566 CARROLL STREET

BROOKLYN, NEW YORK

Remedial Action Report

NYC VCP Number: 14CVCP224K

OER Project Number: 13EHAZ454K)

Prepared for:

Ms. Angeline Huang
566 Carroll Street, LLC
260 West 71st Street
New York, NY 10023
(917) 806-0750
angeline_huang@yahoo.com

Prepared by:

Airtek Environmental Corp.
39-37 29th Street
Long Island City, New York 11101
(718) 937-3720
cchen@airtekenv.com

SEPTEMBER 2015

REMEDIAL ACTION REPORT
TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

Appendix 1: Remedial Investigation Report

Appendix 2: Remedial Action Work Plan

Appendix 3: Results of Community Air Monitoring

Appendix 4: Daily Reports to OER (Photographs of Remedial Action are included)

Appendix 5: End-Point Samples Analytical Laboratory Data

Appendix 6: Disposal Facility Approval and Approval Letter

Appendix 7: Shipping and Disposal Manifests

Appendix 8: Disposal Characterization Sample Laboratory Testing Results

Appendix 9: Imported Backfill Laboratory Analytical Data Reports

Appendix 10: Photographs of Installation of the Vapor Barrier System

Appendix 11: Supplemental Information on the Vapor Barrier System

LIST OF ACRONYMS

Acronym	Definition
CAMP	Community Air Monitoring Plan
DER-10	NYS DEC Division of Environmental Remediation Technical Guidance Manual 10
EC	Engineering Control
HASP	Health and Safety Plan
IC	Institutional Control
NYC VCP	New York City Voluntary Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
ORC	Oxygen Release Compound
PID	Photoionization Detector
QA/QC	Quality Assurance/Quality Control
QEP	Qualified Environmental Professional
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan
SCG	Standards, Criteria and Guidance
SCO	Soil Cleanup Objective
SMMP	Soil/Materials Management Plan
SMP	Site Management Plan
SVOCs	Semi-Volatile Organic Compounds
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

CERTIFICATION

I, Ravi Korlipara, am currently a registered professional engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for implementation of the remedial program for the 566 Carroll Street, Brooklyn, New York site, site number 14CVCP224K. I certify to the following:

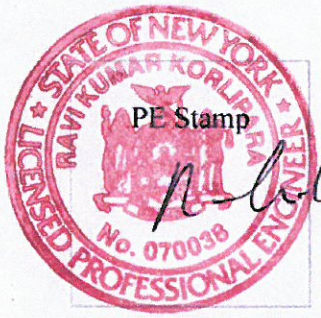
- I have reviewed this document, to which my signature and seal are affixed.
- Engineering Controls implemented during this remedial action were designed by me or a person under my direct supervision and achieve the goals established in the Remedial Action Work Plan for this site.
- The Engineering Controls constructed during this remedial action were professionally observed by me or by a person under my direct supervision and (1) are consistent with the Engineering Control design established in the Remedial action Work Plan and (2) are accurately reflected in the text and drawings for as-built design reported in this Remedial Action Report.
- The OER-approved Remedial Action Work Plan dated April 2014 and Stipulations in a letter dated July 16, 2014 were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

Name Ravi Korlipara

PE License Number 070038

Signature

Date 10/30/2015



PE Stamp

I, Mike Zouak, am a Qualified Environmental Professional. I had primary direct responsibility for implementation of the remedial program for the 566 Carroll Street, Brooklyn, New York site, site number 14CVCP224K. I certify to the following:

- The OER-approved Remedial Action Work Plan dated April 2014 and Stipulations in a letter dated July 16, 2014 were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

QEP Name Mike Zouak

QEP Signature

Date 10/30/2015

EXECUTIVE SUMMARY

Ms. Angeline Huang has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 566 Carroll Street in the Park Slope section of Brooklyn, New York. A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A remedial action was performed pursuant to an OER-approved RAWP in a manner that has rendered the Site protective of public health and the environment consistent with the proposed use of the property. This RAR describes the remedial action performed under the RAWP. 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 applicable laws and regulations.

Site Location and Background

The Site is located at 566 Carroll Street in the Park Slope section of Brooklyn, New York and is identified as Block 961 and Lot 7 on the New York City Tax Map. The Site was an unpaved, vacant lot with weedy undergrowth. A chain-link fence with barbed wire lied at the north and south boundaries of the Site.

Summary of Redevelopment Plan

The proposed use of the Site will consist of developing a new residential building of four stories with a cellar and a bulkhead. Cellar will consist of spaces for building's mechanical and maintenance facilities, and an approximately 18 feet by 25 feet of recreation area. The upper four floors will be used as one residential unit. The proposed structure will be full 20 feet width of the lot and 36.75 feet deep with a 19-foot rear yard. Portion of the rear yard will have an open porch with approximately 13 feet in width along the east side lot line that will extend 5+/- feet from the building. The remainder of the rear yard will consist of vegetative cover for all open spaces. Grass as vegetative coverage is proposed for entire rear yard, including under porch. New shrubs/trees are proposed for rear yard along perimeter fence. The final depth of foundation/footing will be approximately eight feet, but underpinning is likely along the eastern exterior wall.

Additionally, a footing for the porch will need to be constructed. Based on this planned depth and the total area of the proposed structure, Airtek anticipates the generation of approximately 280 tons of excavation material during development of the sub-grade area. The current zoning designation is R8A & C2-4, Residential District with Commercial Overlay.

Summary of Surrounding Property

The Site is bounded by Carroll Street to the north, a paved parking lot north of the roadway, a residential structure to the south on Garfield Place, and residential structures to the east and west on Carroll Street.

Summary of Past Site Uses of Site and Areas of Concern

The Site was previously occupied by a three-story residential building and two (2) one-story structures which were demolished circa 1968. The Site was vacant land since 1968. The historical research conducted for this assessment has established the residential use of the Site prior to 1888. Residential use appears to have been the primary use at the Site until the Site became vacant land.

The following environmental assessment report was developed for the Site:

Phase I Environmental Site Assessment, June 19, 2013, prepared by Airtek Environmental Corp.

The Phase I report was prepared by Airtek Environmental Corp. (Airtek) for Ms. Angeline Huang of 566 Carroll Street, LLC., dated June 19, 2013.

This Phase I identified two (2) recognized environmental conditions (RECs):

1. New York City Little "E" Designations (E-113) for Block 961, Lot 7. Specifically, an E-113 designation, which pertains to Park Slope Rezoning Program, was placed on the Site effective April 30, 2003. The action is intended to preserve the historical scale of brownstone neighborhood and provide increased opportunities for residential and commercial development on Fourth Avenue. The Site is identified under the E-113 designation under Hazardous Materials. The specific description of the Hazardous Material designation is "Underground Gasoline Storage Tanks Testing Protocol".

2. Past presence of two (2) gasoline underground storage tanks (USTs) in a garage building on the adjoining property to the west at 562-564 Carroll Street (as depicted in the 1926 and 1951 fire insurance maps).

Summary of the Work Performed under the Remedial Investigation

1. Installed three soil borings at the Site. Collected 7 soil samples from the three soil borings, including a duplicate sample.
2. Two of the three soil borings were converted to temporary groundwater monitoring wells. Collected three groundwater samples from two groundwater monitoring wells, including a duplicate sample.
3. Installed two soil vapor monitoring implants at the Site. Collected two soil vapor samples from two monitoring implants.
4. Installed one soil vapor monitoring implant at the Site. Collected one confirmatory soil vapor sample from the monitoring implant.
5. Prepared RIR based upon all investigation results.

Summary of Findings of Remedial Investigation

1. Elevation of the property ranges from approximately 21.83 feet (rear/south) to 22.74 feet (front/north).
2. Depth to groundwater ranges from 18.6 feet to 19 feet bgs at the Site.
3. Groundwater flow is generally from east to west beneath the Site.
4. Depth to bedrock is greater than 25 feet at the Site.
5. The stratigraphy, from land surface to approximately 25 feet down, consists of historic fill from zero to 4 feet (concrete fragments and urban fill material). The fill layer is underlain by natural soil to variable depths ranging from 2 to 25 feet (coarse to fine sand, silty clay, silty sand, and fine sand). Bedrock was not encountered during the subsurface investigation.
6. Soil/fill samples collected during the RI showed no PCBs or VOCs at detectable concentrations. Two SVOCs, Benzo(b)fluoranthene (1 mg/kg)

and Indeno(1,2,3-cd)Pyrene (0.51 mg/kg), were detected within the deep sample in the proposed rear yard at the depth between 2 feet to 4 feet at concentrations above their Track 1 Unrestricted Use SCOs. These SVOCs are both PAH compounds, and their concentrations and distributions indicate that they are associated with historical fill material observed in shallow samples. Three metals exceeded Track 1 Unrestricted Use SCOs, i.e. lead (ranging from 72 to 560 ppm) in three samples, including two shallow samples and one deep sample; mercury (max. 1.2 ppm) in two samples; and zinc (max. 240 ppm) in two samples. Pesticides were detected in five samples at concentrations above their Track 1 Unrestricted Use SCOs, including 4,4'-DDD (max. 0.024) in two samples; 4,4'-DDE (max. 0.0697 ppm) in four samples; 4,4'-DDT (max. 0.204 ppm) in four samples; and Dieldrin (0.0161 ppm) in one deep sample. Overall, the findings were consistent with observations for other historic fill sites in NYC and did not indicate a significant source area.

7. Groundwater samples collected during the RI did not show any detectable concentrations of VOCs, SVOCs, PCBs or pesticides. However, detection limits for many VOCs, SVOCs and pesticides were greater than NYSDEC GQS guidelines. One metal, Antimony (12.4 µg/L), was detected above its NYSDEC GQS in a dissolved groundwater sample. However, detection limits for some metals were greater than NYSDEC GQS guidelines. These results indicate the impact of regional sources of salinity. The RI indicates that groundwater is not impacted by site conditions and did not reveal any sources of contaminants onsite.

8. Soil vapor samples collected during the RI showed petroleum-related VOCs and chlorinated VOCs at generally low concentrations. Tetrachloroethene (PCE) was identified in one sample at a concentration of 3.97 µg/m^3. This result is below the monitoring level range of the Sate DOH sub-slab soil vapor guidance matrix. Trichlorofluoromethane (CFC 11) was detected in all three samples at concentrations ranging from 394 to 6,570 µg/m^3.

Trichloroethene (TCE) in one sample was identified at a concentration of 10.3 µg/m^3, however, this reflected an elevated detection limit for TCE in that laboratory sample. The TCE concentration in the confirmatory sample collected at the same location was identified as non-detect, with a lower detection limit of 1.07µg/m^3. The TCE concentration in the third sample was also identified as non-detect, with a lower detection limit of 3.01 µg/m^3. Low to moderate concentrations of petroleum related hydrocarbons included BTEX and associated compounds were detected in both soil vapor samples. Toluene exhibited the highest level of 39.9 µg/m^3. No chlorinated or petroleum-related VOCs were detected within any of the soil or groundwater samples collected at the Site and these low levels in soil vapor are suspected to have an offsite origin. Data collected during the RI is sufficient to delineate the distribution of contaminants in soil vapor at the Site. Most other petroleum hydrocarbons were generally identified at concentrations below 35 µg/m^3.

Summary of the Remedial Action

The remedial action achieved protection of public health and the environment for the intended use of the property. The remedial action achieved all of the remedial action objectives established for the project and addressed applicable standards, criterion, and guidance; was effective in both the short-term and long-term and reduced mobility, toxicity and volume of contaminants; was cost effective and implementable; and used standards methods that are well established in the industry.

A summary of the milestones achieved in the Remedial Action is as follows: A Pre-Application Meeting was held on June 21, 2013. A Remedial Investigation (RI) was performed from August to October, 2013. A RI Report was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established. A RAWP was prepared and released with a Fact Sheet on April 23, 2014 for a 30-day public comment period. The RAWP and Stipulation List dated July 16, 2014 was approved by the New York City Office of Environmental Remediation (OER) on July 17, 2014. A Pre-Construction Meeting was held on December 5, 2014. A Fact

Sheet providing notice of the start of the remedial action was issued on December 10, 2014. The remedial action was begun in January, 2015 and completed in February, 2015. The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan.
2. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Established Track 1 Site Specific Soil Cleanup Objectives (SCOs). Collected and analyzed end-point samples. Achieved Track 4 Site Specific SCOs for soil at the Site. The following Track 4 SCO's were utilized:

Contaminant	Track 4 SCOs
Total SVOCs	250 ppm
Lead	800 ppm (Track 2 Restricted Residential SCO)
Mercury	2.0 ppm (Track 2 Restricted Residential SCO)

4. Mobilized on site in January 2015 and established Site security, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Soil/fill was excavated to a depth of 8 feet from grade beneath the area of the new building and to a depth of 5 +/- feet in the rear yard. A total of 508.09 tons of soil/fill was excavated and removed from the property. Soil/fill was disposed at the following facilities: 508.09 tons (contaminated non-hazardous soil/fill) to Bayshore Soil Management LLC. All excavated soil/fill material was screened during intrusive work for indications of contamination by visual means, odor, and monitoring with a photoionization detector (PID).
6. Sampled and analyzed excavated media as required by disposal facilities. Appropriately segregated excavated media onsite prior to disposal.
7. Transported and disposed all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and the RAWP.
8. Constructed an engineered Composite Cover System consisting of two feet of Mat Slab below the new building footprint, five feet of clean soil/vegetative cover in the rear yard and two feet of clean soil/vegetative cover for all open

spaces to prevent human exposure to residual soil/fill remaining under the Site to prevent human exposure to residual soil/fill remaining under the Site.

9. Installed a Vapor Barrier System that consisted of placement of Grace Preprufe 300R for horizontal applications (46 mil), beneath the building concrete slab, as well as Grace Preprufe 160R for vertical applications (32 mil) behind foundation walls of the proposed building. The waterproofing and vapor barrier membranes were installed per Preprufe Manufacturer's (W.R. Grace's) instructions utilizing all Preprufe Manufacturer supplied and/or recommended system components related to sealing the overlaps, joints, corners, etc. The installation was performed by a contractor with experience in the proposed product, and was certified by the installation contractor and by W.R. Grace's representative, as a seal-tight, protective installation. The contractor for construction of the Vapor Barrier System was CTI Construction, Inc.
10. Imported approximately 81 tons of clean material for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
11. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations.
12. Performed all activities required for the Remedial Action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
13. Residual materials are present beneath the cover layer and will be subject to Site Management under this Remedial Action.
14. Submitted a Sustainability Statement.
15. Submitted a RAR that describes the Remedial Action, certifies that the remedial requirements defined in the Remedial Action Work Plan have been achieved; defines the Site boundaries; describes all Engineering and Institutional Controls applicable to the Site; and describes any changes from the RAWP.
16. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for operation, maintenance, inspection and certification of the performance of Engineering Controls and Institutional Controls. Results of

inspections and certification of performance of all Engineering Controls and Institutional Controls will be included in an Inspection and Certification Letter Report to be submitted by July 30, 2021 (for the reporting period calendar years 2016-2020), July 30, 2026 (for the reporting period calendar years 2021-2025) and every five years thereafter (for the reporting period consisting of the five prior calendar years).

17. The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Engineering Controls and Institutional Controls will be managed in compliance with the SMP. Institutional Controls will include prohibition of the following: (1) prohibition of vegetable gardening and farming in residual soil; (2) prohibition of the use of groundwater beneath the site without treatment rendering it safe for the intended use; (3) prohibition of disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) prohibition of higher levels of land usage than the restricted residential use addressed by this remedial action without prior notification and approval by OER.

REMEDIAL ACTION REPORT

1.0 SITE BACKGROUND

Ms. Angeline Huang has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 566 Carroll Street in the Park Slope section of Brooklyn, New York. The boundary of the property subject to this Remedial Action is shown in Figure *1* and includes, in their entirety, Brooklyn Block 961 and Lot 7.

The Remedial Action was performed pursuant to the OER-approved RAWP in a manner that has rendered the property protective of public health and the environment consistent with its intended use. This RAR describes the remedial action performed under the RAWP. 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 applicable laws and regulations.

1.1 SITE LOCATION AND BACKGROUND

The Site is located at 566 Carroll Street in the Park Slope section of Brooklyn, New York and is identified as Block 961and Lot 7 on the New York City Tax Map. The Site was an unpaved, vacant lot with weedy undergrowth. A chain-link fence with barbed wire lied at the north and south boundaries of the Site.

1.2 REDEVELOPMENT PLAN

The proposed use of the Site will consist of developing a new residential building of four stories with a cellar and a bulkhead. Cellar will consist of spaces for building's mechanical and maintenance facilities, and an approximately 18 feet by 25 feet of recreation area. The upper four floors will be used as one residential unit. The proposed structure will be full 20 feet width of the lot and 36.75 feet deep with a 19-foot rear yard. Portion of the rear yard will have an open porch with approximately 13 feet in width along the east side lot line that will extend 5+/- feet from the building. The remainder of the rear yard will consist of vegetative cover for all open spaces. Grass as vegetative coverage is proposed for entire rear yard, including under porch. New shrubs/trees are

proposed for rear yard along perimeter fence. The final depth of foundation/footing will be approximately eight feet, but underpinning is likely along the eastern exterior wall. Additionally, a footing for the porch will need to be constructed. Based on this planned depth and the total area of the proposed structure, Airtek anticipates the generation of approximately 280 tons of excavation material during development of the sub-grade area. The current zoning designation is R8A & C2-4, Residential District with Commercial Overlay. Figure *2* shows the Site Redevelopment Plan.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The area surrounding the Site consists of residential properties, each zoned primarily for residential use with commercial overlay. The uses and features of adjoining properties are described below.

North: Carroll Street and a paved parking lot for a residential building located further north.

East: A two-story residential building at 568 Carroll Street.

South: A three-story residential building at 15 Garfield Place.

West: A seven-story residential building at 562 Carroll Street.

There are no sensitive receptors, such as schools, hospitals, and day care facilities, located within a 250 to 500-foot radius. Figure *3* shows the surrounding land usage.

1.4 SUMMARY OF PAST SITE USES AND AREAS OF CONCERN

The following environmental assessment report was developed for the Site:

Phase I Environmental Site Assessment, June 19, 2013, prepared by Airtek Environmental Corp.

The Phase I report was prepared by Airtek Environmental Corp. (Airtek) for Ms. Angeline Huang of 566 Carroll Street, LLC., dated June 19, 2013.

This Phase I identified the following past uses of the Site:

The Site was previously occupied by a three-story residential building and two (2) one-story structures which were demolished circa 1968. The Site was vacant land since 1968. The historical research conducted for this assessment has established the residential use of the Site prior to 1888. Residential use appears to have been the primary use at the Site until the Site became vacant land.

This Phase I identified two (2) recognized environmental conditions (RECs):

1. New York City Little "E" Designations (E-113) for Block 961, Lot 7. Specifically, an E-113 designation, which pertains to Park Slope Rezoning Program, was placed on the Site effective April 30, 2003. The action is intended to preserve the historical scale of brownstone neighborhood and provide increased opportunities for residential and commercial development on Fourth Avenue. The Site is identified under the E-113 designation under Hazardous Materials. The specific description of the Hazardous Material designation is "Underground Gasoline Storage Tanks Testing Protocol".
2. Past presence of two (2) gasoline underground storage tanks (USTs) in a garage building on the adjoining property to the west at 562-564 Carroll Street (as depicted in the 1926 and 1951 fire insurance maps).

1.5 SUMMARY OF WORK PERFORMED UNDER THE REMEDIAL INVESTIGATION

1. Installed three soil borings at the Site. Collected 7 soil samples from the three soil borings, including a duplicate sample.
2. Two of the three soil borings were converted to temporary groundwater monitoring wells. Collected three groundwater samples from two groundwater monitoring wells, including a duplicate sample.
3. Installed two soil vapor monitoring implants at the Site. Collected two soil vapor samples from two monitoring implants.
4. Installed one soil vapor monitoring implant at the Site. Collected one confirmatory soil vapor sample from the monitoring implant.
5. Prepared RIR based upon all investigation results.

1.6 SUMMARY OF FINDINGS OF REMEDIAL INVESTIGATION

1. Elevation of the property ranges from approximately 21.83 feet (rear/south) to 22.74 feet (front/north).

2. Depth to groundwater ranges from 18.6 feet to 19 feet bgs at the Site.

3. Groundwater flow is generally from east to west beneath the Site.

4. Depth to bedrock is greater than 25 feet at the Site.

5. The stratigraphy, from land surface to approximately 25 feet down, consists of historic fill from zero to 4 feet (concrete fragments and urban fill material). The fill layer is underlain by natural soil to variable depths ranging from 2 to 25 feet (coarse to fine sand, silty clay, silty sand, and fine sand). Bedrock was not encountered during the subsurface investigation.

6. Soil/fill samples collected during the RI showed no PCBs or VOCs at detectable concentrations. Two SVOCs, Benzo(b)fluoranthene (1 mg/kg) and Indeno(1,2,3-cd)Pyrene (0.51 mg/kg), were detected within the deep sample in the proposed rear yard at the depth between 2 feet to 4 feet at concentrations above their Track 1 Unrestricted Use SCOs. These SVOCs are both PAH compounds, and their concentrations and distributions indicate that they are associated with historical fill material observed in shallow samples. Three metals exceeded Track 1 Unrestricted Use SCOs, i.e. lead (ranging from 72 to 560 ppm) in three samples, including two shallow samples and one deep sample; mercury (max. 1.2 ppm) in two samples; and zinc (max. 240 ppm) in two samples. Pesticides were detected in five samples at concentrations above their Track 1 Unrestricted Use SCOs, including 4,4'-DDD (max. 0.024 ppm) in two samples; 4,4'-DDE (max. 0.0697 ppm) in four samples; 4,4'-DDT (max. 0.204 ppm) in four samples; and Dieldrin (0.0161 ppm) in one deep sample. Overall, the findings were consistent with observations for other historic fill sites in NYC and did not indicate a significant source area.

7. Groundwater samples collected during the RI did not show any detectable concentrations of VOCs, SVOCs, PCBs or pesticides. However, detection limits for many VOCs, SVOCs and pesticides were greater than NYSDEC GQS guidelines. One metal, Antimony (12.4 µg/L), was detected above its NYSDEC GQS in a dissolved groundwater sample. However, detection limits for some metals were greater than NYSDEC GQS guidelines. These results indicate the impact of regional sources of salinity. The RI indicates that groundwater is not impacted by site conditions and did not reveal any sources of contaminants onsite.

8. Soil vapor samples collected during the RI showed petroleum-related VOCs and chlorinated VOCs at generally low concentrations. Tetrachloroethene (PCE) was identified in one sample at a concentration of 3.97 µg/m^3. This result is below the monitoring level range of the Sate DOH sub-slab soil vapor guidance matrix. Trichlorofluoromethane (CFC 11) was detected in all three samples at concentrations ranging from 394 to 6,570 µg/m^3. Trichloroethene (TCE) in one sample was identified at a concentration of 10.3 µg/m^3, however, this reflected an elevated detection limit for TCE in that laboratory sample. The TCE concentration in the confirmatory sample collected at the same location was identified as non-detect, with a lower detection limit of 1.07µg/m^3. The TCE concentration in the third sample was also identified as non-detect, with a lower detection limit of 3.01 µg/m^3. Low to moderate concentrations of petroleum related hydrocarbons included BTEX and associated compounds were detected in both soil vapor samples. Toluene exhibited the highest level of 39.9 µg/m^3. No chlorinated or petroleum-related VOCs were detected within any of the soil or groundwater samples collected at the Site and these low levels in soil vapor are suspected to have an offsite origin. Data collected during the RI is sufficient to delineate the distribution of contaminants in soil vapor at the Site. Most other petroleum hydrocarbons were generally identified at concentrations below 35 µg/m^3.

A copy of Remedial Investigation Report is included in Appendix *1*.

2.0 DESCRIPTION OF REMEDIAL ACTIONS

The remedial action was performed in accordance with an OER approved Remedial Action Work Plan (included in Appendix *2*) and achieved the remedial action objectives established for the project. The remedial action was evaluated in an alternatives analysis and was determined to be protective of human health and the environment, compliant with standards, criteria, and guidelines (SCGs), effective in the short-term, effective in the long-term, capable of attaining appropriate levels of reduction of toxicity, mobility, or volume of contaminated material, implementable, cost effective, acceptable to the community, consistent with land uses, and sustainable.

A summary of the milestones achieved in the Remedial Action is as follows: A Pre-Application Meeting was held on June 21, 2013. A Remedial Investigation (RI) was performed from August to October, 2013. A RI Report was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established. A RAWP was prepared and released with a Fact Sheet on April 23, 2014 for a 30-day public comment period. The RAWP and Stipulation List dated July 16, 2014 was approved by the New York City Office of Environmental Remediation (OER) on July 17, 2014. A Pre-Construction Meeting was held on December 5, 2014. A Fact Sheet providing notice of the start of the remedial action was issued on December 10, 2014. The remedial action was begun in January, 2015 and completed in February, 2015. The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan.
2. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Established Track 1 Site Specific Soil Cleanup Objectives (SCOs). Collected and analyzed end-point samples. Achieved Track 4 Site Specific SCOs for soil at the Site. The following Track 4 SCO's were utilized:

Contaminant	Track 4 SCOs
Total SVOCs	250 ppm
Lead	800 ppm (Track 2 Restricted Residential SCO)
Mercury	2.0 ppm (Track 2 Restricted Residential SCO)

4. Mobilized on site in January 2015 and established Site security, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Soil/fill was excavated to a depth of 8 feet from grade beneath the area of the new building and to a depth of 5 +/- feet in the rear yard. A total of 508.09 tons of soil/fill was excavated and removed from the property. Soil/fill was disposed at the following facilities: 508.09 tons (contaminated non-hazardous soil/fill) to Bayshore Soil Management LLC. All excavated soil/fill material was screened during intrusive work for indications of contamination by visual means, odor, and monitoring with a photoionization detector (PID).
6. Sampled and analyzed excavated media as required by disposal facilities. Appropriately segregated excavated media onsite prior to disposal.
7. Transported and disposed all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and the RAWP.
8. Constructed an engineered Composite Cover System consisting of two feet of Mat Slab below the new building footprint, five feet of clean soil/vegetative cover in the rear yard and two feet of clean soil/vegetative cover for all open spaces to prevent human exposure to residual soil/fill remaining under the Site to prevent human exposure to residual soil/fill remaining under the Site.
9. Installed a Vapor Barrier System that consisted of placement of Grace Preprufe 300R for horizontal applications (46 mil), beneath the building concrete slab, as well as Grace Preprufe 160R for vertical applications (32 mil) behind foundation walls of the proposed building. The waterproofing and vapor barrier membranes were installed per Preprufe Manufacturer's (W.R. Grace's) instructions utilizing all Preprufe Manufacturer supplied and/or recommended system components related to sealing the overlaps, joints, corners, etc. The installation was performed by a contractor with experience in the proposed product, and was certified by the installation contractor and by W.R. Grace's representative, as a

seal-tight, protective installation. The contractor for construction of the Vapor Barrier System was CTI Construction, Inc.

10. Imported approximately 81 tons of clean material for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
11. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations.
12. Performed all activities required for the Remedial Action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
13. Residual materials are present beneath the cover layer and will be subject to Site Management under this Remedial Action.
14. Submitted a Sustainability Statement.
15. Submitted a RAR that describes the Remedial Action, certifies that the remedial requirements defined in the Remedial Action Work Plan have been achieved; defines the Site boundaries; describes all Engineering and Institutional Controls applicable to the Site; and describes any changes from the RAWP.
16. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for operation, maintenance, inspection and certification of the performance of Engineering Controls and Institutional Controls. Results of inspections and certification of performance of all Engineering Controls and Institutional Controls will be included in an Inspection and Certification Letter Report to be submitted by July 30, 2021 (for the reporting period calendar years 2016-2020), July 30, 2026 (for the reporting period calendar years 2021-2025) and every five years thereafter (for the reporting period consisting of the five prior calendar years).
17. The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Engineering Controls and Institutional Controls will be managed in compliance with the SMP. Institutional Controls will include prohibition of the following: (1) prohibition of vegetable gardening and farming in residual soil; (2) prohibition of the use of groundwater beneath the site without

treatment rendering it safe for the intended use; (3) prohibition of disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) prohibition of higher levels of land usage than the restricted residential use addressed by this remedial action without prior notification and approval by OER.

3.0 COMPLIANCE WITH REMEDIAL ACTION WORK PLAN

3.1 HEALTH & SAFETY PLAN

The remedial construction activities performed under this program were in compliance with the Health and Safety Plan and applicable laws and regulations. The Site Safety Coordinator was Christine Chen.

3.2 COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan provided for the collection and analysis of air samples during remedial construction activities to ensure proper protections were employed to protect workers and the neighboring community. Monitoring was performed in compliance with the Community Air Monitoring Plan in the approved RAWP. The results of community air monitoring are shown in Appendix *3*. Community Air Monitoring Daily Data Summary is included in Table *1*.

3.3 SOIL/MATERIALS MANAGEMENT PLAN

The Soil/Materials Management Plan provided detailed plans for managing all soil/materials that were disturbed at the Site, including excavation, handling, storage, transport and disposal. It also included a series of controls to assure effective, nuisance free remedial activity in compliance with applicable laws and regulations. Remedial construction activities performed under this program were in compliance with the SMMP in the approved RAWP.

3.4 STORM-WATER POLLUTION PREVENTION

Storm water pollution prevention included physical methods and processes to control and/or divert surface water flows and to limit the potential for erosion and migration of Site soils, via wind or water. Remedial construction activities performed under this program were in full compliance with methods and processes defined in the

RAWP for storm water prevention and applicable laws and regulations.

3.5 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

The original requirement in the OER-approved RAWP for excavation and removal of soil/fill exceeding Track 1 Unrestricted Use SCOs for the rear yard was two feet below grade. Due to the fact that the remedial investigation soil sampling results indicated levels of lead and mercury exceeding Track 2 SCOs at 4 feet below grade, soil/fill was actually removed to a depth of 5 +/- feet below grade in the rear yard. This action was to protect public health and the environment. This change was notified in an email to Ms. Sarah Pong, Project Manager of OER, on January 13, 2015.

4.0 REMEDIAL PROGRAM

4.1 PROJECT ORGANIZATION

Principal personnel who participated in the remedial action included Certified Industrial Hygienist, Mike Zouak, and Qualified Environmental Professional, Christine Chen. The Professional Engineer (PE) and Qualified Environmental Professionals (QEP) for this project were Ravi Korlipara and Mike Zouak, respectively.

4.2 SITE CONTROLS

Site Preparation

Prior to the commencement of any remedial work, all field personnel were required to attend an orientation meeting, in which the general site operations were outlined, along with health and safety and field procedures. The presence of utilities and easements on site were investigated prior to any work, using the One-Call System (811). Invasive activities were performed in compliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities were contacted to locate and mark the locations. No overhead utilities were located directly above the work site. Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations were employed during invasive and other work contemplated under the RAWP. The integrity and safety of on-Site and off-Site structures was maintained during invasive, excavation or other remedial activity performed under the RAWP. Relevant and necessary agency approval documents, including NYC Buildings Work Permits were acquired and appropriately displayed prior to remedial work. Signage for the project was laminated and mounted on the plywood fence of the Site, publically accessible, along with other permits signage consisting of the NYC VCP Information Sheet announcing the remedial action.

Mobilization

Equipment brought to the Site or maintained on-site was checked out as operational prior to the mobilization as per the NYCDOB Requirements. Proper traffic control was performed in accordance with NYCDOB Construction Codes. During any

roll-off or material delivery or collection, traffic was halted at a safe distance from the activities by workers utilizing high visibility clothing, until the activities ceased, and the trucks had departed the area.

Grubbing, fencing, truck wash, construction, etc.

No Site clearing and Site grubbing of organic matter (wood, roots, stumps, etc.) or other solid waste were required prior to all remedial work. Prior to the start of any remedial construction activities, the entire Site perimeter was secured with a plywood fence or poly sheeting in accordance with New York City Department of Building requirements.

Utility Marker Layout

The presence of utilities and easements on the Site were 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). All invasive activities were performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities were contacted to locate and mark the locations, and a copy of the Markout Ticket was retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations.

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

Acquisition of Agency Approvals

Permits or government approvals required for remedial construction were obtained prior to the start of remedial construction. Construction permits were acquired from the NYCDOB. Permits and notices included a citation of the law, statute or code to be complied with, the originating agency, and a contact name and phone number in that agency. An OER Project Notice was erected at the project entrance and was in place during all phases of the Remedial Action.

An OER Project Notice was erected at the project entrance and was in place during all phases of the Remedial Action.

Soil Screening

Field screening of soils being excavated and removed from Site were completed using visual, olfactory, and PID measurements. Constant CAMP PID and Dust monitoring was conducted during excavation of onsite soils.

Stockpile Management

No contaminated soil stock-piled on site. Contaminated waste was transported by excavator directly to disposal trucks to the OER approved disposal facility.

Truck Inspection

It was ensured that trucks covered the loads prior to departing the Site with contaminated materials. A combination of plastic sheeting and gravel beds were used create a barrier between site soils and truck wheels to prevent migration of soils off-site. Each truck was inspected prior to leaving the Site to ensure soil was not transported off-site.

Site Security

The entire perimeter of the Site was secured using 8' high plywood fence along the north and south boundaries and east and west boundaries in the rear section, and plastic sheeting against the building walls of the adjoining properties on the east and west sides. A padlock was used to secure the front gate. The Site was secured at night in accordance with NYCDOB Construction Codes.

Nuisance Controls

Suitable actions were taken to prevent off-Site odor and dust nuisances, including steps to be taken if nuisances are detected. Generally, dust was managed by application of physical covers. The project was also maintained to comply with NYC noise control standards.

Reporting

All daily reports, including digital photographs of the Remedial Action, are included in Appendix *4*.

4.3 MATERIALS EXCAVATION AND REMOVAL

Track 1 Soil Cleanup Objectives (SCOs) were proposed for this project. Soil and materials management on-Site and off-Site, including excavation, handling and disposal,

was conducted in accordance with the Soil/Materials Management Plan (SMMP) in Appendix *4* of the RAWP. A map showing the location where excavations were performed is shown in Figure *4*. No hazardous wastes (as defined by CFR40 Subpart C, §261.24) were present onsite. Non-hazardous materials were removed from the entire Site, down to a depth of 5-feet below grade in the rear yard; and 8-feet below grade in the construction area. A total of 508.09 tons of non-hazardous materials were removed from the Site. No excavated materials were reused on Site.

End Point Sample Results

Alpha Analytical Labs in Westborough, MA, a New York State DOH ELAP certified lab (11148), was used for soil end-point samples analyses. End-point samples were collected and analyzed to determine the performance of the remedy with respect to attainment of SCOs (those for which SCO exceedances were identified). Three end-point samples designated as S-1, S-2, and S-3 were collected following the removal of historic urban fill material impacted with SVOCs, metals and pesticides. Sample S-1 was collected in the rear yard and samples S-2 and S-3 were collected in the construction pit per the RAWP. The samples were analyzed for semi-volatile organic compounds (SVOCs) with EPA Method 8270, TAL Metals with EPA Method 6010 and Pesticides with EPA Method 8081A. A map of end-point sample locations is shown in Figure *5*. A tabular summary of end-point sampling results compared to SCO's is shown in Table *2*. End-point samples analytical laboratory data are included in Appendix *5*.

In Table *2*, the laboratory analytical results were compared to the NYSDEC 6NYCRR Part 375 Soil Cleanup Objectives (SCOs) for Unrestricted Use, Residential Use, and Restricted-Residential use. Additionally, the results were compared below to the Track 4 Site-Specific SCO's that were established for this project. The Site-Specific SCOs are:

Contaminant	Track 4 SCOs
Total SVOCs	250 ppm
Lead	800 ppm (Track 2 Restricted Residential SCO)
Mercury	2.0 ppm (Track 2 Restricted Residential SCO)

From Table *2*, the Unrestricted SCOs were exceeded for the following parameters (Sample IDs are in parentheses):

Pesticides: 4,4'-DDE (S-2, S-3); 4,4'-DDT (S-2, S-3); and dieldrin (S-2, S-3);

Polycyclic aromatic hydrocarbons (PAHs): benzo(a)anthracene (S-1, S-3); benzo(a)pyrene (S-1, S-3); benzo(b)fluoranthene (S-1, S-3); benzo(k)fluoranthene (S-1, S-3); chrysene (S-1, S-3); dibenzo(a,h)anthracene (S-1, S-3); and indeno(1,2,3-cd)pyrene (S-1, S-3);

Metals: copper (S-1); lead (S-1, S-2, S-3); mercury (S-1, S-2, S-3); and zinc (S-1, S-2, S-3).

However, among the above results, none of the pesticides exceeded Residential use and Restricted-Residential use SCOs in any of the samples; some or all of the PAH parameters in samples S-1 and S-3 exceeded Residential use and Restricted-Residential use SCOs; and among metals only mercury in samples S-1, S-2, and S-3 exceeded Residential use and Restricted-Residential use SCOs.

Considering that the intended use of the property is Restricted-Residential, the exceedances of potential concern are thus limited only to PAHs (which are also SVOCs) in samples S-1 and S-3 only, and only to mercury in all three samples S-1, S-2, and S-3. These residual detections were evaluated to assess the potential for environmental and public health impact. This evaluation shows that the property and building are protected by several mitigating measures that were implemented, including soil cover and a 2-foot Mat Slab, a 46-mil horizontal (model Preprufe 300R) and 32-mil vertical (model Preprufe 150R) vapor barrier system that bonds to poured concrete, that together provide a comprehensive and protective design with no potential exposure pathways of residual contaminants to occupants of the building.

Furthermore, none of the samples exceeded any of the Track 4 Site-Specific SCOs listed above for SVOCs, lead, and mercury. Finally, a Site Management Plan, including an inspection program, will be instituted at the Site to confirm continued protectiveness over the years. Thus, based on this evaluation, the remedial action at the site is concluded to have met the project's soil cleanup objectives, and together with the protective measures implemented during the remedial action, management of these soils in place was determined to be protective of public health and the environment.

4.4 MATERIALS DISPOSAL

The material type, quantity and disposal location of material removed and disposed off-Site is presented below:

Disposal Location/Address	Type of Material	Quantity
Bayshore Soil Management, LLC 75 Crows Mill Road, Keasbay, NJ 08832	Non-Hazardous Soil	508.09 tons

Verbal request from Airtek on behalf of Ms. Angeline Huang was provided to disposal facility providing materials type, source and data. The acceptance letter from disposal facility stating it is approved to accept above materials is attached in Appendix *6*. Manifests are included in Appendix *7*. Disposal Quantities and Disposal Facilities are summarized in Table *3*. Disposal Characterization Sample Laboratory Testing Results are included in Appendix *8*.

4.5 BACKFILL IMPORT

A table of all sources of backfill with quantities for each source is shown in Table *4*. A map showing backfill placement locations at the Site is shown in Figure *6*. Summary of backfill analytical data is shown in Table *5*. Imported backfill laboratory analytical data reports are included in Appendix *9*.

Source	Type of Material	Quantity
Stony Creek Services 4001 Daly Blvd., Oceanside, NY 11572	Clean Soil	81 tons

4.6 DEMARACTION

All soils below the final cover are residual soils and will be subject to soil management under the Site Management Plan.

Soil below the final cover is residual soil that will be addressed by site management under this remedial action.

5.0 ENGINEERING CONTROLS

A Track 4 Remedial Action was achieved and Engineering Controls are required. Engineering Controls were employed in the Remedial Action to address residual materials remaining at the site. The Site has two primary Engineering Control Systems. These are:

Composite Cover System

Exposure to residual soil/fill is prevented by an engineered Composite Cover System that has been built on the Site. The Composite Cover System is a permanent Engineering Control for the Site. The Composite Cover System is comprised of two feet of Mat Slab below the new building footprint, five feet of soil that meets Restricted Residential SCO's and vegetative cover in the rear yard and two feet of soil/vegetative cover for all other open spaces.

The contractor for construction of the Composite Cover System was CTI Construction Inc. Figure *7* shows the as-built design for each remedial cover type used on this Site. Figure *8* shows the location of each cover type built at the Site.

Vapor Barrier System

Exposure to soil vapor is prevented by a Vapor Barrier System that has been built on the Site. The Vapor Barrier System is a permanent Engineering Control for the Site. The Vapor Barrier System consists of placement of Grace Preprufe 300R for horizontal applications (46 mil) beneath the building concrete slab, as well as Grace Preprufe 160R for vertical applications (32 mil) behind foundation walls of the proposed building. The waterproofing and vapor barrier membranes were installed per Preprufe Manufacturer's (W.R. Grace's) instructions utilizing all Preprufe Manufacturer supplied and/or recommended system components related to sealing the overlaps, joints, corners, etc. The installation was performed by a contractor with experience with the product, and was certified by the installation contractor and by W.R. Grace's representative, as a seal-tight, protective installation.

The design engineer for the Vapor Barrier System was Ravi Korlipara, P.E. The contractor for construction of the Vapor Barrier System was CTI Construction, Inc.

Figure *9* shows the as-built design for the Vapor Barrier System used on this Site.

Figure *10* shows the location of Vapor Barrier System. Photographs of installation of the Vapor Barrier System are included in Appendix *10*. Supplemental Information on the Vapor Barrier System is included in Appendix *11*. Appendix *12* provides supplemental information on the Vapor Barrier System used on this Site.

6.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required under this Remedial Action to manage residual soil/fill and other media to assure permanent protection of public health by elimination of exposure to residual materials. These IC's define the program to operate, maintain, inspect and certify the performance of Engineering Controls and Institutional Controls on this property. These Institutional Controls will be implemented in accordance with the Site Management Plan included in this RAR.

Institutional Controls for this property are:

(1) The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;

(2) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a periodic written certification that evaluates their performance;

(3) Engineering Controls will not be discontinued without prior OER approval;

(4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;

(5) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;

(6) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;

(7) All future activities on the Site that will disturb residual soil/fill must be conducted pursuant to the Soil/Materials Management provisions of the SMP, or otherwise approved by OER;

(8) The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

7.0 SITE MANAGEMENT PLAN

Site Management is the last phase of the remedial process and begins after the approval of the Remedial Action Report (RAR) and issuance of the Notice of Completion (NOC) by OER. It is the responsibility of the property owner to ensure that all Site Management responsibilities are performed. Failure to implement the SMP will result in revocation of the Notice of Completion and all associated certifications and liability protections.

Engineering Controls and Institutional Controls have been incorporated into this Remedial Action to ensure that the site remains protective of public health and the environment. Generally, EC's provide physical protective measures and IC's provide restrictions on Site usage and establish remedial operation, maintenance, inspection and certification measures. This Site Management Plan has been established to govern long-term performance of EC's and IC's for this property.

The SMP provides a detailed description of procedures required to manage residual material at the Site following the completion of remedial construction in accordance with the NYC Voluntary Cleanup Agreement with OER. This includes: (1) operation and maintenance of Engineering Controls; (2) inspection of EC's and IC's; and (3) certification of performance of EC's and IC's.

ENGINEERING CONTROLS

Engineering Controls were employed in the remedial action to address residual materials remaining at the site. The Site has two Engineering Control Systems. Engineering Controls for this property are:

(1) Composite Cover System;

(2) Vapor Barrier System.

Operation and Maintenance of Composite Cover System

Chapter 5 describes the Composite Cover System utilized in this Remedial Action and provides as-built design details and the location of each cover type. The Composite Cover System is a permanent Engineering Control for the Site. The system will be inspected and its performance certified at specified intervals defined in this SMP. A

Soil/Materials Management Plan is included in this Site Management Plan and outlines the procedures to be followed in the event that the composite cover system and underlying residual soil/material must be disturbed after the Remedial Action is complete.

The Composite Cover System does not require any special operation or maintenance activities. If the system is breached during future construction activities, the system will be rebuilt by reconstructing the system according to the original design and tying newly constructed cover layers into existing cover layers to form a continuous layer(s).

Operation and Maintenance of Vapor Barrier System

Chapter 5 describes the Vapor Barrier System utilized in this Remedial Action and provides as-built design details and the system location. The Vapor Barrier System is a permanent Engineering Control for the Site. The system will be inspected and its performance certified at specified intervals defined in this SMP.

The Vapor Barrier System does not require any special operation or maintenance activities. If the system is breached during future construction activities, the system will be rebuilt by reconstructing the vapor barrier layers and adhering the newly constructed materials with existing barrier materials in accordance with manufacturer specifications.

INSTITUTIONAL CONTROLS

A series of Institutional Controls are required under this Remedial Action to assure permanent protection of public health by elimination of exposure to residual materials. These IC's define the program to operate, maintain, inspect and certify the performance of Engineering Controls and Institutional Controls on this property. Adherence to these Institutional Controls is required under the Site Management Plan established for this Remedial Action and will be implemented in accordance with the Site Management Plan included in this RAR.

Institutional Controls are also designed to prevent future exposure to residual soil/materials by controlling disturbances in the subsurface, restrict higher uses of the

property than those addressed by the Remedial Action and establish restrictions on activities and site usage. Institutional Controls for this property are:

INSPECTIONS

Engineering Controls and Institutional Controls will be inspected on a regular basis and certified periodically as described below. Inspections will include routine evaluation by custodial and maintenance staff to identify obvious signs of potential failure of system components (i.e., cracks or fissures in the foundation or building slab, erosion of cover soils, Active SSDS alarm warnings, etc.) and periodic inspections by trained personnel for the purpose of certification of the performance of EC's and IC's. The periodic inspections will evaluate the following:

- If Engineering Controls or Institutional Controls employed at the Site continue to perform as designed and continue to be protective of human health and the environment;
- If anything has occurred that impairs the ability of the Engineering Controls or Institutional Controls to protect public health and the environment;
- If changes are needed to the remedial systems or controls;
- If compliance with this SMP has been maintained;
- If site records are complete and up to date; and
- General Site conditions at the time of inspection.

In addition, if an emergency occurs, such as a natural disaster, or if an unforeseen failure of any of the Engineering Controls occurs, an inspection of the Site will be performed within 30 days to evaluate the Engineering Controls and a letter report of findings will be submitted to OER.

Inspection of Composite Cover System

The composite cover will be visually inspected for any breaks or cracks in the building slab and the backyard cover system. Any breaks should be promptly repaired

Inspection of Vapor Barrier System

The vapor barrier will be visually inspected for any tears or breaks. If the vapor barrier is believed to be torn or broken, the system will be repaired.

Site Use Prohibitions

Inspections to evaluate the status of site use prohibitions will include an evaluation of whether there is vegetable gardening or farming in residual soil/fill; whether groundwater underlying the site has been used without treatment rendering it safe for its intended use; whether activities that have disturbed site soil/fill have been conducted pursuant to the Soil/Material Management provisions of the SMP, or otherwise approved by OER; and whether the site has been used for a higher level of use other than the restricted residential use addressed by the Remedial Action.

INSPECTION AND CERTIFICATION LETTER REPORT

Results of inspections performed during a reporting period and certification of performance of all Engineering Controls and Institutional Controls will be included in an Inspection and Certification Letter Report to be submitted by July 30, 2021 (for the reporting period calendar years 2016 -2020), July 30, 2026 (for the reporting period calendar years 2021-2025) and every five years thereafter (for the reporting period consisting of the five prior calendar years). Inspection and Certification Letter Reports will be submitted to OER in digital format.

The Certification Letter Report will include, at a minimum:

- Date of inspections;
- Personnel conducting inspections;
- Description of the inspection activities performed;
- Any observations, conclusions, or recommendations;
- Copy of any inspection forms;
- A determination as to whether groundwater plume conditions, if any, have changed since the last reporting event; and
- Certification of the performance of Engineering Controls and Institutional Controls, as discussed below.

The certification of the performance of EC's and IC's will establish:

- If Engineering Controls or Institutional Controls employed at the Site continue to be in place and perform as designed and continue to be protective of human health and the environment;

- If anything has occurred that impairs the ability of Engineering Controls or Institutional Controls to protect public health and the environment;
- If changes are needed to the remedial systems or controls;
- If compliance with this Site Management Plan has been maintained;
- If vegetable gardening and farming in residual soils has been prevented;
- If groundwater underlying the Site is being utilized without treatment rendering it safe for the intended purpose has been prevented;
- If activities on the Site that have disturbed residual soil/fill material have been in accordance with the Soil/Materials Management Plan in this SMP;
- If the Site has been used for a higher level of use other than the restricted residential use addressed by the Remedial Action;
- If site records are complete and up to date;
- If the Site continues to be registered as an E-Designated property by the NYC Department of Buildings;

OER may enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's.

NOTIFICATIONS

Notifications will be submitted by the property owner to OER as described below:

- 60-day advance notice of any proposed changes in Site use, such as an upgrade from existing use to use that was not contemplated is the Remedial Action.
- Notice within 30 days of any emergency, such as a fire, flood, or earthquake that has the potential to reduce the effectiveness of Engineering Controls in place at the Site.

SOIL/MATERIALS MANAGEMENT PLAN

Any future intrusive work that will disturb residual soil/fill beneath the property, including modifications or repairs to the existing composite cover system, will be performed in compliance with this Soil/Materials Management Plan (SMMP). Intrusive work will also be conducted in accordance with the procedures defined in the Community

Air Monitoring Plan (CAMP) included in this chapter and a Construction Health and Safety Plan (HASP). The HASP is the responsibility of the property owner and should be in compliance with NYSDEC DER-10 Technical Guide and 29 CFR 1910 and 1926, and all other applicable Federal, State and City regulations. Intrusive construction work should be compliant with this SMMP and described in the next Inspection and Certification Letter Report.

Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional (QEP). Soil screening will be performed during any future intrusive work.

Stockpile Methods

Stockpiles will be used to isolate excavated soil 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, at minimum, double layers of 6-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.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent 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.

Characterization of Excavated Materials

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Excavated soil will only be reused on-site with prior approval by OER.

Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

- oversee intrusive work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this management plan;
- ensure that Site maintenance activities and maintenance-related grading cuts will not interfere with, or otherwise impair or compromise the remedial measures established during the remediation construction phase;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site intrusive work.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. 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.

Outbound truck transport routes are shown on Figure *8*. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of 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.

Materials Disposal Off-Site

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP 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 is regulated material generated at an environmental remediation Site in Brooklyn, New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material.

Documentation associated with disposal of all material will include records and approvals for receipt of the material. 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 applicable 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).

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 retained and included in the following Inspection and Certification Report. A manifest system for off-Site transportation of exported materials will be employed. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

Materials Reuse On-Site

All of the soil excavated during any future repair or construction purposes will be placed in the same excavation it was derived from or will be disposed of off-site unless otherwise approved by OER beforehand.

Repair of Remedial Systems

After completion of invasive work, any damage of the engineering controls (composite cover system, vapor barrier, etc.) will be restored to the original condition established during initial construction.

Import of Backfill Soil from Off-Site Sources

In the event that soil importation is needed for the backfilling purposes, this Section presents the requirements for imported fill materials. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. The backfill and cover soil quality objectives including NYSDEC Part 375 Track 2 Residential SCOs and groundwater protections standards. A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;
- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;
- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC; and
- Virgin quarried material or other materials with an approved Beneficial Use Determination (BUD) from NYSDEC for reuse as clean fill.

All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this SMP. The Inspection and Certification Report will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover was placed.

Source Screening and Testing

Inspection of imported fill material will include visual, olfactory, and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:

- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

Composite samples of imported material from the identified clean soil sources will be taken at a minimum frequency of one sample for every 500 cubic yards of material. One composite sample will be collected from each source of virgin quarried material or other material with an NYSDEC approved BUD, unless otherwise approved by OER. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) may be imported from facilities permitted or registered by NYSDEC. A PE/QEP 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 will not be used as cover material.

Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported, and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. 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 NYSDEC.

Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. All existing stormwater systems will be inspected to ensure proper operation.

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/QEPs.

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 and other roadways to provide a clean and dust-free road surface.

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/QEPs.

Noise

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

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 handling of contaminated or potentially contaminated media. 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. Exceedances 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.

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.

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 mcg/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 mcg/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 mcg/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.

CONTINGENCY PLAN

This contingency plan is developed for the remedial construction or repair work to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown 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. 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.

Emergency Telephone Numbers

In the event of any emergency condition pertaining to these remedial systems, the Owner's representative(s) should contact the appropriate parties from the contact list below. Prompt contact should also be made to Mike Zouak of Airtek Environmental Corp. These emergency contact lists must be maintained in an easily accessible location at the Site.

Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center: 3 day notice required for utility markout	(800) 272-4480
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Contact Numbers

Environmental Consultant: Mike Zouak	(718) 937-3720
Office of Environmental Remediation	(212) 788-8841; 311

8.0 SUSTAINABILITY REPORT

This Remedial Action Report provides for sustainable remediation and redevelopment through a variety of means that are defined in this Sustainability Report.

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.

Approximately 81 tons of clean soil were imported to the Site from Stony Creek Services located at 4001 Daly Blvd., Oceanside, NY 11572.

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.

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.

The following means were used to reduce energy consumption in this project: Efficient loading times of trucks to prevent extensive idling times, and consolidating the number of days that soil was shipped from the Site to reduce truck traffic in the neighborhood.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions. Natural gas is utilized for fuel source for the new building.

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 that could impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of existing contamination from off-Site.

The area of the Site that utilizes recontamination controls under this plan included the prevention of transport of contamination to the Site from off-site by ensuring that no unapproved materials were brought to the Site, a vapor barrier was installed at the Site to

provide protections if recontamination from off-site were to occur, and the use of natural gas to ensure no fuel oil will be leaked into the environment. 100% of the area of the Site, or 1,143 square feet, utilizes recontamination controls under this plan.

Paperless Brownfield Cleanup Program. Ms. Angeline Huang participated in OER's Paperless Voluntary Cleanup Program. Under this program, submission of electronic documents replaced submission of hard copies for the review of project documents, communications and milestone reports. A best estimate of the mass (pounds) of paper saved under this plan is 50 pounds.

Low-Energy Project Management Program. Ms. Angeline Huang participated in OER's low-energy project management program. Under this program, whenever possible, meetings were 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 was conserved in this process is 500 miles.

Trees and Plantings. Trees and other plantings provide habitat and add to NYC's environmental quality in a wide variety of ways. Native plant species and native habitat provide optimal support to local fauna, promote local biodiversity, and require less maintenance. The number of trees planted as part of this redevelopment is 2.

FIGURES

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

FIGURE 1: SITE BOUNDARY MAP

Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

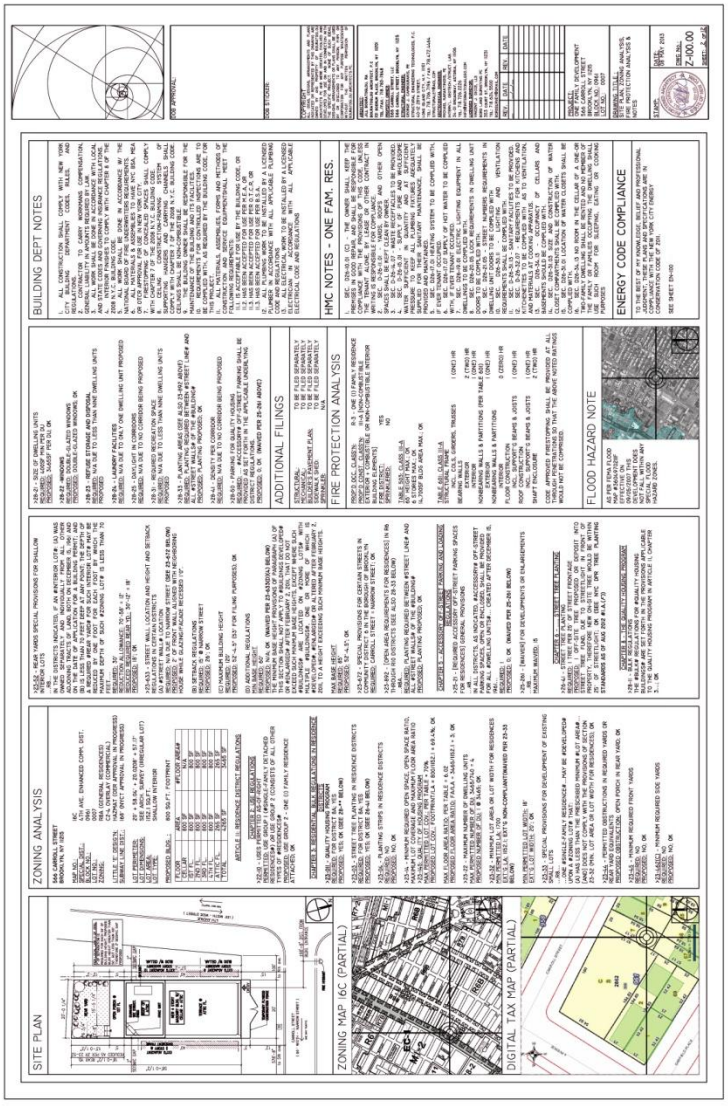


FIGURE 2: SITE DEDEVELOPMENT PLAN

Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

FIGURE 3: SITE LOCATION MAP	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

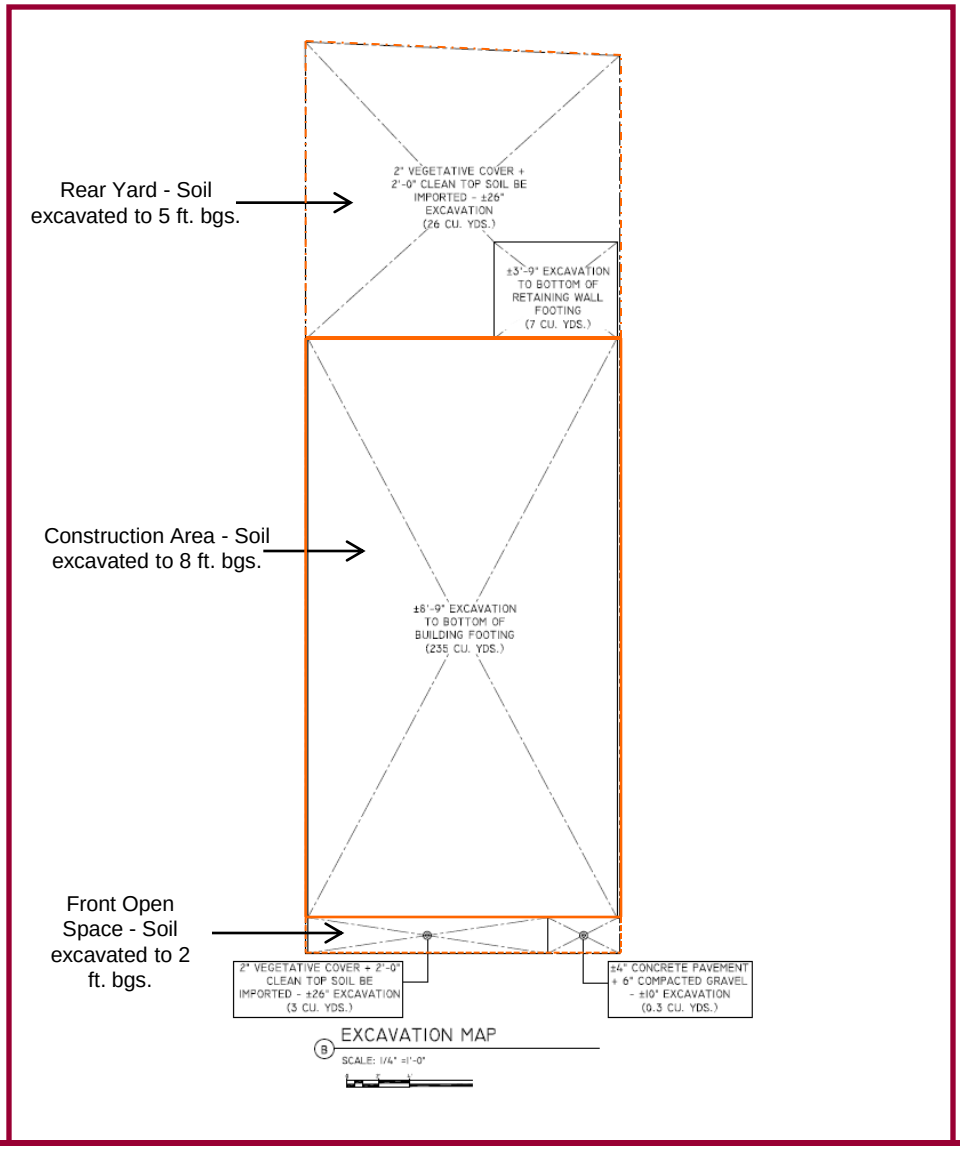
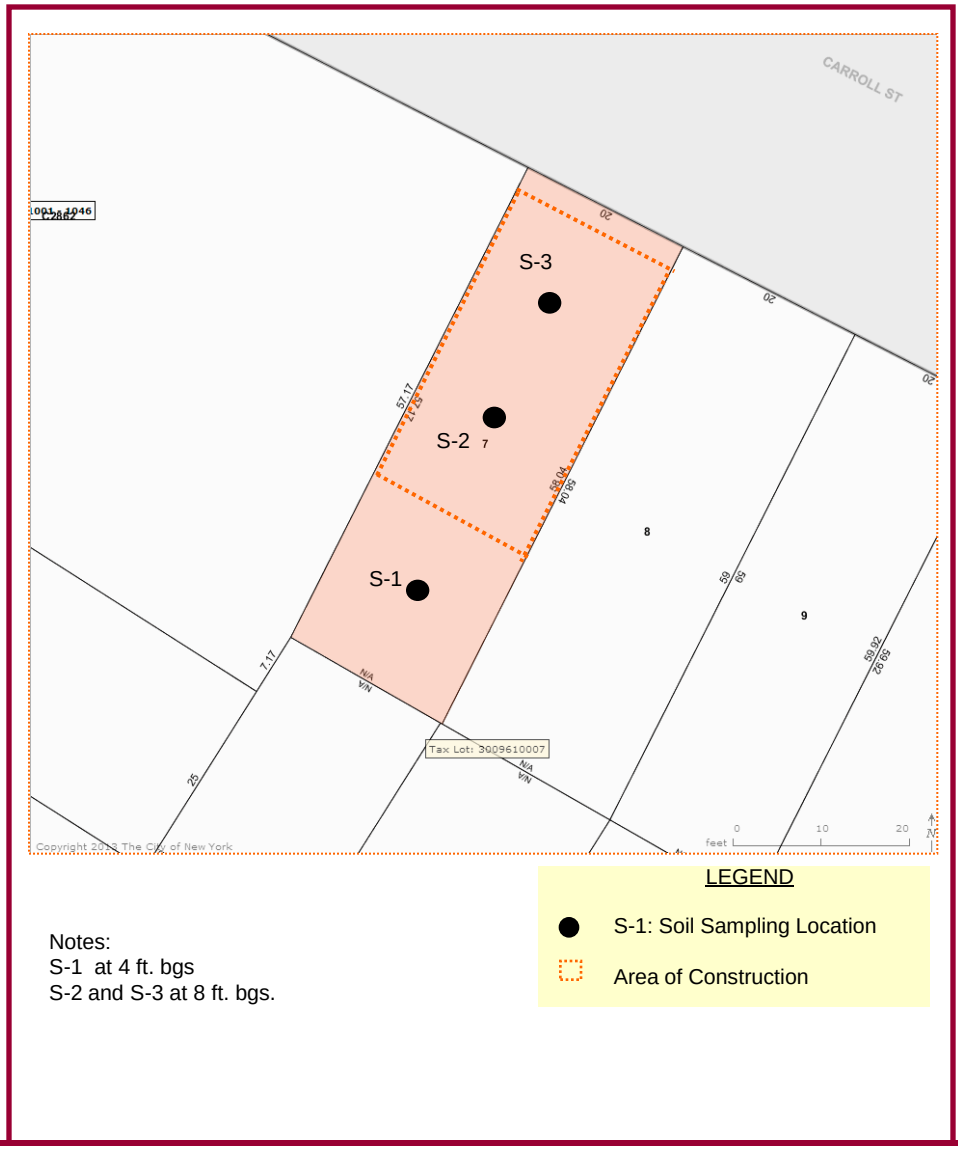


FIGURE 4: MAP OF EXCAVATIONS AND SOURCE REMOVAL	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com



Notes:
S-1 at 4 ft. bgs
S-2 and S-3 at 8 ft. bgs.

Figure 5: MAP OF END-POINT SAMPLEING LOCATION MAP	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

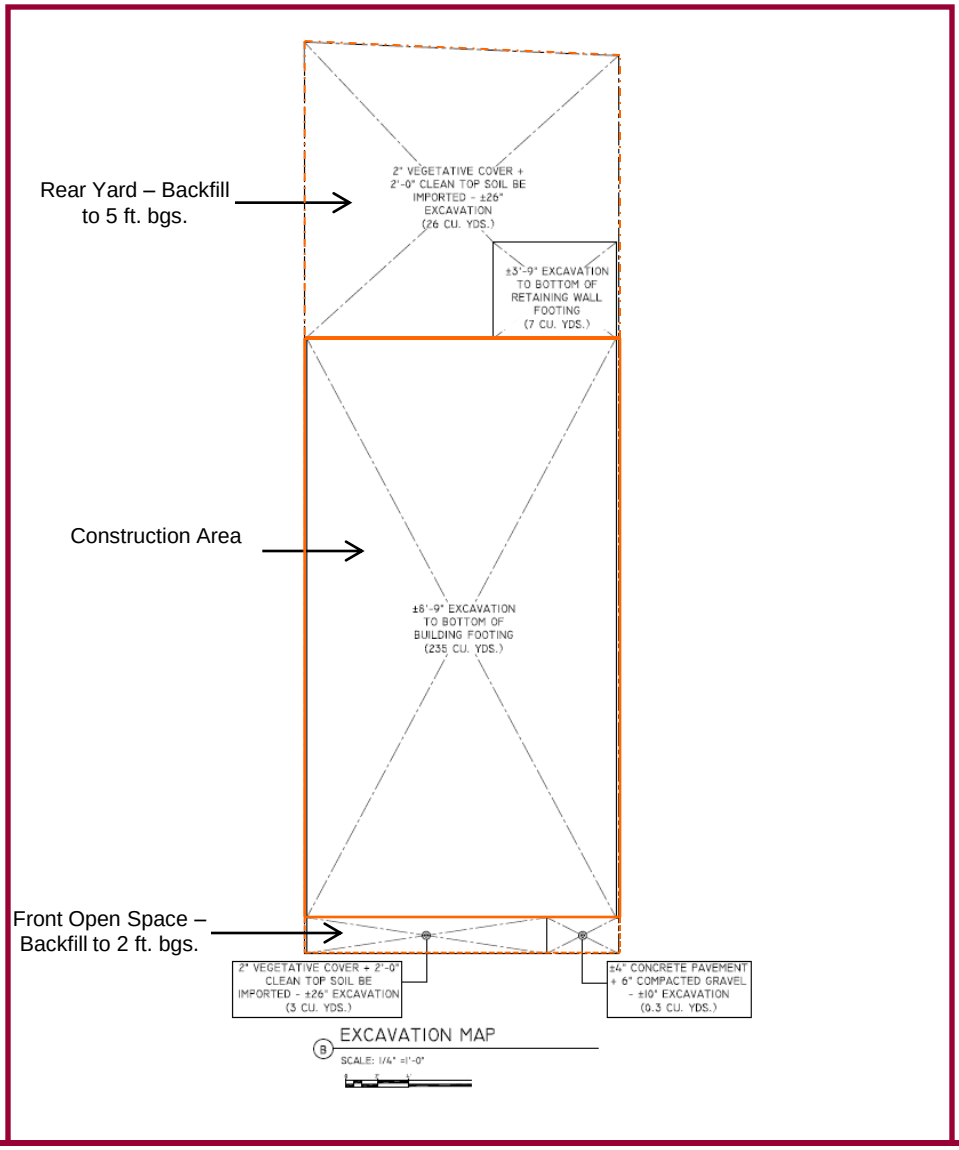


FIGURE 6: SOIL/FILL BACKFILL PLACEMENT LOCATIONS	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

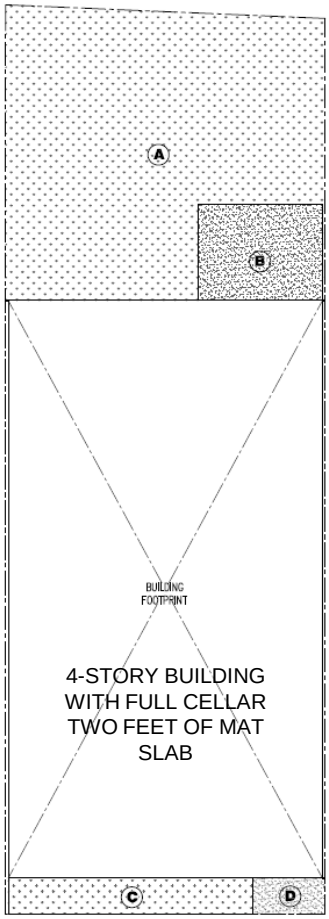
39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

A: Rear Yard – Vegetative Cover

B: Areaway - Poured-in-Place Concrete

C: Front Setback – Vegetative Cover

D: Entryway – Concrete Pavement



A SURFACE COVERAGE PLAN
SCALE: 1/4" =1'-0"

N

FIGURE 7: MAP OF LOCATION OF COMPOSITE COVER SYSTEM	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

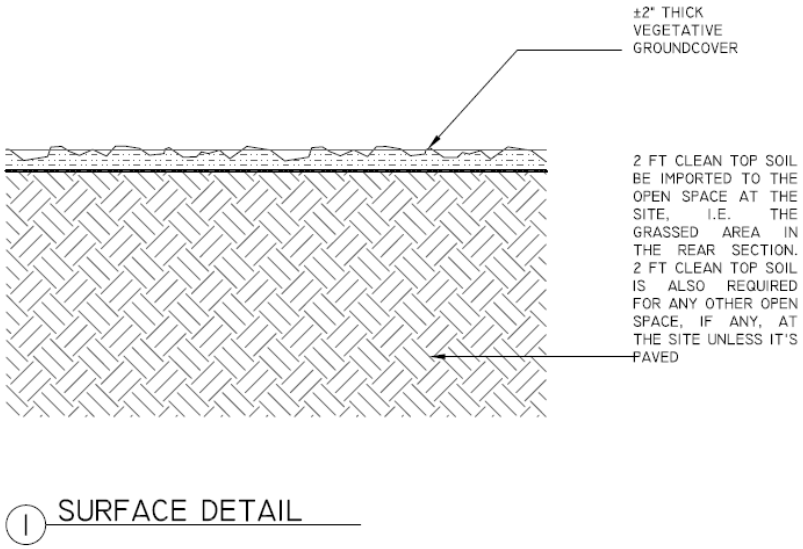
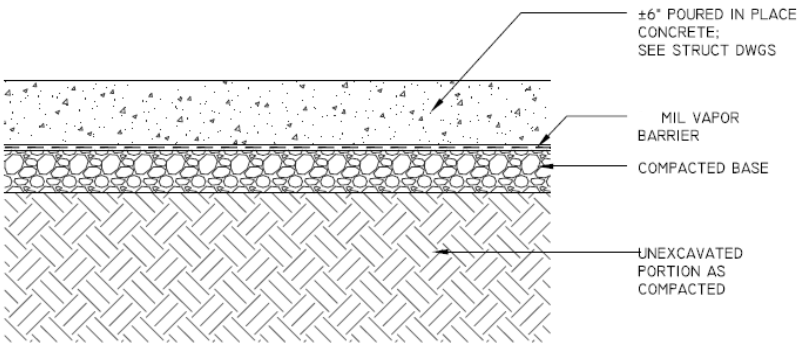


FIGURE 8: AS-BUILT DESIGN DETAIL FOR COVER TYPES	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 07-20-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

W.R. Grace (MFR.'s) Vapor Barrier – Preprufe 300R (46 mil) for Horizontal and Preprufe 160R (32 mil) for Vertical Application



2 SURFACE DETAIL

FIGURE 9: AS-BUILT DESIGN DETAIL FOR VAPOR BARRIER SYSTEM – Part I	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 09-09-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

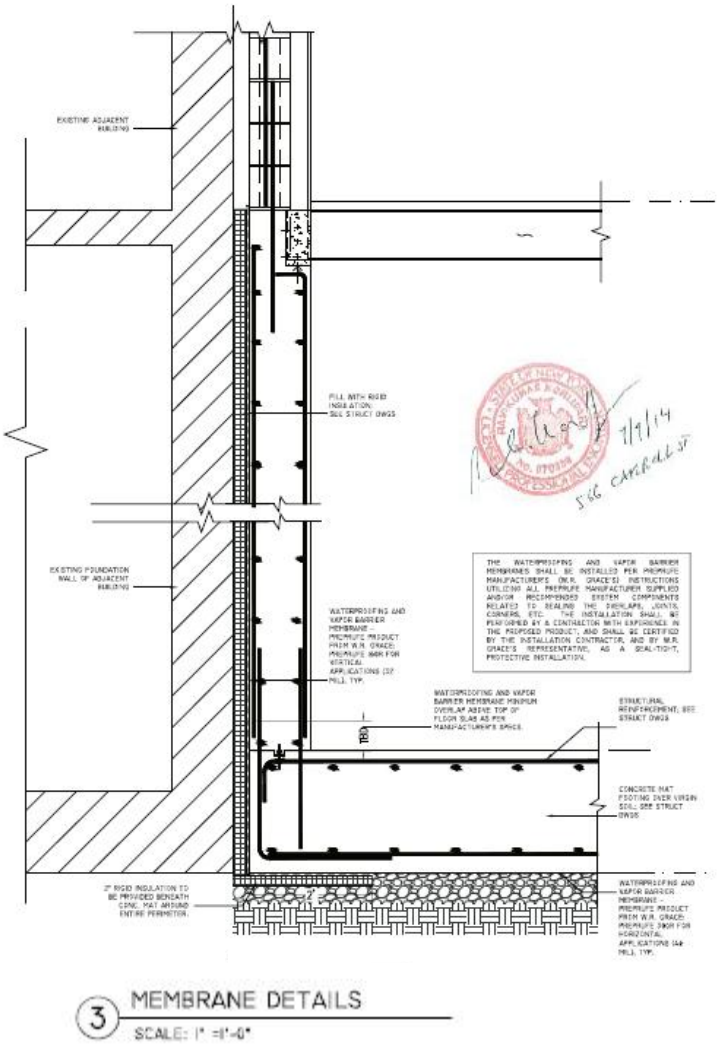


FIGURE 9: AS-BUILT DESIGN DETAIL FOR VAPOR BARRIER SYSTEM – Part II	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 09-09-2015

AIRTEK ENVIRONMENTAL CORP.

39 – 37 29th Street, Long Island City, New York, 11101
Phone (718) 937-3720 Fax (718) 937-3721
www.airtekenv.com

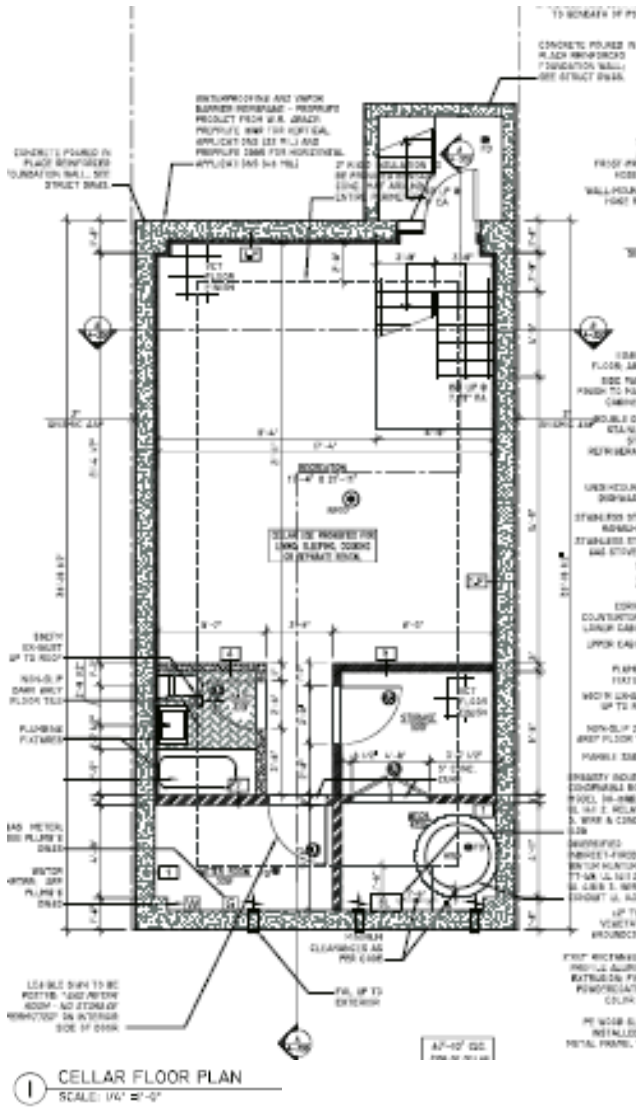


FIGURE 10: MAP OF LOCATION OF VAPOR BARRIER SYSTEM	
Block: 961	**Lot: 7**
Address: 566 Carroll Street Brooklyn, NY 11215	
Airtek Project Number: 13-0933D	**Date:** 09-09-2015

TABLES

Table 1: Community Air Monitoring Daily Data Summary

566 Carroll Street, Brooklyn, NY 11215

Remedial Action Work Plan Compliance (1/8/15 -2/6/15)

Dust Monitor: Dust Trak2 Desktop Monitor 8530

PID: MiniRAE 3000 10.6 120V D

MultiRAE Plus

Date	Dust Trac Monitor (mg/m3)						PID (ppm)									Comments
	Upwind			Downwind			Upwind			Downwind (1st truck loading)			Downwind (2nd truck loading)			
	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	
1/8/2015	0.04	1.26	0.013	0.091	2.38	0.017	0	0	0	0.032	0.306	0	N/A	N/A	N/A	PID downwind data was for two trucks
1/9/2015	0.027	0.075	0.019	0.032	0.079	0	0	0	0	0.082	0.414	0.019	0.119	0.648	0.009	
1/10/2015	**Weekend - No Site Work**															
1/11/2015																
1/12/2015	0.047	0.262	0.03	0.053	0.152	0.032	0	0	0	0.011	0.283	0	0.003	0.077	0	
1/13/2015	0.02	0.159	0.011	0.026	0.188	0.014	0	0	0	0	0	0	0.003	0.36	0	
1/14/2015	0.033	0.146	0.021	0.041	0.26	0.025	0	0	0	0.035	1.377	0	N/A	N/A	N/A	PID downwind data was for entire day work
1/15/2015	0.041	0.098	0.03	0.061	0.733	0	0	0	0	0.017	1.566	0	0.051	0.273	0	
1/16/2015	0.072	0.177	0.057	0.087	0.168	0.069	0	0	0	0.114	0.735	0.033	0.003	0.089	0	
1/19/2015	**Holiday - No Site Work**															
1/20/2015	0.023	0.895	0.013	0.052	2.3	0.015	0	0	0	0.203	0.931	0	0.251	7.37	0.066	Downwind PID data had four sets of readings during soil raking activities at the site. The remaining two sets of data are: Avg. 0.043 and 0.096; Max. 0.124 and 0.472; and Min. 0.01 and 0.024.
1/21/2015	0.026	0.657	0.008	0.098	3.61	0	0	0	0	0.049	4.663	0	N/A	N/A	N/A	PID downwind data was for entire day work
1/22/2015																
1/23/2015																
1/24/2015	**Weekend - No Site Work**															
1/25/2015																
1/26/2015	**No Site Work Due to Snow Storm and Pending Site Survey**															
1/27/2015																
1/28/2015																
1/29/2015																
1/30/2015																
1/31/2015	**Weekend - No Site Work**															
2/1/2015																
2/2/2015	**No Site Work Due to the Weather**															
2/3/2015																
2/4/2015	0.037	0.079	0.022	0.044	0.163	0	N/A*	N/A*	N/A*	0.026	1.009	0	0	0	0	* No data due to PID malfunction. Downwind PID data had three sets of readings for the day. The remaining set of data are: Avg. 0.017; Max. 0.497; and Min. 0.
2/5/2015	0.015	0.032	0	0.027	0.167	0	N/A*	N/A*	N/A*	0.015	0.144	0	0.133	0.335	0	* No data due to PID malfunction.
2/6/2015	0.044	0.142	0	0.041	0.45	0	0.018	1.577	0	0.083	0.669	0	0.037	0.189	0	Downwind PID data had four sets of readings for the day. The remaining two sets of data are: Avg. 0.053 and 0.062; Max. 0.871 and 0.259; and Min. 0.008 and 0.006.

Table 2:

Summary of End-Point Samples Analytical Results for TAL Metals

566 Carroll Street, Brooklyn, NY

SAMPLE NO.			S-1		S-2		S-3				
SAMPLING DATE			08-JAN-15		06-FEB-15		06-FEB-15		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Restricted Residential
LAB SAMPLE ID			L1500365-01		L1502424-01		L1502424-02				
LOCATION			Rear Yard		Construction Area		Construction Area				
	CAS Number	Units		Qual		Qual		Qual			
Aluminum, Total	7429-90-5	mg/kg	6200		6600		6600				
Antimony, Total	7440-36-0	mg/kg	0.8	J	0.69	U	0.73	U			
Arsenic, Total	7440-38-2	mg/kg	6.9		3.8		4.3		13	16	16
Barium, Total	7440-39-3	mg/kg	120		160		180		350	350	400
Beryllium, Total	7440-41-7	mg/kg	0.36	J	0.32	J	0.35	J	7.2	14	72
Cadmium, Total	7440-43-9	mg/kg	0.64	J	0.26	J	0.32	J	2.5	2.5	4.3
Calcium, Total	7440-70-2	mg/kg	8400		7100		7100				
Chromium, Total	7440-47-3	mg/kg	17		19		18				
Cobalt, Total	7440-48-4	mg/kg	6.4		5.2		5.3			30	
Copper, Total	7440-50-8	mg/kg	65		33		36		50	270	270
Iron, Total	7439-89-6	mg/kg	12000		11000		14000			2000	
Lead, Total	7439-92-1	mg/kg	350		210		260		63	400	400
Magnesium, Total	7439-95-4	mg/kg	3700		2800		3200				
Manganese, Total	7439-96-5	mg/kg	260		200		220		1600	2000	2000
Mercury, Total	7439-97-6	mg/kg	1.1		0.87		0.86		0.18	0.81	0.81
Nickel, Total	7440-02-0	mg/kg	27		18		20		30	140	310
Potassium, Total	7440-09-7	mg/kg	920		1400		1100				
Selenium, Total	7782-49-2	mg/kg	0.27	U	0.26	U	0.4	J	3.9	36	180
Silver, Total	7440-22-4	mg/kg	0.19	J	0.17	U	0.18	U	2	36	180
Sodium, Total	7440-23-5	mg/kg	110	J	130	J	130	J			
Thallium, Total	7440-28-0	mg/kg	0.36	U	0.35	U	0.36	U			
Vanadium, Total	7440-62-2	mg/kg	20		20		20			100	
Zinc, Total	7440-66-6	mg/kg	260		160		180		109	2200	10000

Notes:

Any regulatory Exceedance are colored in framed green

U = Undetected

J = Analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated.

Table 2:
Summary of End-Point Samples Analytical Results for SVOCs
566 Carroll Street, Brooklyn, NY

SAMPLE NO.			S-1		S-2		S-3				
SAMPLING DATE			08-JAN-15		06-FEB-15		06-FEB-15		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Restricted Residential
LAB SAMPLE ID			L1500365-01		L1502424-01		L1502424-02				
LOCATION			Rear Yard		Construction Area		Construction Area				
	CAS Number	Units		Qual		Qual		Qual			
1,2,4,5-Tetrachlorobenzene	95-94-3	mg/kg	0.06	U	0.059	U	0.24	U			
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.063	U	0.063	U	0.25	U			
1,2-Dichlorobenzene	95-50-1	mg/kg	0.063	U	0.063	U	0.25	U	1.1	100	100
1,3-Dichlorobenzene	541-73-1	mg/kg	0.061	U	0.06	U	0.24	U	2.4	17	49
1,4-Dichlorobenzene	106-46-7	mg/kg	0.058	U	0.058	U	0.23	U	1.8	9.8	13
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.062	U	0.062	U	0.25	U		100	
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.036	U	0.036	U	0.14	U			
2,4-Dichlorophenol	120-83-2	mg/kg	0.062	U	0.062	U	0.25	U		100	
2,4-Dimethylphenol	105-67-9	mg/kg	0.057	U	0.057	U	0.23	U			
2,4-Dinitrophenol	51-28-5	mg/kg	0.26	U	0.26	U	1	U		100	
2,4-Dinitrotoluene	121-14-2	mg/kg	0.041	U	0.041	U	0.16	U			
2,6-Dinitrotoluene	606-20-2	mg/kg	0.049	U	0.049	U	0.2	U		1.03	
2-Chloronaphthalene	91-58-7	mg/kg	0.063	U	0.062	U	0.25	U			
2-Chlorophenol	95-57-8	mg/kg	0.058	U	0.058	U	0.23	U		100	
2-Methylnaphthalene	91-57-6	mg/kg	0.077	J	0.061	U	1.8			0.41	
2-Methylphenol	95-48-7	mg/kg	0.062	U	0.062	U	0.25	U	0.33	100	100
2-Nitroaniline	88-74-4	mg/kg	0.054	U	0.054	U	0.22	U			
2-Nitrophenol	88-75-5	mg/kg	0.06	U	0.06	U	0.24	U			
3,3'-Dichlorobenzidine	91-94-1	mg/kg	0.051	U	0.051	U	0.2	U			
3-Methylphenol/4-Methylphenol	108-39-4	mg/kg	0.063	U	0.063	U	0.25	U	0.33	34	100
3-Nitroaniline	99-09-2	mg/kg	0.053	U	0.053	U	0.21	U			
4,6-Dinitro-o-cresol	534-52-1	mg/kg	0.07	U	0.07	U	0.28	U			
4-Bromophenyl phenyl ether	101-55-3	mg/kg	0.044	U	0.044	U	0.18	U			
4-Chloroaniline	106-47-8	mg/kg	0.051	U	0.051	U	0.2	U		100	
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	0.058	U	0.058	U	0.23	U			
4-Nitroaniline	100-01-6	mg/kg	0.052	U	0.052	U	0.21	U			
4-Nitrophenol	100-02-7	mg/kg	0.062	U	0.062	U	0.25	U			
Acenaphthene	83-32-9	mg/kg	0.26		0.12	J	3.4		20	100	100
Acenaphthylene	208-96-8	mg/kg	0.25		0.049	J	0.48	J	100	100	100
Acetophenone	98-86-2	mg/kg	0.06	U	0.059	U	0.24	U			
Anthracene	120-12-7	mg/kg	0.84		0.24		3.3		100	100	100
Benzo(a)anthracene	56-55-3	mg/kg	2.4		0.69		5.9		1	1	1
Benzo(a)pyrene	50-32-8	mg/kg	2.3		0.62		4.6		1	1	1

Table 2:
Summary of End-Point Samples Analytical Results for SVOCs (Continued)
566 Carroll Street, Brooklyn, NY

SAMPLE NO.			S-1		S-2		S-3				
SAMPLING DATE			08-JAN-15		06-FEB-15		06-FEB-15		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Restricted Residential
LAB SAMPLE ID			L1500365-01		L1502424-01		L1502424-02				
LOCATION			Rear Yard		Construction Area		Construction Area				
	CAS Number	Units		Qual		Qual		Qual			
Benzo(b)fluoranthene	205-99-2	mg/kg	3		0.87		6.2		1	1	1
Benzo(ghi)perylene	191-24-2	mg/kg	1.6		0.37		2.4		100	100	100
Benzo(k)fluoranthene	207-08-9	mg/kg	0.94		0.29		2.1		0.8	1	3.9
Benzoic Acid	65-85-0	mg/kg	0.19	U	0.19	U	0.77	U		100	
Benzyl Alcohol	100-51-6	mg/kg	0.059	U	0.059	U	0.24	U			
Biphenyl	92-52-4	mg/kg	0.063	U	0.063	U	0.57	J			
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	0.058	U	0.058	U	0.23	U			
Bis(2-chloroethyl)ether	111-44-4	mg/kg	0.054	U	0.054	U	0.21	U			
Bis(2-chloroisopropyl)ether	108-60-1	mg/kg	0.068	U	0.068	U	0.27	U			
Bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	0.26		0.05	U	0.2	U		50	
Butyl benzyl phthalate	85-68-7	mg/kg	0.038	U	0.037	U	0.23	J		100	
Carbazole	86-74-8	mg/kg	0.41		0.11	J	1.4				
Chrysene	218-01-9	mg/kg	2.1		0.72		5.8		1	1	3.9
Di-n-butylphthalate	84-74-2	mg/kg	0.037	U	0.037	U	0.15	U		100	
Di-n-octylphthalate	117-84-0	mg/kg	0.047	U	0.047	U	0.19	U		100	
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.38		0.09	J	0.72		0.33	0.33	0.33
Dibenzofuran	132-64-9	mg/kg	0.18	J	0.068	J	2.6		7	14	59
Diethyl phthalate	84-66-2	mg/kg	0.041	U	0.04	U	0.16	U		100	
Dimethyl phthalate	131-11-3	mg/kg	0.049	U	0.049	U	0.19	U		100	
Fluoranthene	206-44-0	mg/kg	4.9		1.5		15		100	100	100
Fluorene	86-73-7	mg/kg	0.28		0.087	J	2.2		30	100	100
Hexachlorobenzene	118-74-1	mg/kg	0.036	U	0.036	U	0.14	U	0.33	0.41	1.2
Hexachlorobutadiene	87-68-3	mg/kg	0.054	U	0.054	U	0.22	U			
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.12	U	0.12	U	0.49	U			
Hexachloroethane	67-72-1	mg/kg	0.035	U	0.035	U	0.14	U			
Indeno(1,2,3-cd)Pyrene	193-39-5	mg/kg	1.5		0.39		2.6		0.5	0.5	0.5
Isophorone	78-59-1	mg/kg	0.051	U	0.051	U	0.2	U		100	
n-Nitrosodi-n-propylamine	621-64-7	mg/kg	0.057	U	0.057	U	0.23	U			
Naphthalene	91-20-3	mg/kg	0.12	J	0.096	J	2.6		12	100	100
Nitrobenzene	98-95-3	mg/kg	0.046	U	0.046	U	0.18	U		3.7	15
NitrosoDiPhenylAmine(NDPA)/DP	86-30-6	mg/kg	0.04	U	0.04	U	0.16	U			
P-Chloro-M-Cresol	59-50-7	mg/kg	0.056	U	0.056	U	0.22	U			

Table 2:
Summary of End-Point Samples Analytical Results for SVOCs (Continued)
566 Carroll Street, Brooklyn, NY

SAMPLE NO.			**S-1**		**S-2**		**S-3**				
SAMPLING DATE			**08-JAN-15**		**06-FEB-15**		**06-FEB-15**		**NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives**	**NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential**	**NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Restricted**
LAB SAMPLE ID			**L1500365-01**		**L1502424-01**		**L1502424-02**				
LOCATION			**Rear Yard**		**Construction Area**		**Construction Area**				
	CAS Number	**Units**		**Qual**		**Qual**		**Qual**			
Pentachlorophenol	**87-86-5**	**mg/kg**	**0.041**	**U**	**0.041**	**U**	**0.16**	**U**	**0.8**	**2.4**	**6.7**
Phenanthrene	**85-01-8**	**mg/kg**	**2.9**		**1.1**		**19**		**100**	**100**	**100**
Phenol	**108-95-2**	**mg/kg**	**0.057**	**U**	**0.057**	**U**	**0.23**	**U**	**0.33**	**100**	**100**
Pyrene	**129-00-0**	**mg/kg**	**3.9**		**1.3**		**12**		**100**	**100**	**100**
Notes:											
Any regulatory Exceedance are colored in framed green											
U = Undetected											
J = Analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated.											

Table 2:

Summary of End-Point Samples Analytical Results for Pesticides

566 Carroll Street, Brooklyn, NY

SAMPLE NO.			S-1		S-2		S-3				
SAMPLING DATE			08-JAN-15		06-FEB-15		06-FEB-15		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Residential	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Restricted Residential
LAB SAMPLE ID			L1500365-01		L1502424-01		L1502424-02				
LOCATION			Rear Yard		Construction Area		Construction Area				
	CAS Number	Units		Qual		Qual		Qual			
4,4'-DDD	72-54-8	mg/kg	0.000652	U	0.000625	U	0.000639	U	0.0033	2.6	13
4,4'-DDE	72-55-9	mg/kg	0.000422	U	0.0108		0.0118		0.0033	1.8	8.9
4,4'-DDT	50-29-3	mg/kg	0.00147	U	0.0525		0.0534		0.0033	1.7	7.9
Aldrin	309-00-2	mg/kg	0.000643	U	0.00272		0.00172	J	0.005	0.019	0.097
Alpha-BHC	319-84-6	mg/kg	0.000216	U	0.000207	U	0.000212	U	0.02	0.097	0.48
Beta-BHC	319-85-7	mg/kg	0.000693	U	0.000664	U	0.00068	U	0.036	0.072	0.36
Chlordane	57-74-9	mg/kg	0.00605	U	0.0443		0.0344				
cis-Chlordane	5103-71-9	mg/kg	0.000636	U	0.00857		0.00507		0.094	0.91	4.2
Delta-BHC	319-86-8	mg/kg	0.000358	U	0.000343	U	0.000351	U	0.04	100	100
Dieldrin	60-57-1	mg/kg	0.000571	U	0.0239		0.0382		0.005	0.039	0.2
Endosulfan I	959-98-8	mg/kg	0.000432	U	0.000414	U	0.000423	U	2.4	4.8	24
Endosulfan II	33213-65-9	mg/kg	0.00061	U	0.000586	U	0.000599	U	2.4	4.8	24
Endosulfan sulfate	1031-07-8	mg/kg	0.000362	U	0.000348	U	0.000355	U	2.4	4.8	24
Endrin	72-20-8	mg/kg	0.000312	U	0.000299	U	0.000306	U	0.014	2.2	11
Endrin ketone	53494-70-5	mg/kg	0.00047	U	0.000451	U	0.000461	U			
Heptachlor	76-44-8	mg/kg	0.00041	U	0.000393	U	0.000402	U	0.042	0.42	2.1
Heptachlor epoxide	1024-57-3	mg/kg	0.00103	U	0.000986	U	0.00101	U		0.077	
Lindane	58-89-9	mg/kg	0.00034	U	0.000326	U	0.000334	U	0.1	0.28	1.3
Methoxychlor	72-43-5	mg/kg	0.00106	U	0.00102	U	0.00104	U		100	
Toxaphene	8001-35-2	mg/kg	0.00959	U	0.0092	U	0.00941	U			
trans-Chlordane	5103-74-2	mg/kg	0.000603	U	0.00472		0.0102			0.54	

Notes:

Any regulatory Exceedance are colored in framed green

U = Undetected

J = Analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated.

Table 3: Manifest/Waste Disposal Inventory Summary

566 Carroll Street, Brooklyn, NY 11215
Generator ID No.: 2715-0002
Remedial Action Work Plan Compliance (1/8/15 -2/6/15)

Receiving Facility: Bayshore Soil Management, LLC
Address: 75 Crows Mill Road, Keasbay, NJ 08832
Contact/Phone No.: Kassandra Lacerda/(732) 738-6000
Facility ID: NJDEP ID: 132397
U.S. EPA ID No.: NJ1225001522

Transporter: Disalvo Trucking Inc.
Address: 2439 169th St, Whitestone, NY 11357
Contact/Phone No.: Philip Disalvo/ (347) 245-4835
U.S. EPA ID No.: 2A-744

Date	Description of Material	Waste Tracking No.	Truck Plate/No.	Quantities	Waste Tracking No.	Truck Plate/No.	Quantities	Total (ton)
1/8/2015	Non-Hazardous PC Soil	E0071559	20502PB/147	21.91	E0071560	20502PB	23.15	45.06
1/9/2015	Non-Hazardous PC Soil	E0071562	36590ME/363	20.07	E0071563	36590ME/363	20.50	40.57
1/10/2015	**Weekend - No Site Work**							0
1/11/2015								0
1/12/2015	Non-Hazardous PC Soil	E0071564	20502PB	22.80	E0071561	20502PB	25.94	48.74
1/13/2015	Non-Hazardous PC Soil	E0071573	36590ME	27.52	E0071565	36590ME	22.15	49.67
1/14/2015	Non-Hazardous PC Soil	E0071571	36590ME	22.32	E0071572	36590ME	23.13	45.45
1/15/2015	Non-Hazardous PC Soil	E0071570	36590ME	24.38	E0071569	36590ME	24.89	49.27
1/16/2015	**No Soil Disposal**							0
1/17/2015	**Weekend - No Site Work**							0
1/18/2015								0
1/19/2015	**Holiday - No Site Work**							0
1/20/2015	**No Soil Disposal**							0
1/21/2015								0
1/22/2015								0
1/23/2015	Non-Hazardous PC Soil	E0071567	36590ME	23.01	E0071568	36590ME	22.44	45.45
1/24/2015	**Weekend - No Site Work**							0
1/25/2015								0
1/26/2015	**No Soil Disposal**							0
1/27/2015								0
1/28/2015								0
1/29/2015								0
1/30/2015								0
1/31/2015	**Weekend - No Site Work**							0
2/1/2015								0
2/2/2015	**No Site Work - Due to the Weather**							0
2/3/2015								0
2/4/2015	**No Soil Disposal**							0
2/5/2015	Non-Hazardous PC Soil	E0071566	20502PB	22.91	E0070918	20502PB	22.05	44.96
2/5/2015	Non-Hazardous PC Soil	E0070919	36590ME	21.84	E0070920	36590ME	20.82	42.66
2/6/2015	Non-Hazardous PC Soil	E0070901	32565MB	24.56	E0070905	36590ME	20.75	45.31
2/6/2015	Non-Hazardous PC Soil	E0070902	32565MB	23.48	E0070904	20502PB	21.44	44.92
2/6/2015	Non-Hazardous PC Soil	E0070906	36590ME	6.03				6.03
								0
TOTAL				**260.83**			**247.26**	**508.09**

Table 4: Imported Clean Soil Inventory Summary

566 Carroll Street, Brooklyn, NY 11215
Remedial Action Work Plan Compliance (1/8/15 -)

Clean Soil Source: Stony Creek Services
Address: 4001 Daly Blvd., Oceanside, NY 11572

Provider: Restoration & Conservation LLC
Address: 9-22 119th Street, College Point, NY 11356
Contact/Phone No.: James Cervino/917- 620-5287

Date	Material	Quantities (cu. yds.)	Truck No./Receipt No.	Quantities (cu. yds.)	Truck No./Receipt No.	Total (cu. yds.)
1/13/2015	Clean Fill	18	746/92584	18	746/92600	36
1/14/2015	Clean Fill	18	363/92620			18
TOTAL						**54**

Note: 1 cu. yd = 1.5 tons for aggregate, sand and dirt. Total clean soil: 81 tons.

Table 5:
Summary of Backfill Samples Analytical Results for
566 Carroll Street, Brooklyn, NY

Sample ID York ID Sampling Date Client Matrix		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	S-1 Comp + VOC 14L0368-01 12/9/2014 3:00:00 PM Soil		S-2 Comp + VOC 14L0368-02 12/9/2014 3:00:00 PM Soil		S-3 Comp + VOC 14L0368-03 12/9/2014 3:00:00 PM Soil		S-4 Comp + VOC 14L0368-04 12/9/2014 3:00:00 PM Soil	
Compound	**CAS Number**			Result	Q	Result	Q	Result	Q	Result	Q
Volatile Organics, NYSDEC Part 375 List		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				1		1		1		1	
1,1,1-Trichloroethane	71-55-6	0.68	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,1-Dichloroethane	75-34-3	0.27	26	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,1-Dichloroethylene	75-35-4	0.33	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,2,4-Trimethylbenzene	95-63-6	3.6	52	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,2-Dichlorobenzene	95-50-1	1.1	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,2-Dichloroethane	107-06-2	0.02	3.1	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,3,5-Trimethylbenzene	108-67-8	8.4	52	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,3-Dichlorobenzene	541-73-1	2.4	49	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,4-Dichlorobenzene	106-46-7	1.8	13	0.0057	U	0.0056	U	0.0056	U	0.0057	U
1,4-Dioxane	123-91-1	0.1	13	0.23	U	0.23	U	0.22	U	0.23	U
2-Butanone	78-93-3	0.12	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Acetone	67-64-1	0.05	100	0.011	U	0.011	U	0.011	U	0.011	U
Benzene	71-43-2	0.06	4.8	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Carbon tetrachloride	56-23-5	0.76	2.4	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Chlorobenzene	108-90-7	1.1	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Chloroform	67-66-3	0.37	49	0.0057	U	0.0056	U	0.0056	U	0.0057	U
cis-1,2-Dichloroethylene	156-59-2	0.25	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Ethyl Benzene	100-41-4	1	41	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Methyl tert-butyl ether (MTBE)	1634-04-4	0.93	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Methylene chloride	75-09-2	0.05	100	0.011	U	0.011	U	0.011	U	0.011	U
n-Butylbenzene	104-51-8	12	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
n-Propylbenzene	103-65-1	3.9	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
o-Xylene	95-47-6	~	~	0.0057	U	0.0056	U	0.0056	U	0.0057	U
p- & m- Xylenes	179601-23-1	~	~	0.011	U	0.011	U	0.011	U	0.011	U
sec-Butylbenzene	135-98-8	11	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
tert-Butylbenzene	98-06-6	5.9	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Tetrachloroethylene	127-18-4	1.3	19	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Toluene	108-88-3	0.7	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
trans-1,2-Dichloroethylene	156-60-5	0.19	100	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Trichloroethylene	79-01-6	0.47	21	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Vinyl Chloride	75-01-4	0.02	0.9	0.0057	U	0.0056	U	0.0056	U	0.0057	U
Xylenes, Total	1330-20-7	0.26	100	0.017	U	0.017	U	0.017	U	0.017	U
Semi-Volatiles, NYSDEC Part 375 List		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				5		5		5		5	
2-Methylphenol	95-48-7	0.33	100	0.12	U	0.12	U	0.12	U	0.12	U
3- & 4-Methylphenols	65794-96-9	~	~	0.12	U	0.12	U	0.12	U	0.12	U
Acenaphthene	83-32-9	20	100	0.12	U	0.37	D	0.12	U	0.12	U
Acenaphthylene	208-96-8	100	100	0.12	U	0.12	U	0.12	U	0.12	U
Anthracene	120-12-7	100	100	0.12	U	0.36	D	0.24	D	0.12	U
Benzo(a)anthracene	56-55-3	1	1	0.34	D	0.42	D	0.31	D	0.12	U
Benzo(a)pyrene	50-32-8	1	1	0.12	U	0.17	JD	0.12	U	0.12	U
Benzo(b)fluoranthene	205-99-2	1	1	0.21	JD	0.18	JD	0.17	JD	0.12	U
Benzo(g,h,i)perylene	191-24-2	100	100	0.12	U	0.12	U	0.12	U	0.12	U
Benzo(k)fluoranthene	207-08-9	0.8	3.9	0.22	JD	0.21	JD	0.17	JD	0.12	U
Chrysene	218-01-9	1	3.9	0.55	D	0.76	D	0.60	D	0.35	D
Dibenzo(a,h)anthracene	53-70-3	0.33	0.33	0.12	U	0.12	U	0.12	U	0.12	U
Dibenzofuran	132-64-9	7	59	0.12	U	0.12	U	0.12	U	0.12	U
Fluoranthene	206-44-0	100	100	1.24	D	2.18	D	1.47	D	0.82	D
Fluorene	86-73-7	30	100	0.12	U	0.28	D	0.12	U	0.12	U
Hexachlorobenzene	118-74-1	0.33	1.2	0.12	U	0.12	U	0.12	U	0.12	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.12	U	0.12	U	0.12	U	0.12	U
Naphthalene	91-20-3	12	100	0.12	U	0.12	U	0.12	U	0.12	U
Pentachlorophenol	87-86-5	0.8	6.7	0.12	U	0.12	U	0.12	U	0.12	U
Phenanthrene	85-01-8	100	100	0.93	D	2.23	D	1	D	0.76	D
Phenol	108-95-2	0.33	100	0.12	U	0.12	U	0.12	U	0.12	U
Pyrene	129-00-0	100	100	1.03	D	1.76	D	1.16	D	0.65	D
Herbicides, NYSDEC Part 375 Target List		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				1		1		1		1	
2,4,5-TP (Silvex)	93-72-1	3.8	100	0.023	U	0.023	U	0.022	U	0.023	U

Sample ID York ID Sampling Date Client Matrix		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential	S-1 Comp + VOC 14L0368-01 12/9/2014 3:00:00 PM Soil		S-2 Comp + VOC 14L0368-02 12/9/2014 3:00:00 PM Soil		S-3 Comp + VOC 14L0368-03 12/9/2014 3:00:00 PM Soil		S-4 Comp + VOC 14L0368-04 12/9/2014 3:00:00 PM Soil	
Compound	**CAS Number**			Result	Q	Result	Q	Result	Q	Result	Q
Pesticides, NYSDEC Part 375 Target List		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				5		5		5		5	
4,4'-DDD	72-54-8	0.0033	13	0.0017	U	0.0017	U	0.0017	U	0.0017	U
4,4'-DDE	72-55-9	0.0033	8.9	0.0095	D	0.011	D	0.0092	D	0.0080	D
4,4'-DDT	50-29-3	0.0033	7.9	0.012	D	0.0088	D	0.022	D	0.015	D
Aldrin	309-00-2	0.005	0.097	0.0017	U	0.0017	U	0.0017	U	0.0017	U
alpha-BHC	319-84-6	0.02	0.48	0.0017	U	0.0017	U	0.0017	U	0.0017	U
alpha-Chlordane	5103-71-9	0.094	4.2	0.025	D	0.026	D	0.019	D	0.021	D
beta-BHC	319-85-7	0.036	0.36	0.0017	U	0.0017	U	0.0017	U	0.0017	U
delta-BHC	319-86-8	0.04	100	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Dieldrin	60-57-1	0.005	0.2	0.015	D	0.012	D	0.017	D	0.015	D
Endosulfan I	959-98-8	2.4	24	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Endosulfan II	33213-65-9	2.4	24	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Endosulfan sulfate	1031-07-8	2.4	24	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Endrin	72-20-8	0.014	11	0.0017	U	0.0017	U	0.0017	U	0.0017	U
gamma-BHC (Lindane)	58-89-9	0.1	1.3	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Heptachlor	76-44-8	0.042	2.1	0.0072	D	0.0081	D	0.0043	D	0.0024	D
Polychlorinated Biphenyls (PCB)		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				1		1		1		1	
Aroclor 1016	12674-11-2	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1221	11104-28-2	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1232	11141-16-5	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1242	53469-21-9	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1248	12672-29-6	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1254	11097-69-1	~	~	0.019	U	0.019	U	0.019	U	0.019	U
Aroclor 1260	11096-82-5	~	~	0.082		0.044		0.16		0.10	
Total PCBs	1336-36-3	0.1	1	0.082		0.044		0.16		0.10	
Metals, RCRA		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				1		1		1		1	
Arsenic	7440-38-2	13	16	3.59		4.68		4.64		4.01	
Barium	7440-39-3	350	400	37.60		52.60		43.50		37.90	
Cadmium	7440-43-9	2.5	4.3	0.34	U	0.34	U	0.34	U	0.34	U
Chromium	7440-47-3	~	~	13.60		23.20		14.10		13.30	
Lead	7439-92-1	63	400	36.30		64.70		47.60		31.90	
Selenium	7782-49-2	3.9	180	1.69		1.43		1.56		1.14	U
Silver	7440-22-4	2	180	0.57	U	0.57	U	0.56	U	0.57	U
Mercury by 7473		mg/Kg	mg/Kg	mg/kg		mg/kg		mg/kg		mg/kg	
Dilution Factor				1		1		1		1	
Mercury	7439-97-6	0.18	0.81	0.095		0.070		0.12		0.085	
Total Solids				%		%		%		%	
Dilution Factor				1		1		1		1	
% Solids	solids	~	~	88.20		88.60		89.10		87.90	

NOTES:
Any Regulatory Exceedences are color coded by Regulation

Q is the Qualifier Column with definitions as follows:
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
B=analyte found in the analysis batch blank
E=result is estimated and cannot be accurately reported due to levels encountered or interferences
NT=this indicates the analyte was not a target for this sample
~=this indicates that no regulatory limit has been established for this analyte