

ONE FULTON SQUARE

BLOCK 4973, LOTS 24 AND 37

39-16 PRINCE STREET

FLUSHING, NEW YORK

Remedial Action Work Plan

NYC BCP Number: NYC 11CBCP006Q

E-Designation Number: 10EH-N143Q

CEQR #95DCP0525Q/ 89-271Q

Prepared for:

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CERTIFICATIONS

I, Brian P. Morrissey, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the One Fulton Square Site (Site No. NYC 11CBCP006Q).

I certify that this Remedial Action Work Plan (RAWP or Plan) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property as a function of this RAWP, and that all handling, transport and disposal of this material will be performed in accordance with all City, State and Federal laws and regulations. This RAWP requires that material exported during the course of the Plan be taken to facilities licensed to accept such material and that are in full compliance with all applicable City, State and Federal laws and regulations. All required permits will be obtained prior to performance of this work. This RAWP provides a process for importation of all soil, fill and other material from off-Site and all activities of this type will be in accordance with all applicable City, State and Federal laws and requirements.

I certify that this RAWP has provisions for nuisance control during the remediation and all invasive work, including a dust, odor and vector suppression. Thresholds established in this Plan are intended to prevent nuisances from occurring.

Brian P. Morrissey 062617

11/20/2011



NYS PE Name and License Number

Date

I certify that all engineering plans, specifications and associated designs included in the RAWP have been personally developed by me or under my direct supervision, meet industry standards, and are appropriate for the intended purpose established in this Plan. 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.

Brian P. Morrissey 062617

1/20/2011

NYS PE Name and License Number

Date



Signature

REMEDIAL ACTION WORK PLAN

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C/D	Construction/Demolition
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering and Institutional Controls
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
BCA	Brownfield Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC BCP	New York City Brownfield Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PE	Professional Engineer

PID	Photo Ionization Detector
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compound
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

The Remedial Action Work Plan (RAWP) has been prepared and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f).

The proposed remedial action includes:

1. Attainment of a Track 1 cleanup through excavation and removal of soil across the entire Site.
2. Installation of concrete slab across the entire Site.
3. Installation of a vapor/waterproofing membrane beneath the concrete foundation and foundation wall surfaces.

Currently, there are no Institutional Controls in place for the Site and/or have been filed or recorded in a registry.

Site Description, Physical Setting and Site History

One Fulton Square (Site, BCP ID# 11CBBCP006Q) is comprised of two parcels (Lots 24 and 37) on Block 4973 in the Flushing section of Queens County, New York. Lot 24 is also identified as 133-42 39th Avenue, as well as 39-16 Prince Street. Lot 37 is also identified as 133-63 Roosevelt Avenue. According to a review of records on file with the New York City Department of Buildings (NYCDOB), Lot 24 has been assigned an E-designation for potential hazardous materials and noise. According to NYCDOB records, Lot 37 is not listed as an E-designation; however, because the two lots are being developed as one project, both lots are being investigated as an E-designated property. In the near future, the properties will be registered as a single lot.

The Lot 24 section of the Site is currently developed as a paved parking lot and is bordered to the north by 39th Avenue; to the east by Prince Street; to the south by Lot 37 and commercial stores; and to the west by commercial stores. The Lot 37 section of the Site is currently a vacant lot and is bordered to the north by Lot 24; to the east by Prince Street; to the south by Roosevelt Avenue; and to the west by commercial stores. The topography of the Site is relatively flat with

a southeasterly slope. The depth to groundwater beneath the Site ranges between 16 and 30 feet below land surface (ft bls) and is likely influenced by subsurface structures and impediments such as building foundations, sewer lines, utility vaults, and sump pumping from the nearby subway. Historically, the Site contained an auto body repair shop that was located on the northeast corner of Lot 24, a garage located in the center of Lot 24, and a gasoline station on Lot 37.

The planned redevelopment of the Site entails the construction of a mixed-use development that includes a nine story residential structure and a six story hotel structure atop a three-story commercial base with two levels of subterranean parking. The building will include retail spaces on the podium levels located within the E-74 Downtown Flushing Rezoning are which has an “E” Designation for noise.

The Enrollee is a Volunteer under the Brownfield Cleanup Program.

Summary of Past Uses of Site and Areas of Concern

The Site appears to have included three and four parcels from at least 1892 to 1951. The site was occupied by dwellings and associated outbuildings during the period. Sanborn Fire Insurance Company maps indicate that a building (constructed in 1956) was historically present at the northeastern corner of the site. A Certificate of Occupancy for that building was issued in 1956, designating the use as an auto body repair shop. A building labeled “auto body repair” is present onsite on Sanborn Fire Insurance Company maps from 1980 to 1995. Peter Wu, the site owner interviewed at the time of the Phase I Environmental Site Assessment performed in October 2005, indicated that a building was located on the northeastern portion of the site and was occupied by offices for several years prior to demolition when the current parking lot was developed. The current parking lot and attendant booth were constructed in or around 2001. The site has operated as a parking lot since that time.

The AOCs identified during the Phase I ESA for this site include:

1. Presence of a former auto body repair shop on Lot 24.
2. A former gasoline filling station on Lot 37.

Summary of the Work Performed under the Remedial Investigation

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 11 soil borings across the entire project Site, and collected 22 soil samples for chemical analysis from the soil borings to evaluate soil quality.
3. Installed 6 groundwater monitoring wells throughout the Site to establish groundwater flow and collected 6 groundwater samples for chemical analysis to evaluate groundwater quality.
4. Performed a geophysical survey of the Site utilizing ground penetrating radar (GPR) and electromagnetic locator.

Summary of the Hydrogeological Findings

1. Elevation of the property ranges from 26 to 38 feet (relative to site datum).
2. Depth to groundwater ranges from 16 to 34 feet at the Site.
3. Groundwater flow is generally from east-southeast to west-southwest beneath the Site.
4. Depth to bedrock is greater than 100 feet at the Site.
5. The stratigraphy, from land surface to approximately 35 feet below land surface, consists of 2 to 12 feet of historic fill underlain by a layer of brown to orange-brown, fine to coarse sand with little gravel extending to the water table. On the west side of the Site there are also reddish brown silt and clay lenses ranging in thickness from 6 ft to 20 ft in thickness starting at a depth of 6 ft bls.

Summary of the Environmental Contamination

1. Soil/fill samples collected during the RI confirmed the presence of elevated concentrations of lead and barium on-Site in the shallow (0-2 ft bls) soil samples only. VOCs, SVOCs, PCBs and pesticides were not identified above Track 2 soil standards.

2. Groundwater samples collected during the RI confirmed the presence of elevated concentrations of metals on-Site. Dissolved metals in groundwater exhibit several minor metals above applicable groundwater standards including manganese and sodium and suggest possible impacts from road salting. Trace metals (arsenic, lead, cadmium, chromium, mercury etc.) were not detected in dissolved groundwater samples above applicable groundwater standards. Metals detected in unfiltered groundwater throughout the Sites at concentrations exceeding their respective 6NYCRR Part 703.5 groundwater quality standard and strongly indicate influence of sample turbidity.

Based on the results of this RI, we conclude that there is no evidence to suspect disposal of significant quantities of hazardous waste

Qualitative Human Health Exposure Assessment

A Qualitative Human Health Exposure Assessment (QHHEA) was performed and indicated that that potential exposure pathways are considered incomplete for future remediated conditions and complete during the remedial action. The latter requires appropriate Health and Safety program and community air monitoring program during remedial action.

Summary of the Remedy

The preferred remedial alternative is the Track 1 Alternative. The preferred remedy achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative achieves all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective, implementable and uses standards methods that are well established in the industry.

1. Preparation of a Community Protection Statement and performance of all required NYC BCP citizen participation activities according to an approved Citizen Participation Plan (CPP).
2. Establish Track 1 Soil Cleanup Objectives (SCOs).

3. Excavation and removal of soil/fill exceeding Track 1 SCOs. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with all Federal, State and City laws and regulations for handling, transport, and disposal.
4. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of SCOs.
5. Installation of a vapor/waterproof membrane system beneath entire building slab. A two level underground parking garage will be built below grade and will be ventilated in conformance with NYC building code.
6. Performance of Community Air Monitoring Program for particulates and volatile organic carbon compounds.
7. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
8. Implementation of storm-water pollution prevention measures.
9. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and City laws and regulations.
10. Sampling and analysis of excavated media as required by disposal facilities.
11. Removal of all Underground Storage Tanks, if any, and closure of petroleum spills, if any, under authority of New York State Department of Environmental Conservation.
12. Screening for indications of contamination (by visual means, odor, and monitoring with a photo ionization detector (PID)) of excavated soil/fill during all intrusive work.
13. Submission of a RAR that describes the remedial activities including any changes from this RAWP, certifies that the remedial requirements have or will be achieved, defines the Site boundaries, and describes any Engineering Controls to be implemented at the Site.

COMMUNITY PROTECTION STATEMENT

The Office of Environmental Remediation created the New York City Brownfield Cleanup Program (NYC BCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan (“cleanup plan”) describes the findings of prior environmental studies that show the location of contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This Remedial Action Work Plan for One Fulton Square provides a very high level of protection for neighboring communities. This cleanup plan also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and egress cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan. Under the NYC BCP, a thorough cleanup study of this property (called a remedial investigation) has been performed to identify past property usage, to sample and test soils and groundwater, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses. Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community. Land uses in the area include the daycare Kon Wah Day School located at 135-27 38th Avenue, Apt#2, Flushing, NY and the residential buildings Bland Houses located at 40-21 College Point Boulevard, Flushing NY.

Qualitative Human Health Exposure Assessment. An important part of the cleanup study of the Site is the performance of a study to find all of the ways that people might come in contact with contaminants of the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project and is included in this plan. This assessment has considered all known contamination at the Site and

evaluated the potential for people to come in contact with this contamination. All potential public exposures will be addressed under this cleanup plan.

Health and Safety Plan. This cleanup plan includes a Health and Safety Plan that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Health and Safety Administration. This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the Health and Safety Plan. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is Carolyn Roth of Roux Associates who can be reached at 631-831-8539 between the hours of 7:00am and 4:00pm.

Worker Training. Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan (CAMP). Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust and Noise Control. This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, foams and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact Wendy Shen of Roux Associates at 631-484-1333 or Shaminder Chawla of OER at 212-442-3007.

Quality Assurance Plan. This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has a storm-water management plan. The main elements of the storm water management plan include physical barriers such as tarp covers and fencing, and a program for frequent inspection.

Hours of Operation. The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation are from 7:00am to 4:00pm, Monday through Friday.

Signage. The project Fact Sheet will be prominently posted at the main entrance of the property noting that the project is participating in the NYC Brownfield Cleanup Program.

Complaint Management. The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager, Tom Barone at 917-335-5996, the NYC Office of Environmental Remediation Project Manager, Shaminder Chawla at 212-442-3007, or call 311 and mention the Site is in the NYC Brownfield Cleanup Program.

Utility Mark-outs. To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal. All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all City, State and Federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening. All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held

instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management. Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers. Loaded trucks leaving the Site will be securely covered to prevent dust and odor, and properly recorded in logs and records and placarded in compliance with City, State and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Equipment Decontamination. All equipment used for cleanup work will be washed before it leaves the Site. Trucks will be cleaned at a washing station on the property before leaving the Site.

Housekeeping. Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing. Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the property. Loaded trucks leaving the Site will not stop or idle in the local neighborhood.

Final Report. The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for you to review in the public document repositories located at the Flushing Public Library.

Long-Term Site Management. To provide long-term protection after the cleanup is complete, the property will be subjected to the highest quality cleanup available. It is a permanent cleanup call a “Track 1” cleanup.

CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and 39 Prince Realty, LLC has established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Brownfield Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC BCP, 39 Prince Realty, LLC will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the Community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Shaminder Chawla who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 442-3007.

Project Contact List. OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories. A document repository is maintained in the nearest public library that maintains evening and weekend hours. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including project applications, Remedial Investigation plans and reports, draft and final Remedial Action plans and reports, the Site Management Plan, the Notice of Completion and all public notices and fact sheets produced during the lifetime of the remedial project. 39 Prince Realty, LLC will inspect the repositories to ensure that they are fully populated with project information. The repository for this project is:

Queens Library – Flushing Branch

41-17 Main Street, Flushing, NY 11355

Tel: 718-661-1200

Hours of Operation:

Monday – 10am – 9pm

Tuesday – 1pm – 9pm

Wednesday – 10am – 9pm

Thursday - 10am – 9pm

Friday – 10am – 6pm

Saturday – 10am – 5:30pm

Sunday - closed

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Public Notice and Public Comment. Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository

information, and important phone and email contact information. All notices will be prepared by 39 Prince Realty, LLC reviewed and approved by OER prior to distribution and mailed by 39 Prince Realty, LLC, who is obligated to submit a certification of mailing to OER within five days of the mailing date. Public comment is solicited in public notices for all work plans developed under the NYC Brownfield Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones. Public notice and public comment activities occur at several steps during a typical NYC BCP project. See flow chart on the following page, which identifies when during the NYC BCP public notices are issued: These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan.**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

- **Public Notice announcing the approval of the RAWP and the start of remediation**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and

Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.

SUSTAINABILITY STATEMENT

The Sustainability Statement is a process employed by OER to encourage consideration of the benefits of sustainable remediation and development during the formative project planning process. The Sustainability Statement provides a summary of sustainability efforts to be employed by the Enrollee or its contracting team. OER strongly recommends, but does not require, that the Enrollee employ sustainable means to implement the selected remedy defined in this RAWP and subsequent redevelopment including those that take into consideration the sustainability goals defined in PlaNYC. Such goals include: maximizing the recycling and reuse of clean, non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and enhancing biodiversity during landscaping associated with Site development.

This Sustainability Statement summarizes sustainable activities and green remediation efforts to be employed under this Remedial Action Work Plan (RAWP). 39 Prince Realty, LLC proposes the following means to address these goals in the remediation and redevelopment.

Reuse of Clean, Recyclable Materials. Reuse of clean, recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction since these materials can be locally-derived.

An estimate of the mass (tonnage) of clean, non-virgin materials (reported by type of material) reused under this plan will be quantified and reported in the RAR.

Reduce Consumption of Virgin and Non-Renewable Resources. Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

An estimate of the mass (tonnage) of virgin and non-renewable resources, the use of which will be avoided under this plan, will be quantified and reported in the RAR.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency. Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions.

An estimated volume of clean fuels used during remedial activities will be quantified and reported in the RAR.

Recontamination Control. Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of existing contamination from off-Site.

Under future conditions, building recontamination from potential off-site sources will be prevented through the use of a vapor/waterproofing membrane beneath the concrete foundation and foundation wall surfaces.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in total acres and percentage of total Site area.

Storm-water Retention. Storm-water retention improves water quality by lowering the rate of combined storm-water and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.

An estimate of the enhanced storm-water retention capability of the brownfield redevelopment project will be included in the RAR.

Linkage with Green Building. Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.

The number of Green Buildings that are associated with this brownfield redevelopment property will be reported in the RAR. The total square footage of green building space created

as a function of this brownfield redevelopment will be quantified for residential, commercial and industrial/manufacturing uses.

Paperless Brownfield Cleanup Program. 39 Prince Realty, LLC is participating in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents, communications and milestone reports. A gross estimate of the mass (pounds) of paper saved under this plan will be reported in the RAR.

Low-Energy Project Management Program. 39 Prince Realty, LLC is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation. A gross estimate of the number of miles of personal transportation that is conserved in this process, and the number of commuter trips within NYC that are avoided will be quantified and reported in the RAR.

Grey Water Reuse. Reuse of gray water, including harvested rainwater, in place of water from NYC's water distribution system reduces demand on the city's water supply and conserves this valuable resource.

A gross estimate of the value of gray water reuse of the brownfield redevelopment project will be reported (gallons per day).

REMEDIAL ACTION WORK PLAN

1.0 INTRODUCTION

39 Prince Realty, LLC has enrolled as a Volunteer in the New York City Brownfield Cleanup Program (NYC BCP) to investigate and remediate a 0.9 acre site located at 39-16 Prince Street in Queens, New York City. Mixed residential and commercial use, is proposed for the property. 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 April 27 and May 11, 2010. It provides a remedial alternative analysis that includes consideration of a Track 1 (permanent) cleanup, and a description of the proposed remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and conforms with applicable City, State and Federal laws and regulations.

1.1 SITE LOCATION AND DESCRIPTION

The Site is located in Queens, New York City and is identified as Block 4973 and Lots 24 and 37 on the New York City Tax Map. Figure 1 of the RIR shows the Site location. The Site is 0.9-acres and is bounded by 39th Avenue to the north, Lot 37 and commercial stores to the south, Prince Street to the east, and commercial stores to the west. A map of the site boundary is shown in Figure 2 of the RIR. Currently, the Site is used as parking lot and contains a single booth at the entrance of the parking lot.

1.2 CONTEMPLATED REDEVELOPMENT PLAN

A RI was performed to compile and evaluate data and information necessary to develop this RAWP in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described below. However, the Remedial Action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

The contemplated future use of the Site will consist of include a mixed-use development that includes a nine story residential structure and a six story hotel structure atop a three story

commercial base with two levels of subterranean parking. Layout of the proposed site development is presented in Figure 3 of the RIR. The building will include retail spaces on the podium levels located within the E-74 Downtown Flushing Rezoning which has an “E” designation for noise. The current zoning designation is commercial (C4-2). The proposed use is consistent with existing zoning for the property.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The Site is located in predominantly commercial area. The Site is adjoined to the north by 39th Avenue, across which is a restaurant, gift shop, the Best Western hotel and the Flushing Mall; to the east by Prince Street, across which is Prince Center (a four-story commercial/office building); to the south by Lot 37 and to the west by the Ocean Jewel Seafood Restaurant. The surrounding area is served by public water supply and municipal sanitary sewers.

Sensitive Receptors

Nearby sensitive environmental receptors that have been identified within a 500-foot radius of the site include:

- Kon Wah Day School located approximately 340 feet northeast of the site, and
- Residential areas including the NYCHA Bland Houses directly south of the site across Roosevelt Avenue.

Figure 2 of the RIR shows the surrounding land usage, with sensitive environmental receptors indicated.

1.4 PRIOR ACTIVITY

Based on an evaluation of the data and information from the RIR and this RAWP, the presence of inactive hazardous waste as defined in ECL §27-1303 is not suspected.

2.0 DESCRIPTION OF REMEDIAL ACTION OBJECTIVES

2.1 REMEDIAL ACTION OBJECTIVES

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

2.1.1 Groundwater

- Remove contaminant sources causing impact to groundwater.
- Prevent direct exposure to contaminated groundwater.
- Prevent exposure to contaminants volatilizing from contaminated groundwater.

2.1.2 Soil

- Prevent direct contact with contaminated soil.
- Prevent exposure to contaminants volatilizing from contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.1.3 Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwelling and other occupied structures.

3.0 DESCRIPTION OF REMEDIAL ACTION PLAN

3.1 REMEDIAL ACTION ALTERNATIVES ANALYSIS

For One Fulton Square, a Track 1 remedial action alternative is considered in this alternative analysis. Alternative 1 is a Track 1 alternative that involves complete removal of all soil and fill within the property boundary. This alternative involves the excavation and removal of approximately 49,500 cubic yards of soil and fill and eliminates all contaminated sources. In addition, the installation of a concrete slab across the entire Site coupled with the installation of a vapor/waterproofing membrane beneath the concrete foundation and foundation wall surfaces will serve as Engineering Controls.

3.1.1 Threshold Criteria

3.1.1.1 Protection of public 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 how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

The Track 1 alternative will result in excavation of all soil with contaminant concentration above Track 1 SCOs and would:

- Eliminate the risk of ingestion exposures or other direct contact with contaminated on-Site soils consistent with remedial action objectives;
- Eliminate the risk of leaching into groundwater and ingestion exposures or direct contact with groundwater with contamination derived from the Site consistent with remedial action objectives; and
- Eliminate potential sources for on-Site production of soil vapors, and prevent migration of on-Site derived vapors into occupied structures and eliminate associated inhalation exposures consistent with remedial action objectives.

3.1.2. Balancing Criteria

3.1.2.1. Compliance with Standards, Criteria and Guidance (SCGs)

The Track 1 alternative would address the chemical-specific SCGs for soil by excavation and removal of all material above the Track 1 SCOs. Focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs.

3.1.2.2 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.

The Track 1 alternative would result in some short-term impacts due to the quantity of excavation and transport required to remove all historic fill and other material necessary to achieve Track 1 SCOs throughout the Site. These impacts could include higher air quality impacts caused by greater soil excavation, handling and load out, and associated truck traffic. Focused attention to means and methods employed during the remedial action, including community air monitoring and appropriate truck routing, would minimize or negate the overall impact of this additional activity.

3.1.2.3 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 eliminate exposures to contaminants, and long-term reliability of Engineering Controls.

The Track 1 alternative would be effective over the long-term by providing a permanent cleanup of on-Site contamination through removal of all soils in excess of the Track 1 SCOs and would eliminate any potential on-Site sources of soil vapors and groundwater contamination consistent with remedial action objectives.

3.1.2.4 Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of treatment 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 eliminate 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 Track 1 alternative will provide maximum reduction of toxicity, mobility and volume of contaminated material on-Site by excavation and removal of all soils that exceed the Track 1 unrestricted use SCOs.

3.1.2.5 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.

The Track 1 alternative is both feasible and implementable. It uses standard materials and services and well established technology. The reliability of the remedy is high. There are no special difficulties associated with any of the activities proposed but will require a long period of time to accomplish due to the large quantity of soil and fill material that would require removal.

3.1.2.6. Cost effectiveness

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

The capital costs for the Track 1 alternative is higher than a no-removal remedial action. Higher costs are driven by higher total volume of soil/fill that would be excavated and transported from the Site and disposed of at an off-Site location.

The Track 1 alternative satisfies the threshold balancing criterion and other criterion listed here, and is fully protective of public health and the environment, will control migration of contaminants, will comply with SCGs, are effective for the short-term and long-term, are implementable, and reduces both mobility and toxicity.

3.1.2.7 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.

Based on the overall goals of the remedial program and initial observations by the project team, the alternative will be acceptable to the community. This RAWP will be subject to and undergo public review under the NYC BCP and will provide the opportunity for detailed public input on the remedial alternative and the selected remedial action. This public comment will be considered by OER prior to approval of this plan.

3.1.2.8 Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

The Track 1 alternative for remedial action at the site is comparable with respect to the proposed use and to land uses in the vicinity of the Site. The proposed use is consistent with the existing zoning designation for the property and is consistent with recent development patterns. The Site is surrounded by residential and commercial properties and the proposed alternative provides comprehensive protection of public health and the environment for these uses. Improvements in the current brownfield condition of the property achieved by the alternative is also consistent with the City's goals for cleanup of contaminated land and bringing such properties into productive reuse. The alternative is equally protective of natural resources and cultural resources. This RAWP will be subject to public review under the NYC BCP and will provide the opportunity for detailed public input on the land use factors described in this section. This public comment will be considered by OER prior to approval of this plan.

3.1.2.9. Sustainability of the remedial action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in *PlaNYC: A Greener*,

Greater New York. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

The alternative has the potential to utilize sustainable means to achieve the cleanup goals. This program contemplates the utilization of several green remediation methods that are compatible with the alternative. The full list of green remediation activities considered in this program is included in the Sustainability Statement.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial alternative is the Track 1 Alternative. The preferred remedy achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standards methods that are well established in the industry.

The elements of this remedial action are:

1. Preparation of a Community Protection Statement and performance of all required NYC BCP citizen participation activities according to an approved Citizen Participation Plan (CPP).
2. Establish Track 1 Soil Cleanup Objectives (SCOs).
3. Excavation and removal of soil/fill exceeding Track 1 SCOs. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with all Federal, State and City laws and regulations for handling, transport, and disposal.
4. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of SCOs.
5. Installation of a vapor/waterproof membrane system beneath entire building slab. A two level underground parking garage will be built below grade and will be ventilated in conformance with NYC building code.
6. Performance of Community Air Monitoring Program for particulates and volatile organic carbon compounds.

7. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
8. Implementation of storm-water pollution prevention measures.
9. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and City laws and regulations.
10. Sampling and analysis of excavated media as required by disposal facilities.
11. Removal of all Underground Storage Tanks, if any, and closure of petroleum spills, if any, under authority of New York State Department of Environmental Conservation.
12. Screening for indications of contamination (by visual means, odor, and monitoring with a photo ionization detector (PID)) of excavated soil/fill during all intrusive work.
13. Submission of a RAR that describes the remedial activities including any changes from this RAWP, certifies that the remedial requirements have or will be achieved, defines the Site boundaries, and describes any Engineering Controls to be implemented at the Site.

Remedial activities will be performed at the Site in accordance with this OER-approved RAWP. All deviations from the RAWP will be promptly reported to OER. Changes will be documented in the RAR.

4.2 SOIL CLEANUP OBJECTIVES AND MATERIALS REMOVAL

Track 1 cleanup standards are proposed for this project. The Soil Cleanup Objectives (SCOs) for this Site are listed in Table 7 of the RIR.

Soil and materials management on-Site and off-Site will be conducted in accordance with the soil management plan as described below. All primary contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the Remedial Action Report.

4.3 ESTIMATED MATERIAL REMOVAL AND IMPORT QUANTITIES

The total quantity of soil and fill expected to be disposed off-Site is approximately 49,500 cubic yards. Approximately 49,500 cubic yards will be disposed as fill material and will be disposed at a solid waste landfill.

No soil is anticipated to be imported into the Site since the entire excavated area will be developed into a multi-story building.

4.4 POST EXCAVATION END-POINT SAMPLING

Each hotspot and structure to be removed under this remedial action will be performed in conjunction with remedial performance end-point sampling. Sampling and testing will be performed promptly following materials removal and completed prior to Site development activities.

4.4.1 End-Point Sampling Frequency

End-point sampling frequency will consist of the following:

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
2. For excavations 20 to 300 feet in perimeter:
 - For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
 - For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

Post-remediation sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-

remediation samples should be biased toward locations and depths of the highest expected contamination.

4.4.2 Analytical Methodology

All end-point samples will be analyzed utilizing the following methodology:

All soil samples will be analyzed for:

- volatile organic compounds (VOCs) by EPA Method 8260;
- semi-volatile organic compounds (SVOCs) by EPA Method 8270;
- Target Analyte List (TAL) metals; and
- pesticides/PCBs by EPA Method 8081/8082.

If required, groundwater samples will be analyzed for:

- VOCs by EPA Method 8260;
- SVOCs by EPA Method 8270;
- TAL metals, and
- Pesticides/PCBs by Method 8081/8082.

If required, soil gas samples will be analyzed for VOCs by EPA method TO-15.

If either LNAPL and/or DNAPL are detected a sample will be collected for characterization and “finger print analysis”.

4.4.3 Reporting of End-Point Data in Remedial Action Report

Chemical labs used for all end-point sample analytical results will be reported in the RAR. The RAR will provide a tabular and map summary of all end-point sample results.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION

Principal personnel who will participate in the remedial action include Wendy Shen, Senior Engineer and Sin Senh, Principal Hydrogeologist.

5.2 PROGRAM OVERSIGHT

The Professional Engineer (PE) for this project is Brian P. Morrissey.

5.3 SITE SECURITY

Site access will be controlled by 39 Prince Realty, LLC through gated entrances to the fenced property. Barriers will be installed as needed to delineate and restrict access to the work area. For work areas of limited size, barrier tape will be sufficient to delineate and restrict access. For larger worker areas, temporary fencing will be provided.

5.4 WORK HOURS

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.

5.5 CONSTRUCTION HEALTH AND SAFETY PLAN (HASP)

The Health and Safety Plan is included in Appendix D of the RIR. The Site Safety Coordinator will be Carolyn Roth. All remedial work performed under this RAWP will be in full compliance with all applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with all OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and all applicable laws and regulations. The HASP pertains to all remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

5.6 WORKER TRAINING AND MONITORING

All field personnel involved in remedial activities will participate in all training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining all workers training records.

All personnel entering the exclusion zone will be trained in the provisions of the HASP and be required to sign an HASP acknowledgment. Site-specific training will be provided to all field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

5.7 EMERGENCY CONTACT INFORMATION

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use by OER in the case of emergency.

5.8 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or 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. Exceedences of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

5.8.1 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 must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

5.8.2 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/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ 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 $150 \text{ mcg}/\text{m}^3$ 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 $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.9 AGENCY APPROVALS

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.10 SITE PREPARATION

5.10.1 Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

5.10.2 Mobilization

The first step in site preparation is 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 the field investigation), 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.

5.10.3 Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site are not tracking soil fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck wash and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

5.10.4 Utility Marker Layouts, Easement Layouts

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. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout 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.

5.10.5 Dewatering

Excavations that extend below the water table may require dewatering. Submersible pumps will be used to extract groundwater from gravel lined sumps in the excavations or a system of well points will be used for groundwater extraction. Extracted groundwater will be conveyed to a storage tank or treatment system.

Depending on the selected discharge option, a NYC DEP sewer use permit will be obtained to discharge treated groundwater to the nearest sewers.

5.10.6 Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that is consistent with City, State, and Federal regulations. A Site map showing the location(s) of proposed equipment and material staging areas, truck wash, stockpile areas, and other pertinent remedial management features will be prepared by the Subcontractor prior to start of construction activities.

5.10.7 Decontamination Area and Truck Wash

A decontamination area will be established on the project site.

A truck wash pad will be set up close to the Site exit. Before exiting the NYC BCP Site, trucks will be required to stop at the truck wash pad and will be inspected for evidence of contaminated soil on the undercarriage, body, and wheels. Soil will be removed. After wetting with potable water, brooms or shovels will be utilized for the bulk removal of soil from vehicles and equipment. The procedure for the removal of the remaining soil and liquids will consist of washing with potable water. Odor suppressant foam will be applied, if necessary, to control odors from soil in trucks.

Soil generated by the truck wash process will be stockpiled and tested, and based on the results of the testing will be either reused on-Site or transported off-Site for disposal.

5.11 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 area[s], and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (e.g., soil excavators) will be washed on the truck wash pad as necessary. In addition, all investigation and remediation derived waste (IDW) e.g., decontamination fluids, drill cuttings, recirculation water, well development purge water, etc. will be containerized in 55-gallon drums and staged for characterization at a secured location on-Site and will be appropriately disposed.

5.12 TRAFFIC CONTROL

Trucks leaving the NYC BCP Site will proceed without stopping in the neighborhood to prevent neighborhood impacts. The planned route on local roads for trucks leaving the site will be prepared by the Subcontractor prior to start of construction activities.

5.13 REPORTING

All required reports will be included as an Appendix in the Remedial Action Report.

5.13.1 Daily Reports

Daily reports providing a summary of activities for each day of active remedial work will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- A statement of the activities and an update of progress made;

- Locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions;
- Photographs of notable Site conditions and activities.
- OER assigned project number.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication.

5.14 RECORD KEEPING AND PHOTO-DOCUMENTATION

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site at all times during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during all major remedial activities to illustrate remedial program elements and all contaminant source areas. Select photographs will be submitted everyday along with the daily reports. Photographs will be properly tagged and submitted at the completion of the project in the RAR on electronic media (jpeg files).

5.15 COMPLAINT MANAGEMENT

All complaints from citizens will be promptly notified to OER by phone and email. Complaints from the public will be addressed as appropriate through modifications to the remedial program. Complaints will be promptly addressed and outcomes will also be reported to

OER in daily reports. These reports will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.16 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

All changes to the RAWP will be reported to the OER Project Manager and will be documented in daily reports and in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP, at a minimum, will include a written submission to the OER with the following information:

- A request for OER approval regarding the deviation.
- 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.

5.17 DUSR

The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data without third party data validation including post remedial samples. The primary objective of a DUSR is to determine whether or not the data meets the site/project specific criteria for data quality and data use. The DUSR for post-remedial samples collected during implementation of this RAWP will be included in the Remedial Action Report (RAR).

6.0 SOILS/MATERIALS MANAGEMENT PLAN

6.1 SOIL SCREENING METHODS

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the RAR. Soil screening will be performed during all excavation and invasive work performed during the remedy and development phases, including excavations for foundations and utility work, prior to issuance of the Notice of Completion. It will be the responsibility of the PE, QEP's certifying the remedy to provide technically competent field staff with proper experience to oversee all excavation activity. A description of experience of field staff will be provided to OER upon request.

6.2 STOCKPILE METHODS

Excavated soil from suspected areas of contamination and contaminated materials from different sources (e.g., hot spots, USTs, drains, etc.) will be stockpiled separately and will be segregated from other soil and construction materials.

Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and, hay bales will be used as needed near catch basins, surface waters and other discharge points. Soil stockpile areas will be appropriately graded to control run-off in accordance with a Stormwater Pollution Prevention Plan for the Site. All stockpile activities will be compliant with applicable City, State and Federal laws and regulations.

6.3 CHARACTERIZATION OF EXCAVATED MATERIALS

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner that is consistent with the requirements of the receiving facility, and in compliance with applicable laws and regulations. Soils proposed for reuse on-Site will be managed as defined in Section 6.7 of this plan.

6.4 MATERIALS EXCAVATION, LOAD-OUT AND DEPARTURE

The PE will oversee all invasive work and the excavation and load-out of all excavated material and will ensure that there is a party responsible for the safe execution of all invasive and other work performed under this work plan.

The PE will ensure that Site development activities will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP. Development-related grading cuts will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

The presence of utilities and easements on the Site has been investigated by the PE who will ensure that any identified risks from work proposed under this plan are properly addressed by appropriate parties.

A truck wash pad will be maintained on-Site and the PE will be responsible for ensuring that all loaded outbound trucks are cleaned before leaving the Site. Locations where vehicles exit the Site shall be inspected daily for evidence of off-Site soil tracking. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials. The PE will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation and development.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

6.5 OFF-SITE MATERIALS TRANSPORT

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate tarping and secure covering, manifests, and placards) in accordance with City, State, and Federal laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. Loose or incomplete truck covers will be prohibited. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes figure will be prepared by the Subcontractor prior to start of construction activities. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of City mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

6.6 MATERIALS DISPOSAL OFF-SITE

The following documentation will be established and reported by the PE for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with all applicable laws and regulations: (1) a letter from the PE or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed of is regulated material generated at an environmental remediation Site in Queens, New York City under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE or enrollee. 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 each disposal facility stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the RAR.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with

disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RAR.

The proposed disposal locations for Site-derived impacted materials will be prepared prior to start of construction activities in accordance with the template below. Additional disposal locations established at a later date will be reported promptly to the OER Project Manager.

<u>Disposal Facility</u>	<u>Waste Type</u>	<u>Estimated Quantities</u>
(i.e. facility name, city, state)	i.e. historic fill and/or petroleum contaminated soil	(#) tons
(i.e. facility name, city, state)	Contaminated Soil	(#) tons
(i.e. facility name, city, state)	Contaminated liquid	(#) gallons

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with all City, State and Federal laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This formal request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material. Unregulated off-Site management of soil, fill or other excavated materials from this Site without OER approval is otherwise prohibited.

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization

sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RAR. A manifest system or equivalent to oversee off-Site transportation of exported materials will be employed. This information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable City, State, and Federal laws and regulations.

6.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property will not be reused onsite.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

6.8 DEMARCATION

Since the entire Site will be excavated and no backfilling is required, a demarcation layer is not necessary.

6.9 IMPORT OF BACKFILL SOIL FROM OFF-SITE SOURCES

No backfill soil from off-site sources is anticipated to be imported. Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by, and in full compliance with applicable regulations of NYSDEC. Facilities will be identified in the RAR. A PE is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as, cover material.

6.10 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable City, State, and Federal laws and

regulations. Discharge to the New York City sewer represents the preferred method for management of dewatering fluid during construction. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

6.11 STORM-WATER POLLUTION PREVENTION

All applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Where discharge locations or points are accessible, they will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

6.12 CONTINGENCY PLAN

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown or unexpected contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

6.13 ODOR, DUST AND NUISANCE CONTROL

6.13.1. Odor Control

All necessary means will be employed to prevent on- and off-Site odor 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) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. 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. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the Remedial Action Report.

6.13.2 Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.

- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Action Report.

6.13.3 Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

7.0 ENGINEERING CONTROLS

Engineering Controls (EC) have been incorporated in this remedial action to render the Site protective of public health and the environment. These ECs are described hereafter.

7.1 INSTITUTIONAL CONTROLS

- Institutional Controls will not be required because the site will be cleaned up to Track 1 SCOs.

7.2 ENGINEERING CONTROL SYSTEMS

7.2.1 Vapor/Waterproofing System

The building design for the foundation includes an exterior vapor/waterproofing system to prevent infiltration of vapor and moisture into the structure below grade, and construction of a ventilated parking garage in two stories below grade. A sheet vapor/waterproofing membrane will be installed in various locations, including foundation wall surfaces and underslab conditions. The proposed vapor/waterproofing membrane will serve as a vapor barrier. Additional detail about the vapor/waterproofing membrane is included in the Revised Remedial Action Plan dated October 15, 2010 and prepared by Roux Associates. The vapor/waterproofing membrane is a permanent engineering control for the Site.

7.2.2 Composite Cover System

The entire property will be covered by an engineered cover system. This cover system will be comprised of the building slab beneath the entire property and is as a permanent engineering control for the Site.

8.0 REMEDIAL ACTION REPORT

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- As-built drawings for all constructed remedial elements, required certifications, manifests, bills of lading and other written and photographic documentation of remedial work performed under this remedy;
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents;
- 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;
- Test results or other evidence demonstrating that remedial systems are functioning properly;
- Tabular summary and comparison of end point samples to Track 1 6NYCRR Part 375-6.8 SCOs;
- Account of the source area locations and characteristics of all contaminated material removed from the Site including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids, including a map showing all source areas;
- Account of the disposal destination of all contaminated material removed from the Site and documentation associated with disposal of all material will include records and approvals for receipt of the material.
- All reports and supporting material will be submitted in digital form (pdf format) and other digital formats as required by OER.

8.1 REMEDIAL ACTION REPORT CERTIFICATION

The following certification will appear in front of the Executive Summary of the Remedial Action Report. The certification will include the following statements:

I, Brian P. Morrissey, 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 One Fulton Square Site [Site No. 11CBP006Q].

I certify that the Site description presented in this RAR is identical to the Site descriptions and associated amendments presented in the NYC Brownfield Cleanup Agreement for One Fulton Square.

I certify that the OER-approved Remedial Action Work Plan dated January 14 2011 and Stipulations in a letter dated [month day, year; if any] were implemented and that all requirements in those documents have been substantively complied with.

I certify that the remedial activities were observed by qualified professionals under my supervision and that the remediation requirements set forth in the Remedial Action Work Plan have been achieved.

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

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.

9.0 SCHEDULE

The table below presents a schedule for proposed remediation and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a 4 month remediation (earthwork and concrete work) period is anticipated. The construction for the superstructure will continue until January 2014.

Schedule Milestone	Weeks from Remedial Action Start	Estimated Start Date	Duration (weeks)
OER Approval of RAWP		1/14/11	4
Fact Sheet (start of Remedy)		2/14/11	0
Mobilization		2/15/11	1
Hot Spot Excavation		2/22/11	17
Vapor Barrier		10/21/11	8
Demobilization		10/14/11	1
Record Declaration of Covenants and Restrictions		10/15/11	4
Submit Draft Remedial Action Report		12/15/11	4
Submit Final Remedial Action Report		1/14/12	4
Obtain Notice of Completion		3/1/12	6