) NON-DETECT ANALYTES

(NE) NO EXCEEDANCES ABOVE NYSDEC UNRESTRICTED USE SOIL CLEANUP OBJECTIVES

NOTES:

- THE BASE MAP WAS DEVELOPED FROM AN ELECTRONIC FILE PROVIDED BY: STARRETT CORPORATION, ENTITLED: FINAL SURVEY, DATED: OCTOBER 22, 1976, ORIGINAL SCALE: 1" = 30'.
- 2. THE LOCATION OF THE SAMPLING LOCATIONS WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
- THE DATA PRESENTED ARE SUMMARIES OF THE DATA DETECTED AT CONCENTRATIONS ABOVE THE NYSDEC UNRESTRICTED USE SOIL CLEANUP OBJECTIVES (UUSCO's).

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NO.		ISSUE/DESCRI	IPTION		BY	DATE			
UNLESS SPECIF GEOENVIRONMEN CLIENT OR THE THE DRAWING. T USE AT ANY OTH TRANSFER, REUS EXPRESS CONSE	TCALLY S ITAL, INC. CLIENT'S E HE DRAWIN HER LOCATI SE, OR MO INT OF GZ	(GZA). THE INFORMA SESIGNATED REPRESEN IG SHALL NOT BE TR ON OR FOR ANY OTHI DIFICATION TO THE DF A, WILL BE AT THE U	AGREEMI ATION SH ITATIVE F ANSFERR ER PURP RAWING E ISER'S S	ENT, THIS DRAWING IS HOWN ON THE DRAWING OOR THE SPECIFIC PROJE (ED, REUSED, COPIED, O OSE WITHOUT THE PRIOR 37 THE CLIENT OR OTHE OLE RISK AND WITHOUT	THE SOL IS SOLEL CT AND LI R ALTEREE WRITTEN RS, WITHOU ANY RISK	E PROPERTY OF GZA'S OCATION IDENTIFIED ON O IN ANY MANNER FOR CONSENT OF GZA. ANY UT THE PRIOR WRITTEN OR LIABILITY TO GZA.			
		3375 NE BROOK	EPTU LYN,	NE AVENUE NEW YORK					
	G	REMEDIAL . ROUNDWAT	ACTI ER A	ON WORK PL	AN DATA				
PREPARED BY	GZA G Engir	ieoEnvironmental, neers and Scientist www.gza.com	Inc. s	PREPARED FOR: CONEY ISLAND SITE 4-A-1 HOUSING COMPANY					
PROJ MGR:	BE	REVIEWED BY:	BE	CHECKED BY: DW	FIC	GURE			
DESIGNED BY:	CD	DRAWN BY:	MT	SCALE: 1" = 40'		Λ			
DATE:		PROJECT NO.		REVISION NO.		4			
DEC. 2014		12.007611	2.02		SHE	ET NO.			



PREPARED BY:			PREPARED FOR:						
GZ	GZAG Engin	eoEnvironmental, Inc. eers and Scientists www.gza.com	CONEY ISLAND SITE 4-A-1 HOUSING COMPANY						
PROJ MGR:	BE	REVIEWED BY: BE	CHECKED BY: DW	FIGURE					
DESIGNED BY:	CD	DRAWN BY: MT	SCALE: 1" = 40'						
DATE:		PROJECT NO.	REVISION NO.	1 5					
DEC. 2014		12.0076112.02		SHEET NO.					





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PROJ MGR:	BE	REVIEWED BY:	BE	CHECKED BY:	DW	FIGURE	
DESIGNED BY	': CD	DRAWN BY:	MT	SCALE: 1"	= 15'	7	
DATE:		PROJECT NO.		REVISION N	0.	1	
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- Indicates Potentially Complete
 Exposure Pathway
- Indicates Incomplete Exposure Pathway Based on Current Site Use and the Anticipated Future Use

NO.			ISSUE/DESCRIPTION		BY	DATE						
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLENT OR THE CLENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC FORJECT AND LOCATION IDENTIFED ON THE DRAWING, THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPED, OR ALTERED IN ANY MANNER FOR TRANSFER, REUSE, ON MODIFICATION TO THE DRAWING BY THE CLENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.												
	3375 NEPTUNE AVENUE BROOKLYN, NEW YORK											
		со	REMEDIAL ACTI NCEPTUAL SITE	ION WORK PLA EXPOSURE MO	N DDEL	-						
PREPARE	D BY:			PREPARED FOR:								
G	n)	GZA G Engin	eoEnvironmental, Inc. eers and Scientists www.gza.com	CONEY ISLAND SITE 4-A-1 HOUSING COMPANY								
PROJ MGF	R:	BE	REVIEWED BY: BE	CHECKED BY: DW	FIC	GURE						
DESIGNED	BY:	CD	DRAWN BY: MT	SCALE: NOT TO SCALE		0						
DATE:	2014		PROJECT NO. 12.0076112.02	2 REVISIÓN NO. 9 SHEET NO.								



TABLES

Sample ID)		P-9		P-	P-9		P-9		9	P-9 18.25-18.5' L1323110-04 11/13/2013 mg/kg		I	>-9
Sampling Depth Lab Sample Number Sampling Date Units	NYS Part 375 Restricted- Residential SCOs	NYS Part 375 Unrestricted Use SCOs	1-2' L1323110-01 11/13/2013 mg/kg		10' L1323110-03 11/13/2013 mg/kg		14.5-15' L1323110-12 11/13/2013 mg/kg		18-18.25' L1323110-05 11/13/2013 mg/kg				22.5-23' L1323110-13 11/13/2013 mg/kg	
			Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
VOCs									-		-			
1,2,4,5-Tetramethylbenzene	NS	NS	0.0056	U	0.0014	J	0.0047	U	0.0049	U	0.0071	U	0.0042	U
1,4-Diethylbenzene	NS	NS	0.0056	U	0.00023	J	0.0047	U	0.0049	U	0.0071	U	0.0042	U
2-Butanone	100	0.12	0.014	U	0.011	U	0.012	U	0.012	U	0.0033	J	0.0014	J
Acetone	100	0.05	0.014	U	0.011	U	0.0047	J	0.012	U	0.013	J	0.0066	J
Carbon disulfide	NS	NS	0.014	U	0.011	U	0.0024	J	0.012	U	0.018	U	0.0027	J
cis-1,2-Dichloroethene	100	0.25	0.0014	U	0.0018		0.0012	U	0.0012	U	0.0018	U	0.001	U
Isopropylbenzene	NS	NS	0.0014	U	0.0011	U	0.00033	J	0.0012	U	0.0018	U	0.001	U
sec-Butylbenzene	100	11	0.0014	U	0.00029	J	0.0012	U	0.0012	U	0.0018	U	0.001	U
Tetrachloroethene	19	1.3	0.0027		0.00059	J	0.0012	U	0.0012	U	0.0018	U	0.001	U
Trichloroethene	21	0.47	0.0014	U	0.00085	J	0.0012	U	0.0012	U	0.0018	U	0.001	U

Notes:

0.418 This value exceeds NYS Unrestricted Use Soil Cleanup Objectives

mg/kg - Milligrams per kilogram.

For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

- Qual Laboratory data qualifier.
- $U\,\text{-}\,$ The compound was not detected at the indicated concentration.
- J Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
- NS No Standard

Sample ID Sampling Depth Lab Sample Number Sampling Date Units	NYS Part 375 Restricted- Residential SCOs	NYS Part 375 Unrestricted Use SCOs	GZA 1 L13232 11/14, mg,	A-14 233-01 /2013 /kg	GZA 9 L1323 11/14 mg	A-14 , 233-02 /2013 /kg	GZA 14. L1323 11/14 mg	GZA-14 14.75' L1323233-04 11/14/2013 mg/kg		GZA-14 16.5' L1323233-05 11/14/2013 mg/kg		GZA-14 27.5' L1323233-07 11/14/2013 mg/kg		A-14 DUP) 233-07 /2013 /kg	GZA-14 38.5' L1323233-08 11/14/2013 mg/kg		Soil Sampling Field Blank L1323110-10 11/13/2012 mg/kg	
			Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
VOCs																		
Acetone	100	0.05	0.012	U	0.012	U	0.026		0.017		0.012	U	0.018		0.0068	J	1.9	J
Carbon disulfide	NS	NS	0.012	U	0.012	U	0.0096	J	0.0079	J	0.012	U	0.012	U	0.012	U	5	U
cis-1,2-Dichloroethene	100	0.25	0.0012	U	0.0012	U	0.00077	J	0.00044	J	0.0012	U	0.0012	U	0.0012	U	2.5	U
Ethyl ether	NS	NS	0.006	U	0.0058	U	0.01	U	0.0077	U	0.0059	U	0.00041	J	0.0061	U	2.5	U
Methylene chloride	100	0.05	0.012	U	0.012	U	0.02	U	0.015	U	0.012	U	0.0038	J	0.012	U	2.5	U
Naphthalene	100	12	0.006	U	0.0058	U	0.0016	J	0.0077	U	0.0059	U	0.006	U	0.0061	U	2.5	U
p/m-Xylene	NS	NS	0.0024	U	0.0023	U	0.0041	U	0.0031	U	0.0024	U	0.001	J	0.0024	U	2.5	U
Tetrachloroethene	19	1.3	0.0011	J	0.00073	J	0.002	U	0.0015	U	0.0012	U	0.0012	U	0.0012	U	0.5	U

Notes:

0.418 This value exceeds NYS Unrestricted Use Soil Cleanup Objectives

mg/kg - Milligrams per kilogram.

For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

NS - No Standard

Qual - Laboratory data qualifier.

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

Sample ID			P	P-9		-9	GZA	\-14	GZA	\-14	Soil Sampling Field		
Sampling Depth	NYS Part 375	NYS Part 375	5-	6'	16-	18'	4-	5'	15-	16'	Bla	ank	
Lab Sample Number	Restricted-	Unrestricted Use	L1323	110-02	L1323	110-06	L1323	233-03	L13232	233-06	L1323	110-10	
Sampling Date	Residential SCOs	SCOs	11/13	/2013	11/13	/2013	11/14	/2013	11/14	/2013	11/13	/2012	
Units			mg	/kg	mg	/kg	mg/kg		mg/	/kg	mg/kg		
			Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	
SVOCs													
2-Methylnapthalene	NS	NS	0.21	U	0.24	U	0.21	U	0.13	J	0.2	U	
3-Methylphenol/4-Methylphenol	100	0.33	0.25	U	0.29	U	0.25	U	0.29	J	5	U	
Acenaphthene	100	20	0.047	J	0.16	U	0.036	J	0.45		0.2	U	
Acenaphthylene	100	100	0.17		0.16	U	0.1	J	0.094	J	0.2	U	
Anthracene	100	100	0.22		0.12	U	0.15		0.21		0.2	U	
Benzo(a)anthracene	1	1	0.78		0.12	U	0.44		0.49		0.2	U	
Benzo(a)pyrene	1	1	0.77		0.16	U	0.43		0.45		0.2	U	
Benzo(b)fluoranthene	1	1	1		0.12	U	0.54		0.44		0.2	U	
Benzo(ghi)perylene	100	100	0.56		0.16	U	0.31		0.28		0.2	U	
Benzo(k)fluoranthene	3.9	0.8	0.38		0.12	U	0.25		0.23		0.2	U	
Carbazole		NS	0.13	J	0.2	U	0.046	J	0.11	J	2	U	
Chrysene	3.9	1	0.8		0.12	U	0.48		0.45		0.2	U	
Dibenzo(a,h)anthracene	0.33	0.33	0.13		0.12	U	0.086	J	0.07	J	5	U	
Fluoranthene	100	100	1.4		0.12	U	0.9		0.88		0.2	U	
Fluorene	100	30	0.06	J	0.2	U	0.17	U	0.12	J	0.2	U	
Indeno(1,2,3-cd)Pyrene	0.5	0.5	0.59		0.16	U	0.25		0.26		0.2	U	
Naphthalene	100	12	0.17	U	0.2	U	0.17	U	0.41		0.2	U	
Phenanthrene	100	100	0.89		0.12	U	0.6		0.4		0.2	U	
Pyrene	100	100	1.2		0.12	U	0.8		0.8		0.2	U	
PESTICIDES		-											
4,4'-DDE	8.9	0.0033	0.00162	U	0.00188	U	0.00325		0.00251	U	0.04	U	
4,4'-DDT	7.9	0.0033	0.0111		0.00353	U	0.0312		0.0047	U	0.04	U	
cis-Chlordane	4.2	0.094	0.00588		0.00235	U	0.0132		0.00313	U	0.02	U	
Dieldrin	0.2	0.005	0.00101	U	0.00118	U	0.00719	PI	0.00157	U	0.04	U	
Heptachlor epoxide	NS	NS	0.00209	J	0.00353	U	0.00309	U	0.0047	U	0.02	U	
trans-Chlordane	NS	NS	0.000676	J	0.00235	U	0.0108	PI	0.00313	U	0.02	U	
HERBICIDES							No Det	ections					
PCBs													
Aroclor 1268	1	0.1	0.0337	U	0.0401	U	0.742		0.0197	J	0.083	U	
Notes:	This value exceeds NVS I	Intestricted Use Soil Clea	mun Objective	ç									
0.418	This value exceeds NVS P	estricted_Residential Soil	Cleanup Objective	o	Quel	Laboratory d	ata qualifiar						
	Milligrams per kilogram	contectu-residential 301	Cicanup Obje		Qual -	The compour	ata quainer.	acted at the ir	dicated concer	atration			
mg/kg -	The results for the two colu	imme avcaade the method	specified		U -	Data indicata	it was not dele	of a compose	nd that meets f	iu allOII. he identificati	ion criteria Th	a result is less	
P1 -	criteria. The lower value fo due to obvious interference	or the two columns has be	en reported		J - Data indicates the presence of a compound that meets the identification criteria. The result is than the quantitation limit but greater than MDL. The concentration given is an approximate value.						roximate		
	For dual column analysis, t being reported due to coelu	he lowest quantitated cor ting interference.	centration is		NS -	No Standard							

Sample ID			Р	-9	Р	-9	GZA	A-14	GZ	A-14	Soil Sam	pling Field
Sampling Depth Lab Sample Number Sampling Date Units	NYS Part 375 Restricted- Residential SCOs	NYS Part 375 Unrestricted Use SCOs	5- L1323 11/13 mg	6' 110-02 //2013 //kg	16 L1323 11/13 mg	-18' 110-06 5/2013 5/kg	4- L1323 11/14 mg	5' 233-03 /2013 /kg	15- L1323 11/14 mg	16' 233-06 //2013 //kg	Bl L1323 11/1; m	ank 3110-10 3/2012 9/kg
			Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
METALS	4				1	- i	1				L	
Aluminum, Total	NS	NS	1000		850		2100		2200		19.7	
Antimony, Total	NS	NS	3.9	U	2.2	J	4	U	6	U	0.25	J
Arsenic, Total	16	13	1		0.39	J	1.3		2.5		0.16	J
Barium, Total	400	350	73		3.6		97		14		0.16	J
Beryllium, Total	72	7.2	0.39	U	0.47	U	0.13	J	0.6	U	0.5	U
Cadmium, Total	4.3	2.5	0.23	J	0.07	J	0.3	J	0.22	J	0.2	U
Calcium, Total	NS	NS	1700		250		4300		980		160	
Chromium, Total	NS	NS	4		3.5		6.1		9.6		1.22	
Cobalt, Total	NS	NS	0.96	J	0.77	J	2.1		2	J	0.2	U
Copper, Total	270	50	9.6		1.4		45		15		0.19	J
Iron, Total	NS	NS	2200		1800		5400		5900		50	U
Lead, Total	400	63	97		1.5	J	99		28		1	U
Magnesium, Total	NS	NS	380		420		870		1000		24.4	J
Manganese, Total	2000	1600	34		15		120		54		0.55	
Mercury, Total	0.81	0.18	0.03	J	0.1	U	0.08	U	0.31		0.2	U
Nickel, Total	310	30	3.1		2.8		6.7		6.6		0.2	J
Potassium, Total	NS	NS	140	J	190	J	360		470		100	U
Silver, Total	180	2	0.78	U	0.95	U	0.19	J	1.2	U	0.4	U
Sodium, Total	NS	NS	66	J	420		60	J	750		176	
Thallium, Total	NS	NS	1.6	U	1.9	U	1.6	U	2.4	U	0.5	U
Vanadium, Total	NS	NS	4.3		3.8		9.3		8.3		5	U
Zinc, Total	10000	109	84		10		100		34		11.61	
Chromium, Trivalent	180	30	4		3.5		6.1		9.6		10	U
Cyanide, Total	110	27	0.95	U	1.2	U	1	U	1.5	U	1	J

Notes:

0.418 This value exceeds NYS Unrestricted Use Soil Cleanup Objectives

mg/kg - Milligrams per kilogram.

* For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

Qual - Laboratory data qualifier.

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

NS - No Standard

Sample ID Sampling Depth		P-9 10-14'		P-9 14-18'		P-9 21-23	3'	GZA-14 15-19'		GZA- 25-2	14 9'	GZA 35-3	-14 39'	GZA 5-	A-15 6'	FIELD BLANK ¹		
Lab Sample Number	NYSDEC	L132311	10-11	L1323110-	08	L132311	0-07	L1323305-	01	L132323	33-10	L13232	33-09	L1414	974-01	L13232	233-12	
Sampling Date	AwQ5	11/15/2	015	11/13/201	11/13/2013		015	11/15/201	3	11/14/2015		11/14/2015		1/1/4	2014	11/14/2013 ug/l		
Units		Result	Onal	µg/1 Result	Oual	Hg/1 Result	Oual	µg/1 Result	Oual	Result Oual		Result Oual		րչ Result	Oual	µg Result	Oual	
VOCs		Result Quar				Itesuit	Zum	resure			itesuit qui		Quu	resure	- Yuu	result	Zum	
Acetone	50	1.6	J	2	J	3.6	J	5	U	4.7	J	3.4	J	5	U	2.3	J	
Isopropylbenzene	5	2.5	U	0.7	J	2.5	U	0.95	J	2.5	U	2.5	U	2.5	U	2.5	U	
Methyl tert butyl ether	10	2.5	U	2.5	U	2.5	U	2.5	U	5.2		7.8		2.5	U	2.5	U	
Tetrachloroethene	5	1.6		0.5	U	0.59		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
SVOCs																		
Acenaphthene	20	-		0.2	U	-		0.48		-		-		-		0.2	U	
Naphthalene	10	-		0.07	J	-		0.18	J	-		-		-		0.2	U	
PESTICIDES								No De	tections									
HERBICIDES																		
2,4-D	50	-		1.42	J	-	- 10			-		-		-		2	U	
PCBs								No De	tections									
METALS				1		0												
Aluminum, Total	NS	-		68	J	-		1420		-		-		-		10	U	
Antimony, Total	3	-		1.52		-		1.07	J	-		-		-		0.22	J	
Arsenic, Total	25	-		2.77		-		69.5		-		-		-		0.5	U	
Barium, Total	1000	-		173.8		-		202.1		-		-		-		0.21	J	
Cadmium, Total	5	-		0.05	J	-		1	U	U -				-		0.2	U	
Calcium, Total	NS	-		479000		-		626000	-			-		-		49.8 J		
Chromium, Total	50	-		6.24	J	-		34.41		-		-		-		1.22		
Cobalt, Total	NS	-		4	U	-		3.6		-		-		-		0.5	U	
Copper, Total	200	-		20	U	-		10.67		-		-		-		0.41	J	
Iron, Total	300	-		7360		-		14500		-		-	_	-		23.5	J	
Lead, Total	25	-		20	U	-		6.49		-		-		-		1	U	
Magnesium, Total	35000	-		387000	_	-		179000		-		-	-	-		70	U	
Manganese, Total	300	-		210.8		-		231.6		-		-	-	-		0.23	J	
Nickel, Iotal	100	-		12.94		-		29.83		-		-	-	-		0.37	J	
Potassium, Total	NS	-		52200	T	-		42800		-		-		-		100	U	
Selenium, Total	10	-		0.35	J	-		19.2	J	-		-	-	-		5	U	
Sodium, Total Thellium, Total	20000	-		3620000	т	-		2480000	II	-		-	-	-		145	т	
I hallum, Total	0.5	-		100	J	-		2.5	U	-		-		-		0.03	J	
Vanadium, Total	2000	-		100	U	-		9.29	J	-		-	-	-		5	U	
Chromium Trivolont	2000	-		84.42	J	-		40.35	J	-		-	-	-		0.02	J	
Cuepide Total	200	-		10	U	-		54	II	-		-		-		5	U	
Cyanide, Totai	200	-		2	J	-		5	U	-		-		-		3	U	
<u>Notes:</u> 0.418 * - µg/l - NYSDEC AWQS -	This value excee For dual column reported due to micrograms per New York State Water Quality S	eds NYDEC a analysis, th coeluting int liter Departmen tandards	C Ambie le lowes terferen t of Env	nt Ground Water t quantitated con ce. rironmental Cons	Standar centration	rds. on is being 1 Ambient	Qual - U - J - NS -	Laboratory data of The compound w Data indicates the result is less than is an approximate No Standard Multilevel Groun	qualifier vas not c e presen the qua e value.	letected at t ce of a con ntitation lir Sampling	he indic ipound nit but ક્	cated conce that meets greater that	entration the iden n MDL.	tificatio The cor	on criter acentrat	ia. The ion given		

Table 2 - Groundwater Analytical Data Summary

Remedial Action Work Plan Former Gateway French Cleaners 3375 Neptune Avenue

Brooklyn, New York

Sample ID		MW-1		MW-	2	MW-	MW-3			FIELD B	LANK ²	TRIP B	LANK	TRIP I	BLANK	TRIP BLANK		
Sampling Depth Lab Sample Number Sampling Date Units	NYSDEC AWQS	L1323451 11/18/20 µg/l Result	-03 13 Oual	L132345 11/18/20 µg/l Besult	1-04)13 Oual	L132345 11/18/20 µg/l Result	L1323451-05 11/18/2013 µg/l Result Qual		L1323305-02 11/15/2013 µg/l Becult Oucl		L1323451-01 11/18/2013 µg/l Boopt		110-09 /2013 ;/1 Qual	L1323 11/14 µ; Result	233-11 //2013 g/l	L1323 11/18 µ; Result	451-02 5/2013 g/l	
VOCs		Result	Quai	Result	Quai	Result	Quai	Result	Quai	Result	tuni Quui		Quai	Result	Quai	Result	Quai	
Acetone	50	5	U	5	U	5	U	5	U	2	J	1.2	J	5	U	5	U	
SVOCs								-	-		-		-		÷	, ,		
Naphthalene	10	0.2	U	0.2	U	0.2	U	0.07	J	0.09	J	-	-	-	-	-	-	
PESTICIDES	ESTICIDES									tections								
HERBICIDES									No De	tections								
PCBs									No De	tections								
METALS																		
Aluminum, Total	NS	14.9		156		106		23.6	J	4.97	J	-	-	-	-	-	-	
Antimony, Total	3	0.62	J	0.28	J	0.25	J	5	U	0.12	J	-	-	-	-	-	-	
Arsenic, Total	25	7.41		6.94		3.14		6.8		0.5	U	-	-	-	-	-	-	
Barium, Total	1000	7.29		7.84		5.71		88		0.32	J	-	-	-	-	-	-	
Calcium, Total	NS	75100		108000		92900		434000		69	J	-	-	-	-	-	-	
Chromium, Total	50	1.41		2		2.1		1.78	J	0.85	J	-	-	-	-	-	-	
Cobalt, Total	NS	0.22	J	0.29	J	0.34	J	0.5	J	0.5	U	-	-	-	-	-	-	
Copper, Total	200	0.49	J	1.31		1.1		3.05	J	0.19	J	-	-	-	-	-	-	
Iron, Total	300	8240		10600		6050		4480		50	U	-	-	-	-	-	-	
Lead, Total	25	0.25	J	0.9	J	0.93	J	2.46	J	1	U	-	-	-	-	-	-	
Magnesium, Total	35000	12300		11500		12200		198000		70	U	-	-	-	-	-	-	
Manganese, Total	300	77.42		93.02		63.48		66.75		0.45	J	-	-	-	-	-	-	
Nickel, Total	100	3.59		2.27		1.95		3.89		0.26	J	-	-	-	-	-	-	
Potassium, Total	NS	11800		8780		10200		40400		100	U	-	-	-	-	-	-	
Selenium, Total	10	1.28	J	1.38	J	1.22	J	16.2	J	5	U	-	-	-	-	-	-	
Sodium, Total	20000	110000		59600		73500		1860000		153		-	-	-	-	-	-	
Thallium, Total	0.5	0.03	J	0.5	U	0.5	U	0.16	J	0.5	U	-	-	-	-	-	-	
Vanadium, Total	NS	0.97	J	1.73	J	1.59	J	1.99	J	5	U	-	-	-	-	-	-	
Zinc, Total	2000	13.68		12.02		11.07		20.8	J	9.49	J	-	-	-	-	-	-	
Cyanide, Total	200	5	U	2	J	1	J	5	U	1	J	-	1	-	-	-	-	
<u>Notes:</u> 0.418 µg/I NYSDEC AWQS	This value excee - micrograms per - New York State Water Quality S For dual column reported due to o	eds NYDEC An Department of tandards analysis, the lo coeluting interf	nbient G Environ owest qu erence.	round Water mental Cons antitated con	Standar ervation	rds. Ambient on is being		Qual U J	 Labora The co Data in criteria The co No Sta ² Monito 	tory data qua mpound was adicates the p a. The result incentration g ndard pring Well Sa	lifier. not detecte resence of a s less than t jiven is an a mpling	d at the indic a compound the quantitati approximate	cated conce that meets ion limit bu value.	entration. the identific at greater th	cation an MDL.			

Table 3A - Soil Gas Analytical Data Summary Remedial Action Work Plan 3375 Neptune Avenue

Brooklyn, New York

Sample ID	NYSDOH Air	NYSDOH Fuel Oil	USEPA BASE Data 90th Percentile	HEI RIOPA 2005	SG-2		SG	-3	se	<u>3-4</u>	SG-5		so	3-6	so	<u>-7</u>
Lab Sample Number	Guidance Value	2003 Upper Fence		95th Percentile	L1323	368-03	L1323	368-04	L1323	368-07	L1323	368-08	L1323	368-09	L1414	954-01
Sampling Date	(AGV)	Limit		Value (2)	11/15	/2013	11/15	/2013	11/15	/2013	11/15	/2013	11/15	5/2013	41	827
Units	μg/m ³	μg/m ³	µg/m ³	μg/m ³	μg/	/m ³	μg/	$\mu g/m^3$		$\mu g/m^3$		/m ³	μg	/m ³	μg	$/m^3$
	Results C		Oual	Results	Oual	Results	Results Qual		Qual	Results	Oual	Results	Qual			
VOCs		•		•			11	<u> </u>								
1,2,4-Trimethylbenzene	-	9.8	9.5	-	5.95		9.83	U	6.05		6.24		5.06		17.9	
1,3,5-Trimethylbenzene	-	3.9	3.6	-	1.97	U	9.83	U	1.97	U	1.97	U	1.97	U	5.01	
1,3-Butadiene	-	-	-	-	13.8		4.45		7.74		6.04		20.8		1.15	
1,3-Dichlorobenzene	-	0.5	0.6	-	35.2		45.3		44.2		34.1		31.4		1.2	U
2,2,4-Trimethylpentane	-	5	7.7	-	1.87	U	9.34	U	2.32		1.87	U	1.87	U	0.934	U
2-Butanone	-	16	16	-	41.3		32.1		25.8		69.9		25.2		24.5	
2-Hexanone	-	-	-	-	2.1		8.2	U	1.64	U	1.64	U	1.64	U	3.99	
4-Ethyltoluene	-	-	-	-	1.97	U	9.83	U	1.97	U	1.97	U	1.97	U	2.68	
4-Methyl-2-pentanone	-	1.9	2.2	-	10.2		16.1		5.2		3.64		1.64	U	3.23	
Acetone	-	115	110	45.8	214		218		212		584		356		371	- I
Benzene	-	13	15	10	14.9		7.28		8.37		27.8		12.4		1.27	
Carbon disulfide	-	-	-	-	59.5		44.5	_	4.89		9.16		18.7		3.86	
Carbon tetrachloride	-	1.3	0.8	1.1	2.52	U	12.6	U	2.52	U	2.52	U	2.52	U	1.26	U
Chloroform	-	1.2	1.4	6.34	5.81		9.77	U	4.14		2.8		20.4		2.21	
Chloromethane	-	4.2	3.3	-	0.826	U	4.13	U	0.826	U	0.826	U	2.4		0.413	U
Cyclohexane	-	6.3	8.1	-	14.3		6.88	U	2.56		14.4		8.74		0.881	
Dichlorodifluoromethane	-	-	-	-	42		9.89	U	2.45		1.98	U	1.98	U	0.989	
Ethanol	-	1300	1400	-	162		328		163		115		236		72.5	
Ethylbenzene	-	6.4	7.3	7.62	6.65		8.69	U	6.95		5.13		10.2		2.65	
Heptane	-	-	4.6	-	23.7		17.8		10.7		288		22.9		2.15	
Isopropanol	-	-	-	-	100		251		126		66.6		186		2.9	
n-Hexane	-	9.5	-	-	43.7		31.3		30.7		472		72.2		2.98	
o-Xylene	-	0.8	7.6	7.24	9.86		8.69	U	10.1		8.3		23.3		6.78	
p/m-Xylene	-	11	12	22.2	25		22.9		25.6		18.1		36.7		9.51	
Propylene	-	-	-	-	129		46.1		68.2		284		296		-	
Styrene	-	1.4	1.3	5.13	1.7	U	8.52	U	1.7	U	1.7	U	1.7	U	1.08	
Tetrachloroethene	30	2.5	2.9	6.01	1020		6920		211		57		3.12		25.9	
Tetrahydrofuran	-	0.8	3.3	-	1.18	U	5.9	U	1.18	U	1.18	U	1.78		0.59	U
Toluene	-	57	58	39.8	22.7		25.2		18.2		22.8		19.4		5.8	
Trichloroethene	5	0.5	0.5	1.36	11.1		29.3		2.15	U	2.15	U	2.15	U	1.07	U
Trichlorofluoromethane	-	12	17	-	38.4		11.2	U	4.91		3.91		3.68		1.12	U

Notes

 Interest
 Exceeds One or More Regulatory Values except AGV

 31.3
 Exceeds All Regulatory Value

 AA - Ambient Air
 Ambient Air

- IA Indoor Air
- SV Soil Vapor
- NS No Standard

Qual - Laboratory data qualifier.

U - Not detected at the reported detection limit for the sample.

*Sub-slab and indoor air samples collocated

HEI RIOPA - Health Effects Institute established Relationships of Indoor, Outdoor and Personal Air.

NYSDOH AGV - New York State Department of Health Air Guidance Value.

NYSDOH Fuel Oil - New York State Department of Health Upper Fence Limit of VOCs in fuel oil heated homes

USEPA BASE - United States Environmental Protection Agency established background indoor air concentrations.

Table 3B - Sub-Slab Soil Vapor and Air Analytical Data Summary

Remedial Action Work Plan 3375 Neptune Avenue Brooklyn, New York

Sample ID	NYSDOH Air Guidance Value	NYSDOH Fuel Oil 2003 Upper Fence	USEPA BASE Data 90th	HEI RIOPA 2005 95th Percentile	VS	VS-14		VS-15		VS-16		-20*	SV-20IA*		SV-21*		SV-21IA*		AA111513		IA11	1513
Lab Sample Number	(AGV)	Limit	Percentile	Value (2)	L1223	192-01	L12234	499-01	L1302	995-01	L1323	368-05	L13233	68-06	L1323368-10		L1323.	368-11	L13233	68-01	L13233	368-02
Sampling Date					12/20	12/20/2012		/2012	2/20/	2013	11/15	/2013	11/15/2013		11/15/2013		11/15	/2013	11/15/	2013	11/15/	2013
Units	μg/m ³	$\mu g/m^3$	μg/m ³	$\mu g/m^3$	μg/	$\mu g/m^3$		μg/m ³		$\mu g/m^3$		μg/m ³		n ³	μg/m ³		μg/	m ³	µg/⊨	m ³	µg∕⊨	m ³
			·		Results	Results Qual		Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
VOCs							•															
1,2,4-Trimethylbenzene	-	9.8	9.5	-	16		5.31		2.05	U	9.93		0.983	U	5.36		0.983	U	0.983	U	0.983	U
1,3,5-Trimethylbenzene	-	3.9	3.6	-	7.92		2.11	U	2.05	U	9.83	U	0.983	U	1.97	U	0.983	U	0.983	U	0.983	U
1,3-Dichlorobenzene	-	0.5	0.6	-	2.53	U	2.59	U	2.51	U	12	U	1.2	U	63.1		1.2	U	1.2	U	1.2	U
1,4-Dichlorobenzene	-	1.2	1.3	344	2.53	U	2.59	U	2.51	U	12	U	20.3		2.4	U	1.2	U	1.2	U	1.2	U
2,2,4-Trimethylpentane	-	5	7.7	-	1.97	U	2.01	U	1.95	U	9.34	U	0.934	U	2.8		0.934	U	5.79		1.13	
2-Butanone	-	16	16	-	17.3		15.7		1.23	U	5.9	U	1.13		5.81		0.805		0.997		1	
4-Ethyltoluene	-	-	-	-	7.42		2.11	U	2.05	U	9.83	U	0.983	U	1.97	U	0.983	U	0.983	U	0.983	U
4-Methyl-2-pentanone	-	1.9	2.2	-	3.07		2.98		1.71	U	8.2	U	0.82	U	1.64	U	0.82	U	0.82	U	0.82	U
Acetone	-	115	110	45.8	77.7		56.8		4.96	U	81.7		43.2		24		7.39		11.6		23.1	
Benzene	-	13	15	10	5.43		3.18		1.34	U	6.39	U	1.2		1.67		0.882		0.984		1.26	
Carbon tetrachloride	-	1.3	0.8	1.1	2.65	U	2.7	U	2.63	U	12.6	U	0.711		2.52	U	0.44		0.459		0.528	
Chloroform	-	1.2	1.4	6.34	6.1		2.1		2.04	U	9.77	U	0.977	U	1.95	U	0.977	U	0.977	U	0.977	U
Chloromethane	-	4.2	3.3	-	0.869	U	0.888	U	0.863	U	4.13	U	1.37		0.826	U	1.13		1.14		1.36	
Cyclohexane	-	6.3	8.1	-	1.45	U	1.48	U	1.44	U	6.88	U	0.688	U	1.54		0.688	U	0.688	U	0.688	U
Dichlorodifluoromethane	-	-	-	-	2.08	U	2.49		2.27		9.89	U	2.23		1.98	U	1.75		1.33		2.4	
Ethanol	-	1300	1400	-	837		202		9.85	U	47.1	U	309		390		7.74		7.71		18.6	
Ethyl Acetate	-	-	-	-	3.78	U	3.89	U	3.75	U	18	U	3.96		3.6	U	1.8	U	1.8	U	1.8	U
Ethylbenzene	-	6.4	7.3	7.62	46.9		8.9		1.82	U	8.69	U	0.869	U	4.86		0.869	U	0.869	U	0.869	U
Heptane	-	-	4.6	-	2.63		2.31		1.71	U	8.2	U	2.48		8.07		0.82	U	0.82	U	0.82	U
Isopropanol	-	-	-	-	4.28		13.7		2.56	U	32.4		54.8		317		1.23	U	1.23	U	8.65	
Methyl tert butyl ether	-	14	26	36	2.13		1.55	U	1.51	U	7.21	U	0.721	U	1.44	U	0.721	U	0.721	U	0.721	U
Methylene chloride	60	16	22	7.5	7.33	U	7.54		7.26	U	34.7	U	3.47	U	6.95	U	3.47	U	3.47	U	3.47	U
n-Hexane	-	9.5	-	-	1.48	U	1.52	U	1.47	U	7.05	U	0.832		6.34		0.705	U	0.782		1	
o-Xylene	-	0.8	7.6	7.24	47.8		9.21		1.82	U	8.69	U	0.869	U	8.56		0.869	U	0.869	U	0.869	U
p/m-Xylene	-	11	12	22.2	160		30		3.63	U	17.4	U	1.74	U	19.9		1.74	U	1.74	U	1.74	U
Propylene	-	-	-	-	1.81	U	1.86	U	1.79	U	8.61	U	1.59		1.72	U	1.12		1.25		1.64	
Styrene	-	1.4	1.3	5.13	1.79	U	1.83	U	1.78	U	8.52	U	1.11		1.7	U	0.852	U	0.852	U	0.852	U
Tetrachloroethene	30	2.5	2.9	6.01	31.3		6.35		2.83	U	7050		0.61		29.8		0.149		0.197		1.38	
Tetrahydrofuran	-	0.8	3.3	-	18.1		6.28		1.23	U	5.9	U	0.59	U	1.86		0.59	U	0.59	U	0.59	U
Toluene	-	57	58	39.8	192		44.5		1.58	U	7.54	U	3.88		15.2		1.37		1.74		2.52	
Trichloroethene	5	0.5	0.5	1.36	2.26	U	2.31	U	2.25	U	37.2		0.107	U	2.15	U	0.107	U	0.107	U	0.107	U
Trichlorofluoromethane	-	12	17	-	2.37	U	2.42	U	2.35	U	12.8		15.7		14.8		4.15		1.48		65.7	
Notes					<u> </u>		<u>. </u>		•	-	•		·		-		<u>. </u>		<u> </u>		•	

18.1Exceeds One or More Regulatory Values except AGV31.3Exceeds All Regulatory Value

- AA Ambient Air
- IA Indoor Air
- SV Soil Vapor
- NS No Standard

Qual - Laboratory data qualifier.

U - Not detected at the reported detection limit for the sample.

*Sub-slab and indoor air samples collocated

HEI RIOPA - Health Effects Institute established Relationships of Indoor, Outdoor and Personal Air.

NYSDOH AGV - New York State Department of Health Air Guidance Value.

NYSDOH Fuel Oil - New York State Department of Health Upper Fence Limit of VOCs in fuel oil heated homes

USEPA BASE - United States Environmental Protection Agency established background indoor air concentrations.

APPENDIX A

LIMITATIONS



GEOHYDROLOGICAL LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

Standard of Care

- 2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
- 3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.
- 4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

Subsurface Conditions

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

Compliance with Codes and Regulations

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

Screening and Analytical Testing

- 8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.
- 9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.
- 10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

Interpretation of Data

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

Additional Information

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

Additional Services

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i)

observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

Cost Estimates

14. Unless otherwise stated, our cost estimates are only for comparative and general planning purposes. These estimates may involve approximate quantity evaluations. Note that these quantity estimates are not intended to be sufficiently accurate to develop construction bids, or to predict the actual cost of work addressed in this Report. Further, since we have no control over either when the work will take place or the labor and material costs required to plan and execute the anticipated work, our cost estimates were made by relying on our experience, the experience of others, and other sources of readily available information. Actual costs may vary over time and could be significantly more, or less, than stated in the Report.



APPENDIX C

REMEDIAL INVESTIGATION REPORT– FORMER GATEWAY FRENCH DRY CLEANERS, 3375 NEPTUNE AVENUE, BROOKLYN NEW YORK, NYSDEC SITE NO. C224151. APRIL 2014, REVISED JULY 2014 (APPENDICIES AVAILBLE ELECTRONICALLY) **APPENDIX D**

NYSDEC AND NYSDOH NOTIFCATION OF NO SIGNIFICANT THREAT

(Fact Sheet Begins Next)

Act Now to Continue Receiving Information About This Site!

DEC's Division of Environmental Remediation (DER) now distributes information about contaminated sites *electronically by email*.

If you would like to continue to receive information about the contaminated site featured in this fact sheet:

You <u>must</u> sign up for the DER email listserv:

www.dec.ny.gov/chemical/61092.html

DER cannot register your email address - only the email address owner can do so. If you already have signed up for the listserv for the county in which the site is located, you need do nothing.

Why You Should Go "Paperless":



- \blacksquare Get site information faster and share it easily;
- ☑ Receive information about all sites in a chosen county read what you want, delete the rest;
- \blacksquare It helps the environment and stretches your tax dollars.

If "paperless" is not an option for you, call or write to the DER project manager identified in this fact sheet. Indicate that you need to receive paper copies of fact sheets through the Postal Service. Include the site name in your correspondence. The option to receive paper is available to individuals only. Groups, organizations, businesses, and government entities are assumed to have email access.

NEW YORK STATE DEPARTMENT OF



Where to Find Information:

Project documents are available at the following location(s) to help the public stay informed.

Brooklyn Public Library

Coney Island Branch 1901 Mermaid Avenue Brooklyn, NY 11224 (718) 265-3220 Call for hours

NYSDEC, Region 2 Office

47-40 21st Street Long Island City, NY 11101 Call in advance: (718) 482-4900 Hours: Mon. to Fri. 8AM to 4 PM

Who to Contact:

Comments and questions are always welcome and should be directed as follows:

Project Related Questions

Bryan Wong, Project Manager NYSDEC, Region 2 Office 47-40 21st Street Long Island City, NY 11101 (718) 482-4905 yukyin.wong@dec.ny.gov

Public Health questions:

Stephanie Selmer NYSDOH Empire State Plaza Corning Tower Room 1787 Albany, NY 12237 (518) 402-7860 beei@health.ny.gov

For additional information on the New York's Brownfield Cleanup Program, visit:

www.dec.ny.gov/chemical/8450.html

FACT SHEET #1

Brownfield Cleanup Program

Former Gateway French Dry Cleaners 3375-3377 Neptune Avenue Brooklyn, NY 11235

October 2014

SITE No. C224151 NYSDEC REGION 2

Remedy Proposed for Brownfield Site Contamination; Public Comment Period Announced

The public is invited to comment on a proposed remedy being reviewed by the New York State Department of Environmental Conservation (NYSDEC) to address contamination related to Former Gateway French Dry Cleaner site (the "Site") located at 3375-3377 Neptune Avenue, Brooklyn, NY. Please see the site location map (attached) for the Site.

Based on the findings of the investigation, NYSDEC in consultation with the New York State Department of Health (NYSDOH) has determined that the Site does not pose a significant threat to public health or the environment.

How to Comment: NYSDEC is accepting written comments about the proposed plan for 45 days, from October 15, 2014 through November 29, 2014. The proposed plan is available for public review at the location(s) identified on the left-hand side of this page under "Where to Find Information." Please submit comments to the NYSDEC project manager listed under Project Related Questions in the "Who to Contact" area on the left-hand side of this page.

Draft Remedial Action Work Plan: The cleanup plan is described in a detailed "Remedial Action Work Plan". The proposed Track 4 restricted-residential use remedy consists of:

- Expansion of an existing off-site Sub-Slab Depressurization System to prevent the migration of vapor into buildings (both on and off-site) from the subsurface;
- Maintenance of a site cover system consisting of building slabs on the entire site;
- Implementation of Health and Safety Plan and Community Air Monitoring plan during all ground intrusive activities;
- Implementation of a Site Management Plan (SMP) would also be required for long-term maintenance of the remedial system; and
- Recording of an Environmental Easement to ensure implementation of the SMP.

The proposed remedy was developed by Coney Island Site 4A-1 Houses, Inc. (the "Participant") after performing a detailed investigation of the Site under New York's Brownfield Cleanup Program (BCP). A "Remedial Investigation Report", which describes the results of the site investigation, was submitted and is also available for review at the locations identified on Page 1.

BROWNFIELD CLEANUP PROGRAM

Site Description: The 0.04 acre Site is located at 3375-3377 Neptune Avenue in the Borough of Brooklyn, City of New York and is identified as Block 6979 and a portion of Lot 100. The Site is currently occupied and operating as a dental office. The Site was previously operated by Gateway French Dry Cleaners (a.k.a. Charles French Cleaners) as a dry cleaner from 1985 to 1996. Investigations completed at the Site documented the presence of volatile organic compounds (VOCs) particularly tetrachlorethere (PCE), in soil vapor beneath the Site, beneath the commercial spaces east of the Site, and beneath the residential building north of the Site.

Investigation to Date: The remedial investigations conducted on the Site included soil, groundwater, and soil vapor sampling and analysis. Sampling identified elevated concentrations of PCE (also known as perchloroethylene or "perc") and its breakdown products in soil vapor. PCE is commonly used in the dry cleaning process. As an interim measure to address the potential for soil vapor intrusion in the adjacent residential building, the Participant installed a sub-slab depressurization in that building in January 2013. That system will continue to operate and will be incorporated into proposed system.

Next Steps: NYSDEC will consider public comments, revise the cleanup plan as necessary, and issue a final decision document. After approval, the proposed remedy becomes the selected remedy. The draft Remedial Action Work Plan will be revised as needed to describe the selected remedy and will be made available to the public. The Participant will then design and perform the cleanup action to address the Site contamination, with oversight by NYSDEC and NYSDOH. NYSDEC will keep the public informed throughout the investigation and cleanup of the site.

Brownfield Cleanup Program: New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and redeveloped. These uses may include recreation, housing, business or other uses. A brownfield is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. For more information about the BCP, visit:

http://www.dec.ny.gov/chemical/8450.html

Contact the NYSDEC project manager if you have any concerns or questions on implementation of the work plan, or if you or someone you know would like to be added to the project contact list to receive future fact sheets for this Site. We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Site Fact Sheets by Email

Have site information, such as this fact sheet, sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email list-serves, available at the following web page: www.dec.ny.gov/chemical/61092.html Former Gateway French Dry Cleaners (Site No. C224151)

October 2014 Fact Sheet #1 Page 3 of 3

BROWNFIELD CLEANUP PROGRAM

Site Location Map





Figure 1 - Site Boundary Map Former Gateway French Dry Cleaners Site No. C224151

(La hoja informativa comienza a continuación)

Actúe ahora para continuar recibiendo información sobre este sitio!

La División de Saneamiento Ambiental (DER) de DEC ahora distribuye información sobre sitios contaminados *por correo electrónico*.

Si desea continuar recibiendo información sobre el sitio contaminado que se menciona en esta hoja informativa:



<u>Debe</u> registrarse en la lista de distribución de DER: www.dec.ny.gov/chemical/61092.html

DER no puede registrar su dirección de correo electrónico; únicamente el dueño de la dirección de correo electrónico puede hacerlo. Si ya se ha registrado en la lista de distribución para el condado en cual se encuentra el sitio, no necesita nada.

¿Por qué elegir la versión electrónica?

- ☑ Obtenga información del sitio de forma más rápida y compártala fácilmente
- Reciba información sobre todos los sitios en un condado elegido: lea lo que desee, elimine el resto
- ☑ Ayuda al medioambiente y reduce sus costos de impuestos

Si la versión electrónica no es una opción para usted, llame o escriba al gerente del proyecto DER identificado en esta hoja informativa. Indique que necesita recibir copias en papel de las hojas informáticas a través del servicio postal. Incluya el nombre del sitio en su correspondencia.

La opción de recibir papel está disponible solo para individuos. Se presume que los grupos, las organizaciones, las empresas y las entidades gubernamentales tienen acceso al correo electrónico.

NEW YORK STATE DEPARTMENT OF



Donde Encontrar Informacion:

Documentos del Proyecto estan disponibles en las localizaciones siguentes para ayudar a la estancia publica informada.

Brooklyn Public Library

Coney Island Branch 1901 Mermaid Avenue Brooklyn, NY 11224 (718) 265-3220 Call for hours

NYSDEC, Region 2 Office 47-40 21st Street Long Island City, NY 11101 Call in advance: (718) 482-4900 Hours: Mon. to Fri. 8AM to 4 PM

A Quien Contactar:

Preguntas y comentarios siempre son bienvenidos y deben ser dirigidas a los siguientes:

Preguntas Relacionadas con Proyecto

Bryan Wong, Project Manager NYSDEC, Region 2 Office 47-40 21st Street Long Island City, NY 11101 (718) 482-4905 yukyin.wong@dec.ny.gov

Preguntas de Salud Publico: Stephanie Selmer NYSDOH Empire State Plaza Corning Tower Room 1787 Albany, NY 12237 (518) 402-7860 beei@health.ny.gov

Para mas informacion sobre el Programa Brownfield Cleanup de Neuva York's, visite: www.dec.ny.gov/chemical/8450.html OJA INFORMATIVA#1 Brownfield Cleanup Program Former Gateway French Dry Cleaners 3375-3377 Neptune Avenue Brooklyn, NY 11235

Octubre 2014

Sitio No. C224151 NYSDEC REGION 2

Remedio Propuesto para Brownfield Sitio Contaminación; Período de Comentarios Públicos Anunciado

El público está invitado a comentar sobre un remedio propuesto siendo revisado por El Departamento de Conservación Ambiental del Estado de Nueva York (NYSDEC) para hablar sobre la contaminación relacionado con el "Former Gateway French Dry Cleaner" (el Sitio) situado en 3375-3377 Neptune Avenue, Brooklyn, NY. Por favor, refieren al mapa (ajuntado) para el Sitio.

Basado sobre los resultados de la investigacion, NYSDEC, en consulta con el Dpeartamento de la Salud del Estado de Nueva York (NYSDOH), ha determinado que el sitio no plantea un riesgo significo al la salud del publico o el medio ambiente.

Como Comentar: NYSDEC esta aceptando comentarios escritos sobre el plan propuesto durante 45 dias, **del 15 de octubre 2014 al 29 de noviembre de 2014**. El plan propuesto esta disponible al publico para revision en los locales indentificados en el lado izquierdo de esta pajina debajo de "Donde Encontrar Informaccion." Por favor envie los comentarios al gerente de proyectos de NYSDEC debajo de Preguntas Relacionadas con Proyecto "A Quien Contactar." Esta lista tambien se encuentra en el lado izquierdo de esta pajina.

Borrador de Plan de Trabajo de Accion Correctiva: El plan de limpieza se describe en detallo en un "Plan de Trabajo de Acción Correctiva". La propuesta "Track 4" utilización residencial- restringida remedio consiste en:

- Expansion de un existente fuera-del-sitio sistema de Depresurizacion del Subsuelo (SSDS) para previnir la migracion de vapores desde el subsuelo en los edificios (tanto dentro y fuera del Sitio);
- Mantenimiento de un system de cubertura consistiendo en la construccion de suelos en todo el Sitio;
- Implementacion de un Plan de Salud y Seguridad y un plan de Monitor de Aire de la Comudidad durante todas actividades intrusivas de tierra;
- Implementacion de un Plan de Manejo del Sitio (SMP) tambien sera necesario para el mantenimiento a largo-plazo de el sistema de remediacion; y
- Anotacion/registracion de un Usufructo Ambiental para asegurar la implementacion del SMP.

BROWNFIELD CLEANUP PROGRAM

El remedio propuesto fue preparado por Coney Island Site 4A-1 Houses, Inc. (el "Participante") despues de gestionar una investigacion detallada del Sitio de bajo de el programa de "Brownfield Cleanup" de Nueva York (BCP). Un "Reporte de Investigacion de Remediacion" que describe los resultado de la investigacion, se a presentado y esta disponible para revision en los lugares identificados en la pagina 1.

Descripcion del Sitio: El Sitio de 0.04 hectáreas está localizado en en 3375-3377 en el distrito de Brooklyn, ciudad de Nueva York y se identifica como Bloque 6979 y en la parte del Lote 100. El sitio está ocupado y funciona como una oficina dental. Este sitio fue operado previamente por "Gateway French Dry Cleaners (a.k.a Charles French Cleaners) como una tintorería des de 1985 a 1996. Las investigaciones terminadas en el Sitio documentaron la presencia de compuestos orgánicos volátiles (VOCs) en particular tetrachlorethere (PCE), en el vapor del suelo por debajo de el Sitio, por debajo de los espacios comerciales al este del sitio, y debajo del edificio residencial al norte del sitio

Investigación hasta la fecha: Las investigaciones correctivas gestionadas en el Sitio incluyeron tierra, agua subterránea, y muestras de vapores del suelo y análisis. Las muestras identificaron concentraciones elevadas de PCE (también conocido como percloroetileno o "perc") y sus productos de degradación en el vapor del suelo. PCE es usado generalmente en el proceso de tintoreria. Como medida provisional para poner atencion a la posibilidad de intrusión de vapores del suelo en el edificio residencial adyacente, el Participante instalo un sistema de despresurización del subsuelo en ese edificio, en enero de 2013. Este sistema seguirá funcionando y será incorporado en el sistema propuesto.

Pasos siguientes: NYSDEC considerará los comentarios públicos, revisara el plan de limpieza cuando sea necesario, y emitira un documento de decisión final. Después de la aprobación, el remedio propuesto se convierte en el remedio seleccionado. El Borrador de Plan de Trabajo de Accion Correctiva sera revisada cuando sea necesario para describir el remedio seleccionado y se pondrá a disposición del público. El Participante será entonces diseñara y llevara a cabo la acción de limpieza para tratar la contaminación del sitio, con la supervisión de NYSDEC y NYSDOH. NYSDEC mantendrá informado al público durante toda la investigación y remedacion del sitio.

El Programa de Limpieza del Sito Industrial Abandonado: El programa de limpieza del sitio industrial abandonado de Nueva York (BCP) alienta la limpieza voluntaria de de propiedades contaminadas conocidas como "brownfields" para que puedan ser reutilizados y reconstruido. Estos usos pueden incluir areas de recreación, viviendas, negocios y otros usos. Un Brownfield es cualquier propiedad real que es difícil reutilizar o reconstruir a causa de la presencia o la posibilidad de presencia de contaminación. Para obtener más información acerca de la BCP, visite:

http://www.dec.ny.gov/chemical/8450.html

Pongase en contacto con el gerente del proyecto de NYSDEC si tienen alguna preocupacion o pregunta sobre la aplicacion del plan de trajabo, o si usted o alguien que usted conoce quisiera agregar a la lista de contactos de proyector para recibir futuras ojas informativas de este Sitio. Los invitamos a compartir esta pajina de datos con vecinos y inquilinos, y/o poner en publico esta oja informativa de en un area prominente de su edificio para otors a ver.

Reciba Ojas Informativas por Email

Reciba information del Sitio como esta oja informative, enviado directamente a su email. NYSDEC los invita a enscribirce con uno o mas listas de correo de sitios contaminados, disponible en la pagina web siguiente: www.dec.ny.gov/chemical/61092.html Former Gateway French Dry Cleaners (Sitio No. C224151)

Octubre 2014 Oja Informativa #1 Pagina 3 of 3

BROWNFIELD CLEANUP PROGRAM

Mapa del Sitio





Figure 1 - Site Boundary Map Former Gateway French Dry Cleaners Site No. C224151
APPENDIX E GOVERNING DOCUMENTS

- 1. Site-Specific Health and Safety Plan
- 2. QAPP
- 3. Waste Management
- 4. Citizen Participation Plan

FORMER GATEWAY FRENCH DRY CLEANERS kings county, brooklyn, new york

NYSDEC BCP NUMBER: C224151 Health and Safety Plan

Prepared for:

Coney Island Site 4-A-1 Housing Company 70 East 55th Street – 7th Floor New York, NY 10022

Prepared by:

Goldberg-Zoino Associates of New York P.C. d/b/a GZA GeoEnvironmental of New York 104 West 29th Street, 10th Floor New York, New York 10001

DECEMBER 2014

GZA SITE-SPECIFIC HEALTH, SAFETY & ACCIDENT PREVENTION PLAN

1	I. CLIENT/S	ITE/PROJECT I	NFORM	IATION
Job/Project #: 12.0076112.02				
Client: Starrett Corporation				
Site Address: 3375 Neptune Avenu	e, Brooklyn, New	v York		
Site Description, Work Environmer Space with Promenade and Low Inco	nt: Dental office me Housing	and surrounding area.	General v	vicinity consists of commercial
Estimated Start Date: Sept. 2014	Estimated	Finish Date: Oct. 201	4	Hours of Work: 7 am – 5 pm
	2. EME	RGENCY INFO	RMATI	ON
Hospital Name & Address: New York Brooklyn, New York	Methodist Hospita	ıl 3049 Ocean Parkway,	•	Hospital #: (718) 265-0005
Directions and Street Map of Route to N	learest Hospital Att	ached: 🛛 Yes (required	l)	
Fire #: 911	Ambulance #: 9	11	F	Police #: 911
Other Emergency Contact(s): Brett Eng	gard		Phone #'	s: 347-640-2760
Location of Nearest Phone: Cell Phone	on Person, Retai	l Business on Promena	ade	
Site Specific Emergency Preparedness/F Santiago - Facilities Manager (347) 57	Response Procedure 79-0122	es/Concerns: Evacuate to	o grass area	north of the Site. Contact Alex
IMPORTANT: All incidents (injuries, fires, chemical spills, property damage, and significant near misses) must be reported within 24- hours to your EHS Coordinator and the EHS Director and Insurance Coordinator, per GZA Incident Reporting Policy # 03-1005. Incident Report/Analysis form (HASP Attachment C) located on GZA Intranet under "Health and Safety," "Incident Report/Analysis Form"				
3 SUB-SUE	PEACE WOR	K UNDERCRO		ΤΗ ΙΤΥ Ι ΟΟΛΤΙΟΝ
J. SUD-SUF Will subsurface explorations be condu	cted as part of this	$\frac{\mathbf{X}}{\mathbf{Y}} = \frac{\mathbf{X}}{\mathbf{Y}} = \frac{\mathbf{X}}{\mathbf{Y}$		
win substituce explorations be condu	cieu as part or tins			
Site property ownership where underg	ground	Public Access Property	י 🖾 א	Ies No
explorations will be conducted on:		Private Property	\boxtimes Y	Yes 🗌 No
Have Necessary Underground Utility Notifications For Subsurface Work Been Made?		ed - 🗌 N/A		
Specify Clearance Date & Time, Dig S	afe Clearance I.D	. #, And Other Relevant	t Informati	on: Consult the utility map at drilling
locations.	nuion to the initiati	ion of ground nonotratin	a activities	CZA percentral to access whether the
underground utility clearance (UUC)	prior to the initial process has been co	ompleted in an manner	that appear	s acceptable, based on participation/
confirmation by other responsible parties (utility companies, subcontractor, client, owner, etc.), for the following:				
Electric:	Yes	No NA	Othe	r
Fuel (gas, petroleum, steam):	Yes	No NA	Othe	r
Communication:	Yes	No NA	Othe	r

Yes

Yes

Yes

Water:

Sewer:

No No

No No

No No

Comments: Please perform a Site reconnaissance for the above utilities at all drilling location prior the start of work.

□ NA

□ NA

□ NA

Other_

Other_

Other_

Other:

4. SCOPE OF WORK		
Any OSHA PERMIT-REQUIRED CONFINEI	• SPACE entry?	Any INDOOR fieldwork?
If yes, use Site Specific H&S Plan/Confined Space	e Entry Permit for	If yes, explain: The Site is located inside of a
that portion of the work	•	dental office.
General project description, and phase(s) or work to which this H&S Plan applies.Install mor groundwate		wells, Installation of SSDS. Collection of les and SSDS effluent.
Specific Tasks Performed by GZA:	Oversee monitoring well installation, oversee SSDS installation.	
Concurrent Tasks to be Performed by GZA Subcontractors (List Subcontractors by Name):	SSDS contractor w be installed using a and blower fans or Driller to be deterr	vill install SSDS at the site. Suction sump pits will a concrete corer. Followed by installation of piping a the ceiling. nined
Concurrent Tasks to be Performed by Others:	N/A	

IMPORTANT! Subcontractors may use GZA's plan for general informational purposes only. Each subcontractor is responsible for determining the adequacy and applicability of the information herein to its own activities on site. Each subcontractor engaged by GZA is responsible for all matters relating to the H&S of its personnel and equipment in performance of its work, as well as obligations for compliance with H&S regulations applicable to its work. GZA subcontractors are subject to GZA's review, recommendations, and contractual requirements pertaining to H&S.

5. DOCUMENTATION TO BE COMPLETED

- Initial Site Health and Safety Briefing Record (Attachment A) must be completed prior to the initiation of on-site activities, with any change in the scope of work, or a change in the Site or weather working conditions of each GZA Employee and provided to each GZA subcontractor.
- **Daily Safety Meeting** (Attachment B) must be completed at the initiation of daily on-site activities, and reviewed or updated with any change in the scope of work, or a change in the Site or weather working conditions, until the completion of GZA on-site activities.
- Incident Analysis Form (Attachment C) must be completed for each accident, injury, incident, near miss.
- Route to Hospital (Attachment D) must be completed prior to the start of each job.

• Review of the appropriate Task Hazard Analyses.

ON-SITE HAZARDS:	SAFETY MEASURES:
Slip, Trips and Falls	Most common and costly. Maintain an orderly site with good housekeeping. Keep foot paths clear of tripping hazards (hoses, tools, etc.). Use 3 points of contact when climbing on or off equipment. Maintain exclusion area for public safety and keep all tools and equipment in the public exclusion zone.
Construction Hazard/Heavy Equipment	Workers will retain a safe distance between themselves and the active drilling equipment when in operation. Be aware of surroundings while working and moving equipment, including: walls, facility equipment, parked cars and moving equipment
Weather	Appropriate clothing will be worn to avoid heat/cold stress. Please refer to the attached OSHA Quick Card.
Sampling of Urban Fill, Petroleum Constituents, Chlorinated VOCs	Monitor the work zone with a hand-held PID. Wear nitrile gloves and eye protection while collecting samples. Practice good hygiene by properly decontaminating, cleaning hands after sampling and prior to eating.
Lifting Hazards	Use help to lift anything above 50 pounds.
Noise, vibration and flying object hazards	Wear hearing, side impact eye protection and hard hat. Use hand signals and eye contact when unable to communicate verbally.

Operator Hazards	Use hand signals and eye contact when unable to communicate verbally. Operator to display hands off the controls if another person is to enter the operator's work area.
Utility Related Hazards	Contractor is required to have the utility On-call mark out done and have the location ticket on-hand for reference.
Overhead Hazards	Look up and be aware of existing overhead utilities, equipment and building structural elements. Minimum distance for any boom swing radius or drilling mast is 10-feet unless the lines are de-energized and lockout/tag-out procedures are implemented by the appropriate utility or facility staff and administration
General unknown or unexpected conditions	COMMUNICATE JOB HAZARD ANALYSIS AND LESSONS LEARNED INFORMATION TO RETURNING PERSONNEL.
General unknown or unexpected conditions	Do not assume that the Site has been maintained for safety. Coordinate site visit with other personnel not present on site, so that they aware of your location and can provide assistance if needed. Wear appropriate Personal Protective Equipment (PPE) as required by the Site Specific Health and Safety Plan (e.g., steel toe boots, hearing protection, and work clothes). Follow procedures identified in the HASP for required training, medical monitoring and work practices.

7. HEALTH AND SAFETY	EQUIPMENT AND CONTROLS
AIR MONITORING INSTRUMENTS	PERSONAL PROTECTIVE EQUIPMENT
(ensure instruments are calibrated)	
 PID Type: MiniRae Lamp Energy: 10.6 eV FID Type: Carbon Monoxide Meter Hydrogen Sulfide Meter O₂/LEL Meter Particulate (Dust) Meter Calibration Gas Type: Isobutylene 	 Respirator Type: Respirator-Cartridge Type: Hardhat Outer Gloves Type: Nitrile Inner Gloves Type: Steel-toed boots/shoes Coveralls Type: Outer Boots Type:
 Others: Personal Dust Monitor Discuss/Clarify, as Appropriate: 	 Eye Protection with side shields Face Shield Traffic Vest Personal Flotation Device (PFD)
OTHER H&S EQUIPMENT & GEAR	 Fire Retardant Clothing EH (Electrical Hazard) Rated Boots, Gloves, etc. Noise/Hearing Protection Others:
 Caution Tape Traffic Cones or Stanchions Warning Signs or Placards Decontamination Buckets, Brushes, etc. Portable Ground Fault Interrupter (GFI) Lock-out/Tag-out Equipment Ventilation Equipment Others: 	Discuss/Clarify, as Appropriate:
Discuss/Clarify, as Appropriate: Set up an Exclusion Zone to protect public safety and to prevent vandalism to temporary sampling points.	

8. AIR MONITORING ACTION LEVELS

Is air monitoring to be performed for this project? Yes No

Make sure air monitoring instruments are in working order and have been calibrated prior to use. Depending on project-specific requirements, periodic field calibration checks may be necessary during the day of instrument use.

A. ACTION LEVELS FOR OXYGEN DEFICIENCY AND EXPLOSIVE ATMOSPHERIC HAZARDS (Action levels apply to occupied work space in general work area.)

Applicable, See Below	w. Not Applicable
Parameter	Response Actions for Elevated Airborne Hazards
Oxygen	At 19.5% or below, exit area, provide adequate ventilation, or proceed to Level B, or discontinue activities Verify presence of adequate oxygen (approx. 12% or more) before taking readings with LEL meter. If oxygen levels are below 12%, LEL meter readings are not valid.
LEL	Less than 10% LEL - Continue working, continue to monitor LEL levels <u>Greater than or Equal to 10% LEL</u> - Discontinue work operation and immediately withdraw from area. Resume work activities ONLY after LEL readings have been reduced to less than 10% through passive dissipation, or through active vapor control measures.

B. ACTION LEVELS FOR INHALATION OF TOXIC/HAZARDOUS SUBSTANCES (Action levels are for sustained breathing zone concentrations.)

App	licable, See Below.	Not Applicable	
Air Qu (Check	ality Parameters all that apply)	Remain in Level D or Modified D	Response Actions for Elevated Airborne Hazards
\square	VOCs	0 to 5 ppm	5 ppm to 25 ppm: Proceed to Level C, or Ventilate, or Discontinue Activities
			> 25 ppm: Proceed to Level B, or, Ventilate, or Discontinue Activities
	Carbon Monoxide	0 to 35 ppm	At greater than 35 ppm, exit area, provide adequate ventilation, or proceed to Level B, or discontinue activities.
	Hydrogen Sulfide	0 to 10 ppm	At greater than 10 ppm, exit area, provide adequate ventilation, or proceed to Level B, or discontinue activities
	Dust	Visual Fugitive Dust	A Personal Dust Monitor (PDM) will be utilized to monitor fugitive dust levels. Any conditions which create visual fugitive dust will be temporarily halted, and the causes will be determined. Water or foams will be used to mitigate visual fugitive dust from leaving the work area.

C. SPECIAL INSTRUCTIONS/COMMENTS REGARDING AIR MONITORING (IF APPLICABLE)

SEE CAMP PREPARED FOR THIS PROJECT

9. H&S TRAINING/QUALIFIC	CATIONS FOR FIELD PERSONNEL
Project-Specific H&S Orientation Required for All	Fall Protection Training
Projects and All Field Staff Including Subcontractors	Trenching & Excavation
OSHA 40-Hr. Hazwoper/8-Hr. Refreshers	Others:
Hazard Communication (for project-specific chemical	
products)	
First Aid/CPR (at least one individual on site)	
General Construction Safety Training	
Lock-out/Tag-out Training	
Electrical Safety Training	
Blood-borne Pathogen Training	

Discuss/Clarify, as needed:

10. PROJ	ECT PERSONNEL - ROLES AND I	RESPONSIBILITIES	
GZA ON-SITE PERSONNEL:			
Name	Project Title/Assigned Role	Telephone Numbers	
TBD	Site Supervisor	work: cell:	
TBD	Site Safety Officer	work: cell:	
TBD	First Aid Personnel	work: cell:	
procedures and applicable laws and regulations is shared by all GZA management and supervisory personnel. This includes the for effective oversight and supervision of project staff necessary to control the Health and Safety aspects of GZA on-site activiti Site Safety Officer (SSO): The SSO is responsible for implementation of the Site Specific Health and Safety Plan. First Aid Personnel: At least one individual designated by GZA who has current training and certification in basic first ai cardiopulmonary resuscitation (CPR) must be present during on-site activities involving multiple GZA personnel.			
OTHER PROJECT PERSONNEL:			
Name	Project Title/Assigned Role	Telephone Numbers	
Dave Winslow	Associate/Principal-in-Charge	Work: 973-774-3300 Cell: 347-242-7107	
Brett Engard	Project Manager	Work: 973-774-3300 Cell: 347-640-2760	
Brett Engard	Health and Safety Coordinator (HSC	Work: 212-594-8140 Cell: 347-640-2760	
Richard Ecord	GZA Director of Health and Safety	Work: 781-278-3809 Cell: 404-234-2834	
 Principal-in-Charge: Responsible of overall project oversight, including responsibility for Health and Safety. Project Manager: Responsible for day-to-day project management, including Health and Safety. Health and Safety Coordinator: General Health and Safety guidance and assistance. Director of Health and Safety: H &S technical and regulatory guidance, assistance regarding GZA H&S policies and procedures. 			

11. HAZARD ASSESSMENT (CHECK ALL THAT APPLY)
A. GENERAL FIELDWORK HAZARDS: (Investigative, remedial or construction-related work; environmental,
geological, geotechnical, geo-civil, wetland/upland/woodland work, etc.)
Confined Space Entry – USE CONFINED SPACE H&S PLAN/ENTRY PERMIT (tanks, vessels, tunnels, misc. equipment enclosures)
Enclosed Spaces (Non-Confined Spaces) – (trenches, basements, sub-basements, attics)
General Housekeeping, Slip/Trip/Fall Hazards
Unsanitary/Infectious Hazards (wastewater, sewage, landfill, medical waste, blood borne pathogens)
Poisonous Plants, Plant Allergies
Biting/Stinging Insects, Spiders, Lyme Disease
Animal Hazards (snakes/rats/vermin, feral dogs/cats, urban dogs, wild animals, etc.)
Water/Wetland Hazards (boating, barge, raft, wading, diving, ice/thin ice, hazardous currents, shoreline/tidewater hazards, dam release/flash floods, river/stream crossing, mud/silt, etc.)
Remote Location/Navigation/Orientation Hazards (need for map/compass/GPS, limited communication/cell phone coverage, getting lost, distance from medical facility, lack of potable water)
Rough Terrain Hazards (ledges, cliffs, high altitude, climbing, strenuous hiking, rip rap, holes, pits, mine shaft/sink holes, avalanche, or falling rocks)
Fall Hazards (ladders, stairs, scaffolds, towers, elevated work platforms, retaining walls, rope access work, use of areal lifts, pits, holes, etc.)
Weather/Seasonal Hazards (heat/cold stress, sunburn, dehydration, wind/weather/lightning, snow/ice, hunting season)
Roadway/Highway/Transportation Corridor Hazards (moving vehicles, traffic safety, railroad hazards, airport traffic)
Motor Vehicle Operation Hazards (towing, hauling, transporting loads, etc.)
Pedestrians/General Public (any need for special measures to protect bystanders, secure work area during off hours)
Construction/Heavy Equipment, (operation of, or working near, loaders, excavator, backhoe, drill rig, GeoProbe, cranes, etc.)
Overhead Hazards (Falling tools, equipment, debris, rocks, tree limbs, etc.)
Hand Tools/Power Tools/Equipment (tool use hazards, chips, blades, projectiles, electrical generators, compressors, hoists, etc.)
Material Handling/Storage Hazards (manual handling, lifting, repetitive motion, mechanical transport, ropes/slings/chains, rigging, stacking, etc.)
Gas Welding/Cutting, Arc Welding/Cutting
Electrical Hazards (electrical equipment 120 volts or greater, low voltage electric shock hazards, etc.)
Fire and/or Explosion Hazards (compressed gas, fuels, flammable materials, heat-producing equipment, unexploded ordnance, explosives, etc.)

\boxtimes	Noise an	d Noise	Source	Awareness
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- Utility-Related Hazards (underground/overhead electric utilities, gas pipelines, water, sewer, fiber optic, etc.)
- Trenching & Excavation, Test Pits and Related Hazards

A. General Fieldwork Hazards, Continued

Unexploded Ordnance and Related Hazards

- Long-Distance/Overnight Travel (distance driving/fatigue, unfamiliar territory, unfamiliar rental vehicles, etc.)
- Security/Personal Safety/Criminal Activity/Theft Concerns, High Crime Area
- Working Alone (in a manner requiring special considerations, notifications, etc.)
- Lack of Visibility (night work, poor lighting, etc)
- Chemical/Toxicity/Irritant Hazards (See Part III for details)
- Other:

B. BUILDING-RELATED FIELDWORK HAZARDS (Work in operating or abandoned facilities, including temporary remediation system facilities, or during construction/demolition/renovation/abatement activities)

	No Building-Related Work
\boxtimes	Operating, Abandoned/Vacant Building, Active Construction Site
	Confined Space Entry – USE CONFINED SPACE H&S PLAN/ENTRY PERMIT
	Enclosed Spaces (Non-Confined Spaces) - (trenches, basements, sub-basements, attics)
	General Environmental Conditions (degraded walking/working surfaces, housekeeping, poor lighting, too hot, too cold, etc., unsanitary)
	Fire, Hot Work, Explosion (welding/cutting, compressed gases, flammable/combustible liquids)
	Biological (mold, bird or bat guano, medical waste, insects, vermin, unsanitary, sewerage, waste water, etc.)
	Ionizing/Non-Ionizing Radiation (radioactive materials, x-ray equipment, lasers, UV/IR from welding/process equipment, microwave, magnetic fields, radio frequency hazards)
	Fall Hazards (open pits, elevator shafts, working on roof, elevated work areas, elevated equipment access, stairs, ladders, scaffolding, powered boom lifts/scissors lifts)
	Electrical (operating equipment, power tools, extension cords, GFI, wet locations, abandoned electrical equip, batteries, capacitors, static electricity, arc flash/arc blast hazards, high voltage, need for lockout)
	Stored Energy Hazards (pneumatic/hydraulic pressure, hot surfaces, etc. including remediation injection wells)
	Mechanical/Moving Equipment/Machinery (cranes, operating equipment, conveyors, lockout hazards, robotic equipment, machine guarding hazards)
	Traffic/Vehicles/Pedestrian (moving fork trucks, parking lot, access road way, loading dock)
\boxtimes	Noise, Vibration Hazards
	Structural Hazards (unsafe floors/stairways/roof, deteriorated building components)

Demolition/Renovation (overhead hazards, unstable building structures, heavy equipment, restricted access areas, etc.)

Chemical/Toxicity/Irritant Hazards (See Part III for details)

\square	Other
\sim	Other:

Indoor work may be performed in occupied commercial retail and residential areas of the building. Need to manage walkways for public access and safety from slip, trips, and falls, as well as vandalism and damage to temporary sampling points.

C. CHEMICAL/EXPOSURE HAZARDS

	No Chemical Hazards Anticipated
	Chemicals Subject to OSHA Hazard Communication (for commercial chemical products, attach MSDSs if applicable)
\boxtimes	Soil and/or Groundwater Contaminants
	Drums and Buried Drums
	Former Chemical Lagoon/Disposal Site
\boxtimes	Miscellaneous Residual "Urban Fill" Hazards and Similar Residual Hazard Conditions
	Contaminated Building Surfaces, Paint, Settled Dust, Accumulated Hazardous Substances
	Vapor/Fume/Particulate from Industrial/ Manufacturing or Welding/Cutting/Hot Processes
	Containerized Waste, Chemicals in Piping & Process Equipment
	Emissions from Gasoline-, Diesel-, Propane-fired Engine, Heater, Similar Equipment
	Spill, Potential for Spill
	General Work Site Airborne Dust Hazards
\square	Volatile Organic Compounds (VOCs), BTEX
\square	Chlorinated Organic Compounds
\square	Fuel Oil, Gasoline, Petroleum Products, Waste Oil
	Asbestos
	Oxygen Deficiency, Asphyxiation Hazards
	Methane Hazards
	Sulfides, Hydrogen Sulfide (H ₂ S)
	Cyanides, Hydrogen Cyanide (HCN)
	Carbon Monoxide
	Herbicides, Pesticide, Fungicide, Animal Poisons
	Metals, Metal Compounds (esp. heavy metals, toxic metals, etc.)
	Corrosives, Acids, Caustics, Strong Irritants
	Polychlorinated Biphenyls (PCBs)
	Polycyclic Aromatic Hydrocarbons (PAHs)

Compressed Gases

Cryogenic Hazard (hazards of extremely low temperature materials)

Flammable/Combustible Liquids

Explosives, Explosive Dust, Unexploded Ordnance, etc.

Radiation Hazards (radioactive sealed/open source, x-rays, ultra violet, infrared, radio-frequency, etc.)

Sensitizers

C. CHEMICAL/EXPOSURE HAZARDS, CONTINUED

Other:

12. PLAN ACKNOWLEDGEMENT AND APPROVALS

The following individuals indicate their acknowledgement and/or approval of the contents of this Site Specific H&S Plan based on their understanding of project work activities, associated hazards and the appropriateness of health and safety measures to be implemented.

	Date	
Prepared by:		
Project Manager:		
EHS Approval ¹ :		
PIC:		

¹ - EHS Coordinator, EHS Director, or designated H&S Plan Reviewer

Attachments:Attachment AHealth and Safety Plan Briefing RecordAttachment BDaily Safety MeetingAttachment CIncident Analysis/Reporting FormAttachment DRoute to HospitalAttachment ETask Hazard Analyses and / or GZA Policy, as required

Attach additional information if required. (Revised March 2012)

ATTACHMENT A Initial Health and Safety PLAN BRIEFING Record

Project:	Job No.:	
5		

Project Location: _____

PM:	Phone No.:
PIC:	Phone No.:

The undersigned have attended a Health and Safety briefing, consisting of a review of the provisions of the Site Specific H&S Plan, and/or appropriate prior H&S events or concerns, and/or review of anticipated H&S concerns and safety measures for the project.

SUMMARY OF HEALTH AND SAFETY TOPICS COVERED					
Project Specific Information and Site History					
Site Specific Hazards					
S	Scope of Work				
R	Roles and Responsibilities				
H	L&S Equipment and Si	te Control Measures			
E	vacuation Route, Asse	mbly Point, and Route to Hospit	al		
N	NAME (printed)	SIGNATURE	COMPANY	DATE	

Conducted by:	Date:
Conducted by:	Date:
Conducted by:	Date:

USE ADDITIONAL SHEETS AS NECESSARY

REPLACE WITH MAP TO HOSPITAL

FORMER GATEWAY FRENCH DRY CLEANERS

KINGS COUNTY, BROOKLYN, NEW YORK

NYSDEC BCP NUMBER: C224151 Quality Assurance Project Plan

Prepared for:

Coney Island Site 4-A-1 Housing Company 70 East 55th Street – 7th Floor New York, NY 10022

Prepared by:

Goldberg-Zoino Associates of New York P.C. d/b/a GZA GeoEnvironmental of New York 104 West 29th Street, 10th Floor New York, New York 10001

DECEMBER 2014

1.0 **PROJECT OVERVIEW**

In accordance with the New York State Department of Environmental Conservation (NYSDEC) DER-10 Guidance, a draft Quality Assurance Project Plan (QAPP) for the Former Gateway French Dry Cleaners Site has been created (BCP No. C224151). A Site location map is included as **Figure 1**.

1.1 Project Scope

Significant levels of volatile organic compounds (VOCs) were identified in sub-slab soil vapor samples during this and previous investigation at the Site. Results were above New York State Department of Health (NYSDOH) AGVs and published background values. GZA assessed potential remedial alternatives to address the identified sub-slab VOCs in soil vapor, including PCE at concentrations as high as 55,000 μ g/m³. Further, soils had elevated levels of PAHs, lead, pesticides, and PCBs above the Unrestricted Use Soil Cleanup Objectives, but below Restricted Soil Cleanup Objectives. The remedial action for this Site includes the expansion of an existing Sub-Slab Depressurization System (SSDS), coupled with Monitored Natural Attenuation (MNA) of PCE in the groundwater, and concrete building slabs to maintain soil cover.

1.2 Project Goals

In order to protect human receptors from potential exposure to contaminants in groundwater and soil vapor at the Site, this remedial strategy will remove or eliminate, to the extent feasible, the chlorinated hydrocarbon contamination that exists below the Site and mitigate exposure pathways for any remaining contaminants. Specifically, the remedial action will:

- Remove migration route from soil gas to indoor air via an expanded SSDS;
- Reduce groundwater concentrations of PCE via MNA; and
- Control human contact (dermal and ingestion) with contaminated soil with a concrete slab cover.

2.0 **PROJECT ORGANIZATION**

Project Manager:	Brett Engard
	Phone:
	Mobile:
Quality Assurance Officer:	Chunhua Liu
	Phone:
	Mobile:

*Resumes of all personnel available upon request.

3.0 SAMPLE PLAN

GZA will implement a groundwater monitoring program to verify that dissolved chlorinated solvent contaminant mass decreases with time. Currently three deeply screened monitoring wells are located on the immediate Site. GZA will install three additional shallow wells to complete the vertical monitoring network. GZA proposes to conduct quarterly groundwater monitoring of three existing Site wells, MW-1, MW-2, and MW-3, and three new water table wells for VOC analysis commencing upon approval of this Work Plan. MNA parameters will be collected in the first and fourth quarters of the first year for comparison. Please note that metals and SVOCs are considered to be associated with Historic Fill Material and are relatively immobile; these will be addressed through engineering controls to eliminate exposure scenarios.

The SSDS system effluent will be sampled quarterly for the first year, then semiannually thereafter to monitor effluent levels. Should the PCE concentrations in the SSDS effluent appear to be below NYSDOH AGVs, grab soil gas samples will be collected while the system is operating. In the event that the soil gas samples are below mitigation levels, as presented in the NYSDOH Decision Matrices I and II, the system will be turned off and soil gas will be sampled quarterly to assess rebound for one year; sampling will be conducted semiannually for three years, biannually for two years, then once every four years thereafter.

Groundwater	Methods	Hold Time	Sample Container	Number of Samples ¹
VOCs	8260	14 Days	3 x 40 mL glass vials, HCL pres.	6
Alkalinity	SM2320B	14 days	Plastic 250 mL, unpres.	6
Dissolved Fe/Mn	6020A	180 days	Plastic 500ml, HNO ₃ pres., field filtered	6
Nitrate/Nitrite	353.2	28 days	Plastic 500 ml H ₂ SO ₄ pres.	6
Sulfate/Chloride	300	28 days	Plastic 250ml, unpres.	6
SSDS Exhaust	TO-15	14 days	6-L SUMMA	1

 Table 1: Quality Assurance/Quality Control Analytical Summary

1 – Duplicates, MS/MSD, Field-rinse Blanks will be collected at a rate of one per twenty samples collected per sample event. Trip Blanks will be created for each sample event that includes VOC analysis in groundwater.

Analytical data will be provided in an electronic format in accordance with section 1.15 of the DEC-10.

4.0 **QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES**

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representativeness, completeness, and comparability associated with the sampling and analysis activities to be conducted as part of this Investigation. Field QA/QC procedures will be used to ensure that samples collected are representative of the actual conditions of the Subject Property, and do not

contain contaminants introduced either from the field activities or from sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds present in the sample matrix or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC sample requirements will conform to NYSDEC DER-10 and ASP protocol. A summary of the field and laboratory QA/QC procedures to be followed as part of this Remedial Action Work is given below.

4.1 Field QA/QC

Field QA/QC will include the following procedures: 1) calibration of field equipment; 2) the collection of trip, and field blanks and duplicate samples; 3) the use of dedicated and disposable field sampling equipment; 4) proper sample handling and preservation; 5) proper sample chain of custody documentation; and 6) the completion of report logs. A description of each of these procedures is provided below.

4.1.1 Calibration of Field Equipment

All field analytical equipment used including PIDs and water quality meters will be calibrated in accordance with factory instructions on a daily basis.

4.1.2 Collection of Field QA/QC Samples

Trip blanks will be prepared by the ASP-certified laboratory with deionized laboratory grade water and one (1) blank will accompany all sample shipments to the laboratory. The water used will be from the same source as that used for the laboratory method blank. The trip blank will be handled and transported in the same manner as the samples collected which it will accompany. Trip blanks will be analyzed for VOCs accordance with EPA Method 8260 to identify the presence of cross-contamination as a result of sample shipment, e.g. contaminated from the air, shipping containers, or from other items coming into contact with the sample bottles.

The field blank will be collected by pouring deionized laboratory grade water over the decontaminated sampling equipment and gathering this water into appropriate sample containers and will be preserved in the same manner as other aqueous matrix samples. The water used for the field blank will be from the same source as that used for the laboratory method blank. The field blank will be analyzed with the same method(s) as collected sample to determine whether the field sampling equipment is cross-contaminating samples.

4.1.3 Use of Dedicated and Disposable Field Sampling Equipment

Dedicated HDPE tubing, silica tubing, and a peristaltic pump will be used in all monitoring wells to eliminate the possibility of cross-contamination during groundwater sampling activities.

Disposable sampling equipment including, acetate liners for soil sampling, nitrile gloves, and disposable bailers will be used to prevent cross-contamination between samples. Field screening equipment will be decontaminated after each sample by washing them with laboratory-grade Alconox detergent and deionized water, and thoroughly air-drying equipment.

All drilling equipment that contacts contaminated material will be decontaminated according to NYSDEC Protocol.

4.1.4 Sample Handling and Preservation

For each of the analytical parameters analyzed, a sufficient sample volume will be collected to allow the specified analytical method to be performed according to protocol, and to provide sufficient sample for reanalysis if necessary.

Because plasticizers and other organic compounds inherent in plastic containers may contaminate samples requiring organic analysis, these samples will be collected in glass containers.

Appropriate sample preservation techniques, including cold temperature storage at 4° C and pH adjustment with appropriate preservatives will be utilized to ensure that the analytical parameters in the samples analyzed by the laboratory have not changed from the time the sample was collected in the field.

Samples will be analyzed prior to the respective holding time for each of the analytical parameters to ensure the integrity of the analytical results.

The appropriate EPA SW-846 sample handling and preservation procedures, outlined in the ASP protocol will be followed as part of this Investigation, including sample volume, sample container, sample preservative, and holding times.

4.1.5 Sample Custody

Sample handling in the field will conform to appropriate sample custody procedures. Field custody procedures include proper sample identification, chain-of-custody forms, and packaging and shipping procedures. Sample labels will be attached to all sampling bottles before field activities begin to ensure proper sample identification. Each label will identify the site and sample location.

Proposed sampling locations are indicated in the Sample Location Plan. Actual sampling locations, if different than proposed, will be marked on the Sample Location Plan that will be revised accordingly.

Each cooler will be lined with two (2) 6-mil thick plastic bags. Styrofoam or bubble wrap will be used to absorb shock and prevent breakage of sample containers. VOC vials will be packaged inside a plastic "Ziplock" bag prior to placement inside the cooler. Ice or ice packs will be placed in between the plastic bags for sample preservation purposes.

After each sample is collected and appropriately identified, the following information will be entered into the chain-of-custody form: 1) site name and address; 2) sampler(s)' name(s) and signature(s); 3) names and signatures of persons involved in the chain of possession of samples; 4) sample number; 5) number of containers; 6) sample location; 7) date and time of collection; 8) type of sample, sample matrix and analyses requested; 9) preservation used (if any); and 10) any pertinent field data collected (pH, temperature, conductivity, DO).

The sampler will sign and date the "Relinquished" blank space prior to removing one (1) copy of the custody form and sealing the remaining copies of the form in a Ziplock plastic bag taped to the underside of the sample cooler lid. After sample containers are sufficiently packed and the chain-of-custody form completed, the 6-mil plastic bags will be sealed around the samples by twisting the top and securely taping the bag closed to prevent leakage. A sample custody seal will be placed around the neck of the bag which will include the signature of the project manager, and/or his designee, and the date.

The sample cooler will be sealed with tape prior to delivery or shipment to the laboratory. Additionally, sample custody seals will be placed around the cooler lid to detect unauthorized tampering with samples following collection and prior to the time of analysis. The seals will be attached in such a way that it will be necessary to break them in order to open the container. Seals will be affixed at the time of sample packaging and will include the signature of the project manager and/or his designee and the date.

4.1.6 Report Logs

The following project logs will be completed during the course of this investigation: 1) field logs; 2) boring logs; 3) monitoring well development purging and sampling data logs; and 4) monitoring well installation details. A field log will be completed on a daily basis which will describe all field activities including: 1) project number, name, manager, and address; 2) date; 3) weather; 4) attendees on-Site and associated affiliations; 5) description of field activities; and 6) all pertinent sample collection information including sample identification numbers, description of samples, location of sampling points, number of samples taken, method of sample collection and any factors that may affect its quality, time of sample collection, name of collector, and field screening results.

A boring log will be completed for each boring advanced and each monitoring well drilled. The following information will be included on each boring log: 1) project number, name, manager, and location; 2) date; 3) drilling company and method used; 4) boring number; 5) total and water table depths; and 6) all pertinent soil sample information including sample number, interval, depth, amount recovered, color, composition, percent moisture, visual and olfactory observations of contamination, and field screening readings.

A monitoring well development, purging, and sampling data log will be completed following development, purging and sampling of each monitoring well. For both development as well as purging and sampling activities, the following information will be recorded: 1) project number, name, manager,

and location; 2) monitoring well number; 3) well casing diameter and stick-up height; 4) depth of well from top of well and roadbox casings; 5) date; 6) time; and 7) water analyzer used. Additionally, for development activities, the following information will be recorded: 1) distance from top of well casing to water and free product (if present); 2) height of water column; 3) volume factor and well volume, and 4) volume of groundwater removed during development. Also, for purging and sampling activities, the following information will be recorded: 1) distance from top of well casing to water and free product (if present); 2) height of water column; 3) volume factor and well volume, and 4) volume of groundwater removed during development. Also, for purging and sampling activities, the following information will be recorded: 1) distance from top of well casing to water and free product (if present); and 2) the pH, temperature, conductivity, and dissolved oxygen content associated with the number of well volumes removed.

A monitoring well installation detail will be completed for each new monitoring well installed. The following information will be recorded on each detail: 1) project name, number, and manager; 2) monitoring well number; 3) driller; 4) date installed; 5) top of casing, ground surface, well point, and bottom of boring elevations, 6) borehole diameter, 7) type of well cover/cap, 8) type of protective casing and collar; 9) type of well casing and screen; 10) diameter of casing and screen; 11) type of backfill material; 12) type of joint; 13) type of impermeable backfill; 14) type of screen packing; and 15) screen slot size.

4.2 Laboratory QA/QC

Alpha Analytical, an ELAP-certified laboratory, will be used for all sample analyses to be performed as part of this Investigation. This laboratory will follow the following QA/QC protocols.

4.2.1 Sample Custody

All samples will be delivered to a NYSDEC ASP certified laboratory within 24 hours of sample collection. Samples will be received by laboratory personnel who will inspect the sample cooler(s) to check the integrity of the custody seals. The cooler(s) will then be opened, the samples unpackaged and the information on the chain-of-custody form examined. If the samples shipped match those described on the chain-of-custody form, the laboratory sample custodian will sign and date the form on the next "Received" blank and assume responsibility for the samples. If problems are noted with the sample shipment, the laboratory custodian will sign the form and record problems in the "Remarks" box. The custodian will then immediately notify the Project Manager so appropriate follow-up steps can be implemented on a timely basis.

All samples will then be logged into a sample log book and/or computerized information system. The following information will be recorded: 1) date and time of sample receipt; 2) project number; 3) field sample number; 4) laboratory sample number (assigned during log-in procedure); 5) sample matrix; 6) sample analytical parameters; 7) storage location; and 8) log-in person's initials. A record of the information detailing the handling of a particular sample through each stage of analysis will be provided by the completion of a laboratory chronicle form. The following information will be included on this form: 1) job reference; 2) sample matrix; 3) sample number; 4) date sampled; 5) date and time received

by laboratory; 6) holding conditions; 7) analytical parameters; 8) extraction date, time and extractor's initials (if applicable), 9) analysis date, time, and analyst's initials, and 10) QA batch number, date reviewed, and reviewer's initials.

All information relevant to the samples will be secured at the end of each business day. All samples will be stored in a designated sample storage refrigerator, access to which will be limited to laboratory employees.

FORMER GATEWAY FRENCH DRY CLEANERS kings county, brooklyn, new york

NYSDEC BCP NUMBER: C224151

Waste Management Plan

Prepared for:

Coney Island Site 4-A-1 Housing Company 70 East 55th Street – 7th Floor New York, NY 10022

Prepared by:

Goldberg-Zoino Associates of New York P.C. d/b/a GZA GeoEnvironmental of New York 104 West 29th Street, 10th Floor New York, New York 10001

DECEMBER 2014

The following wastes will be generated as part of this Remedial Action Work: 1) soil cuttings from drilling operations; 2) well development and purge water; 3) decontamination water; and 4) disposable sampling equipment.

1.0 **Soil**

All soil cuttings generated from drilling operations will be screened in the field with a PID. If field screening results do not indicate the presence of contamination, then soil cuttings from Geoprobe macrocore samples will be backfilled into the borehole. Cuttings from monitoring well installations will be shoveled into DOT-approved 55-gallon drums. The drums will be labeled and stored on-Site until the soil sampling analytical results are available. The label will include a description and source of the contents of each drum. Based on the soil sampling results, the drummed soil will be disposed of in accordance with all applicable regulations.

2.0 **Groundwater**

Well development and purge water will be passed through a portable activated carbon vessel prior to discharge to ground surface.

2.1 Decontamination Water

Wastewater generated from the cleaning of drilling equipment and field screening equipment, such as the water quality analyzer and oil/water interface probe, will be collected and transferred into DOT-approved 55-gallon labeled drums. The drums will be stored on-Site until soil and groundwater samples are analyzed. The label will include a description and source of the contents of each drum. Based on the sampling results, the drummed wastewater will be disposed of in accordance with all applicable regulations.

2.2 Disposable Sampling Equipment

All disposable sampling equipment including latex gloves and disposable bailers will be collected and sealed in plastic trash bags, and stored on-Site until soil and groundwater samples are analyzed. The label will include a description and source of the contents of each bag. Based on the sampling results, the bagged sampling equipment will be disposed of in accordance with all applicable regulations.



New York State Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan

FORMER GATEWAY FRENCH CLEANERS BCP SITE NO: C224151

> 3375-3377 NEPTUNE AVENUE BROOKLYN, NEW YORK

SUBMITTED TO:

Mr. Bryan Wong New York State Department of Environmental Conservation Division of Environmental Remediation, Region 2 One Hunters Point Plaza 47-40 21st Street, Long Island City, 11101

PREPARED FOR:

Peter Gray Coney Island Site 4-A-1 Housing Company 70 East 55th Street – 7th Floor New York, NY 10022

PREPARED BY:

GZA GeoEnvironmental, Inc. 55 Lane Road, Suite 407 Fairfield, New Jersey 07004

June 2013

Contents

Section	Page Number
1. What is New York's Brownfield Cleanup Program?	2
2. Citizen Participation Activities	2
3. Major Issues of Public Concern	7
4. Site Information	7
5. Investigation and Cleanup Process	11
Appendix A Project Contacts and Locations of Reports and Information	14
Appendix B Site Contact List	16
Appendix C Site Location Maps	24, 25
Appendix D Brownfield Cleanup Program Process	26
Appendix E Document Repository Approval Letter	27
Appendix F Scoping Sheet	28

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Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.

Applicant: **Bay Park One Company Coney Island Site 4A-1 Houses Inc. ("Applicant")** Site Name: **Former Gateway French Cleaners ("Site")** Site Address: **3375 Neptune Avenue** Site County: **Kings** Site Number: **C224151**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants that conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at: <u>http://www.dec.ny.gov/chemical/8450.html</u>.

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include:

• Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment;

- Improving public access to, and understanding of, issues and information related to a particular site and that Site's investigation and cleanup process;
- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process;
- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community;
- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the Site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the Site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The site contact list includes, at a minimum:

- Chief executive officer and planning board chairperson of each county, city, town and village in which the Site is located;
- Residents, owners, and occupants of the Site and properties adjacent to the Site;
- The public water supplier which services the area in which the Site is located;
- Any person who has requested to be placed on the Site contact list;
- The administrator of any school or day care facility located on or near the Site for purposes of posting and/or dissemination of information at the facility; and
- Location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- Notices and fact sheets help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.
- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the Site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the Site, as described in Section 5.

If the Site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the Site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the site.

For more information about TAGs, go online at http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)		
Application Process:			
Prepare site contact listEstablish document repositories	At time of preparation of application to participate in the BCP.		
 Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30- day public comment period Publish above ENB content in local newspaper Mail above ENB content to site contact list Conduct 30-day public comment period 	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.		
After Execution of Brownfi	eld Site Cleanup Agreement:		
Prepare Citizen Participation (CP) Plan	Before start of Remedial Investigation		
Before NYSDEC Approves Reme	dial Investigation (RI) Work Plan:		
 Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan Conduct 30-day public comment period 	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.		
After Applicant Complet	es Remedial Investigation:		
• Distribute fact sheet to site contact list that describes RI results	Before NYSDEC approves RI Report		
Before NYSDEC Approves	Remedial Work Plan (RWP):		
 Distribute fact sheet to site contact list about proposed RWP and announcing 45-day public comment period Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) Conduct 45 day public comment period 	Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.		
Conduct 45-day public comment period			
Distribute feet chest to site context list that	Before the start of cleanup action		
Distribute fact sheet to site contact list that describes upcoming cleanup action	before the start of cleanup action.		
After Applicant Comp	letes Cleanup Action:		
 Distribute fact sheet to site contact list that announces that cleanup action has been completed and that summarizes the Final Engineering Report Distribute fact sheet to site contact list announcing 	At the time NYSDEC approves Final Engineering Report. These two fact sheets are combined if possible if there is not a delay in issuing the COC.		
issuance of Certificate of Completion (COC)			

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the Site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

This section of the CP Plan identifies major issues of public concern, if any, that relate to the Site. Additional major issues of public concern may be identified during the site's remedial process.

A potential for vapor intrusion of Trichloroethene (TCE) and Tetreachlorethene (PCE) exists at the site. Soil gas vapor was identified beneath occupied structures in May 2009 as a result of the handling, storage, and use of solvents typically used in dry cleaning operations by past tenants. Recent soil vapor sampling in 2011 identified TCE concentrations between 150 and 730 ug/m³ and PCE concentrations between 32 and 55,000 ug/m³, exceeding DOH guidances.

In the event that actions are taken to move forward with mitigation to address the potential of TCE and PCE vapor concentrations of migrating into the occupied spaces on the Site, a sub slab depressurization system (SSDS) will be installed within the Site in conjunction with periodic indoor monitoring to protect and preserve the safety and health of future occupants.

In addition, once the remediation of the Site begins, there may be other issues such as impacts resulting from noise or dust coming from the Site. The Site is located in an Environmental Justice Area. The Applicant will be required to fillout a Scoping Sheet for Major Issues of Public Concern. Environmental Justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Furthermore, the Site has a large Hispanic-American population within the nearby area. Therefore, it is recommended that any future fact sheets be translated into Spanish as well.

4. Site Information

The following information presents a brief Site Description, and Site History. Appendix C contains a map and an aerial photograph identifying the location of the subject Site.

Site Description

The Site is located at 3375 Neptune Avenue, in Brooklyn, New York and is a portion of the Tax Block 6979, Lot 100. The Site is centrally located on the west end of the Coney Island neighborhood of Brooklyn. The Former Gateway French Cleaners (aka Charles French Cleaners) operated within the western portion of the retail space at the Site between 1975 and 1996. A Site Location Plan (Figure 1) and Aerial Photograph (Figure 2) from the Remedial Investigation Workplan depicting the location of the Former Gateway French Cleaners and the boundary of the proposed Brownfield Area (Site) are attached in Appendix C.

The Site is located approximately 1000 feet south of Gravesend Bay and Coney Island Creek and 2000 feet north of the Atlantic Coast line. The Site is also located approximately 3000 feet from the western tip of Coney Island. The Site is a portion of a mixed-use development with residential apartments and retail space. The complex consists of several residential towers sprawled over approximately three city blocks. The development is north of Neptune Avenue, west of 33rd Street, east of 37th Street and south of Canal Avenue. 35th Street and 36th Street were eliminated during the Site development in 1973; 34th Street appears to have not previously existed. The current retail space is located along a promenade in ground floor units, with an approximate 40-foot setback from the historic store fronts and sidewalk line. Through the placement of fill material, the grade has increased by approximately four vertical feet from pre-redevelopment elevations to the current elevation. The promenade is approximately four feet above street level.

History of Site Use, Investigation, and Cleanup

As stated above, the Site is part of a development covering three city blocks. Prior to development in 1973-1974, there were three separate and individual city blocks consisting of residential and commercial buildings. Commercial businesses primarily were located along the northern side of Neptune Avenue. Based on the historical Sanborn Fire Insurance Maps (Sanborns) and a City directory search the addresses prior to development ranged between 3300 and 3600 along Neptune Avenue between 33rd and 37th Streets. After Site development, the businesses and buildings are listed as having 3300 numbers.

Based upon a review of Sanborn Fire Insurance Maps, there were no buildings in the Site vicinity in 1906. The next available Sanborn, 1930, depicts significant urban development in the area. Both the 1930 and the 1950 maps are primarily devoid of property use descriptions in the Site area. The 1966 and 1968 Sanborn maps depict several historical businesses which could be of potential environmental concern in the general area. There is a dry cleaning business located at 3503 to 3505 Neptune Avenue; which lies directly south of the Former Charles French Cleaners. All other available Sanborn Maps are post redevelopment and none indicate the type of operator in the retail spaces.

A Phase I Environmental Site Assessment of 3325 Neptune Avenue, 2750 West 33rd Street, and 2770 West 33rd Street Brooklyn, New York (Phase I ESA) was completed in June 2008 by Velocity Consulting Incorporated (Velocity). The Phase I ESA indicated that a dry cleaner, known as the Gateway French Cleaners (the "Gateway Cleaners"), formerly operated at 3375-3377 Neptune Avenue. A City Directory Search of 3375-3377 Neptune Avenue lists Charles French Cleaners as the former occupant. Reportedly, Gateway Cleaners operated from about 1984 to 1995. After 1995, the retail space was occupied by Neptune Dental and AFAM Medical until approximately 2009. A new tenant has occupied the retail space in early 2012.

Until recently, the focus of investigations has been the retail space formerly occupied by the Gateway Cleaners; bordered to the east by the Stationary Store and to the north by a residential building. The previous investigations, listed in the following section, focused on the Gateway Cleaners.

Based upon the conclusions of the Phase I ESA, the Gateway Cleaners was identified as a Recognized Environmental Conditions (RECs). The Gateway Cleaners was identified as a REC due to the lack of information regarding the tenant's operations and management practices as it pertains to the handling, storage, and the use of solvents typically used in dry cleaning operations. Due to renovations that occurred after Gateway Cleaners vacated the space (subsequently occupied by Neptune Dental and AFAM Medical), Velocity was unable to perform a thorough inspection during the PhaseI ESA.

In May 2009 GZA GeoEnvironmental of New York (GZA) performed a limited subsurface investigation in the Site vicinity. The results of the investigation were summarized in a report entitled "*Phase II Environmental Site Assessment Report Bay Park 1 October 2009*" (Phase II ESA) and submitted to the NYSDEC. Soil borings, GZA-1 through GZA-4, were advanced and temporary groundwater well points were installed. The soil encountered directly below ground surface was fill material consisting of a heterogeneous mix of fine to medium sand and gravel was observed from directly beneath the ground surface between 5 and 6 feet below ground surface (bgs). The fill material is underlain by brown fine to medium sand with silt.

Petroleum constituents were detected in the soil sample from GZA-3. No Volatile Organic Compounds (VOCs) or Semi-volatile Organic Compounds (SVOCs) were detected above soil Clean-up Objectives (SCOs) as defined by NYSDEC in Technical Administrative Guidance Memorandum (TAGM) 4046. Groundwater was encountered at approximately 8-9 feet bgs. Tetrachloroethene (PCE) was detected in groundwater samples collected from GZA-3 and GZA-4. PCE concentrations at GZA-4 (5.8 ppb) were in exceedance of NYSDEC Ambient Water Quality Standards (AWQS) of 5 ppb.

After discovery of soils contaminated with fuel compounds and groundwater concentrations of tetrachloroethene (PCE) in May 2009, a supplemental subsurface investigation of the Gateway Cleaners operating space was performed in July 2009. Six soil borings, designated GZA-5 through GZA-10, were advanced with a direct push drilling rig. Three perminant groundwater monitoring wells, designated MW-1 through MW-3, were also installed. One soil gas probe (SG-1) was installed to collect a sub-slab soil gas sample in the rear of the former dry cleaning tenant space.

Relatively low levels of SVOCs, below soil cleanup objectives, were detected in Site soils at these locations. PCE was detected in groundwater samples collected at GZA-5 and GZA-10 but were at concentrations below AWQS. Several additional VOCs (methyl-tert-butyl-ether) and SVOCs (naphthalene) were also detected in groundwater samples. At monitoring wells MW-1, MW-2, and MW-3, only methyl-tert-butyl-ether was identified in MW-2, at a concentration less

than the AWQS, suggesting the impact to groundwater has been vertically delineated. Sub-slab soil vapor samples exhibited exceedences of four VOCs for the EPA's Office of Solid Waste and Emergency Response (OSWER) guidelines including 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, and ethyl benzene and five VOCs exceeded New York State Department of Health (NYSDOH) background values; including 1,2,4-trimethylbenzene, benzene, ethyl benzene, and m/p-xylene.

Due to observations of petroleum impacts to soil and groundwater, the NYSDEC Region 2 was notified of a petroleum release on September 1, 2009. Bay Park One subsequently received a letter, on September 11, 2009, from Jeffrey Vought of the NYSDEC Division of Environmental Remediation (DER) requiring a summary letter outlining the cause and remedial activities. GZA submitted the Phase II EAS report to the DER on October 9, 2009.

On December 30, 2009, a letter was received from Jeffrey Vought indicating that the Phase II EAS report had been reviewed in conjunction with the NYSDOH. The December 30th letter required that additional assessment be conducted at the Site, including indoor and outdoor air ambient air and sub-slab soil vapor samples in accordance with the NYSDOH. The requested additional assessment was completed and a *Vapor Intrusion Assessment Letter Report* was issued to the NYSDEC and the NYSDOH on July 2, 2010.

Two sub-slab soil gas samples, designated SS-2 and SS-3, were collected on February 4, 2010, from beneath the former dry cleaning tenant space. Tetrachloroethene and trichloroethane were detected at concentrations in both sub-slab vapor samples above the respective Table C-2 Indoor Air BASE median values, United States Environmental Protection Agency (USEPA) Region 8 background values, and the NYSDOH Air Guideline Values. Concentrations of tetrachloroethene and trichloroethane were 2,180 μ g/m3 and 25.8 μ g/m3, respectively in SS-2 and 25,000 μ g/m³ and 289 μ g/m³ in sample SS-3. The report identified the occurrence of VOCs above NYSDOH guidance and USEPA criteria. However, the absence of tetrachloroethene and trichloroethene in the indoor sample results suggests that vapors are not concentrating within the building interior and/or there is not a direct pathway from beneath the slab into the active indoor space.

In October, 2011 an additional assessment at the former dry cleaner space was conducted utilizing a mobile SRI 8610 gas chromatograph (GC) laboratory using EPA Method 8021 to expedite delineation and screen vapor samples for the presence of PCE. The objective was to delineate the vapor condition to the NYSDOH GESVI mitigation action level of 250 micrograms per cubic meter (ug/m³) of PCE.

GZA performed the soil vapor survey utilizing the mobile laboratory, in the retail space where accessible, and confirmation and correlation summa canister samples for fixed-laboratory analysis. The results indicated the vapor plume concentrations were highest at the southern side of the former dry cleaning space and tapered off to the north or rear of the former dry cleaner space. The concentrations increased again to the north on the opposite side of the common-wall

with the apartment space. During Site reconnaissance, GZA observed a seam in the concrete floor suggesting the possible presence of a grade beam separating the front one-story retail space with the rear 5 story apartment building. This seam in the concrete slab was visible in the rear of the stationary store covered by a linear metal plate.

GZA also conducted a limited soil boring investigation within the Site to beneath the building slab. GZA did not encounter any olfactory, visual or PID evidence of residual soil contamination immediately beneath the slab. GZA did observe soil staining, odors and elevated PID readings in soils slightly above the water table and extending to a depth of at least 12 feet below the building slab. Two borings, P-3 and P-4 (8.5-9.0 ft) contained VOCs that exceeded the (New York State Protection of Ground Water Soil clean-up objectives (NYSPGW SCOs) in samples obtained from just above the water table. Only P-3 contained PCE, at a concentration of 2.9 ppm as compared to the New York State Protection of Groundwater (NYSPGW) Soil Cleanup Objective (SCO) of 1.3 ppm.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Participant for 3375 Neptune Avenue.

The Applicant in its Application proposes that the Site will be used for combination of residential and commercial restricted purposes.

To achieve this goal, the Applicant will conduct cleanup activities at the Site with oversight provided by NYSDEC. As part of this process the Applicant identifies major issues of public concern, if any, that relate to the Site and prepares a Scoping Sheet; please refer to Appendix F. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the Site.

Investigation

The Applicant will conduct an investigation of the Site officially called a "remedial investigation" (RI). This investigation will be performed with NYSDEC oversight. The Applicant must develop a remedial investigation workplan, which is subject to public comment.

The site investigation has several goals:

- 1) Define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
- 2) Identify the source(s) of the contamination;
- 3) Assess the impact of the contamination on public health and the environment; and
4) Provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the Site poses a significant threat to public health or the environment. If the Site is a significant threat, it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the Site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a Certificate of Completion (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a Remedial Work Plan. The Remedial Work Plan describes the Applicant's proposed remedy for addressing contamination related to the Site.

When the Applicant submits a proposed Remedial Work Plan for approval, NYSDEC would announce the availability of the proposed plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The NYSDOH must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a Final Engineering Report (FER) that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the Site, it will approve the FER. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the Site after it receives a COC.

Site Management

Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management may be conducted by the Applicant under NYSDEC oversight, if contamination will remain in place. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An institutional control is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the Site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that is pumping and treating groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Bryan Wong Project Manager NYSDEC, Region 2 Division of Environmental Remediation 47-40 21st Street Long Island City, NY 11101 Phone: (718) 482-4905 Email: yywong@gw.dec.state.ny.us Thomas V. Panzone Regional Citizen Participation Specialist NYSDEC, Region 2 47-40 21st Street Long Island City, NY 11101 Tel: (718) 482-4953 Email: <u>tvpanzon@gw.dec.state.ny.us</u>

New York State Department of Health (NYSDOH):

Stephanie Selmer Project manager NYSDOH Empire State Plaza, Corning Tower, Room 1787 Albany, NY 12237 Tel: (518) 402-7860 Email:<u>Beei@health.state.ny.us</u>

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Ulmer Park Library Brooklyn Public Libraries 2602 Bath Avenue Brooklyn, NY 11214 Phone: (718) 265-3443 Attn: Mr. Edward Flanagan, Branch Manager Hours: Monday 10:00 am – 6:00 pm Tuesday 1:00 pm - 8:00 pm Wednesday 10:00 am - 6:00 pm Thursday 1:00 pm - 8:00 pm Friday 10:00 am - 6:00 pm Saturday 10:00 am - 5:00 pm Sunday CLOSED

In addition, attached is a copy of a letter (Appendix E) received from the repository acknowledging that it agrees to act as the document repository for the property.

Site Contact List										
Site #: C224151										
Sita Nama: Formar Franck	Cotoway Cloopers 2275 2277 Noptupa Avanua		List Lost Undeted: 00/20/2014							
Current Occupant	Name Title	Address 1	Address 2	Address 3	Street Address		City	State	Zin	Site Name (County)
Current Occupant	Coney Island Site 4A Housing	Building Management	That 655 2	riddross s	3601 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				8502 Neptune Avenue	ļ.	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				3506 Neptune Avenue	B	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				3508 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				3510 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				8514 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				3520 Neptune Avenue		Brooklyn	N I NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				3520 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				8524 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	RESIDENT/BUSINESS OWNER				8528 Neptune Avenue	P	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	NY Dental Implant Center	Juan E. Rivera	jrivera@dentalimplantcenterny.com		3375 Neptune Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	Bay Park Pharmacy				3355 Neptune Avenue	P	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Current Occupant	Sea Gate Stationary				3365 Neptune Avenue	B	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	Louise Williams			2770	WEST 33 STREET Unit	it # 170-0220	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	The Procedure Percert	Attn: Media Relations			250 Broadway		New York	NY	10007	Former Gateway French Dry Cleaners (Kings)
	The Brooklyn Paper				50 60 Grand Avanua		Accoch	N I UV	11201	Former Gateway French Dry Cleaners (Kings)
	Brooklyn's Progress Express				25 Flm Pl #401		Brooklyn	NY NY	11201	Former Gateway French Dry Cleaners (Kings)
	Newsday				235 Pinelawn Road		Melville	NY	11747	Former Gateway French Dry Cleaners (Kings)
	New York Daily News			1	4 New York Plaza	1	New York	NY	10004	Former Gateway French Dry Cleaners (Kings)
	New York Post	1	1		211 Avenue of the Americas		New York	NY	10036	Former Gateway French Dry Cleaners (Kings)
	Courier-Life Publications				Metro-Tech Center North - 10th Floor	l l	Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
	Brooklyn Daily Eagle				80 Henry Street	I	Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
	NY 1 News				75 Ninth Avenue	1	New York	NY	10011	Former Gateway French Dry Cleaners (Kings)
	News 12 Brooklyn				E. 18 th Street & Avenue Z		Brooklyn	NY	11235	Former Gateway French Dry Cleaners (Kings)
	Hoy Nueva York				1 Metro-Tech Center,-18th floor		Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
	El Diario La Prensa				Metro-Tech Center- 18th floor		Brooklyn		11201	Former Gateway French Dry Cleaners (Kings)
Chief Executive Officer	Hon. Bill de Blasio	NYC Mayor	City Hall of New York		City Hall	1	New York	NY	10007	Former Gateway French Dry Cleaners (Kings)
	Hon. Eric L. Adams	Brooklyn Borough President			209 Joralemon Street	1	Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
	Hon. Scott M. Stringer	NYC Comptroller			Centre Street		New York	NY	10007	Former Gateway French Dry Cleaners (Kings)
	Hon. Letitia James	Public Advocate			1 Centre Street, 15 th Floor		New York	NY	10007	Former Gateway French Dry Cleaners (Kings)
	Hon. Mark Treyger	NYC Councilmember			445 Neptune Avenue, Community Room C	1	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	Stephen Moran, Chairman	Brooklyn 13 Community District			201 Surf Avenue 3rd Floor		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	Chuck Reichenthal, District Manager	Brooklyn 13 Community District	District Office		1201 Surf Avenue 3rd Floor		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	Alec Brook-Krashy, New York State Assembly Member	Assembly District 40	District Office		2823 West 12th Street, Suite IF		Brooklyn	NY NV	11224	Former Gateway French Dry Cleaners (Kings)
	Hon Diane Savino	NYS Senator	Kings County Clerk's Office		1872 West 15th Street		Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
Document Repository	A Barnes Branch Contact	Coney Island Library	Brooklyn Public Library		1901 Mermaid Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Public Water Supplier	Hon, Emily Lloyd, NYC DEP Commissioner	NYC Dept. of Environmental Protection	Brooklyn Fublic Elofary		59-17 Junction Blvd, 19th Floor		Flushing	NY	11373	Former Gateway French Dry Cleaners (Kings)
	John Wuthenow	NYC Dept. of Environmental Protection	Office of Environmental Planning and Analysis		96-05 Horace Harding Expressway		Flushing	NY	11373	Former Gateway French Dry Cleaners (Kings)
	Carl Weisbrod, Commissioner	NYC Dept. of City Planning			22 Reade Street		New York	NY	10007	Former Gateway French Dry Cleaners (Kings)
School	Frederick M. Tudda, Principal	Public School 188			314 Neptune Avenue	l l	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Daycare	Madeline Jones	Head Start			3415 Neptune Avenue	B	Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Daycare	Coney Island Child Care Center				2757 West 33 Street		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Daycare	123's & ABC's Daycare	Attn: Director			8705 Laurel Avenue		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
Daycare	Sunshine Daycare Center	Attn: Director			2757 West 33 Street		Brooklyn	NY	11224	Former Gateway French Dry Cleaners (Kings)
	Hon. Unarles Schumer	U.S. Senator			780 1 nird Avenue, Suite 2301		New York		10017	Former Gateway French Dry Cleaners (Kings)
	Hon Heleem Jeffries	U.S. Senator			145 Neptune Avenue, Amalgameted Warhasse # 2		New YORK	N I NV	10017	Former Gateway French Dry Cleaners (Kings)
	Crowseed Heures	Atta: Mana compat Devidenment Office			702 West 22 rd Street		Dreelder	1 I NIX7	11224	Earman Cataviay Franch Dry Cleaners (Kings)
	Gravesend Houses	Atta Davidart			2750 West 33 Street		DIOOKIYN	IN I NIXZ	11224	Former Gateway French Dry Cleaners (Kings)
	Searise Lenants Association	Attn: President			2/50 West 33 Street		Brooklyn	IN Y	11224	Former Gateway French Dry Cleaners (Kings)
	Dravesend Community Center	Auti: Director			p140 Dayview Avenue		Brooklyn	IN Y	11224	Former Gateway French Dry Cleaners (Kings)
	Brooklyn Chamber of Commerce	Attn: Executive Director		_	25 Eim Place, Suite 200 2 th Floor		Brooklyn	NY	11201	Former Gateway French Dry Cleaners (Kings)
	Amance for Coney Island	Attn: Director			1000 Suff Avenue		Brooklyn	IN Y IV	11224	Former Gateway French Dry Cleaners (Kings)
	Bryan Wong	NYSDEC Project Manager	vikvin wong@dec.nv.gov		1010 Merman Avenue		пооктуп	N I	11224	Former Gateway French Dry Cleaners (Kings)
	Jane O'Connell	NYSDEC Region 2 Chief of Superfund	iane oconnell@dec.ny.gov							Former Gateway French Dry Cleaners (Kings)
	Thomas V. Panzone	Regional Citizen Participation Specialist	thomas.panzone@dec.ny.gov							Former Gateway French Dry Cleaners (Kings)
	Larry Ennist	NYSDEC	larry.ennist@dec.ny.gov		1					Former Gateway French Dry Cleaners (Kings)
	Stephanie Selmer	NYSDOH Bureau of Environmental Exposure Investigation	beei@health.ny.gov		1					Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3642	BAY VIEW AVENUE		BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3638	BAY VIEW AVENUE		BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3634	BAY VIEW AVENUE	l	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3630	BAY VIEW PLACE	I	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3626	BAY VIEW AVENUE		BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			8622	BAY VIEW AVENUE		BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			8618	BAY VIEW AVENUE		SKOOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2610	DAT VIEW AVENUE		POOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDEN I/DUSINESS UWINER	1	1	010	DAT VIEW AVENUE	r i	NUONLIN	11	11224	TOTHCE Galeway FICICIE Dry Cleaners (Killgs)

Site Contact List									
Site #: C224151									
Site Name: Former French	Gateway Cleaners, 3375-3377 Neptune Avenue		List Last Updated: 09/30/2014						
Current Occupant	Name, Title	Address 1	Address 2	Address 3	Street Address	City	State	Zip	Site Name (County)
	RESIDENT/BUSINESS OWNER			3606	BAY VIEW AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3602	BAY VIEW AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2670	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2672	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2674	WEST 36 STREET	BROOKLYN BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2070	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2680	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2682	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2684	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2688	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2690	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2692	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2694	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2696	WEST 30 STREET	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2098	WEST 36 STREET	BROOKLYN BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2702	WEST 36 STREET	BROOKLYN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2706	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2708	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2710	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2712	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2714	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2716	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3601	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3605	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3609	CANAL AVENUE	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2617	CANAL AVENUE	BROOKLYN BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3621	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3625	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3629	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3633	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3637	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3641	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2715	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2713	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2/11	WEST 37 STREET	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2709	WEST 37 STREET	BROOKLYN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2705	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2703	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2701	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2697	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2695	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2691	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2689	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	KESIDENT/BUSINESS OWNER			2687	WEST 37 STREET	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2083	WEST 37 STREET	BROOKLYN BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2679	WEST 37 STREET	BROOKLIN BROOKLVN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2677	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2675	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2673	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2671	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2669	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2721	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2719	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/DUSINESS OWNED			2/1/	WEST 26 STREET	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2/15	WEST 36 STREET	BROOKLYN BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2707	WEST 36 STREET	BROOKLIN BROOKLVN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2705	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2701	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2697	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2659	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2713	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2709	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2703	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	KESIDENT/BUSINESS OWNER			2699	VEST 30 STREET	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
1	NEGIDEN I/DUGINEGO UWINEK			p042	L'UNDE AVENUE	DRUUKLIN	411	11224	n ormer Gateway French Dry Cleatters (Kligs)

Site Contact List									
Site #: C224151									
Site Name: Former French	Gateway Cleaners, 3375-3377 Neptune Avenue		List Last Updated: 09/30/2014						
Current Occupant	Name, Title	Address 1	Address 2	Address 3	Street Address	City	State	Zip	Site Name (County)
	RESIDENT/BUSINESS OWNER			3638	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3634	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3630	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3626	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3622	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3618	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3614	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3606	CANAL AVENUE	BROOKLIN	NV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3602	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3598	CANALAVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3594	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3590	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3584	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3582	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3578	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3574	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3570	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3566	CANAL AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	KESIDENT/BUSINESS OWNER			8521	NEPTUNE AVENUE	BROOKLYN	NY NV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2001	NETIUNE AVENUE	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNEP			8614	NEPTINE AVENUE	BROOKLYN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			8610	NEPTUNE AVENUE	BROOKLIN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3608	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3604	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3602	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2814	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2816	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2820	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2822	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2826	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2830	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2832	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2830	WEST 36 STREET	BROOKLYN BROOKLYN	NY NV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2830	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2840	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2846	WEST 36 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2837	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2835	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2831	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2833	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2825	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2823	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2815	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2821	WEST 37 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNEP			2019	WEST 37 STREET	BROOKLYN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3528	NEPTUNE AVENUE	BROOKLIN BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3524	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3522	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3520	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3516	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3514	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3510	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3508	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	KESIDENT/BUSINESS OWNER			8506	NEPTUNE AVENUE	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			002	NETIONE AVENUE	BROOKLYN		11224	Former Gateway French Dry Cleaners (Kings)
	NESIDENT/BUSINESS OWNER			2014	WEST 35 STREET	BROOKLYN BROOKLYN	NY NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2010	WEST 35 STREET	RROOKI VN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2824	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2826	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2830	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2832	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2836	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2838	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2842	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2852	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
1	RESIDENT/BUSINESS OWNER			2856	WEST 35 STREET	BROOKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)

Site Contact List										
Site #: C224151										
Site Name: Former French	Gateway Cleaners 3375-3377 Neptune Avenue		List Last Undated: 09/30/2014							
Current Occupant	Name. Title	Address 1	Address 2	Address 3	Street Address		City	State	Zip	Site Name (County)
	RESIDENT/BUSINESS OWNER			2858	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2860	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2859	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2857	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2855	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2853	WEST 36 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2831	WEST 36 STREET	BRC	OKLYN I	IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2847	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2845	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2843	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2841	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2841	WEST 36 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2839	WEST 36 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2637	WEST 36 STREET	BRC	OKLIN	IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3302	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2844	WEST 33 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2848	WEST 33 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2850	WEST 33 STREET	BRC	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2852	WEST 33 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2854	WEST 33 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2856	WEST 33 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			28958	WEST 33 STREET	BRU	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2859	WEST 35 STREET	BRC	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2857	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2855	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2853	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2851	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2849	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2847	WEST 35 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2843	WEST 35 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			8138	NEPTUNE AVENUE	BRC	OKLIN I	IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3134	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3130	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3126	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3122	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3118	NEPTUNE AVENUE	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3110	NEPTUNE AVENUE	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2100		BRU	OKLYN I		11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2810	WEST 31 STREET	BRC	OKLYN I	IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2827	WEST 32 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2825	WEST 32 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2823	WEST 32 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2821	WEST 32 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2819	WEST 32 STREET	BRO	OKLYN I	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2817	WEST 32 STREET	BRO	OKLYN I	IY IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2815	WEST 32 STREET	BRO	OKLYN I	IV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2813	WEST 32 STREET	BRU	OKLYN	IY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0120 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0121 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0122 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0124 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0125 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0126 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0127 BR	JOKLYN JOKLYN	IN Y NV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0128 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0129 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0131 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0219 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0221 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0222 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0223 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0224 BR	JOKLYN OKLYN	IN Y NV	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0225 BR	OKLYN	NY	11224	Former Gateway French Dry Cleaners (Kings)
1						DR				Success frences by Cleaners (Rungs)

Site Contact List									
Site #: C224151									
Cita Nama, Eamar Eranah	Cotomore 2275 2277 Nontune Avenue		List Lost Undeted: 00/20/2014						
Current Occupant	Name Title	Address 1	Address 2	Address 3	Street Address		City State	Zin	Site Name (County)
Current Occupant	RESIDENT/BUSINESS OWNER	Address I	Address 2	2770	WEST 33 STREET	Unit # 170-0227	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0228	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0229	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0230	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0232	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0233	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0319	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0320	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0321	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0322	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0323	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0324	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0325	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0326	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0327	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0328	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0329	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0331	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0332	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0333	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0419	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0420	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0421	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0422	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0423	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0424	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0425	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0426	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0427	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0428	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0429	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0430	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0431	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0432	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
-	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0433	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0520	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0520	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0522	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0523	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0524	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0525	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0526	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0527	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0528	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0530	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0531	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2770	WEST 33 STREET	Unit # 170-0532	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			2325	WEDTINE AVENUE	Unit # 174 0212	BROOKLYN NY	11224	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTINE AVENUE	Unit # 174-0313	BROOKLYN NV	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0315	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0316	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0317	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0318	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0513	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0516	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)
	RESIDENT/BUSINESS OWNER			3325	NEPTUNE AVENUE	Unit # 174-0517	BROOKLYN NY	11225	Former Gateway French Dry Cleaners (Kings)



Appendix C Site Location Map

© 2012 - GZA GeoEnvironmental, Inc. GZA-J:\161800's\41.0161826.00\Figures\CAD\161826.60\TASK 0003\FIGURE 2.dwg [FIGURE 2] August 24, 2012 - 11:07am edward.morris



				3375-3377 Neptune Avenue Brooklyn, New York	PREPARED BY:	GZ of N Eng	A GeoEnvironmen New York	PREPARE	BAY PARK ONE COMPANY					
ND.	ISSUE/DESCRIPTION	BY	DATE		S.	104 V	WEST 29TH STREET, 10 V YORK, NEW YORK 100	ST 29TH STREET, 10TH FLOOR JRK, NEW YORK 10001						
UNLESS SPECIFICALLY STATED BY WHITER AARCEMENT, THIS URAMING IS THE SULE PROPERTY OF GZA GEBEWINGONMENTAL, INC. (GZA). THE MFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIDHT OR THE CLIDHT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PHORE WHITEN CONSENT OF GZA. ANY TRANSFERRED, COM MODIFICATION				Brownfield Cleanup Program		CB	REVIEWED BY:	СВ	CHECKED	BY: BE	FIGURE			
					DESIGNED BY:	BE	DRAWN BY:	EM	SCALE:	1" = 100'	0			
				Citizen Participation Plan	DATE:		PROJECT NO.		REVISION NO.		- Z			
GZA, WILL	AWING BY THE CLENT OR OTHERS, WITHOUT THE PHOR WRITEN EXPAG. . BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIA		TO GZA.		AUGUST 2	2012	41.01618	26.60	ł.		SHEET NO.			

Appendix D– Brownfield Cleanup Program Process



Appendix E Document Repository Approval Letter

Brooklyn

Authors

Brooklyn Public Library

May 17th, 2012

Ms. Claire-Elise Orleach Engineer II GZA geoEnvironmental of New York 104 West 29th Street, 10th Floor New York, NY 10001

Re: Document repository for the property at 3375-3377 Neptune Ave.

Dear Ms. Orleach

Brooklyn Public Library approves the use of its Coney Island Library situated at 1901 Mermaid Avenue, Brooklyn, NY 11224 as a document repository for the 3375-3377 Neptune Avenue, Brooklyn, NY project in accordance to the Citizens' Participation Plan and Brownfield application for the property.

We suggested this branch as the most appropriate since it is the closest to the project's location. Feel free to leave the documents with the Neighborhood Library Supervisor, Angela Barnes. To make arrangements for delivery you can reach her at a.barnes@brooklynpubliclibrary.org , or (718) 265-3220.

Should you have any questions or need more information, please do not hesitate to contact me at (718) 230-2792, or brenda@brooklynpubliclibrary.org.

Very truly,

popents - Etons

Brenda Bentt-Peters Coordinator, Government and Community Affairs Brooklyn Public Library

Cc: Angela Barnes, NLS- Coney Island Library

Grand Army Plaza Brooklyn, New York 11238-5619 www.brooklynpubliclibrary.org

Appendix F Scoping Sheet Remedial Programs

Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses: major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public, if applicable.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Include the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g. Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g. Can our children play outside? Can we garden? Must we avoid certain areas? Can we continue to recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g. who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?
- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby properties, natural resources, etc.?

- Are there activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Do the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated to the Community.

- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - **e.** Obtain information from local officials, property owners and residents, site reports, site visits, "windshield surveys," other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.
- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.
- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public. Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial stages, or may only be interested in particular issues. It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help in the selection and conduct of appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage

- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups



New York State Department of Environmental Conservation Division of Environmental Remediation

Remedial Programs Scoping Sheet for Major Issues of Public Concern (see instructions)

Remedial Party: Peter Gray, Coney Island Site 4-A-1 Housing Company

Site Name: Former Gateway French Cleaners

Site Number: BCP Site No: C224151

Site County: Kings County

Note: For Parts 1. - 3., the individuals, groups, organizations, businesses, and units of government identified should be added to the site contact list as appropriate.

Part 1. List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses, and/or units of government related to the issue(s) and/or information. Use this information as an aid to prepare or update the Major Issues of Public Concern section of the site Citizen Participation Plan.

This section of the CP Plan identifies major issues of public concern, if any, that relate to the Site. Additional major issues of public concern may be identified during the site's remedial process.

A potential for vapor intrusion of Trichloroethene (TCE) and Tetreachlorethene (PCE) exists at the site. Soil gas vapor was identified beneath occupied structures in May 2009 as a result of the handling, storage, and use of solvents typically used in dry cleaning operations by past tenants.

In the event that actions are taken to move forward with mitigation to address the potential of TCE and PCE vapor concentrations of migrating into the occupied spaces on the site, a sub slab depressurization system (SSDS) will be installed within the Site in conjunction with periodic indoor monitoring to protect and preserve the safety and health of future occupants.

In addition, once the remediation of the Site begins, there may be other issues such as impacts resulting from noise or dust coming from the Site. The Site may is located in an Environmental Justice Area. The Applicant will be required to fillout a Scoping Sheet for Major Issues of Public Concern. Environmental Justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

How were these issues and/or information identified? Recent soil vapor sampling in 2011 identified TCE concentrations between 150 and 730 ug/m3 and PCE concentrations between 32 and 55,000 ug/m3, exceeding DOH guidances.

Part 2. List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses, and/or units of government related to the needed information. <u>Click here to enter text.</u>

How were these information needs identified? <u>Click here to enter text.</u>

Part 3. List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.

Click here to enter text.

How were these issues and/or information identified?

Part 4. Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):

a. Land use/zoning around site:

☐ Yes ⊠ No⊠ Residential)		Recreational	Comme	ercial	Industrial
b. Residential typeUrban	around site:		Rural			
c. Population densit	y around site:		Low			
d. Community econ High	omic status:	\boxtimes	Low			
e. Water supply of r	nearby residences:		Mixed			
f. Other environmer	ntal issues significantly	/ imp	acting affected com	munity?		
Provide details if ap Click here to enter tex	propriate: .t.					
g. Special considera	tions:			_		
🖂 Language			Transportation		Other	

Explain marked categories in g.:

The Site has a large Hispanic-American population within the nearby area. Therefore, it is recommended that any future fact sheets be translated into Spanish as well.

Part 5. The site contact list must include, at a minimum, the individuals, groups, and organizations identified in the instructions for **Part 5.** Are other individuals, groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)

Non-Adjacent Residents/Property Owners: Click here to enter text.

Local Officials: <u>Click here to enter text.</u>

- **Media:** <u>Click here to enter text.</u>
- **Business/Commercial Interests:** <u>Click here to enter text.</u>
- Labor Group(s)/Employees: <u>Click here to enter text.</u>
- **Indian Nation:** <u>Click here to enter text.</u>
- **Citizens/Community Group(s):** <u>Click here to enter text.</u>
- Environmental Justice Group(s): <u>Click here to enter text.</u>

- **Environmental Group(s):** <u>Click here to enter text.</u>
- **Civic Group(s):** <u>Click here to enter text.</u>
- **Recreational Group(s):** <u>Click here to enter text.</u>
- **Other(s):** <u>Click here to enter text.</u>
- Date Completed: <u>Click here to enter text.</u>
- Prepared By: <u>Click here to enter text.</u>
- Reviewed By: <u>Click here to enter text.</u>