

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

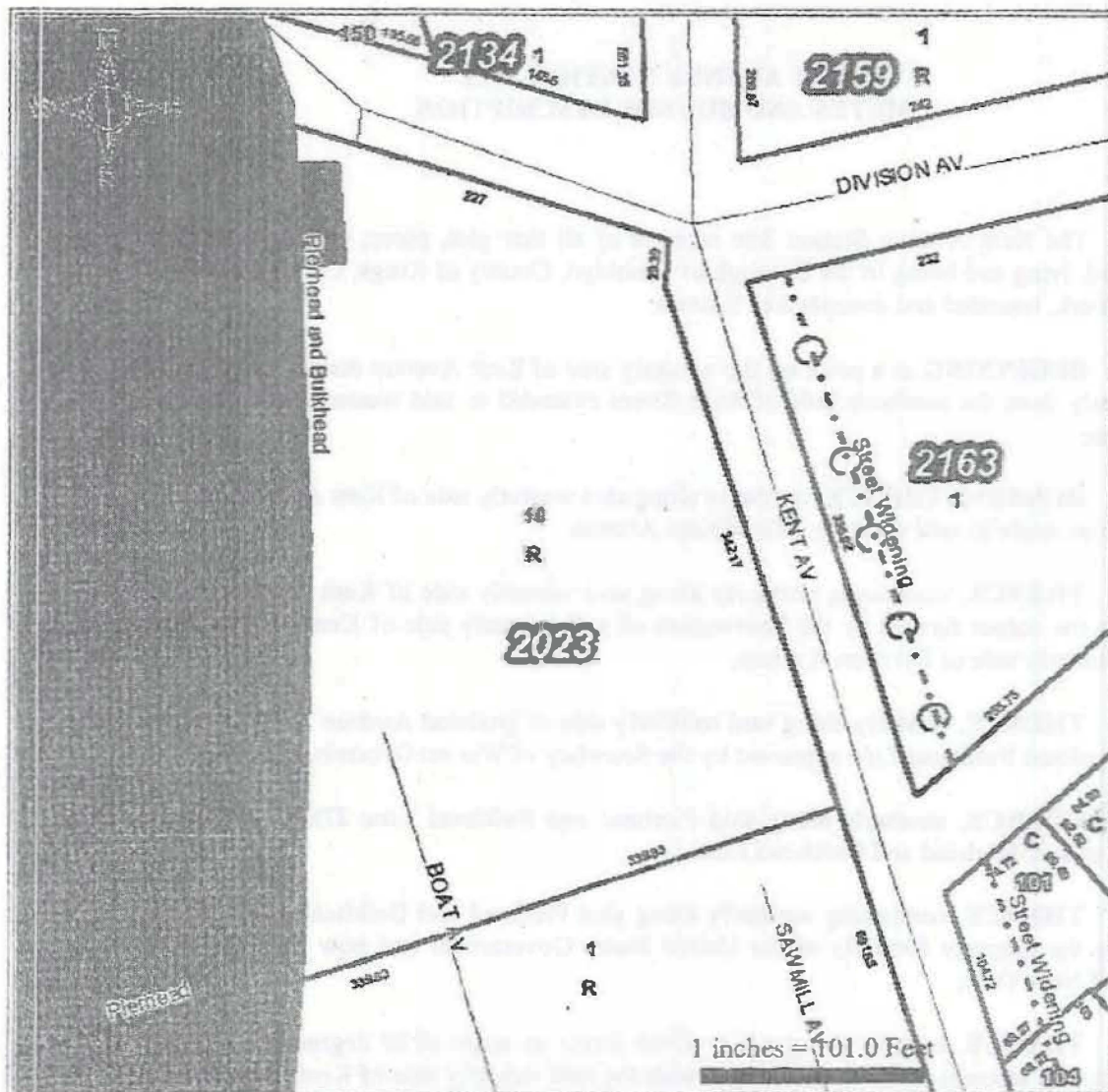
Part 1 - Project and Sponsor Information							
Name of Action or Project: Petition pursuant to Section 70 of the PSL to Transfer Certain Real Property Located in the City of New York, Kings County							
Project Location (describe, and attach a location map): 492-518 Kent Avenue, City of New York, Kings County, New York							
Brief Description of Proposed Action: Consolidated Edison Company of New York, Inc. is proposing to sell a 2.65 acre parcel of vacant land to 500 Kent LLC of 505 Flushing Avenue, Suite 1D, Brooklyn, New York. The parcel is known by the tax designation of Block 2023, Lot 10.							
Name of Applicant or Sponsor: Consolidated Edison Company of New York, Inc.		Telephone: 212-460-3188 E-Mail: silberfeldl@coned.com					
Address: 4 Irving Place, 2nd Floor							
City/PO: New York		State: NY	Zip Code: 10003				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES						
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES						
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
3.a. Total acreage of the site of the proposed action?		2.65 acres					
b. Total acreage to be physically disturbed?		N/A acres					
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		2.65 acres					
4. Check all land uses that occur on, adjoining and near the proposed action.							
<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input checked="" type="checkbox"/> Parkland							

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape? N/A	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Are public transportation service(s) available at or near the site of the proposed action?		<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: N/A	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ N/A	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ N/A	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. Is the proposed action located in an archeological sensitive area?		<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? <input type="checkbox"/> NO <input type="checkbox"/> YES	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____ N/A			
	<input type="checkbox"/> NO <input type="checkbox"/> YES		

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: <u>Remediation of the site involved removal and disposal of contaminated soil and sediment and institutional and engineering controls to address remaining contamination. See attached Final Engineering Report dated Feb. 2015 (w/o attachments) and NYSDEC Release and Covenant Not to Sue dated April 7, 2015.</u></p>	<p>NO</p> <p><input type="checkbox"/></p>	<p>YES</p> <p><input checked="" type="checkbox"/></p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: <u>Consolidated Edison Company of NY, Inc.</u> Date: <u>9.7.17</u></p> <p>Signature: <u>By: James Silbey, Director, Real Estate</u></p>		

Attachment 1

Location Map



Kent Avenue Station Site - Block 2023 L+10



6/18/2010

- Boroughs
- Tax Blocks
- Tax Lots
- Boundary Lines
- Streets
- Hydrography

Attachment 2

Final Engineering Report dated February 2015 (without attachments)

Former Kent Avenue Generating Station
KINGS COUNTY, NEW YORK

Final Engineering Report

NYSDEC Site Number: V00732-2

Prepared for:
Consolidated Edison Company of New York, Inc.
31-01 20th Avenue
Long Island City, New York

Prepared by:
Shaw Environmental & Infrastructure Engineering of New York, P.C.
1633 Broadway, 30th Floor
New York, NY 10019
(212) 290-6000

FEBRUARY 2015

CERTIFICATIONS

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

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

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in a Declaration of Covenants and Restrictions (DCR) created and recorded pursuant to ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such DCR has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper 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 Department.

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

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

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Daniel Chen, of Shaw Environmental & Infrastructure Engineering of NY, P.C., am certifying as Owner's Designated Site Representative and I have been authorized and designated by the site owner to sign this certification for the site.

Daniel Chen

NYS Professional Engineer #065271

Feb 24, 2015

Date



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- E Photographic Log
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- O Remediation Performance Documentation Sample Laboratory Reports (CD)
- P Table of Imported Materials by Truckload
- Q Declaration of Covenants and Restrictions and Proof of Filing
- R Project Deviation Documentation

LIST OF ACRONYMS

Airtek	Airtek Environmental Corporation
ACM	Asbestos Containing Material
AOC	Area of Concern
ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CFR	Code of Federal Regulations
Clean Water	Clean Water of New York
CLP	USEPA Contract Laboratory Program
Con Edison	Consolidated Edison Company of New York, Inc.
CPP	Citizen Participation Plan
CQA/QC	Contractor Quality Assurance/Quality Control
CQAP	Construction Quality Assurance Plan
Cr+6	Hexavalent Chromium
DCR	Declaration of Covenants and Restrictions
DGA	Structural Fill
DUSR	Data Usability Summary Report
EC/IC	Engineering Control/Institutional Control
ELAP	Environmental Laboratory Approval Program
EMMP	Excavated Materials Management Plan
FER	Final Engineering Report
ft	feet
GROWS	GROWS North Landfill
HASP	Health and Safety Plan
IRM	Interim Remedial Measure

LDCCF	Low Density Cellular Concrete Fill
Maxymillian	Maxymillian Technologies
mg/kg	milligram per kilogram
MGP	Manufactured Gas Plant
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NYCDEP	New York City Department of Environmental Protection
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	Polychlorinated biphenyl
PCM	Phase Contrast Microscopy
PID	Photoionization Detector
PLM	Polarized Light Microscope
ppm	parts per million
QAPP	Quality Assurance Project Plan
QC	Quality Control
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
SCO	Site Cleanup Objective
SDG	Sample Delivery Group
Shaw	Shaw Environmental & Infrastructure Engineering of New York, P.C.
SMP	Site Management Plan
SOP	Site Operation Plan
SVOC	Semivolatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
TestAmerica	TestAmerica Laboratories, Inc.

TEM	Transmission Electron Microscopy
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
$\mu\text{g}/\text{m}^3$	microgram per cubic meter
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Consolidated Edison Company of New York, Inc. (Con Edison) entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) in July 2002. The VCA was amended (Amendment #2) in July 2010 (VCA #D2-0003-02-08, Amendment #2), to investigate and remediate a 2.6-acre property located in Brooklyn, Kings County, New York. The property was remediated to restricted residential use as defined by 6 New York Codes, Rules and Regulations (NYCRR) Part 375-1.8(g), although land use is subject to local zoning laws, provided that the long-term Engineering and Institutional Controls included in the Site Management Plan (SMP) are employed.

The site is located in the County of Kings, New York (see **Figure 1**) and is identified as Block 2023 and Lot 10 on the Tax Map of the Borough of Brooklyn/Kings County. The site is situated on an approximately 2.6-acre area bounded by Division Avenue to the north, the former Brooklyn Navy Yard property to the south (the portion adjacent to Con Edison's Kent Avenue site was the Nassau Gas Works, a former Manufactured Gas Plant (MGP) site that is being addressed by National Grid), Kent Avenue to the east, and Wallabout Channel to the west (see **Figure 2**). The boundaries of the site are fully described in **Appendix A: Survey Map, Metes and Bounds**.

An electronic copy of this Final Engineering Report (FER) with all supporting documentation is included as **Appendix B**.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Site Investigation, Pre-Design Investigation and Pre-Interim Remedial Measure (IRM) Investigation, the following Remedial Action Objectives (RAOs) were identified for this site.

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

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

2.1.2 Soil RAOs

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

2.1.3 Soil Vapor RAOs

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by the NYSDEC in the Decision Document dated October 2013.

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

1. Remedial Design

A remedial design program was implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques were implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components were as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases 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 which would otherwise be considered a waste;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

All on-site soils above the water table, with the exception of the building footprint, which exceeded restricted-residential soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8, were excavated and transported off-site for disposal.

Approximately 13,700 tons of soil and debris were removed from the site and disposed off-site, in accordance with applicable regulations, including the identification and proper disposal of asbestos containing material (ACM). Clean fill materials meeting the requirements of DER-10, Appendix 5, were brought in to replace the excavated soil and debris and establish the designed grades at the site. Appropriate dust suppression techniques were employed to prevent the release of asbestos and other particulates into the surrounding areas.

3. Underground Storage Tank Removal

In the northern section of the site, an old underground storage tank, used to store fuel oil, was registered and removed. The surrounding soils were excavated, as noted in item 2.

4. Site Cover

A site cover is required to allow for restricted residential use of the site. The cover will consist of the structures such as buildings, pavement, sidewalks comprising future site development, and a soil cap constructed in the southwest area of the site where the upper two feet of exposed surface soil potentially exceeded the applicable SCOs. The soil cap, which was placed over a demarcation layer, consists of two feet of soil, topped off with a layer of 3/4-inch stone. All fill material brought to the site met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

5. National Grid Investigation of Nassau Gas Works Manufactured Gas Plant

In 2014 National Grid, in compliance with a Consent Order (W2-1090-06-06) with the NYSDEC, conducted an investigation within the southern portion of the Site to determine whether MGP contamination has migrated from the former Nassau Gas Works MGP located immediately south of the Site. The investigation was performed based on the NYSDEC-approved *Revised Supplemental Remedial Investigation Work Plan, Former Kent Avenue Generating Station [Off-Site Area], Nassau Gas Works Manufactured Gas Plant (MGP) Site*, dated March 6, 2009. Beginning May 8, 2014, a total of six soil borings were advanced up to 105 ft bgs. In addition, two monitoring well pairs comprising a deep and a shallow well were installed at two of the six boring locations. The drilling and well development activities were completed on May 30, 2014.

On June 18 and 19, 2014, the monitoring wells were surveyed and sampled. Summary tables of all soil and groundwater laboratory analyses and a figure showing the

soil boring and monitoring well locations are provided in **Appendix C** of the **Site Management Plan**.

6. Institutional Controls –Declaration of Covenants and Restrictions

Execution and recording of a Declaration of Covenants and Restrictions to control land use and prevent future exposure to any contamination remaining at the site. Imposition of an institutional control in the form of a DCR for the controlled property:

- allows the use and development of the controlled property for restricted residential, commercial and industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or New York City Department of Environmental Protection (NYCDEP);
- requires compliance with the Department-approved Site Management Plan, and
- requires periodic certification and reporting in accordance with Part 375-1.8(h) (3).

7. Site Management Plan

Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the DCR, which includes the following:

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

Institutional Controls: the DCR listed above.

Engineering Controls: possible long term groundwater monitoring, site-wide inspections to ensure that use restrictions and the soil cover remain in place, and an excavation work plan.

The Institutional and Engineering Control Plan includes, but may not be limited to:

- An Excavation Work Plan which details the provisions for management of future excavation in areas of remaining contamination;
 - Descriptions of the provisions of the DCR including any land use, and groundwater use restrictions;
 - A provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - Provisions for the 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.
- b) A Monitoring Plan to assess the performance and effectiveness of the remedy. The Plan includes, but may not be limited to:
- Possible groundwater monitoring;
 - Monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above; and;
 - A schedule of monitoring and frequency of submittals to the Department.

3.0 INTERIM REMEDIAL MEASURES

The information and certifications made in the June 2013 Former Kent Avenue Generating Station Ash Pit Construction Completion Report (CCR) were relied upon to prepare this report and certify that the remediation requirements for the site have been met. The CCR, prepared by Shaw Environmental & Infrastructure Engineering of NY, P.C. (Shaw), was approved by the NYSDEC on June 7, 2013. NYSDEC approval documentation is presented in **Appendix C**.

The ash pit was located in the northwestern portion of the Site as shown on **Figure 2**. The ash pit, built in the late 1920s or 1930s, was constructed of poured concrete walls underlain by iron reinforcing bars. The dimensions of the pit were approximately 68 feet (ft). by 27 ft by 24 ft deep. Ash from the power station boilers was mixed with water and discharged to the pit through one or more sluice gates.

A 2000 investigation of the sediment and water within the ash pit found that the sediment was contaminated with volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. The water within the ash pit contained SVOCs, PCBs, and metals. A 2006 survey of the property bulkhead along Wallabout Channel found the condition of the ash pit to be “poor”; severe scaling of the interior walls was noted, and severe scaling and some minor cracking were noted on the outboard wall of the pit facing Wallabout Channel. In 2007, Shaw conducted a two-phase investigation of the ash pit. The first phase found 1) PCB concentrations in the water exceeded NYSDEC criteria for discharging wastewater to surface waters and 2.) the toxicity characteristic concentrations in the sediment did not exceed hazardous waste thresholds; however, one PCB concentration (120 milligram per kilogram [mg/kg]) exceeded the Toxic Substances Control Act (TSCA) threshold value of 50 parts per million (ppm). The second phase of the investigation found that, with the exception of much of the west wall surface, the concrete has resisted applied loading in conformance with its originally intended design. In 2009, Shaw submitted a Feasibility Study Summary Report which concluded that GeoTube[®] technology was a viable option for dewatering the ash pit sediment/sludge.

The ash pit remediation was initiated with a pre-construction meeting with NYSDEC and all contractors on August 26, 2011. Mobilization for the ash pit remediation commenced on September 19, 2011. Air monitoring was initiated on September 23, 2011, in accordance with the NYSDEC-approved Community Air

Monitoring Plan (CAMP) and continued through January 31, 2012. There were no exceedances recorded during any of the remedial activities.

The removal of sludge from the ash pit was initiated on October 10, 2011. Testing of the dewatered sludge showed that most of the material had to be disposed as TSCA PCB waste and/or NYSDEC hazardous waste due to elevated PCB concentrations. The Contractor disposed of the TSCA PCB/NYS hazardous waste at the CWM Model City, New York facility, a NYSDEC licensed hazardous waste treatment, storage and disposal facility. Transportation of the TSCA PCB/NYS hazardous waste began on December 27, 2011, and continued periodically through January 19, 2012. A total of 22 truckloads (718.72 tons) were removed from the Site during this period.

The Contractor disposed of the non-hazardous dewatered sludge material at the High Acres Landfill, owned and operated by Waste Management, in Fairport, New York. Transportation of the non-hazardous dewatered sludge material began on December 12, 2011 and continued periodically through January 3, 2012. A total of eight truckloads and two roll-off containers (275.02 tons) were removed from the Site during this period.

After dredging the bottom of the ash pit for three days, a total of 12 confirmatory samples were collected on November 11, 2011 from the bottom of the pit. Ten of the 12 samples contained PCBs with concentrations ranging from 1.32 to 678.0 mg/kg. After one additional month of dredging the bottom of the pit, a total of eight confirmatory samples were collected on December 13, 2011. Six of the eight samples contained PCBs with concentrations ranging from 2.89 to 49.1 mg/kg. Con Edison and Shaw discussed the results with the NYSDEC Project Manager regarding the cost effectiveness of continued dredging and requested that the sludge removal activities be terminated and the Ash Pit backfilled as detailed in the Remedial Action Work Plan (RAWP). On December 16, 2011, NYSDEC approved the commencement of the ash pit concrete encapsulation.

Between January 5 and January 11, 2012, the ash pit was backfilled with a total of 88 truckloads of low density cellular concrete fill (LDCCF) (1,782 tons [2,200 cubic yards]). On January 31, 2012, a total of seven truckloads of structural concrete were used to place a 13-inch thick structural cap on top of the LDCCF.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved RAWP for the Former Kent Avenue Generating Station site (September 2012) and the October 13, 2013 Area of Concern (AOC) Letter (approved by the NYSDEC on October 21, 2013). Documentation of the NYSDEC approvals is provided in **Appendix C**. All deviations from the RAWP and the AOC Letter are noted below.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan (HASP)

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

The Health and Safety Plan (HASP), developed by the Contractor and considered acceptable by Con Edison and the NYSDEC (NYSDEC approval documentation is in **Appendix C**), was complied with for all remedial and invasive work performed at the Site.

4.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Attachment 2 of the Pre-IRM Investigation Work Plan approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

4.1.3 Construction Quality Assurance Plan (CQAP)

Information regarding construction quality assurance measures was included in the remedial action construction specifications. The contractor, Maxymillian Technologies (Maxymillian), was required to submit a Contractor Quality Assurance/Quality Control Plan (CQA/QC Plan). The CQA/QC Plan was reviewed by the Remedial Engineer (Shaw), Con Edison and the NYSDEC. The NYSDEC approved the plan on October 24, 2013 (Appendix C). The CQA/QC Plan provided details of how to monitor the construction activities and ensure that the work was performed in

accordance with the specifications. The CQA/QC Plan named Glenn Houle as the Maxymillian Construction Manager, James Smith as the Site Supervisor, and Douglas Mason as the Contractor Quality Control Engineer. The Plan provided a number of checklists used by the Construction Quality Control Engineer to monitor quality throughout the remedial program. The contractor was required to submit daily reports the following work day which included any quality issues. The contractor was required to attend a weekly meeting with Con Edison that usually would include the NYSDEC, Remedial Engineer and subcontractors. The Plan required the contractor to archive the QA/QC documentation after completion of the remedial program.

4.1.4 Excavation and Materials Management Plan (EMMP)

The contractor was required to submit for approval by the Remedial Engineer, Con Edison and the NYSDEC (approval documentation in **Appendix C**), an Excavation and Materials Management Plan which detailed, among several remedial activities, the removal, testing, storage, handling and transportation of asbestos-containing waste from the Site. The EMMP included:

1. A description of the anticipated sequence of work, including the means and methods;
2. A description of the anticipated waste streams;
3. A description of the anticipated sequence of activities (15 separate steps) requiring material handling for the completion of the remedial program including:
 - A description of the waste storage areas and how they will be constructed;
 - A description of how the sediment and erosion control measures will be handled;
 - A description of the asbestos abatement critical barrier and delineation of the required work zones;
 - A description of the removal of the Underground Storage Tank (UST);
 - A description of the removal of buried structures and equipment;
 - A description of the installation of the demarcation barrier;
 - A description of the sidewalk vault closure (if necessary) and the repair of any buried exterior walls; and

- A description of the types of backfill materials to be used and the sequence of backfilling;
4. A description of the types of backfill materials to be used and the sequence of backfilling;
 5. A description of sample collection methods and a listing of the analytical methods for different types of samples; and
 6. A description of the transportation of wastes including coordination of trucks on site, local truck routes and disposal facilities for the various types of waste.

The EMMP was supported by the following documents:

1. The Waste Characterization Sampling Plan, which was approved by Con Edison and initiated prior to finalizing the EMMP;
2. The Erosion and Sediment Control Plan, which was approved by Con Edison and the NYSDEC (approval documentation in **Appendix C**);
3. The Transportation and Traffic Safety Plan, which was approved by Con Edison and the NYSDEC (approval documentation in **Appendix C**); and
4. The Tank Disposal Plan, which was approved by Con Edison.

4.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

Since the area to be disturbed by the remedial action was less than one acre (0.84 acres), no SWPPP was required. The NYSDEC did review and approve the Contractor's Erosion and Sediment Control Plan (approval documentation in **Appendix C**).

4.1.6 Community Air Monitoring Plan

The Community Air Monitoring Plan provided a measure of protection for the downwind community (*i.e.*, off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of the remedial work activities. This CAMP was reviewed and approved by the NYSDEC (approval documentation in **Appendix C**) and addressed particulates (dust) and potential subsurface organic vapors that may have been released to the air during implementation of the remedial action activities. The CAMP was prepared in accordance with NYSDOH requirements presented in Appendix 1A of the NYSDEC DER-10 Technical Guidance for Site

Investigation and Remediation (2010). The CAMP required real-time monitoring for dust and organic vapors at the downwind perimeter of each designated work area for the benefit of downwind adjoining properties that contain sensitive receptors (e.g., Division Avenue, Kent Avenue, the public park east of Kent Avenue, and the nearby residential buildings on Kent Avenue). The measures included in the CAMP provided a level of protection for the occupants of the neighborhood schools and residences, as well as the downwind community, from potential airborne releases.

Air monitoring stations for measuring dust less than 10 micrometers in size (PM-10) were established at four stationary locations (two along Kent Avenue, one along Division Avenue and one along the western property line bordering Wallabout Channel). Depending on the wind direction, one location was established as the upwind Site perimeter monitoring location and the other three were downwind Site perimeter monitoring locations. In addition, a roving air monitor using a hand-held instrument for measuring VOCs walked the northern and eastern perimeters of the Site, and also collected organic vapor data at the four stationary dust monitor locations. The upwind monitoring station was located in the predominantly upwind direction of the Site and its location varied depending on daily conditions (see **Photo 1** in **Appendix E**). A windsock was used to determine and monitor wind direction throughout the work day.

These air-monitoring activities included real-time monitoring for particulates and VOCs based on the New York State CAMP requirements. The action levels specified below required increased monitoring, corrective actions to abate emissions, and/or work shutdown.

VOC Direct-Reading Monitoring

Organic vapor monitoring equipment consisted of a real-time photoionization detector (PID) capable of detecting total VOCs that could potentially be released from Site remedial activities. In addition to instantaneous readings, the instrument was capable of calculating 15-minute running average VOC concentrations, which were compared to the prescribed total organic vapor action levels. The instrument was calibrated in accordance with the manufacturer's operating instructions on a daily basis and documented in a dedicated field logbook.

Upwind 15-minute average background VOC levels were subtracted from the downwind 15-minute average VOC levels to establish ambient organic vapor concentrations reflective of work activities at a particular point in time. Therefore, the "background" level was the most recent upwind 15-minute average reading.

The 15-minute running average PID concentrations were compared to the following:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the Site or work area exceeded 5 ppm above background for the 15-minute average, work activities were temporarily halted and monitoring continued. If the total organic vapor level readily decreased (per instantaneous readings) below 5 ppm over background, work activities resumed with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the Site or work area persisted at levels in excess of 5 ppm over background but less than 25 ppm, work activities were halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities resumed provided that the total organic vapor level 200 feet downwind of the Site or half the distance to the nearest potential receptor or residential structure, whichever was less (but in no case less than 20 feet), was below 5 ppm over background for the 15-minute average.
- If the organic vapor level was above 25 ppm at the downwind perimeter of the Site or work area, activities were shut down and the engineering controls and site work plan re-evaluated.

As an extra precautionary measure, when the downwind perimeter of the Site was within 20 feet of the nearest potential receptor (Division Avenue), then the perimeter organic vapor level could not exceed VOC background concentrations. This guideline avoided vapor migration into nearby residential buildings. If VOC background concentrations were exceeded at any time at any perimeter location within 20 feet of the nearest receptor, then activities were shut down and the engineering controls and site work plan re-evaluated.

Particulate (Dust) Direct-Reading Monitoring

Particulate (dust) monitoring equipment set up at the four stationary monitoring locations consisted of real-time aerosol/particulate dust monitors capable of measuring PM-10 particulate matter that could be released from Site remedial activities. The instruments were capable of providing instantaneous readings as well as integrating measurements over a period of 15 minutes (or less) for comparison to the prescribed airborne particulate action levels. The equipment was calibrated in accordance with the

manufacturer's operating instructions and documented in a dedicated logbook.

Dust concentrations were monitored continuously at the four stationary monitoring locations. In addition, fugitive dust migration was visually assessed during all work activities. As with VOC levels, upwind 15-minute average background particulate levels were subtracted from the downwind 15-minute average particulate levels to establish dust concentrations reflective of work activities at a particular point in time. The "background" particulate level, therefore, was the most recent upwind 15-minute average reading.

The 15-minute running average particulate readings were compared to the following:

- If the downwind PM-10 particulate level was 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust was observed leaving the work area, then dust control/suppression measures were implemented. Work continued with dust suppression techniques provided that the downwind PM-10 particulate levels did not exceed $150 \mu\text{g}/\text{m}^3$ above the upwind level and provided that no visible dust was migrating from the work area.
- If, after implementation of dust suppression techniques, the downwind PM-10 particulate levels were greater than $150 \mu\text{g}/\text{m}^3$ above the upwind level or dust was observed leaving the Site, work was stopped and the remedial activities were re-evaluated. Work resumed provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 particulate concentration to within $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

The CAMP daily records were posted the following work day on a bulletin board located along the sidewalk on Kent Avenue (see **Photo 2** in **Appendix E**), as well as posted on a website that Con Edison maintained to provide information related to the remedial program to the general public.

4.1.7 Asbestos Variance and Air Monitoring

As mentioned in Section 2.2 above, the excavated fill contained ACM. Con Edison, through one of the subcontractors, Delta Environmental, Inc., applied to the NYCDEP for a variance for the handling of the ACM. The variance, prepared by a New York State Asbestos Project Designer, requested relief from use of an enclosure and

traditional clearance monitoring. The variance was approved on August 2, 2013 (approval documentation is **Appendix C**).

In compliance with the NYSDOL's 12 NYCRR Part 56 and NYCDEP's Title 15, Chapter 1, Rules of the City of New York, an asbestos air monitoring program was conducted throughout the handling of any excavation soil/debris. The asbestos air monitoring program consisted of 16 monitoring points (11 Transmission Electron Microscopy (TEM); 5 Phase Contrast Microscopy (PCM)) at the Site. Samples were collected throughout the working hours, and then submitted for laboratory analyses of asbestos. The results were received before the beginning the next working day. Like the CAMP daily records, the asbestos air monitoring results were posted the following work day on the bulletin board located along Kent Avenue, as well as posted on the Con Edison website.

4.1.8 Contractors Site Operations Plans (SOPs)

The Remedial Engineer and Con Edison reviewed all plans and submittals for this remedial project (i.e. those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RAWP, the AOC Letter and the bid documents, including all specifications and drawings. All remedial documents were submitted to the appropriate New York State and City regulatory agencies in a timely manner and prior to the start of work.

4.1.9 Community Participation Plan

A Citizen Participation Plan (CPP) was developed to provide the community with the history of the site, investigation work performed to date, stakeholder concerns and a Site Contact List for on-going communication. The CPP also described citizen participation activities conducted during site investigation and remediation activities. These activities were designed to achieve the following objectives:

- Help the interested and affected public to understand the contamination existing at this Site, and the nature and progress of Con Edison's program to investigate and clean up the Site;
- Ensure open communication between the public and project staff throughout the remedial process; and
- Create opportunities for the public to contribute information, opinions and perspectives that had potential to influence decisions about the Site's investigation and cleanup.

Con Edison used many tools to communicate with the public: a toll-free hotline where concerned citizens could leave a voice mail message, fact sheets to update the community on the remedial plan, local document repositories and a Kent Avenue webpage where all historical and remedial documents were posted as well as photographs.

In addition, the Site Contact List also served as a list serve so the community could receive via mail and email fact sheets and updates on the remediation progress. As part of the public review process NYSDEC held a public meeting and extended the public review time from 45 days to 60 days. Con Edison and NYSDEC also hosted a local Availability Session so citizens could see and ask questions on the remedial design, Con Edison and NYSDEC also met with the Community Boards and local elected officials to explain the remedy being proposed.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

Technical specifications and a bid package for the remedial program were prepared by Shaw on behalf of Con Edison. The Engineer of Record responsible for the technical specifications and the oversight of the remedial program was Daniel Chen, P.E. (NYS Professional Engineer #065271). Con Edison performed construction management for the remedial program. The Con Edison Project Manager was David Rubin; The Con Edison Construction Manager was Michael Lombardi; the Con Edison Chief Construction Inspector was Joseph Baratta. Shaw's Resident Engineer was Joseph DeMauro.

Maxymillian was selected as the General Contractor to implement the remedial program. Maxymillian's subcontractors and their associated tasks were as follows:

1. Delta Environmental, Inc., Brooklyn, NY – Asbestos abatement contractor;
2. Triangle Health and Safety Solutions, Hamilton, NJ – Site safety;
3. TEC Land Surveying, PC, Beacon, NY – Surveying; and
4. Ral-Bar Electric, Long Island City, NY – Electrical.

Third-party asbestos air monitoring was performed by Airtek Environmental Corporation (Airtek) of Long Island City, NY (contracted by Con Edison).

4.2.2 Site Preparation

On August 12 and 13, 2013, Maxymillian collected 22 waste characterization (soil) samples from the Site. The laboratory analytical results, presented in **Appendix D**, indicated that none of the material was hazardous. Therefore, all excavated material could be transported off site and disposed of as ACM. Maxymillian began mobilization to the Site on October 28, 2013 with the delivery of trailers, the start of the installation of the plywood sheeting along the Division Avenue and Kent Avenue perimeter fences for the asbestos abatement critical barrier, installation of a new gate along Division Avenue and relocating the Kent Avenue gate to be flush with the sidewalk. On October 31, 2013, an oil boom was installed in Wallabout Channel to ensure there would be no uncontrolled releases to the surface waters (see **Photo 3** in **Appendix E**). A pre-construction meeting was held with NYSDEC and all contractors on November 4, 2013. On November 5, 2013, a 20,000 gallon frac tank was placed in the western central portion of the Site to contain all construction water generated during the remedial program (see **Photo 4** in **Appendix E**). All applications, permits, and approvals required for the project were filed by Maxymillian through the appropriate agencies (see **Appendices C and F**). Also, Maxymillian made all required arrangements for water and sanitary services. Con Edison supplied a source for electrical power and Maxymillian made all of the electric connections.

A NYSDEC-approved project sign was erected at the project entrance and remained in place during all phases of the Remedial Action (see **Photo 5 and 6** in **Appendix E**).

4.2.3 General Site Controls

General Site controls used during the remedial program were documented in the specifications and consisted of the following:

- Daily decontamination of equipment used on-site;
- Use of fences and barricades around the work area to maintain Site security;
- Daily maintenance of soil erosion and sediment controls;
- Daily logging of contractor activities and personnel onsite;
- Daily air quality monitoring (CAMP and asbestos) with next day posting of the results; and

- Vibration monitoring of the structural wall along the southern property line during use of the hi-ram equipment to breakup concrete and brick structures within the south excavation.

The contractor provided security at the Site during non-working hours throughout the duration of the remedial program. Daily records were maintained by the contractor that detailed construction activities, progress, problems encountered, and resolution.

4.2.4 Nuisance controls

Nuisance controls used during the remedial program activities consisted of the following:

- Dust suppression measures including hydrant-connected hoses during excavation work and in traffic areas;
- Placement of coarse gravel roadways in areas of on-site truck routes to minimize the generation of dust from the Site;
- Construction of a truck wash pad for removal of all soil and other material from the wheels, tire treads, and undercarriage of every truck leaving the Site; and
- Control of odor, as necessary, was through the use of poly sheeting over any stockpiled material.

Truck traffic control and routing were important for the safety of the project site (due to limited access on the Site) and the surrounding area (residential community with a school in close proximity of the Site). As mentioned in Section 4.1.4, a Transportation and Traffic Safety Plan, approved by Con Edison and the NYSDEC, was used to safely control truck traffic on the job site as well as in the local community.

During the remediation, Con Edison received two complaints via voice messages from its toll-free hotline. One complaint concerned trucks sounding their horns in the early morning. Although Con Edison spoke to its contractor about the matter, it was believed that the noise was likely related to non-project trucks lining up to re-load salt from the New York City Department of Sanitation facility located immediately south of the Site. Con Edison's Public Affairs Department contacted the constituent to provide information about Con Edison's discussions about the matter with the contractor and to invite the constituent to call with any further issues.

The second complaint was about the handling of dust on a windy day. Con Edison Public Affairs reached out to the constituent and explained the CAMP to the concerned citizens; the constituent was satisfied and no further complaints on the subject were received.

4.2.5 CAMP and Asbestos Air Monitoring Results

CAMP monitoring was initiated on November 12, 2013. The CAMP was operated every day of Site activity through the completion of the remedial activities on February 24, 2014. Copies of all field data sheets relating to the CAMP are provided in electronic format in **Appendix G**.

There were no exceedances of either the particulate or VOC 15-minute time weighted average (TWA) action levels.

On December 5, 2013 and January 13 through January 15, 2014, the particulates readings were unusually high due to very high humidity (i.e., fog). The particulate monitoring equipment monitors aerosols, and the fog is actually detected by the equipment. However, this impacted both the upwind as well as the downwind monitoring stations with very little difference, if any, between the two. The CAMP monitoring requirements were based on the difference between the upwind and downwind locations, and very little difference, if any, was measured on these days.

Asbestos air monitoring was initiated on November 12, 2013. The asbestos air monitoring was operated every day of Site activity through the completion of the excavation activities on February 10, 2014. Copies of all field data sheets relating to the asbestos air monitoring are provided in electronic format in **Appendix G**.

Asbestos was not detected in any air samples collected during the entire remedial program.

4.2.6 Reporting

As mentioned in Section 4.1.3, the contractor was required to provide daily reports to Con Edison the morning of the following workday. The daily reports were maintained in the contractor's on-site trailer during the remedial program. The daily reports included photographs of the day's activities with written descriptions. The Contractor's daily reports are included in electronic format in **Appendix H**. In addition, Shaw's daily reports documenting work activities are included in electronic format in **Appendix I**.

4.3 CONTAMINATED MATERIALS REMOVAL

The Kent Avenue remedial program involved the removal and off-site disposal of non-hazardous ACM and decontamination fluids/construction water. The remedial program also included the removal of a UST and its contents.

The SCOs for the contaminants of concern for this project are the restricted residential criteria as defined by NYCRR Part 375-1.8(g). As detailed in the RAWP, the remedial excavation extended vertically to either the top of the former generating station basement floor slab or to the watertable (whichever was encountered first). Post-excavation soil samples were collected (where applicable) to document the quality of the material that remained below the demarcation barrier placed at the bottom of the excavation.

The areas where excavations were performed are shown in **Figure 3**.

4.3.1 Non-Hazardous Asbestos-Containing Material

All solid material excavated and removed from the Site was transported and disposed of as non-hazardous ACM. The material consisted of cinder, ash, soil, concrete, brick, timber, and metal (pipes as well as structural steel). The non-hazardous ACM was initially excavated from the North Excavation Area, and once all of that material was removed and replaced with clean backfill, the excavation activities moved to the South Excavation Area (see **Figure 3**). As-built drawings showing the final elevations of the excavation bottom (**FOUNDATION REMAINS FOUND AT 500 KENT AVENUE**) and showing the final grade contours (**FINAL ASBUILT**) are presented in **Appendix J**.

4.3.1.1 Disposal Details

The non-hazardous ACM was transported to the GROWS North Landfill (GROWS) in Morrisville, Pennsylvania for disposal. The laboratory reports for the waste classification samples collected on August 12 and 13, 2013 for the remediation are presented in **Appendix D**. The waste classification analyses identified that the material was not hazardous.

The letter from Maxymillian to the disposal facility owners and the acceptance letter from the disposal facility owners are attached in **Appendix K**.

Transportation of the non-hazardous ACM to GROWS began on November 13, 2013 and continued through February 10, 2014. A total of 599 truckloads of non-hazardous ACM were removed from the Site during this time. Manifests for each truck

are included in **Appendix L**. A total of 13,702.95 tons of non-hazardous ACM (including an estimated 12 tons of sand removed from the interior of the UST) were removed from the Site. The Contractor's manifest summary table which presents both the manifest number and weight of non-hazardous ACM that each truck transported from the Site is also presented in **Appendix L**.

None of the excavated material was reused at the Site.

4.3.2 UST Contents

Previous environmental site investigations identified a suspect 1,500-gallon UST within the North Excavation Area. The suspect UST was located and the top was exposed on November 12, 2013 (see **Photo 7** in **Appendix E**). At this time the UST was opened at the top and it was determined that the UST was filled with sand, and that the UST had a 2,500 gallon capacity. On November 20, 2013, the UST was pulled from the ground (see **Photo 8** in **Appendix E**) and the soil beneath the UST was sampled (see **Photo 9** in **Appendix E**). Details of the UST closure including the laboratory analyses and supporting closure documentation were submitted to the NYSDEC in a UST Closure Report, dated January 29, 2014 (an electronic copy of the report is in **Appendix M**). On March 5, 2014, Con Edison submitted a Petroleum Bulk Storage (PBS) registration form for the UST to the NYSDEC (**Appendix M**). The Facility Information Report in the NYSDEC PBS database, as of May 27, 2014, shows that the UST was closed and removed from the Site (**Appendix M**).

4.3.2.1 Disposal Details

The 12 tons of sand removed from the interior of the UST were included with the material transported off of the Site under manifest number 111143 (a duplicate of this manifest, including the Contractor's estimate of the UST material is provided in Attachment B of the UST Closure Report in **Appendix M**) on December 20, 2013.

4.3.3 Decontamination Fluids/Construction Water

All construction water, decontamination fluids, and dewatering fluids were containerized within one 20,000-gallon frac tank for subsequent treatment and disposal at Clean Water of New York (Clean Water) in Staten Island, New York. On February 4, 2014, a sample of the construction water was collected for analysis. The laboratory analytical results of the construction water sample are presented in **Appendix D**. The letter from Maxymillian to the disposal facility and the acceptance letter from the disposal facility are attached in **Appendix K**.

4.3.3.1 Disposal Details

The construction water was transported to Clean Water on February 19, 2014. One tanker truck was used to transport the water from the Site. The manifest for the truck is included in **Appendix L**. A total of 3,697 gallons of water were removed from the Site.

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

The remedial performance/documentation sampling was completed in accordance with the RAWP. In the North Excavation Area, as well as any excavation that had a portion without either a basement wall or slab floor, or shoring, samples were collected at a minimum of one for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area. It was anticipated that the excavation in the South Excavation Area would be confined within the basement walls and slab floors of the former power plant building. Existence of the walls and slab were confirmed, so no documentation samples were collected. In any areas of noticeable staining on the buried walls or slab floors, particularly in the area of boring PBL-7 (South Excavation Area) where a soil sample contained a concentration of 3.5 mg/kg of PCBs (Shaw Environmental, Inc. Site Investigation Summary Report, April 2007), wipe samples were to be collected and analyzed for PCBs.

Each soil/fill documentation sample was analyzed for the SVOCs and metals listed in 6NYCRR Part 375-6.8, as well as for asbestos. The analytical results of SVOCs and metals in the soil/fill material were compared with Restricted Residential SCOs. The PCB wipe samples were to be compared to the low contact, outdoor nonimpervious surface cleanup criteria established in Title 40 of the Code of Federal Regulations Part 761.125 (40 CFR Part 761.125). The asbestos results were compared to the one percent (1%) asbestos content threshold for ACM as established in Title 15, Chapter 1 of the Rules of the City of New York (Title 15, Chapter 1). The samples were analyzed by TestAmerica Laboratories, Inc. (TestAmerica), a USEPA Environmental Laboratory Approval Program (ELAP) and Pennsylvania-certified laboratory. Sample collection and laboratory analyses conformed to the NYSDEC Analytical Services Protocol (ASP) Category B data deliverables per NYSDEC DER-10 Appendix 2B: *Guidance for Data Deliverables and the Development of Data Usability Summary Reports (DUSR)*. The asbestos samples were analyzed by polarized light microscope (PLM) in accordance with American Society for Testing and Materials (ASTM) Method D7521-13.

As indicated above, all of the excavation in the South Excavation Area was contained within the basement walls and slab floor (see **Photos 10** through **13** in **Appendix E**). Therefore, no soil/fill documentation samples were collected from the South Excavation Area. No noticeable staining was observed on either the basement walls or slab floor in either the North or South Excavation Areas, therefore no PCB wipe samples were collected. There was a concrete slab at the base of the North Excavation Area (see **Photo 14** in **Appendix E**), however in some areas there were no basement walls. Con Edison directed Maxymillian/Delta to collect a total of 17 soil/fill samples from immediately above the slab floor and at the base (within on foot of the bottom) of the side wall. A table and figure summarizing all documentation sampling is included in **Table 1** and **Figure 4**, respectively, and all exceedances of SCOs are highlighted.

Several SVOCs were detected above the Restricted Residential SCOs in most of the documentation samples. In all but two of the samples (SW-SW8 and EP8), the exceedances were slight. In samples SW-SW8 and EP8, located adjacent to the Ash Pit, the exceedances were generally an order of magnitude greater than the Restricted Residential SCOs. The same SVOCs were detected throughout the Site at similar concentrations in the previous environmental site investigations suggesting that these contaminants, at these concentrations, are ubiquitous at the Site. Arsenic, lead and mercury were the only metals detected above the corresponding Restricted Residential SCOs. Exceedances of at least one of these three metals was found in nine of the 17 samples collected and analyzed. As with the SVOCs, metals and in particular, arsenic, were also detected throughout the Site at similar concentrations in previous environmental site investigations. Exceedances of the asbestos 1 percent ACM criteria were detected in five of the 17 samples. The asbestos exceedances ranged between 1.3 and 1.8 percent.

A DUSR was prepared for the SVOC and metals data generated in this remedial documentation program. This DUSR is included in **Appendix N**, and the associated laboratory reports are provided electronically in **Appendix O**.

The DUSR states that the accuracy and precision of the semi-volatile organic compound results were acceptable for the samples in all sample delivery groups (SDGs), with the exception of the two soil samples (SW-S-2 and EP-2) in SDG 490-40738-1 due to various matrix spike (MS) or matrix spike duplicate (MSD) recoveries that were outside Quality Control (QC) limits of the respective compounds.

Most of the QC criteria for the metals analyses were met, except for the matrix spike recoveries outside QC limits for one to four analytes in eight of the nine SDGs and mercury in four of these SDGs, as identified in Table 4 and Table 5 of the DUSR. The associated sample results were qualified as estimated values and flagged with either “NJ+” or “NJ-” depending on the potential bias suggested by the batch QC sample, either a potential positive or potential low bias. Since the laboratory did not flag sample results associated with matrix spike recoveries outside QC limits, the “N” flag was applied during the data review in order to assist the data user in recognizing the reason a sample result was qualified, a convention routinely used to report data in the USEPA Contract Laboratory Program (CLP). Similarly, the laboratory qualifiers “*” and “E” flags were applied following the data review for precision and serial dilution issues. These qualified sample metals results are presented in Table 6 of the DUSR.

Following the review of the general chemistry data, twelve cyanide results, eleven hexavalent chromium (Cr+6) results and two trivalent chromium results were qualified following the data usability review. Seven cyanide and nine Cr+6 results were qualified as estimated values (NJ-) due to low matrix spike recoveries in the associated QC sample, thereby suggesting a potential low bias in the reported result. The two cyanide results in SDG 490-41855-1 (SW-SW-8 and EP-8) were qualified as estimated values due to a potential low bias in addition to experiencing potential variability in the analytical precision as suggested by the duplicate analysis. These two results are flagged with “*NJ-”. Since the two samples in SDG 490-43051-1 (SW-S-9 and EP-9) were received at the laboratory with a sample cooler temperature above 6°C (cooler lost in transit), the trivalent and Cr+6 results are qualified as estimated values and flagged with “J-”. The cyanide results are also subject to qualification in these samples, but are already flagged with “NJ-”. Three non-detect cyanide results were rejected and flagged with “NR” due to the MS recoveries below 30% in the associated batch QC sample, in accordance with data validation guidelines (USEPA, *National Functional Guidelines for Inorganic Superfund Data Review*, Publication OSWER 9240.1-51, EPA540-R-10-011, January 2010.).

The results of the two soil samples (SW-S-9 and EP-9) that were associated with the sample cooler that was lost in transit were qualified as estimated values in accordance with various data validation guidelines, because the 12.3°C temperature at sample receipt was above the 6°C specified temperature for sample handling and preservation and above 10°C for the SVOC requirement (USEPA, *Standard Operating Procedure for Validating Semi-Volatile Organic Compounds by Gas*

Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP No. HW-22, Revision 3, October, 2006.). Non-detect results were qualified and not rejected based on professional judgement for specific reasons presented in the DUSR. The results that were qualified due to temperature issues for samples SW-S-9 and EP-9 are presented in Tables 2, 6, and 8 of the DUSR for the SVOC, metals and mercury, and general chemistry analytes.

The data validation process identified a laboratory error that impacted the reported concentrations for all compounds, excluding asbestos, for sample EP-4. The laboratory switched the percent solids and percent moisture values. The corrected laboratory report, included in **Appendix O**, shows that the concentrations are lower than what was originally presented. This resulted in the arsenic concentration dropping from 23.1 mg/kg (an exceedance of the Restricted Residential SCO [16 mg/kg]) to 4.14 mg/kg. All other SVOC and metal concentrations were reduced, but none of the compounds had exceeded the corresponding Restricted Residential SCO. The correct data are presented in **Tables 1 and 2**.

The DUSR concludes that the reported sample results for the Kent Avenue Site are usable and of acceptable accuracy and precision, with perhaps the exceptions of the rejected sample results identified in the text above. Qualified sample results are usable within the context of the qualifications identified.

4.5 IMPORTED BACKFILL

There were four types of backfill imported to the Site for the remedial program:

1. Rip Rap – used for erosion control at the southeast corner of the Ash Pit where the North Excavation Area was directly exposed to Wallabout Channel;
2. 2-Inch Stone – used for erosion control during extreme weather conditions along the western edge of the soil cap (adjacent to Wallabout Channel);
3. 0.75-Inch Clean Stone (aka washed stone) – used as final cover (approximately four inches) over the structural fill; and
4. Structural Fill (DGA) – a well-graded virgin material that was used to backfill the North and South Excavation Areas and forms the predominant material of the soil cap in the southwest portion of the Site.

The volumes of imported material, as provided to Con Edison from Maxymillian, included 72.93 tons of rip rap, 25.44 tons of 2-inch stone, 939.4 tons of 0.75-inch clean stone and 17,013.78 tons of structural fill. A table with quantities (daily by individual truck) for each type of material is shown in **Appendix P**. All of the material was imported from the Stavola Construction Materials, Bound Brook, New Jersey Quarry 10-3R. NYSDEC approved the use of the materials (approval documentation in **Appendix C**) because the material met the gradation requirements and was virgin material.

4.6 CONTAMINATION REMAINING AT THE SITE

The Site Investigation Summary Report, dated April 2007, for the Former Kent Avenue Generating Station discusses the history of the Site, including how the Site was landfilled sometime between 1844 and 1900. Much of the landfill material at that time consisted of coal ash, cinders, slag, brick, wood and cement. The 2007 report acknowledged finding similar materials at the Site. It is these older landfill materials, often referred to as “historic urban fill”, that have elevated levels of SVOCs and metals that exceed regulatory cleanup objectives. **Table 2** and **Figure 4** summarize the results of soil samples collected at the Site after completion of the remedial program that exceed the Restricted Residential SCOs.

Because the Site is underlain below remaining basement/structural slabs by historic urban fill, there is soil contamination remaining beneath the Site. **Figure 5** indicates how the top of the soil contamination is identified. In the North and South Excavation Areas, a demarcation barrier (plastic orange fencing, see **Photo 15** in **Appendix E**) was placed at the base of the excavation. Any material below the demarcation barrier should be considered contaminated. In 2009 when the former generating station located in the center of the Site was demolished and removed, the basement walls and foundation slab remained in place. The interior portion of the generating station basement was backfilled with environmentally clean backfill; no demarcation barrier was installed when the basement was backfilled. Within the former generating station footprint, any material below the foundation slab should be considered contaminated material. In the southwest portion of the site, as shown on **Figure 6**, contaminated material was left in place and covered with a demarcation barrier and capped with two feet of clean structural fill. In this area, any material below the demarcation barrier should be considered to be contaminated.

In the northeast corner of the South Excavation Area, there is a 35 ft. by 6.5 ft. strip of soil with contaminated soil (below 4 ft) that has been left in place above the

concrete slab floor and adjacent to the basement wall (**Figure 5**). The top four feet of the strip of soil is clean fill that was placed during the 2009 generating station demolition and from restoration of the onsite waste dewatering area for the 2011 Ash Pit remediation. There is no demarcation barrier between the clean and contaminated soil. It should be assumed that any soil within this strip that is deeper than four feet is contaminated.

NYSDEC is overseeing an environmental investigation of MGP-related contamination being performed by National Grid at the former Nassau Gas Works site located immediately to the south of the Site. As part of the remedy for the Site, National Grid commenced the collection and analysis of environmental samples from the former Kent Avenue Generation Station Site in May 2014. The results of the investigation show MGP-related contamination beneath the Site. Additionally, the MGP contamination is impacting the groundwater quality beneath the Site. Since contaminated soil remains beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the SMP approved by the NYSDEC.

4.7 SOIL COVER SYSTEM

Exposure to remaining contamination in soil/fill at the Site is prevented by a soil cover system placed over the Site. This cover system in the North and South Excavation Areas is comprised of between 4.5 and 11 feet of structural fill with approximately 4 inches of ¾-inch stone on top. The footprint of the former generation station has up to 12 feet of environmentally clean fill topped off with ¾-inch stone. The southwest portion of the Site has a minimum of 24 inches of clean structural fill and ¾-inch stone. **Figure 6** shows the as-built cross section for the soil cap in the southwest portion of the Site. An Excavation Work Plan, which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, is provided in **Appendix E** of the SMP.

4.8 OTHER ENGINEERING CONTROLS

The remedy for the Site did not require the construction of any active engineering control systems.

Procedures for monitoring and maintaining the cover system are provided in the Monitoring Plan in Section 3 of the SMP. The Monitoring Plan also addresses inspection

procedures that must occur annually and after any severe weather condition has taken place that may affect the cover system.

4.9 INSTITUTIONAL CONTROLS

The site remedy requires that a DCR be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to restricted residential, commercial or industrial uses only as defined by 6 NYCRR Part 375-1.8(g).

The DCR for the site was executed by the Department on December 23, 2014, and filed with the Kings County Clerk on January 8, 2015. The County Recording Identifier number for this filing is 2015010500429001. A copy of the DCR and proof of filing is provided in **Appendix Q**.

4.10 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

There were a total of five deviations from the RAWP, AOC Letter and Construction Documents:

1. The RAWP and Construction Documents called for the containment of stockpiled materials by placing material on plastic and covering the material with plastic. All excavated materials that were not immediately transported off site for disposal were stockpiled within the excavation area, i.e., were piled on top of other material that was also to be excavated and removed (**Photo 16** in **Appendix E**). The purpose of containing the excavated material was to ensure that it did not contaminate underlying clean materials. Since the stockpiled materials were on top of other contaminated material, it was not necessary to segregate the stockpiled materials. The stockpiled materials were covered with plastic at the end of each workday and over weekends/holidays to ensure there were no health exposures to the surrounding neighborhood (**Photo 17** in **Appendix E**).
2. The Construction Documents called for compaction testing of all backfilled material. While all backfilled material was compacted, Con Edison agreed to not perform compaction testing on backfill materials placed deeper than four feet below grade.

3. The Construction Documents (drawings) called for the rip rap placed at the narrow breach between the former generating station basement wall and the Ash Pit to be placed with a 1:2 slope on the west side (facing Wallabout Channel). Because it was not feasible to control the placement of the rip rap on the west side, chain link fence (**Photo 18 in Appendix E**) was placed to hold the rip rap securely in place (**Photo 19 in Appendix E**).
4. Site documentation showed that there was a vault beneath the Kent Avenue sidewalk that could be open to the South Excavation Area. The Contract Documents called for sealing the opening (if it was open) with a concrete wall poured in place. Upon opening the east side of the South Excavation Area, it was determined that the vault area was filled with debris, but open to the South Excavation Area (**Photo 20 in Appendix E**). It was not practicable to pour a concrete wall to cover the openings into the vault area, so Con Edison permitted the Contractor to seal off the openings with a cinder block wall (**Photo 21 in Appendix E**).
5. On January 27, 2014, Con Edison petitioned the NYSDEC to leave in place a utility pole, conex box and associated soil, located in the northeast corner of the South Excavation Area (**Figure 5**). The petition, presented in **Appendix R**, indicated that the areas adjacent to the pole had been excavated, but the material in question was left in place to avoid undermining the utility pole and electrical panel housed in the adjacent conex box. The petition contained photo documentation that the top four feet of the soil to be left in place was clean. The NYSDEC approved the petition on January 29, 2014 (approval documentation in **Appendix R**).

Attachment 3

New York State Department of Environmental Conservation
Release and Covenant Not to Sue dated April 7, 2015

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of the General Counsel

625 Broadway, 14th Floor, Albany, New York 12233-1500

P: (518) 402-9185 | F: (518) 402-9018

www.dec.ny.gov

April 7, 2015

Carolyn W. Jaffe, Esq.
Consolidated Edison Corporation
4 Irving Place
New York, New York 10003

Kenneth Kaiser, Director, Remediation
Consolidated Edison Corporation
31-01 20th Avenue, Bldg. 138
Astoria, New York 11105

Assignable Release and Covenant Not to Sue

Under the terms of the Voluntary Cleanup Agreement entered into between the New York State Department of Environmental Conservation (the "Department") and Consolidated Edison Company of New York, Inc. ("Volunteer"), Index No. D2-0003-02-08 (the "Agreement"), Amended July 16, 2010.

The Department is pleased to report that the Department is satisfied that the Agreement's Technical requirements relative to the Site, located at the Kent Avenue Station site, 500 Kent Avenue in the Borough of the Brooklyn, New York Block 2023, Lot 10), and as is more particularly described in the Agreement, have been successfully implemented

The Department, therefore, hereby releases, covenants not to sue, and shall forbear from bringing any action, proceeding, or suit pursuant to the Environmental Conservation Law, the Navigation Law or the State Finance Law, and from referring to the Attorney General any claim for recovery of costs incurred by the Department, against Volunteer and Volunteer's lessees and sublessees, grantees, successors and assigns, and their respective secured creditors, for the further investigation and remediation of the Site, based upon the release or threatened release of Covered Contamination, provided that (a) timely payments of the amounts specified in Paragraph VI of the Agreement continue to be and/or have been made to the Department, (b) appropriate use restrictions remain recorded in accordance with Paragraph X of the Agreement, and (c) Volunteer and/or its lessees, sublessees, successors, or assigns promptly commence and diligently pursue to completion the Work Plan providing for OM&M, if any. Nonetheless, the Department hereby reserves all of its respective rights concerning, and such release, covenant not to sue, and forbearance shall not extend to, natural resource damages or to any further investigation or remedial action the Department deems necessary:

- due to migration off-Site of contaminants resulting in impacts to environmental resources, to human health, or to other biota that are not inconsequential and to off-Site migration of petroleum;



Department of
Environmental
Conservation

- due to environmental conditions or information related to the Site which were unknown at the time this Release and Covenant not to Sue was issued and which indicate that the Contemplated Use cannot be implemented with sufficient protection of human health and the environment;
- due to Volunteer's failure to implement the Agreement to the Department's satisfaction; or
- due to fraud committed by Volunteer in entering into or implementing this Agreement.

Additionally, the Department hereby reserves all of its respective rights concerning, and any such release, covenant not to sue, and forbearance shall extend neither to Volunteer nor to any of Volunteer's lessees, sublessees, successors, or assigns that cause or allow a release or threat of release at the Site of any hazardous substance (as that term is defined at 42 USC 9601 [14]) or petroleum (as that term is defined in Navigation Law§ 172 [15]), other than Covered Contamination, or cause or allow the use of the Site to change from the Contemplated Use to one requiring a lower level of residual contamination before that use can be implemented with sufficient protection of human health and the environment, nor to any of Volunteer's lessees, sub lessees, successors, or assigns who is otherwise a party responsible under law for the remediation of the Existing Contamination independent of any obligation that party may have respecting same resulting solely from the Agreement's execution or such lessee's, sublessee's, successor's, or assign's present ownership or operation of the Site.

Notwithstanding the above, however, with respect to any claim or cause of action asserted by the Department, the one seeking the benefit of this release, covenant not to sue, and forbearance shall bear the burden of proving that the claim or cause of action, or any part thereof, is attributable solely to Covered Contamination.

Notwithstanding any other provision in this release, covenant not to sue, and forbearance:

- if with respect to the Site there exists or may exist a claim of any kind or nature on the part of the New York State Environmental Protection and Spill Compensation Fund against any party, nothing in this letter shall be construed or deemed to preclude the State of New York from recovering such claim;
- except as provided in this letter and in Agreement, nothing contained in the Agreement or in this letter shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights (including, but not limited to, the right to recover natural resources damages) with respect to any party, including Volunteer;
- nothing contained in this letter shall prejudice any rights of the Department to take any investigatory or remedial action it deems necessary if Volunteer fails to comply with the Agreement or if contamination other than Existing Contamination is encountered at the Site;
- nothing contained in this letter shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers;
- nothing contained in this letter shall be construed to affect the Department's right to terminate the Agreement under the terms of the Agreement at any time during its

implementation if Volunteer fails to comply substantially with the Agreement's terms and conditions.

In conclusion, the Department is pleased to be part of this effort to return the Site to productive use of benefit to the entire community.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

By: _____

A handwritten signature in black ink, appearing to read 'Louis P. Oliva', written over a horizontal line.

Louis P. Oliva, Esq.
Bureau Chief
OGC Remediation Bureau

ec: R. Schick
G. Heitzman
G. Cross
D. MacNeal