300 AND 308 COLUMBUS AVENUE

TUCKAHOE, WESTCHESTER COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: C360136

Prepared for:

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at 300 and 308 Columbus Avenue (hereinafter referred to as the "Site") under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index# C360136-02-14, which was executed on March 13, 2014. The Site is identified as NYSDEC Site No. C360136.

1.1.1 General

Crestwood Builders Group, LLC entered into a BCA with the NYSDEC to remediate a 0.75-acre property located in the Village of Tuckahoe, Westchester County, New York. This BCA required the Remedial Party, Crestwood Builders Group, LLC, to investigate and remediate contaminated media at the "Site". The Site location and boundaries of the Site are shown on Figures 1 and 2, respectively. The boundaries of the Site are more fully described in the metes and bounds Site description that is part of the Environmental Easement (EE) included as Appendix A.

After completion of the remedial work described in the Remedial Action Work Plan (RAWP), the potential for contamination and fill exceeding the Site Specific Soil Cleanup Objectives (SSSCOs), listed in Table 1, remains in the subsurface at this Site. This Site Management Plan (SMP) was prepared to manage any potential remaining contamination and human contact with remaining urban fill in exceedance of the SSSCOs, at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by AKRF, Inc. (AKRF), on behalf of Crestwood Builders Group, Inc., in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010 and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the EE for the Site.

1.1.2 Purpose

The Site contains the potential for contaminated soil and fill in exceedance of SSSCOs to remain on-site after completion of the remedial action. ECs have been incorporated into the Site remedy to control exposure to any potential remaining contamination and urban fill during the use of the Site to ensure protection of public health and the environment. An EE granted to the

NYSDEC, and recorded with the Westchester County Clerk, requires compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on Site use, and mandate inspection, monitoring, and reporting measures for all ECs and ICs. This SMP specifies the methods necessary ensure compliance with all ECs and ICs required by the Environmental Easement for any contamination and urban fill that remains at the Site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC. This SMP provides a detailed description of all procedures required to manage any remaining contamination and urban fill at the Site after completion of the Remedial Action, including: (1) implementation and management of all ECs and ICs; (2) indoor air monitoring; and (3)performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; and (2) a Site Monitoring Plan for implementation of a monitoring program for the ECs.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the Site-specific implementation procedures that are required by the EE. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C360136-02-14; Site #C360136) for the Site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

Most recently, the Site was used for commuter parking and as an auto repair facility. Historically, since the 1950s and 1930s, 300 and 308 Columbus Avenue were developed as gasoline stations with underground storage tanks (USTs). Each lot contained a single-story building utilized for auto repair related services. The Site was vacant prior to its use as gasoline filling stations.

1.2.1 Site Location and Description

The Site is located in the Village of Tuckahoe in Westchester County, New York and is identified as Block 8, Lots 5 and 10 on the Westchester County Tax Map. The Site is situated on an approximately 0.75-acre lot comprised of two contiguous properties bounded by residential homes across Lincoln Avenue to the north; residential apartment

units followed by commercial properties and a commuter parking lot across Fisher Avenue to the south; the Woodlot Christian Pre-School and the Light and Life Korean United Methodist Church to the east; and commercial stores followed by commercial and residential apartment units across Columbus Avenue to the west. The metes and bounds of the Site are more fully described in Appendix A - Environmental Easement.

1.2.2 Site History

A 1999 Phase I Environmental Site Assessment inspection by Dorson Environmental Management, Inc. for 300 Columbus Avenue revealed the use of six USTs at the time of inspection including: one 4,000-gallon, two 3,000-gallon, and one 2,000-gallon gasoline USTs, one 250-gallon fuel oil UST, and one 550-gallon waste oil UST. Between September and December 2008, the removal of five of the six USTs was completed. In July 2010, three gasoline USTs at the 308 Columbus Avenue property were removed. The tanks consisted of one 6,000-gallon gasoline UST, one 8,000-gallon gasoline UST, and one 10,000-gallon gasoline UST.

A 2005 Phase II subsurface investigation for 300 Columbus Avenue by Nova Consulting and Engineering LLC indicated that the following tanks were present on Site: one (1) 4,000-gallon and two (2) 3,000-gallon gasoline USTs, one (1) 2,000-gallon diesel UST, one (1) 250-gallon fuel oil UST, and one (1) 550-gallon waste oil UST.

In April 2013, AKRF completed a Phase I ESA of both properties (300 and 308 Columbus Avenue), and confirmed boring locations for a proposed Subsurface (Phase II) Investigation to be conducted concurrently with the Phase I ESA. The property at 300 Columbus Avenue was reported to be developed in the 1950s as a gasoline station and was being used for commuter parking and an auto repair facility. The building included two service bays with one sub-grade hydraulic lift (southern bay), one above-grade hydraulic lift, and a reported 250-gallon fuel oil UST adjacent to the eastern (rear) side of the building. The northern service bay reportedly formerly contained a sub-grade hydraulic lift. Former USTs, including 4,000-gallon and two 3,000-gallon gasoline USTs, one 2,000-gallon diesel UST, and one 550-gallon waste oil UST, were reported as being removed in 2009 and was documented in a January 2009 UST Closure Report. The service area contained small containers of parts cleaners and car maintenance fluids, and waste oil was reported by the business owner to be stored in a 55-gallon drum (located along the front wall of the building) that was removed approximately once a month by an oil disposal contractor. The lot was covered with asphalt pavement, with the exception of the former tank grave and dispenser island areas, which were not re-paved after tank removal in 2009.

The property at 308 Columbus Avenue was reported to be developed in the 1930s as a gasoline station and was being used for commuter parking and an auto repair facility at the time of AKRF's inspection. The building included three service bays with two above-grade hydraulic lifts and an emissions inspection station, and a 275-gallon fuel oil aboveground storage tank (AST) adjacent to the eastern (rear) side of the building. Each service bay was reported to formerly contain a sub-grade hydraulic lift; the removal date of the former lifts was not known. Former underground tanks, including one 6,000-gallon, one 8,000-gallon, and one 10,000-gallon gasoline USTs were reported as being removed in July 2010 (as documented in a July 2010 UST Closure Report). A review of Village records indicated that 308 Columbus Avenue historically utilized gasoline and waste oil USTs on the northern portion of the Site and the western portion of the Site. The USTs on the western side of the Site were reported to be abandoned-in-place. A former waste oil UST was also reported beneath the southern service bay in the Site

building. The gasoline and waste oil USTs that were depicted on the northern portion of the Site, which were potentially abandoned-in-place, were not investigated as part of the Phase II investigation. The service area contained small containers of parts cleaners and car maintenance fluids, and waste oil was reported by the Site owner to be stored in a 275-gallon AST (located along the front wall of the building) that was emptied approximately twice a month by an oil disposal contractor. The lot was covered with asphalt pavement, with the exception of the former tank grave and dispenser island areas that were not re-paved after tank removal in 2010.

A follow-up inspection was conducted in April 2013 as part of an update to the Phase I ESA report. During that inspection, the operator at 300 Columbus Avenue identified the northern service bay as a former location of a parts washer in the northeastern corner of the northern service bay on this property.

A Phase II Remedial Investigation (RI) conducted by AKRF in May 2012 identified separate phase petroleum product in soil samples collected from between 3 and 6 feet below grade at the southern service bay at 308 Columbus Avenue. This discovery constituted the report to the NYSDEC Spills Division on May 30, 2012, which was assigned Spill #1202031. The 2012 RI also revealed evidence of solvent-related VOCs in the soil between 1 and 6 feet below grade beneath the northern service bay at 300 Columbus Avenue. Regulatory records during the initial Site assessment identified a 250-gallon fuel oil UST, a sub-grade hydraulic lift at the southern service bay at 300 Columbus Avenue, and the potential for three 1,000-gallon USTs and one 550-gallon waste oil UST at 308 Columbus Avenue. The three 1,000-gallon USTs were not identified during remedial actions conducted between May and October 2014. Additionally, two sub-grade hydraulic lift systems, an oil-water separator, and a 550-gallon waste oil UST were identified beneath the southern service bay at 300 Columbus Avenue, and an additional oil-water separator, two sub-grade hydraulic lift systems, and a 1,000-gallon UST were identified at 300 Columbus Avenue.

A Supplemental Phase II conducted by AKRF in November 2013 included the collection of additional groundwater samples to fulfill the remedial investigation requirements of the BCP, and serve to supplement groundwater sampling that occurred during the Subsurface (Phase II) Investigation performed in 2012. Pesticides and PCBs were not detected in the groundwater samples. Several metals were detected in each groundwater sample, with iron, manganese, sodium, and lead being detected in one or both of the samples at concentrations above their respective Class GA AWQVs. Based on the concentration of the detected metals, and that VOC and SVOC analysis indicated there was no evidence of a petroleum release in groundwater samples collected during the Phase II investigation, the metal detections were consistent with background concentrations associated with the collection of groundwater samples from temporary wells points.

1.2.3 Geologic Conditions

The topography of the Site parcels is relatively flat, gently sloping downward from east to west. Based on U.S. Geological Survey map of the Mount Vernon, New York Quadrangle dated 1995, the Site elevation at 300 and 308 Columbus Avenue ranges from approximately 130 feet above the National Geodetic Vertical Datum (NGVD – an approximation of mean sea level) on the eastern portion of the Site and gradually slopes down to an elevation of approximately 120 feet above NGVD on the western portion of the Site. Regional surface water likely flows in a westerly direction towards the Bronx River, located approximately 500 feet west of the Site. Localized groundwater flow in the

vicinity of the Site is likely influenced by this topography, but may also be affected by other factors including: past filling activities, underground utilities and other subsurface openings or obstructions, bedrock, current and past pumping of groundwater, and other factors. Based on surrounding topography, groundwater beneath the Site is anticipated to flow in a westerly direction towards the Bronx River.

Based on results from previous investigations, subsurface materials beneath the Site consist of glacial till containing varying amounts of silt, clay, sand and gravel. Asphalt, crushed rock and brick were also present in the upper sections of the soil column, indicating that the fill material was present in the upper 6 to 15 feet across the Site. Groundwater was encountered at depths ranging from approximately 17 to 20 feet below grade at 300 Columbus Avenue, and 22 to greater than 25 feet below grade at 308 Columbus Avenue and was not encountered during remedial activities at the Site.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Phase II Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the Site. The results of the RI are described in detail in the following reports:

- Subsurface (Phase II) Investigation Report, AKRF, Inc., April 2013Supplemental Groundwater Sampling Letter, AKRF, Inc., November 2013

Generally, the RI determined that areas of concern at the Site are based on the former use of the Site as gasoline filling stations and auto repair facilities, which were known to maintain USTs, sub-grade hydraulic lift systems, oil-water separators, and a parts cleaner. The RI identified the potential for two defined release areas in soil; one solvent release area below the northern service bay at 300 Columbus Avenue between 3 to 6 feet below grade, and one solvent and petroleum release below the southern service bay at 308 Columbus Avenue within the top six feet of soil below the concrete slab. Observations from soil borings advanced during the subsurface investigation indicated that the release appeared to be associated with a former parts cleaner and/or an abandoned sub-grade hydraulic lift system. Separate petroleum phase product was observed in soil samples collected from 3 to 6 feet below grade at the southern service bay at 308 Columbus Avenue. Observations from soil borings indicated that the release appeared to be associated with abandoned sub-grade hydraulic lift equipment or historic tank use at the Site. Soil samples collected from within the southern service bay at 308 Columbus Avenue exhibited evidence of separate phase hydrocarbons, which was assigned spill # 1202031 under the New York State Department of Environmental Conservation (NYSDEC) Spills division.

1.3.1 Soil

Soil contamination was identified and subsequently delineated during the RI beneath the service bays at 300 and 308 Columbus Avenue. Analytical results indicated that samples collected from beneath the foundation slab in the northern service bay at 300 Columbus Avenue, contained tetrachlorethylene (PCE), trichloroethylene (TCE), cis-1,2 dichloroethene (DCE), 1,1 dichloroethane (DCA), 1,1,1-trichloroethane (TCA), benzene, ethylbenzene, toluene, and xylenes at concentrations ranging from 900 micrograms per kilogram (µg/kg) (benzene) to 1,300,000 µg/kg (PCE). The concentration of each compound exceeded the SCOs for unrestricted use and protection of groundwater, and the concentration of PCE, TCE, and cis-1,2 DCE also exceeded the Restricted Residential SCOs. SVOC analysis indicated the concentration of

benzo(a)antracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene in SB-1 (10.5-11.5) and SB-11 (1-2) exceeded the SCOs for unrestricted use, with each compound except chrysene also exceeding its respective Restricted Residential SCO. Benzo(a)anthracene and chrysene were detected in SB-1 and SB-11 at concentrations that exceeded the SCOs for protection of groundwater. Polychlorinated biphenyl (PCB) compounds Aroclor 1248 and Aroclor 1260 were detected in SB-11 (1-2) at estimated concentrations of 36 and 75 µg/kg, respectively. The total PCB concentration of 111 µg/kg exceeded the Unrestricted Use SCO of 100 µg/kg, but was below the Restricted Residential SCO (1,000 µg/kg) and Protection of Groundwater SCO (3,200 µg/kg). The soil contamination identified at the Site was both vertically and horizontally delineated to the extent feasible based on accessible sampling locations and Site constraints.

The RI soil sampling locations and the remedial target areas are shown on Figure 3.

1.3.2 Site-Related Groundwater

PCE was detected in each of the five groundwater samples at concentrations ranging from an estimated 0.42 µg/l to 1.2 µg/l, which were below the ambient standard of 5 µg/l. Cis-1,2 DCE and toluene was also detected at estimated concentrations of 0.73J and 0.22J µg/l, which were below the GA ambient standard of 5 µg/l for each compound. Results from the RI determined that historic automotive uses at the Site did not materially affect on- or off-Site groundwater. Additionally, groundwater was not encountered during any remedial actions at the Site and was therefore not incorporated as part of the remedial action objectives at the Site.

1.3.3 Underground Storage Tanks

The Phase I ESA documented that the 300 Columbus Avenue property was developed with a one-story building with two service bays, which contained two sub-grade hydraulic lifts, one above-grade hydraulic lift, and a 1,000-gallon fuel oil UST east-adjacent to the building. The 308 Columbus Avenue property contained two sub-grade hydraulic lifts, one 250-gallon waste oil UST, and one oil-water separator.

Former USTs at 300 Columbus Avenue, including (1) 4,000-gallon and two (2) 3,000-gallon gasoline USTs, one (1) 2,000-gallon diesel UST, and one (1) 550-gallon waste oil UST were reported as being removed in 2009. Former underground tanks at 309 Columbus Avenue, including (1) 6,000-gallon, one (1) 8,000-gallon, and one (1) 10,000-gallon gasoline USTs were reported as being removed in July 2010.

1.4 Summary of Remedial Actions

The Site was remediated in accordance with AKRF's NYSDEC-approved Remedial Action Work Plan and Health and Safety Plan and Community Air Monitoring Program dated April 2014.

The selected Remedial Action Objectives (RAOs) were designed to achieve a Track 4 clean up, in accordance with Part 375-3.8(e) and Title 14 - § 27-1415, which imposes cleanup requirements consistent with the restricted use specific to this Site (i.e., restricted residential use). The remedial action goals were designed to be protective of public

health and the environment given the intended use of the Site; and to remove or eliminate identifiable sources of contamination to the extent feasible. The following is a summary of the Remedial Actions performed at the Site:

The following is a summary of the Remedial Actions performed at the Site:

1. Removal of one 1,000-gallon underground fuel oil tank, associated piping, and contents at 300 Columbus Avenue; removal of one 550-gallon underground waste oil tank, associated piping, and contents at 308 Columbus Avenue; removal of one oil-water separator, associated piping, and contents at 308 Columbus Avenue; removal of two hydraulic lift systems and contents at 308 Columbus Avenue; removal of two hydraulic lift systems and contents at 300 Columbus Avenue; and all subsurface piping and structures associated with historic use that were encountered within the excavation area beneath the former service bays at 300 and 308 Columbus Avenue in accordance with AKRF's RAWP dated April 2014;
2. Excavation of contaminated soil exceeding restricted residential SCOs listed in Table 1, to varying depths between 5.5 and 15 feet below grade, as shown on Figure 4;
3. Excavation of regulated historic fill material to depths ranging from 1 to 10 feet below grade, as shown on Figure 5, including excavation in all locations where former tanks and/or hydraulic lifts were documented to be used to confirm removal;
4. Installation of a vapor barrier consisting of 15 mil Stego Wrap installed below the first floor of the building (lowest building slab) and beneath the staircase in the unenclosed parking garage to prevent potential vapor intrusion from any residually contaminated soil and soil vapor, and to protect occupants from exposure to soil vapor resulting from off-Site migration of contamination;
5. Installation of a passive sub-slab depressurization system (SSDS) system installed below the vapor barrier beneath the occupied portion of the building consisting of an underground manifold of slotted piping situated within an aggregate layer to capture potential vapors below the building slab, vented above the roof of the building, and fitted with a wind driven turbine ventilator;
6. Construction of a site cover system consisting of either a minimum 6-inch concrete slab with aggregate subbase, asphalt or concrete sidewalk with road base gravel layer of at least 6 inches in thickness, or a soil cover in areas where the upper two feet of exposed surface soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use to prevent human exposure to any remaining contaminated soil/fill remaining at the Site;
7. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site;
8. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) inspection and monitoring, and (3) reporting.

Remedial activities were completed at the Site in August 2015.

1.4.1 Removal of Contaminated Soil and Fill Material from the Site

Following the receipt of the formal approvals from the chosen waste disposal facilities, remedial activities began in May 2014 in accordance with the NYSDEC-approved RAWP, which included the removal of USTs, hydraulic lift

systems, an oil-water separator, and all associated subsurface equipment/piping. Following equipment removal, the delineation, excavation, and removal of contaminated soil beneath the former service bays and within former UST areas was completed. All petroleum contaminated soil was removed in accordance with the RAWP.

Excavation of the sub-grade hydraulic lift beneath the northern service bay at 300 Columbus Avenue revealed that solvent contaminated soil identified during the Phase II RI was entirely contained within an oil water separator located adjacent to the lift. The contents of the oil water separator were removed and placed in a 55-gallon drum, and the oil water separator and all associated piping were removed from the excavation for off-site disposal. Environmental Protection Agency (EPA) Hazardous Waste ID NYD 986 909 919 was issued for the Site in June 2014 for disposal of the 55-gallon drum of contaminated soil.

The SSCOs for the primary contaminants of concern (COCs) and applicable land use for this Site include the NYSDEC Restricted Residential SCOs and the NYSDEC Protection of Groundwater SCOs. A list of the SSSCOs for the primary contaminants of concern (COCs) and applicable land use for this Site is provided in Table 1. End-point soil samples were collected from the sidewalls and the bottom of each remedial excavation following the UST, hydraulic lift, oil-water separator and petroleum contaminated soil removals. A figure depicting remedial excavation areas and end-point soil sample locations is provided as Figure 4. Tables 2 through 5 include the laboratory results for endpoint soil samples collected from each remedial excavation.

Between June and December 2014, general site excavation for the installation of foundation elements was completed. Figure 5 includes a site excavation plan indicating the depth of excavation across the Site. All excavated fill material not tested and utilized as backfill was transported off-site to permitted facilities in accordance with the RAWP, including the review and approval from each soil disposal facility.

The total export resulting from the remedial excavations and general site excavation for development was approximately 7,180 tons of soil classified as non-hazardous soil. All removals, including contaminated soil, the waste solvent drum, fill material, and equipment/piping were completed in accordance with the NYSDEC-approved RAWP. The Final Engineering Report (FER) includes a breakdown of the source area and the destination facility for each waste stream generated from the Site.

1.4.2 Engineering and Institutional Control Systems

A BCP Track 4 cleanup allows for use of engineering and institutional controls as part of the remedy to prevent human exposure to any remaining contaminants in soil beneath the Site. The engineering controls as described in this Section include a vapor mitigation system consisting of the SSDS and vapor barrier, and site cover system described in this section. The Institutional Controls include the recording of an Environmental Easement

The SSDS is a passive venting that was installed beneath the floor slab of the occupied portion of the Site building. The SSDS was not installed beneath the remainder of the building, as that area consists of an external open air parking garage beneath the second floor. The SSDS consists of an underground manifold

of slotted piping situated within a gravel aggregate layer to capture potential vapors below the building slab, which is vented above the roof of the building. The vent risers above the roof are fitted with a wind driven turbine ventilator. A vapor barrier consisting of 15 mil Stego Wrap was installed over the passive SSDS system and below the occupied portion of the first floor of the building (lowest building slab) to prevent potential vapor intrusion. Installation was completed in accordance with the manufacturer's specifications and the NYSDEC-approved RAWP. The addition of the vapor barrier will further minimize the intrusion of sub-slab vapors from any residually contaminated soil and soil vapor, and will protect future occupants from exposure to soil vapor resulting from off-site migration of contamination. Construction of the site cover system consisted of a concrete slab with aggregate subbase, asphalt/road base gravel layer, or a clean soil cover in areas where the upper two feet of exposed surface soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d).

The institutional controls restrict the land use and provide the means for the engineering controls to prevent exposure to the remaining contamination, and establish the inspection and monitoring requirements to confirm that the engineering controls continue to function properly. The design and maintenance of the Engineering Control System, and the detailed requirements of the institutional controls are presented in Section 2.0 – Engineering and Institutional Control Plan.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

Since there is a potential for residual contamination or fill materials to remain at the Site that exceed the SSSCOs, Engineering Controls and Institutional Controls (EC/ICs) have been utilized to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the Site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the Site remedy, as determined by the NYSDEC.

2.2 Engineering Controls

2.2.1 Engineering Control Systems

Site Cover System

- Exposure to remaining potential contamination in soil and urban fill at the Site is prevented by an engineered composite cover system built over the entire Site. This composite cover system is comprised of buildings, pavement, sidewalks, or soil cover meeting the SCOs for cover material as set forth in NYSDEC Part 375-6.7(d). The composition of each cover component consists of:A minimum of 6 inches of asphalt pavement or concrete sidewalk material combined with compacted subgrade;
- A minimum of 6 inches of concrete building foundation slab underlain by compacted subgrade followed by non-woven geotextile fabric,
- A minimum of 2 feet of exposed topsoil below applicable SCOs for restricted residential use underlain by a demarcation layer, followed by compacted subgrade.

The integrity of the Site cover system will be maintained at all times. The Excavation Work Plan that appears in Appendix B outlines the procedures

required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed.

The site cover system plan is shown on Figure 6.

Vapor Barrier

A vapor barrier consisting of 15 mil Stego Wrap was installed below the occupied portion of the first floor of the building (lowest building slab) and beneath the staircase in the unenclosed parking structure, to prevent potential vapor intrusion. During installation, all seams were lapped and taped using Stego Tape, in accordance with the manufacturer's specifications. All penetrations were sealed with Stego Tape and/or Mastic. The addition of the vapor barrier further minimizes the intrusion of sub-slab vapors from any residually contaminated soil and soil vapor, and will protect future occupants from exposure to soil vapor resulting from off-site migration of contamination.

Passive Sub-slab Depressurization System

A passive SSDS system was installed below the vapor barrier beneath the occupied portion of the first floor of the site building. The passive SSDS system was not installed beneath the remainder of the first floor as that area consists of an unenclosed, open air parking area. The passive SSDS system consists of an underground manifold of slotted piping situated within a gravel layer to capture potential vapors below the building slab, which is vented above the roof of the building. The vent risers above the roof were fitted with a wind driven turbine ventilator. The design for the vapor mitigation system is included in the FER.

Procedures for monitoring the SSDS system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the Site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

Composite Cover System

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

Sub-slab Depressurization System (SSDS)

The passive SSDS will not be discontinued unless prior written approval is granted by the NYSDEC and NYSDOH. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by Crestwood Builders, LLC to the NYSDEC and NYSDOH.

2.3 Institutional Controls

- A series of Institutional Controls is required by the RAWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface

contamination; and, (3) limit the use and development of the Site to restricted residential uses only. Adherence to these Institutional Controls on the Site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;

- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil vapor and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The Site has a series of Institutional Controls in the form of Site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted residential use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any future buildings developed on the site, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited unless in aboveground planters;
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The Site has been remediated for restricted residential use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the

remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix B to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in the Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A Site-specific HASP and CAMP are included as Appendix C to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section B-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 4).

The Site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The Site owner will ensure that Site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction, demolition, or redevelopment of any enclosed structures located within the Site boundary, an SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 Inspections and Notifications

2.4.1 Inspections

Inspections of all remedial components installed at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. The inspection and monitoring program will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Indoor air sampling during monitoring events, if necessary;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 4.3).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the Brownfield Cleanup Agreement (BCA) 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or engineering control that reduces or has the potential to reduce the effectiveness of an Engineering Control and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC

within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Brownfield Cleanup Agreement (BCA), and all approved work plans and reports, including this SMP
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to AKRF, Inc.'s Project Principal or Project Manager. These emergency contact lists must be maintained in an easily accessible location at the Site.

Table 1: Emergency Contact Numbers

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

Table 2: Contact Numbers

Company/Regulator	Contact Name	Contact Title	Contact Number
AKRF	Marc Godick	Project Principal/QEP	914-922-2356 (office)
AKRF	Bryan Zieroff	Project Manager	914-922-2382 (office)
NYSDEC	Randy Whitcher	Project Manager	518-402-9662 (office)
NYSDOH	Nathan Freeman	Public Health	800-458-1158 ext.27860 (office)
Crestwood Builder's Group, LLC	Angelo Monaco	Owner Representative	914-644-7000 (office)

* Note: Contact numbers subject to change and should be updated as necessary.

QEP- Qualified Environmental Professional

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 300-308 Columbus Avenue, Tuckahoe, NY

Nearest Hospital Name: Lawrence Hospital Center

Hospital Location: 55 Palmer Avenue, Bronxville, NY 10708

Hospital Telephone: (914) 787-1000

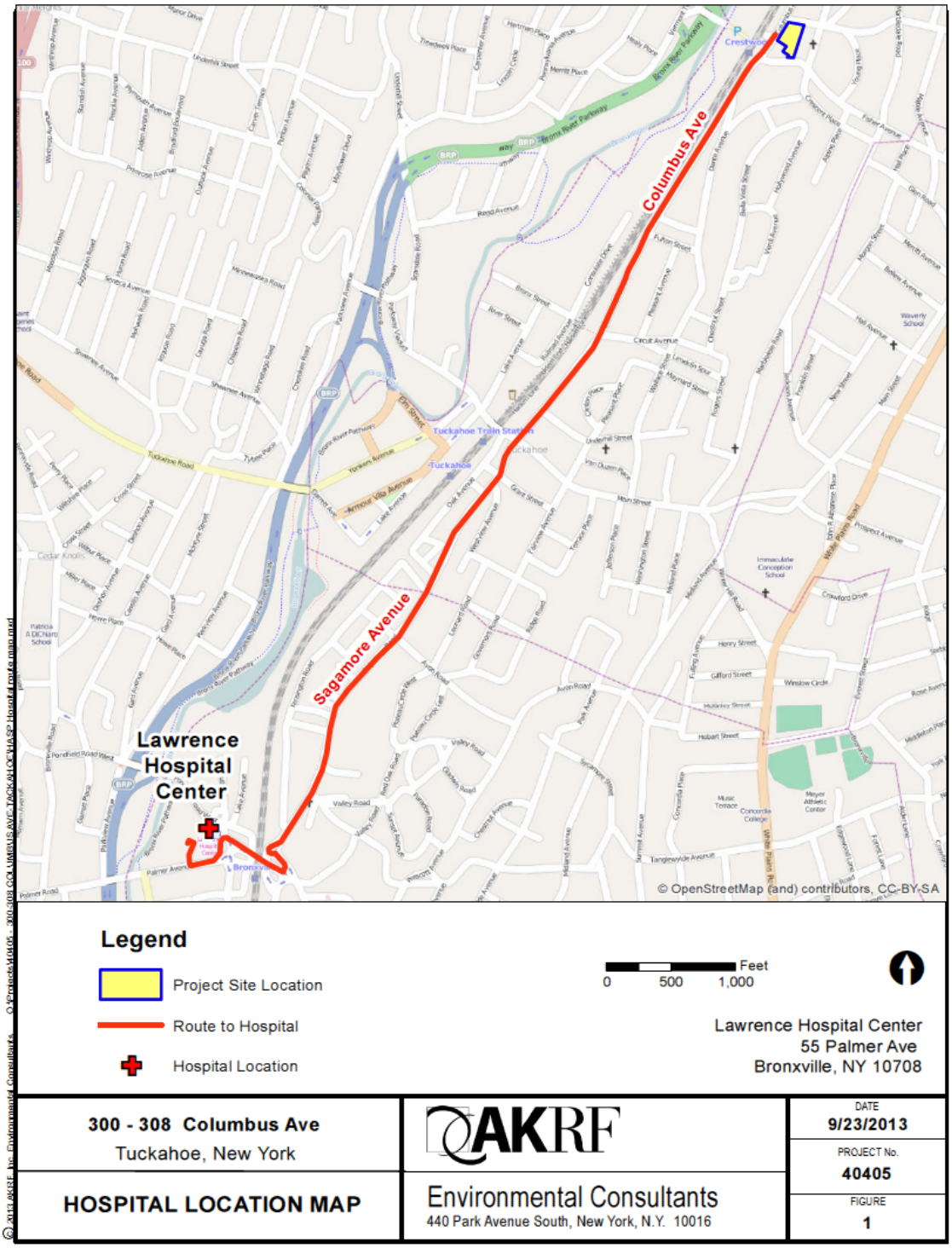
Directions to the Hospital:

1. Head SOUTH on Columbus Avenue (0.7 miles)
2. Continue onto Depot Square (325 feet)
3. Continue onto Sagamore Road (0.7 miles)
4. Go three-quarters around the traffic circle to stay on Sagamore Road
5. Turn RIGHT onto Kraft Avenue (70 feet)
6. Turn RIGHT onto Pondfield Road (500 feet)
7. Take second exit from traffic circle onto Palmer Avenue (0.2 miles)
8. Turn RIGHT into hospital entrance (Paxton Avenue)

Total Distance: 2.1 miles

Total Estimated Time: 8 minutes

Map Showing Route from the Site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 6). The list will also be posted prominently at the Site and made readily available to all personnel at all times.

The appropriate actions for other on-Site emergencies are detailed in the attached HASP, provided in Appendix C. The HASP may require revisions as necessitated by changes to Site conditions and project personnel. The plan will be updated as necessary or at a minimum of once every five years to ensure accuracy.

3.0 SITE MONITORING PLAN

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected Site media identified below. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Site inspection and monitoring to determine the integrity of the site cover system and the proper operation of the passive SSDS;
- Sampling and analysis of all appropriate media (e.g., , indoor air and soil vapor,), if necessary;
- Assessing achievement of the remedial performance criteria;
- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- The protocol for completing the inspection and periodic certifications;
- Inspection, monitoring, and sampling protocol and frequency
- Reporting requirements; and
- Quality Assurance/Quality Control (QA/QC) requirements;

Annual monitoring of the performance of the remedy and overall reduction in contamination on-Site will be conducted for the first 5 years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. The Monitoring program is outlined in detail in Sections 3.2 and 3.3 below.

3.2 Cover System and SSDS Monitoring

Exposure to residual contaminated soil remaining at the Site is being prevented by an engineered Site cover system that is made up of the newly constructed concrete floor slab, the asphalt parking lot, concrete sidewalks, and the landscaped areas. The concrete floor slab for the enclosed portion of the Site also includes the underlying passive SSDS at the Site. The location and details of the Site cover system and passive SSDS are shown on Figures 6 and 7, respectively. The as-built drawings for the cover system and SSDS are included in Appendix D.

The Site cover system will remain intact 24-hours a day, 7 days a week, for 365 days a year. Disturbance of the Site cover system or EC components is prohibited by the Environmental Easement. In the unlikely event of an unanticipated accidental or required

disturbance of the Site cover system, the response procedure is outlined in Section 2.5 – Contingency Plan.

Monitoring of the Site cover system will occur on an annual basis as long as the Environmental Easement is in effect to ensure the system's integrity. Monitoring will consist of visual inspection, which shall evaluate the structural integrity of the concrete floor slab of the first floor, support columns into the floor and the wall joints. If any cracks or openings are identified, they shall be screened for organic vapors with a PID and any readings shall be noted. In addition, any cracks or openings in the floor shall then be properly sealed.

Monitoring of the passive SSDS will occur on an annual basis and be conducted concurrent with the cover system monitoring. Monitoring will consist of visual inspection of the SSDS piping for structural integrity and/or damage that would prohibit proper functioning of the SSDS. Inspection will include the entire length of accessible piping from the manifold floor slab up through the roof exhaust. The wind driven turbine will be inspected to confirm proper function.

A Site Cover System and SSDS Inspection Form is included in Appendix D. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where applicable, sample collection; and
- Confirm that Site records are up to date.

The results of the inspection will be included in the Periodic Review Report. In addition, the Site cover system and SSDS must be inspected and certified any time a disturbance in the system occurs. The inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or indoor air sampling may take place when a suspected failure of the Site cover system has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

3.3 Indoor Air Sampling

To confirm indoor air quality during the operation of the SSDS system, one round of indoor air samples were collected from within the Site building following completion of the remedy. The sampling event took place on August 3, 2015 and was completed in accordance with the NYSDEC-approved RAWP and the NYSDOH Vapor Intrusion Guidance Document. The indoor air sampling locations are shown on Figure 8. The sampling showed that the vapor barrier and SSDS were effective in preventing any residual vapors from entering the site building.

The need to perform additional rounds of indoor air sampling will be determined based on the results of the site inspection program, or a request to decommission or terminate components of the SSDS with the approval of NYSDEC. This SMP will be modified to reflect any changes in sampling plans approved by NYSDEC. Situations that may require additional rounds of indoor air sampling include evidence of vapor intrusion observed during a site inspection event, or modifications to the cover system or restoration of vapor barrier/floor slab after completion of repairs. Prior to the collection of indoor air samples, a sampling plan will be forwarded to NYSDEC to confirm

sampling locations and schedule. The following section includes the protocol for the collection of indoor air samples.

3.3.1 Indoor Air Sampling Protocol

Following the completion of a pre-sampling inspection and chemical inventory of the Site building, indoor air sampling will be performed during the operation of the building's heating system at two locations on the first floor of the Site building. Two indoor air samples will be collected from the first floor of the building using 8-hour flow controllers. An outdoor ambient air sample will also be collected for quality control purposes and to document background conditions. The samples will be collected using the following procedures in accordance with NYSDOH guidance and the sampling procedures detailed in the Quality Assurance Project Plan (QAPP) in Appendix F:

1. Place a labeled 1-liter Summa canister at the breathing zone level (4.5 to 5 feet above ground surface) in the designated sampling location.
2. Record the vacuum reading from the vacuum gauge on the canister at the beginning of the 8-hour sampling period.
3. Open the valve of the canister and record the time in the field book. At the end of the 8-hour sampling period, close valve, remove flow-rate controllers and vacuum gauges, install caps on canisters, and record time.
4. Place canisters in shipping containers for transportation to laboratory.
5. Repeat procedure for all of the sampling locations.

The samples will be analyzed for VOCs by EPA Method TO-15 with a detection limit of 1 ug/m^3 for all compounds, except for TCE and PCE, which will have a detection limit of 0.25 micrograms per cubic meter (ug/m^3) for indoor air samples. All sample analysis will be performed in a New York State Department of Health Environmental Laboratory Approval Program (NYSDOH-ELAP) laboratory certified to perform NYSDEC Analytical Services Protocol (ASP). The laboratory will produce Category B deliverables. Samples will be shipped to the laboratory with appropriate chain of custody documentation. Field observations (e.g., potential VOC sources, etc.) will be noted on the sampling log, which will be subject to the reporting requirements and system checks as discussed in Section 3.5 and 4.0. Complete indoor air sampling procedures are detailed in the QAPP (Appendix F).

3.4 Monitoring Quality Assurance/Quality Control

The field inspections and any required sampling and analyses will be performed in accordance with the requirements of the QAPP prepared for the Site (Appendix F). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
  - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
  - Sample holding times will be in accordance with the NYSDEC ASP requirements.

- Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:
  - All field analytical equipment will be calibrated immediately prior to each day's use and will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.5 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-Site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. Based on the scope or the type of Site monitoring performed, a letter report or an email summary with attachments will be prepared, subsequent to each inspection and/or sampling event. The document submittal will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected, if applicable (e.g., indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., inspection forms, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and

- A determination as to whether site conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC.

4.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

4.1 Site Inspections

4.1.1 Inspection Frequency

Monitoring of the site cover system and passive SSDS will be completed on an annual basis, and in accordance with Section 3.0 (Site Monitoring Plan). Additional inspections will also be conducted when a breakdown of any site cover or treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that has the potential to affect the ECs.

4.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the Site Cover System and Passive SSDS Inspection Form, which is included in Appendix E. This form is subject to NYSDEC revision.

The inspection form, and any other records, including all media sampling data and system maintenance/repair records reports, generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

4.1.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,
- The Site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and FER.

4.2 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare the following certification:

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;

- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the Site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Marc S. Godick, LEP, of AKRF, Inc., am certifying as Site Representative: I have been authorized and designated by all site owners to sign this certification for the Site.

The signed certification will be included in the Periodic Review Report described below.

Every five years the following certification will be added:

- The assumptions made in the qualitative exposure assessment remain valid.
- The signed certification will be included in the Periodic Review Report described below.

4.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department annually, beginning fifteen months after the Certificate of Completion is issued. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described in Appendix B (Environmental Easement - Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual Site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any information generated during the reporting period with comments and conclusions;

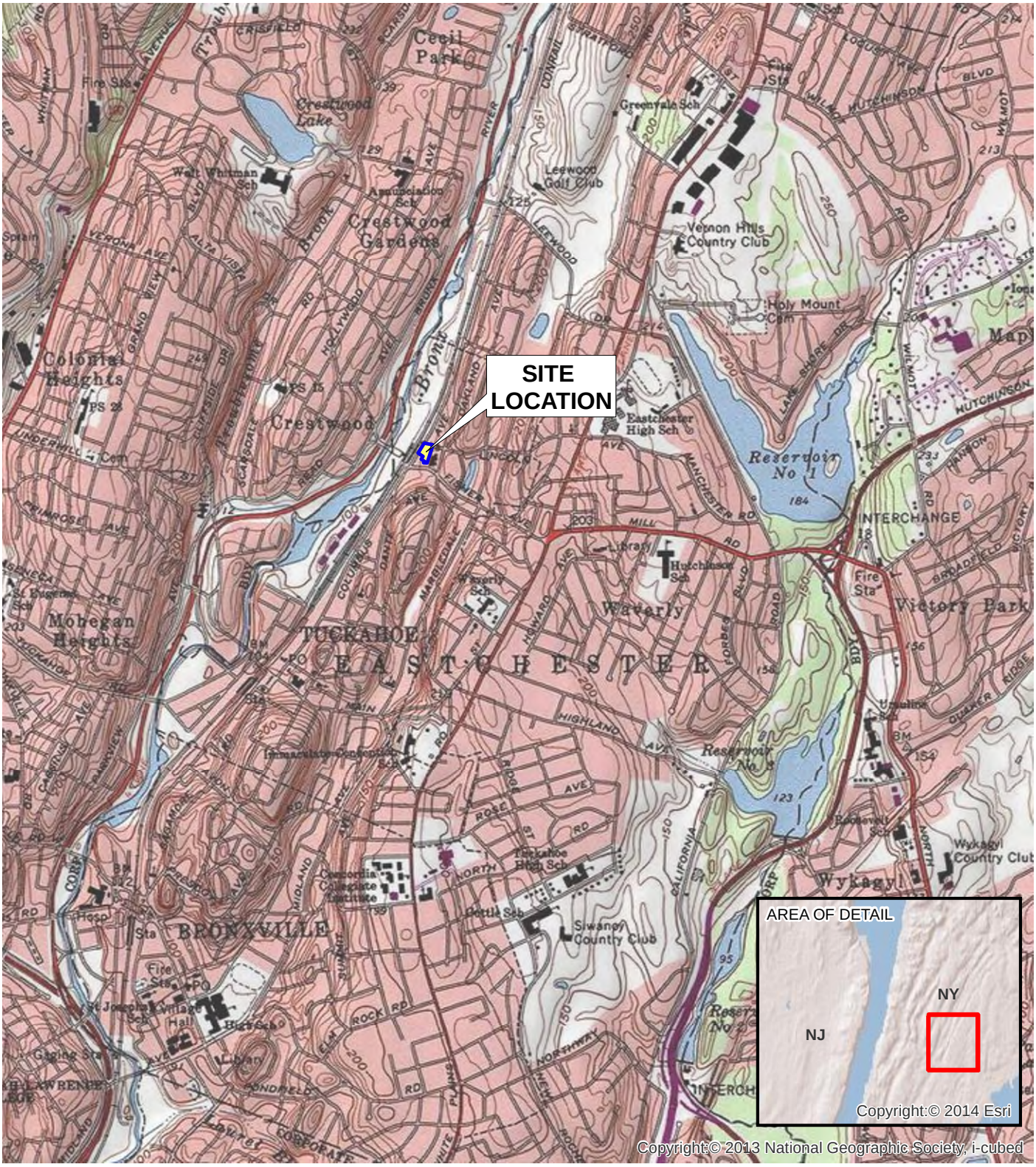
- Data summary tables and graphical representations of contaminants of concern by media (indoor air), if applicable, which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for any samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A Site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the Site-specific RAWP, ROD or Decision Document;
  - The operation and the effectiveness of the site cover system and passive SSDS, including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
  - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office and Regional Office in which the Site is located, and in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

4.4 CORRECTIVE MEASURES PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

FIGURES



SOURCE
USGS 7.5 Minute Topographic Map
MOUNT VERNON Quad 1979

0 1,000 2,000
Feet

300 & 308 COLUMBUS AVE
TUCKAHOE, NEW YORK

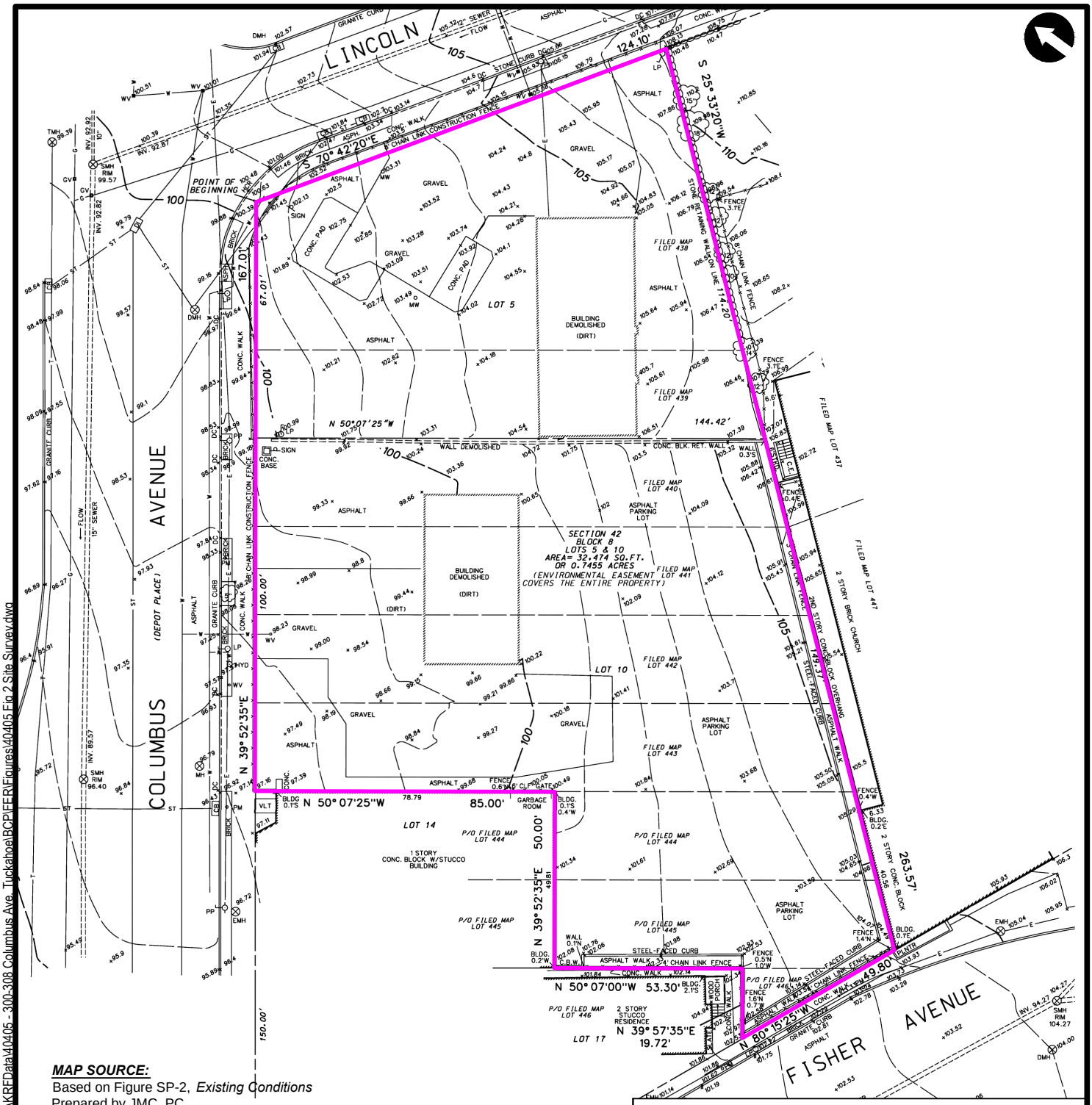
SITE LOCATION MAP

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
7.9.2015

PROJECT No.
40405

FIGURE
1



MAP SOURCE:

Based on Figure SP-2, *Existing Conditions*
Prepared by JMC, PC
120 Bedford Road Armonk, New York
August 2011

LEGEND:

	PROJECT SITE BOUNDARY
UST	UNDERGROUND STORAGE TANK
AST	ABOVEGROUND STORAGE TANK

300 & 308 COLUMBUS AVE

TUCKAHOE, NEW YORK

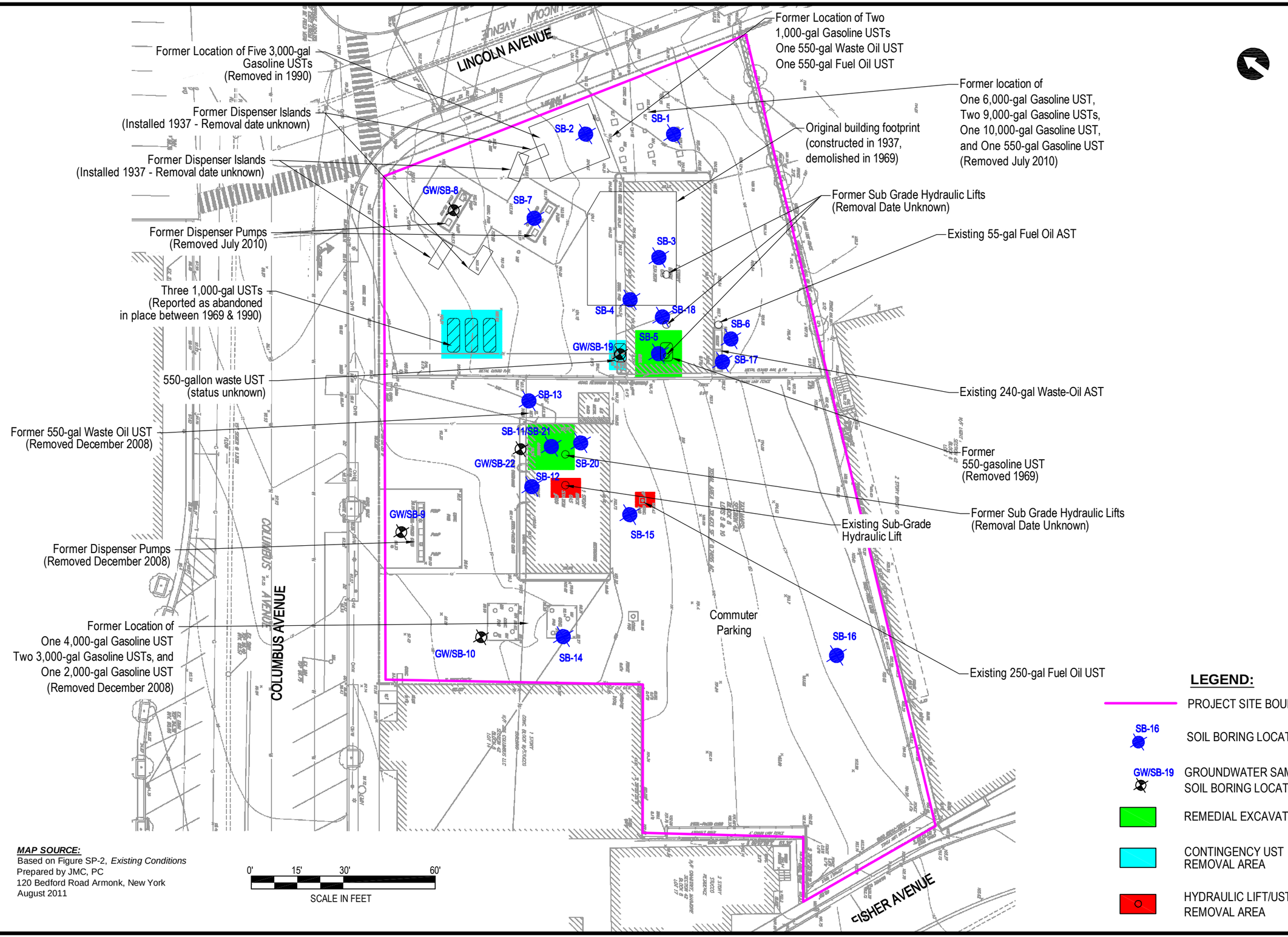
SITE SURVEY

AKRF

Environmental Consultants

440 Park Avenue South, New York, N.Y. 10016

DATE	7.22.2015
PROJECT No.	40405
SCALE	as shown
FIGURE	2



LEGEND:

- PROJECT SITE BOUNDARY
- SB-16 — SOIL BORING LOCATION
- GW/SB-19 — GROUNDWATER SAMPLE/ SOIL BORING LOCATION
- REMEDIAL EXCAVATION AREA
- CONTINGENCY UST REMOVAL AREA
- HYDRAULIC LIFT/UST REMOVAL AREA

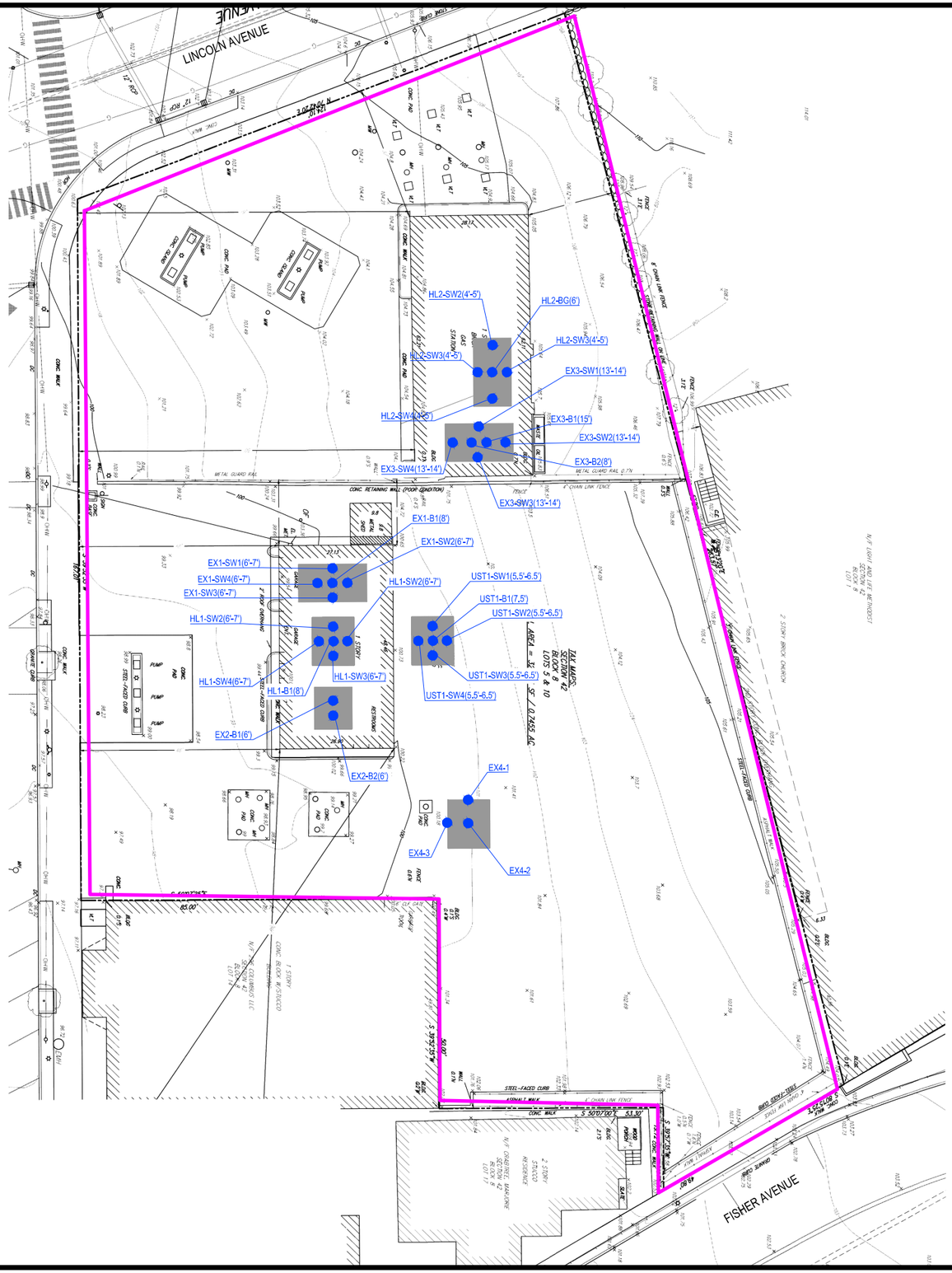
MAP SOURCE:
Based on Figure SP-2, *Existing Conditions*
Prepared by JMC, PC
120 Bedford Road Armonk, New York
August 2011

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

300-308 COLUMBUS AVE
TUCKAHOE, NEW YORK

REMEDIAL ACTION TARGET AREAS

DATE: 7.9.2015
PROJECT NO.: 40405
SCALE: as shown
FIGURE: 3



MAP SOURCE:
Based on Figure SP-2, *Existing Conditions*
Prepared by JMC, PC
120 Bedford Road Armonk, New York
August 2011

LEGEND:

- PROJECT SITE BOUNDARY
- ENDPOINT SAMPLE LOCATION
- EXCAVATION AREA

0' 15' 30' 60'
SCALE IN FEET

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

300-308 Columbus Avenue
Tuckahoe, New York

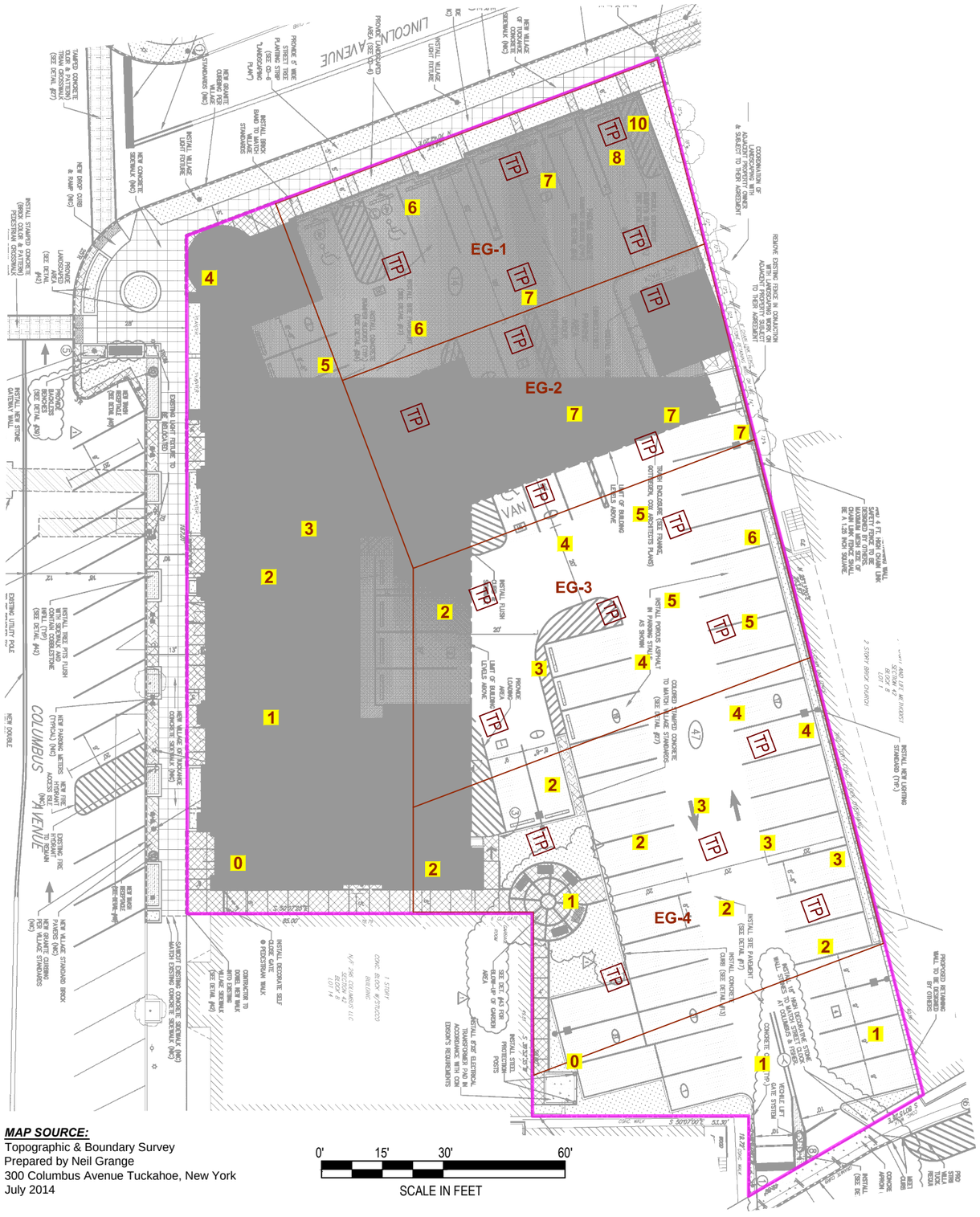
REMEDIAL EXCAVATION AREAS

DATE
9.4.2015

PROJECT NO.
40405

SCALE
as shown

FIGURE
4



LEGEND:

- PROJECT SITE BOUNDARY
- 7 — FINAL DEPTH FOR SITE CUT (FEET BELOW ORIGINAL GRADE)
- EG-1 — EXCAVATION GRID
- TP — TEST PIT FOR 5-POINT COMPOSITE

MAP SOURCE:
Topographic & Boundary Survey
Prepared by Neil Grange
300 Columbus Avenue Tuckahoe, New York
July 2014

0' 15' 30' 60'
SCALE IN FEET

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

300-308 COLUMBUS AVE
TUCKAHOE, NEW YORK

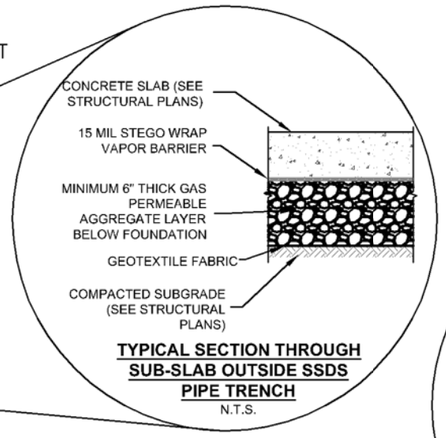
SITE EXCAVATION PLAN

DATE
7.22.2015

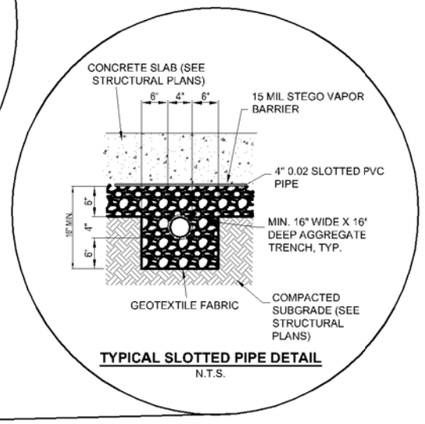
PROJECT NO.
40405

SCALE
as shown

FIGURE
5



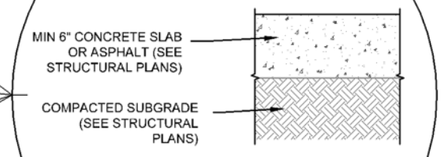
TYPICAL SECTION THROUGH SUB-SLAB OUTSIDE SSDS PIPE TRENCH
N.T.S.



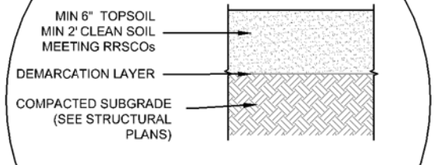
TYPICAL SLOTTED PIPE DETAIL
N.T.S.

LEGEND:

- PROJECT SITE BOUNDARY
- PARKING AREA SITE COVER
- OPEN AIR PARKING AREA UNDER STRUCTURE SITE COVER
- BUILDING SITE COVER, VAPOR BARRIER & PASSIVE SSDS
- BUILDING SITE COVER WITH VAPOR BARRIER ONLY
- SIDEWALK SITE COVER WITH PASSIVE SSDS AND VAPOR BARRIER
- LANDSCAPE AREA SITE COVER



SIDEWALK/PARKING LOT SITE COVER SYSTEM
N.T.S.



LANDSCAPE SITE COVER
N.T.S.

MAP SOURCE:
Topographic & Boundary Survey
Prepared by Neil Grange
300 Columbus Avenue Tuckahoe, New York
July 2014

0' 15' 30' 60'
SCALE IN FEET

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

300-308 COLUMBUS AVE
TUCKAHOE, NEW YORK

SITE COVER SYSTEM PLAN

DATE
9.4.2015

PROJECT NO.
40405

SCALE
as shown

FIGURE
6

END CAP, TYP.

MANIFOLD PIPE SHAFT, 6" SOLID SCH 40 PVC VERTICAL RISER TERMINATE AT ROOF

△MP-1

4" SCH. 40 PVC PIPE, TYP.

4" 0.02 SLOTTED PVC PIPE, TYP.

END CAP, TYP.

4" 0.02 SLOTTED PVC PIPE, TYP.

END CAP, TYP.

4" SCH. 40 PVC PIPE, TYP.

△MP-2

END CAP, TYP.

4" 0.02 SLOTTED PVC PIPE, TYP.

PROPERTY LINE

EXIST. ADJ. BLDG.

LEGEND:

4-INCH 0.02 SLOTTED PVC PIPE

4-INCH SCHEDULE 40 PVC PIPE

EXTENT OF PASSIVE SUB-SLAB DEPRESSURIZATION SYSTEM AND VAPOR BARRIER

EXTENT OF VAPOR BARRIER ONLY

MP-1 △ VAPOR MONITORING POINT (REFER TO DETAIL 8 ON H202.00)

0' 5' 10' 20'

APPROXIMATE SCALE IN FEET

AKRF Environmental Consultants
440 Park Avenue South, New York, NY 10016

300-308 COLUMBUS AVE
TUCKAHOE, NEW YORK

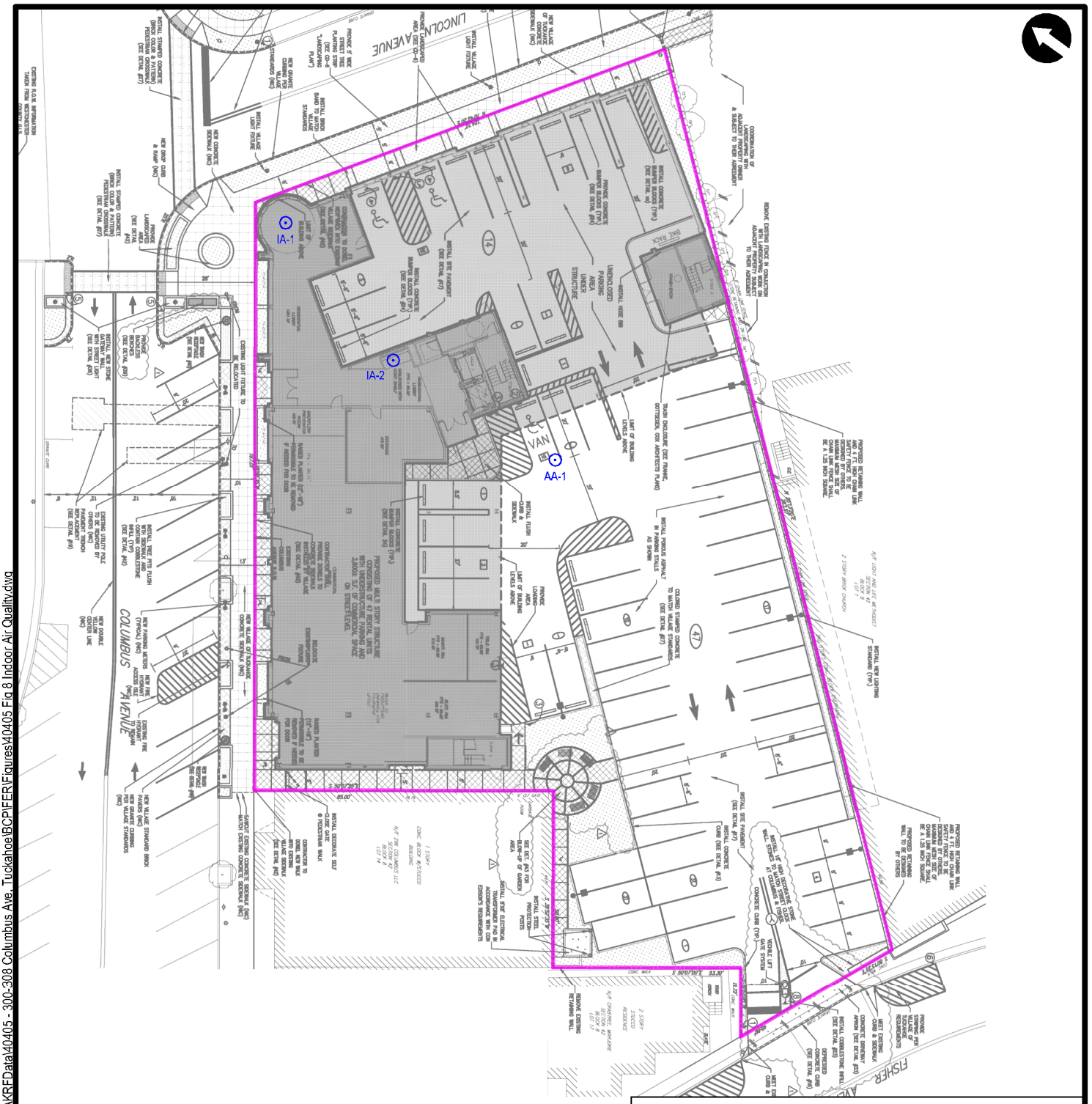
SSDS LOCATION PLAN

DATE 9.4.2015

PROJECT NO. 40405

SCALE as shown

FIGURE 7



MAP SOURCE:
Topographic & Boundary Survey
Prepared by Neil Grange
300 Columbus Avenue Tuckahoe, New York
July 2014

0' 20' 40' 80'
SCALE IN FEET

LEGEND:

PROJECT SITE BOUNDARY

IA-1 INDOOR AIR SAMPLE

AA-1 AMBIENT AIR SAMPLE

300 & 308 COLUMBUS AVE

TUCKAHOE, NEW YORK

POST-REMEDIATION INDOOR AIR QUALITY

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE 8/25/15
PROJECT No. 40405
SCALE as shown
FIGURE 8

TABLES

Table 1
300 and 308 Columbus Avenue
Tuckahoe, New York
NYSDEC BCP Site Specific Soil Cleanup Objectives

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Part 375 Restricted Residential SCO mg/kg	NYSDEC Part 375 Protection of Groundwater SCO mg/kg
Volatile Organic Compounds		
1,1,1-Trichloroethane	100	0.68
1,1-Dichloroethane	26	0.27
1,1-Dichloroethene	100	0.33
1,2-Dichloroethane	3	0.02
2-Butanone	100	0.12
Acetone	100	0.05
Benzene	5	0.06
Carbon disulfide	NS	2.7
Carbon tetrachloride	2	0.76
Chlorobenzene	100	1
Chloroform	49	0.37
cis-1,2-Dichloroethene	100	0.25
Ethylbenzene	41	1
Methylene Chloride	100	0.05
Tetrachloroethene	19	1
Toluene	100	0.7
trans-1,2-Dichloroethene	100	0.19
Trichloroethene	21	0.47
Vinyl chloride	0.9	0.02
Xylenes, Total	100	2
Semivolatile Organic Compounds		
1,2-Dichlorobenzene	100	1
1,3-Dichlorobenzene	49	2
1,4-Dichlorobenzene	13	2
2,4,5-Trichlorophenol	NS	0.1
2,4-Dimethylphenol	NS	0.4
2,4-Dinitrophenol	NS	0.2
2,6-Dinitrotoluene	NS	1
2-Methylnaphthalene	NS	36
2-Methylphenol	100	0.33
2-Nitroaniline	NS	0.4
2-Nitrophenol	NS	0.3
3-Nitroaniline	NS	0.5
4-Chloroaniline	NS	0.22
4-Nitrophenol	NS	0.1
Acenaphthene	100	98
Acenaphthylene	100	107
Anthracene	100	1,000
Benzidine	NS	NS
Benzo[a]anthracene	1	1
Benzo[a]pyrene	1	22
Benzo[b]fluoranthene	1	2
Benzo[g,h,i]perylene	100	1,000
Benzo[k]fluoranthene	4	2
Bis(2-ethylhexyl) phthalate	NS	435
Butyl benzyl phthalate	NS	122
Carbazole	NS	NS
Chrysene	4	1
Dibenz(a,h)anthracene	0.33	1,000
Dibenzofuran	59	210
Diethyl phthalate	NS	7
Dimethyl phthalate	NS	27
Di-n-butyl phthalate	NS	8
Di-n-octyl phthalate	NS	120
Fluoranthene	100	1,000
Fluorene	100	386
Hexachlorobenzene	1	1
Indeno[1,2,3-cd]pyrene	0.5	8
Isophorone	NS	4
Naphthalene	100	12
Nitrobenzene	15	0.17
Pentachlorophenol	7	0.8
Phenanthrene	100	1,000
Phenol	100	0.33
Pyrene	100	1,000

Table 1
300 and 308 Columbus Avenue
Tuckahoe, New York
NYSDEC BCP Site Specific Soil Cleanup Objectives

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Part 375 Restricted Residential SCO mg/kg	NYSDEC Part 375 Protection of Groundwater SCO mg/kg
Metals		
Arsenic	16	16
Barium	400	820
Beryllium	72	47
Cadmium	4	8
Chromium	180	19
Copper	270	1,720
Lead	400	450
Manganese	2,000	2,000
Mercury	0.81	1
Nickel	310	130
Selenium	180	4
Silver	180	8
Zinc	10,000	2,480
PCBs		
Aroclor 1016	1	3.2
Aroclor 1221	1	3.2
Aroclor 1232	1	3.2
Aroclor 1242	1	3.2
Aroclor 1248	1	3.2
Aroclor 1254	1	3.2
Aroclor 1260	1	3.2
Pesticides		
Aldrin	0.097	0.19
4,4'-DDD	9	17
4,4'-DDE	8	136
4,4'-DDT	1	47
alpha-BHC	0.48	0.02
beta-BHC	4	2.90
Chlordane	0	0.09
delta-BHC	100	0.25
Dieldrin	0.2	0.10
Endosulfan I	5	102
Endosulfan II	5	102
Endosulfan sulfate	5	1,000
Endrin	11	0.06
gamma-BHC (Lindane)	1	0.10
Heptachlor	2	0.38
Heptachlor epoxide	NS	0.02
Methoxychlor	NS	900

NS - No Soil Cleanup Objective Listed
SCOs - Soil Cleanup Objectives
mg/kg - milligrams per kilogram or parts per million
NYSDEC - New York State Department of Environmental Conservation

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	UST1-SW1 (5-6) 460-77244-2 6/4/2014	UST1-SW2 (5-6) 460-77244-3 6/4/2014	UST1-SW3 (5-6) 460-77244-4 6/4/2014	UST1-SW4 (5-6) 460-77244-5 6/4/2014	UST1-B1 (7) 460-77244-6 6/4/2014	HL1-SW1 (6-7) 460-77244-7 6/4/2014
1,1,1-Trichloroethane	100,000	680	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethane	26,000	270	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethene	100,000	330	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2,4-Trimethylbenzene	52,000	3,600	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dichlorobenzene	100,000	1,100	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dichloroethane	3,100	20	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,3,5-Trimethylbenzene	52,000	8,400	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,3-Dichlorobenzene	49,000	2,400	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,4-Dichlorobenzene	13,000	1,800	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,4-Dioxane	13,000	100	22 U	21 U	22 U	21 U	22 U	21 U
2-Butanone (MEK)	100,000	120	5.6 U	5.2 U	5.6 U	5.3 U	5.6 U	5.3 U
Acetone	100,000	50	5.6 U	5.2 U	5.6 U	5.3 U	5.6 U	5.3 U
Benzene	4,800	60	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	2,400	760	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Chlorobenzene	100,000	1,100	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloroform	49,000	370	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
cis-1,2-Dichloroethene	100,000	250	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.8
Ethylbenzene	41,000	1,000	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl tert-butyl ether	100,000	930	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Methylene Chloride	100,000	50	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
n-Butylbenzene	100,000	12,000	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
N-Propylbenzene	100,000	3,900	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
sec-Butylbenzene	100,000	11,000	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
tert-Butylbenzene	100,000	5,900	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Tetrachloroethene	19,000	1,300	0.47 J	1 U	1.1 U	0.18 J	0.79 J	2.3
Toluene	100,000	700	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
trans-1,2-Dichloroethene	100,000	190	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Trichloroethene	21,000	470	1.1 U	1 U	1.1 U	1.1 U	1.1 U	0.45 J
Vinyl chloride	900	20	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
Xylenes, Total	100,000	1,600	2.2 U	2.1 U	2.2 U	2.1 U	2.2 U	2.1 U
Total Concentration	NA	NA	0.47	0	0	0.18	0.79	4.55

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL1-SW2 (6-7) 460-77244-8 6/4/2014	HL1-SW3 (6-7) 460-77244-9 6/4/2014	HL1-SW4 (6-7) 460-77244-10 6/4/2014	HL1-B1 (8) 460-77244-11 6/4/2014	HL2-SW1 (4-5) 460-77467-3 6/9/2014	HL2-SW2 (4-5) 460-77467-4 6/9/2014
1,1,1-Trichloroethane	100,000	680	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,1-Dichloroethane	26,000	270	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,1-Dichloroethene	100,000	330	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,2,4-Trimethylbenzene	52,000	3,600	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,2-Dichlorobenzene	100,000	1,100	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,2-Dichloroethane	3,100	20	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,3,5-Trimethylbenzene	52,000	8,400	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,3-Dichlorobenzene	49,000	2,400	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,4-Dichlorobenzene	13,000	1,800	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
1,4-Dioxane	13,000	100	24 U	21 U	26 U	22 U	24 U	22 U
2-Butanone (MEK)	100,000	120	6 U	5.2 U	6.5 U	5.4 U	0.86 J	5.5 U
Acetone	100,000	50	6 U	5.2 U	6.5 U	5.4 U	4.7 J B	5.5 U
Benzene	4,800	60	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Carbon tetrachloride	2,400	760	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Chlorobenzene	100,000	1,100	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Chloroform	49,000	370	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
cis-1,2-Dichloroethene	100,000	250	3.7	0.31 J	1.3 U	3.4	1.2 U	1.1 U
Ethylbenzene	41,000	1,000	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Methyl tert-butyl ether	100,000	930	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Methylene Chloride	100,000	50	1.2 U	1 U	1.3 U	1.1 U	0.6 J	1.1 U
n-Butylbenzene	100,000	12,000	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
N-Propylbenzene	100,000	3,900	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
sec-Butylbenzene	100,000	11,000	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
tert-Butylbenzene	100,000	5,900	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Tetrachloroethene	19,000	1,300	17	2.5	0.41 J	2.8	1.2 U	2.2
Toluene	100,000	700	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
trans-1,2-Dichloroethene	100,000	190	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Trichloroethene	21,000	470	1.2	1 U	1.3 U	0.62 J	1.2 U	1.1 U
Vinyl chloride	900	20	1.2 U	1 U	1.3 U	1.1 U	1.2 U	1.1 U
Xylenes, Total	100,000	1,600	2.4 U	2.1 U	2.6 U	2.2 U	2.4 U	2.2 U
Total Concentration	NA	NA	21.9	2.81	0.41	6.82	6.16	2.2

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL2-SW3 (4-5) 460-77467-5 6/9/2014	HL2-SW4 (4-5) 460-77467-6 6/9/2014	HL2-B1 (6) 460-77467-7 6/9/2014	EX 4-1 (10') 200-25628-1 11/25/2014	EX 4-2 (10') 200-25628-2 11/25/2014	EX 4-3 (6') 200-25628-3 11/25/2014
1,1,1-Trichloroethane	100,000	680	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,1-Dichloroethane	26,000	270	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,1-Dichloroethene	100,000	330	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,2,4-Trimethylbenzene	52,000	3,600	1.1 U	1.3 U	1 U	1.7 J	0.28 J	8.2 U
1,2-Dichlorobenzene	100,000	1,100	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,2-Dichloroethane	3,100	20	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,3,5-Trimethylbenzene	52,000	8,400	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,3-Dichlorobenzene	49,000	2,400	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,4-Dichlorobenzene	13,000	1,800	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
1,4-Dioxane	13,000	100	21 U	26 U	21 U	160 U	140 U	160 U
2-Butanone (MEK)	100,000	120	5.3 U	6.4 U	5.2 U	7.9 U	7.2 U	8.2 U
Acetone	100,000	50	5.3 U	6.4 U	5.2 U	7.9 U	7.2 U	8.2 U
Benzene	4,800	60	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Carbon tetrachloride	2,400	760	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Chlorobenzene	100,000	1,100	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Chloroform	49,000	370	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
cis-1,2-Dichloroethene	100,000	250	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Ethylbenzene	41,000	1,000	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Methyl tert-butyl ether	100,000	930	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Methylene Chloride	100,000	50	1.1 U	1.3 U	0.79 J	1.9 J B	2.1 J B	2 J B
n-Butylbenzene	100,000	12,000	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
N-Propylbenzene	100,000	3,900	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
sec-Butylbenzene	100,000	11,000	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
tert-Butylbenzene	100,000	5,900	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Tetrachloroethene	19,000	1,300	9.3	3.4	2.3	7.9 U	7.2 U	8.2 U
Toluene	100,000	700	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
trans-1,2-Dichloroethene	100,000	190	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Trichloroethene	21,000	470	1.1 U	1.3 U	0.13 J	7.9 U	7.2 U	8.2 U
Vinyl chloride	900	20	1.1 U	1.3 U	1 U	7.9 U	7.2 U	8.2 U
Xylenes, Total	100,000	1,600	2.1 U	2.6 U	2.1 U	16 U	14 U	16 U
Total Concentration	NA	NA	9.3	3.4	3.22	3.6	2.38	2

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX1-SW1 (6-7) 460-77244-12 6/4/2014	EX1-SW2 (6-7) 460-77244-13 6/4/2014	EX1-SW3 (6-7) 460-77244-14 6/4/2014	EX1-SW4(6-7) 460-77251-1 6/4/2014	EX1-B1(8) 460-77251-2 6/4/2014	EX1-A(8) 460-77251-3 6/4/2014
1,1,1-Trichloroethane	100,000	680	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,1-Dichloroethane	26,000	270	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,1-Dichloroethene	100,000	330	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,2,4-Trimethylbenzene	52,000	3,600	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,2-Dichlorobenzene	100,000	1,100	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,2-Dichloroethane	3,100	20	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,3,5-Trimethylbenzene	52,000	8,400	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,3-Dichlorobenzene	49,000	2,400	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,4-Dichlorobenzene	13,000	1,800	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
1,4-Dioxane	13,000	100	21 U	21 U	21 U	19 U	22 U	21 U
2-Butanone (MEK)	100,000	120	5.3 U	5.1 U	5.3 U	4.8 U	5.6 U	5.3 U
Acetone	100,000	50	5.3 U	5.1 U	5.3 U	4.8 U	5.6 U	5.3 U
Benzene	4,800	60	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Carbon tetrachloride	2,400	760	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Chlorobenzene	100,000	1,100	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Chloroform	49,000	370	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
cis-1,2-Dichloroethene	100,000	250	3	30	7.4	1.1	4.2	14
Ethylbenzene	41,000	1,000	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Methyl tert-butyl ether	100,000	930	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Methylene Chloride	100,000	50	1.1 U	1 U	1.1 U	0.96 U	1.2 B	0.47 J B
n-Butylbenzene	100,000	12,000	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
N-Propylbenzene	100,000	3,900	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
sec-Butylbenzene	100,000	11,000	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
tert-Butylbenzene	100,000	5,900	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Tetrachloroethene	19,000	1,300	2.9	20	8.6	2.1	2.8	9.8
Toluene	100,000	700	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
trans-1,2-Dichloroethene	100,000	190	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Trichloroethene	21,000	470	0.58 J	4	1.4	0.23 J	0.76 J	2.1
Vinyl chloride	900	20	1.1 U	1 U	1.1 U	0.96 U	1.1 U	1.1 U
Xylenes, Total	100,000	1,600	2.1 U	2.1 U	2.1 U	1.9 U	2.2 U	2.1 U
Total Concentration	NA	NA	6.48	54	17.4	3.43	8.96	26.37

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX2-B1 (6) 460-77467-1 6/9/2014	EX2-B2 (6) 460-77467-2 6/9/2014	EX3-SW1 (13-14) 460-77553-1 6/10/2014	EX3-SW2 (13-14) 460-77553-2 6/10/2014	EX3-SW3 (13-14) 460-77553-3 6/10/2014	EX3-SW4 (13-14) 460-77553-4 6/10/2014
1,1,1-Trichloroethane	**100,000**	**680**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,1-Dichloroethane	**26,000**	**270**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,1-Dichloroethene	**100,000**	**330**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,2,4-Trimethylbenzene	**52,000**	**3,600**	2.7	0.99 J	1.3 U	1.2 U	1.3 U	1.2 U
1,2-Dichlorobenzene	**100,000**	**1,100**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,2-Dichloroethane	**3,100**	**20**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,3,5-Trimethylbenzene	**52,000**	**8,400**	6.3	0.85 J	1.3 U	1.2 U	1.3 U	1.2 U
1,3-Dichlorobenzene	**49,000**	**2,400**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,4-Dichlorobenzene	**13,000**	**1,800**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
1,4-Dioxane	**13,000**	**100**	23 U	24 U	27 U	25 U	26 U	25 U
2-Butanone (MEK)	**100,000**	**120**	5.7 U	6 U	6.7 U	6.2 U	6.4 U	6.2 U
Acetone	**100,000**	**50**	3.5 J B	5.1 J B	6.7 U	6.2 U	6.4 U	6.2 U
Benzene	**4,800**	**60**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Carbon tetrachloride	**2,400**	**760**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Chlorobenzene	**100,000**	**1,100**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Chloroform	**49,000**	**370**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
cis-1,2-Dichloroethene	**100,000**	**250**	3.9	1.4	1.3 U	1.2 U	1.3 U	1.2 U
Ethylbenzene	**41,000**	**1,000**	2.7	0.28 J	1.3 U	1.2 U	1.3 U	1.2 U
Methyl tert-butyl ether	**100,000**	**930**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Methylene Chloride	**100,000**	**50**	1.1 U	0.19 J	1.3 U	1.2 U	1.3 U	1.2 U
n-Butylbenzene	**100,000**	**12,000**	1.2	0.12 J	1.3 U	1.2 U	1.3 U	1.2 U
N-Propylbenzene	**100,000**	**3,900**	2.5	0.47 J	1.3 U	1.2 U	1.3 U	1.2 U
sec-Butylbenzene	**100,000**	**11,000**	0.36 J	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
tert-Butylbenzene	**100,000**	**5,900**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Tetrachloroethene	**19,000**	**1,300**	64	16	0.25 J	1.2 U	1.3 U	1.2 U
Toluene	**100,000**	**700**	1.4	0.57 J	1.3 U	1.2 U	1.3 U	1.2 U
trans-1,2-Dichloroethene	**100,000**	**190**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Trichloroethene	**21,000**	**470**	0.92 J	0.47 J	1.3 U	1.2 U	1.3 U	1.2 U
Vinyl chloride	**900**	**20**	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U
Xylenes, Total	**100,000**	**1,600**	8.1	2.4 U	2.7 U	2.5 U	2.6 U	2.5 U
Total Concentration	**NA**	**NA**	97.58	26.44	0.25	0	0	0

Table 1
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX3-B1 (15) 460-77553-5 6/10/2014	EX3-B2 (8) 460-77553-6 6/10/2014	ST1-1A 460-77251-4 6/4/2014	ST1-1B 460-77251-5 6/4/2014	ST2-1 460-77251-7 6/4/2014	TB 460-77244-1 6/4/2014
1,1,1-Trichloroethane	**100,000**	**680**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
1,1-Dichloroethane	**26,000**	**270**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
1,1-Dichloroethene	**100,000**	**330**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
1,2,4-Trimethylbenzene	**52,000**	**3,600**	1.3 U	0.19 J	1.1 U	1.1 U	51 *	1 U
1,2-Dichlorobenzene	**100,000**	**1,100**	1.3 U	1.2 U	1.1 U	1.1 U	2.2 *	1 U
1,2-Dichloroethane	**3,100**	**20**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
1,3,5-Trimethylbenzene	**52,000**	**8,400**	1.3 U	1.2 U	1.1 U	1.1 U	19 *	1 U
1,3-Dichlorobenzene	**49,000**	**2,400**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U *	1 U
1,4-Dichlorobenzene	**13,000**	**1,800**	1.3 U	1.2 U	1.1 U	1.1 U	1.2 *	1 U
1,4-Dioxane	**13,000**	**100**	26 U	24 U	21 U	23 U	22 U	50 U
2-Butanone (MEK)	**100,000**	**120**	6.6 U	6 U	5.3 U	5.7 U	50	5 U
Acetone	**100,000**	**50**	6.6 U	6 U	5.3 U	5.7 U	360 B	5 U
Benzene	**4,800**	**60**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Carbon tetrachloride	**2,400**	**760**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Chlorobenzene	**100,000**	**1,100**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Chloroform	**49,000**	**370**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1.3
cis-1,2-Dichloroethene	**100,000**	**250**	1.3 U	1.2 U	1.8	5.2	4.3	1 U
Ethylbenzene	**41,000**	**1,000**	1.3 U	1.2 U	1.1 U	1.1 U	1.5	1 U
Methyl tert-butyl ether	**100,000**	**930**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Methylene Chloride	**100,000**	**50**	1.3 U	1.2 U	0.45 J B	0.48 J B	0.42 J B	1 U
n-Butylbenzene	**100,000**	**12,000**	1.3 U	1.2 U	1.1 U	1.1 U	5.7 *	1 U
N-Propylbenzene	**100,000**	**3,900**	1.3 U	1.2 U	1.1 U	1.1 U	6.5 *	1 U
sec-Butylbenzene	**100,000**	**11,000**	1.3 U	1.2 U	1.1 U	1.1 U	1.5 *	1 U
tert-Butylbenzene	**100,000**	**5,900**	1.3 U	1.2 U	1.1 U	1.1 U	0.13 J *	1 U
Tetrachloroethene	**19,000**	**1,300**	1.3 U	3.2	11	4.4	110	1 U
Toluene	**100,000**	**700**	1.3 U	1.2 U	1.1 U	1.1 U	1.3	1 U
trans-1,2-Dichloroethene	**100,000**	**190**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Trichloroethene	**21,000**	**470**	1.3 U	1.2 U	0.82 J	0.84 J	1.5	1 U
Vinyl chloride	**900**	**20**	1.3 U	1.2 U	1.1 U	1.1 U	1.1 U	1 U
Xylenes, Total	**100,000**	**1,600**	2.6 U	2.4 U	2.1 U	2.3 U	12	2 U
Total Concentration	**NA**	**NA**	0	3.39	14.07	10.92	628.25	1.3

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	UST1-SW1 (5-6) 460-77244-2 6/4/2014 1	UST1-SW2 (5-6) 460-77244-3 6/4/2014 1	UST1-SW3 (5-6) 460-77244-4 6/4/2014 1	UST1-SW4 (5-6) 460-77244-5 6/4/2014 1	UST1-B1 (7) 460-77244-6 6/4/2014 1	HL1-SW1 (6-7) 460-77244-7 6/4/2014 1
2-Methylphenol	**100,000**	**330**	360 U	360 U	370 U	380 U	370 U	360 U
3 & 4 Methylphenol	**100,000**	**330**	360 U	360 U	370 U	380 U	370 U	360 U
Acenaphthene	**100,000**	**98,000**	360 U	360 U	370 U	380 U	370 U	360 U
Acenaphthylene	**100,000**	**107,000**	47 J	360 U	370 U	380 U	370 U	360 U
Anthracene	**100,000**	**1,000,000**	49 J	360 U	370 U	380 U	370 U	360 U
Benzo[a]anthracene	**1,000**	**1,000**	450	160	81	100	300	140
Benzo[a]pyrene	**1,000**	**22,000**	540	200	110	130	370	170
Benzo[b]fluoranthene	**1,000**	**1,700**	790	340	180	210	520	230
Benzo[g,h,i]perylene	**100,000**	**1,000,000**	280 J	79 J	51 J	57 J	170 J	99 J
Benzo[k]fluoranthene	**3,900**	**1,700**	300	140	65	90	200	110
Chrysene	**3,900**	**1,000**	620	230 J	120 J	130 J	440	190 J
Dibenz(a,h)anthracene	**330**	**1,000,000**	94	35 J	25 J	38 U	63	39
Dibenzofuran	**59,000**	**210,000**	360 U	360 U	370 U	380 U	370 U	360 U
Fluoranthene	**100,000**	**1,000,000**	850	360	180 J	240 J	570	230 J
Fluorene	**100,000**	**386,000**	360 U	360 U	370 U	380 U	370 U	360 U
Hexachlorobenzene	**1,200**	**3,200**	36 U	36 U	37 U	38 U	37 U	36 U
Indeno[1,2,3-cd]pyrene	**500**	**8,200**	320	91	53	64	200	120
Naphthalene	**100,000**	**12,000**	360 U	360 U	370 U	380 U	370 U	360 U
Pentachlorophenol	**6,700**	**800**	740 U	730 U	750 U	760 U	740 U	740 U
Phenanthrene	**100,000**	**1,000,000**	410	140 J	56 J	78 J	290 J	110 J
Phenol	**100,000**	**330**	360 U	360 U	370 U	380 U	370 U	360 U
Pyrene	**100,000**	**1,000,000**	950	280 J	150 J	190 J	670	300 J
Total Concentration	**NA**	**NA**	5,700	2,055	1,071	1,289	3,793	1,738

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL1-SW2 (6-7) 460-77244-8 6/4/2014 1	HL1-SW3 (6-7) 460-77244-9 6/4/2014 1	HL1-SW4 (6-7) 460-77244-10 6/4/2014 2	HL1-B1 (8) 460-77244-11 6/4/2014 1	HL2-SW1 (4-5) 460-77467-3 6/9/2014 1	HL2-SW2 (4-5) 460-77467-4 6/9/2014 1
2-Methylphenol	**100,000**	**330**	360 U	360 U	720 U	360 U	370 U	360 U
3 & 4 Methylphenol	**100,000**	**330**	360 U	360 U	720 U	360 U	370 U	360 U
Acenaphthene	**100,000**	**98,000**	360 U	360 U	870	360 U	370 U	360 U
Acenaphthylene	**100,000**	**107,000**	360 U	360 U	720 U	360 U	370 U	360 U
Anthracene	**100,000**	**1,000,000**	360 U	360 U	2,200	360 U	370 U	360 U
Benzo[a]anthracene	**1,000**	**1,000**	100	150	**3,300**	86	37 U	49
Benzo[a]pyrene	**1,000**	**22,000**	130	160	**2,900**	100	37 U	45
Benzo[b]fluoranthene	**1,000**	**1,700**	190	260	**3,700**	140	37 U	62
Benzo[g,h,i]perylene	**100,000**	**1,000,000**	79 J	62 J	1,000	60 J	370 U	360 U
Benzo[k]fluoranthene	**3,900**	**1,700**	67	110	1,500	53	37 U	27 J
Chrysene	**3,900**	**1,000**	150 J	190 J	3,400	110 J	370 U	57 J
Dibenz(a,h)anthracene	**330**	**1,000,000**	36 U	30 J	300	36 U	37 U	36 U
Dibenzofuran	**59,000**	**210,000**	360 U	360 U	410 J	360 U	370 U	360 U
Fluoranthene	**100,000**	**1,000,000**	170 J	250 J	9,400	130 J	370 U	75 J
Fluorene	**100,000**	**386,000**	360 U	360 U	810	360 U	370 U	360 U
Hexachlorobenzene	**1,200**	**3,200**	36 U	36 U	72 U	36 U	37 U	36 U
Indeno[1,2,3-cd]pyrene	**500**	**8,200**	95	78	**1,300**	72	37 U	26 J
Naphthalene	**100,000**	**12,000**	360 U	360 U	720 U	360 U	370 U	360 U
Pentachlorophenol	**6,700**	**800**	720 U	730 U	1,500 U	730 U	740 U	740 U
Phenanthrene	**100,000**	**1,000,000**	75 J	120 J	8,600	71 J	370 U	360 U
Phenol	**100,000**	**330**	360 U	360 U	720 U	360 U	370 U	360 U
Pyrene	**100,000**	**1,000,000**	240 J	230 J	6,100	170 J	370 U	90 J
Total Concentration	**NA**	**NA**	1,296	1,640	45,790	992	0	431

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL2-SW3 (4-5) 460-77467-5 6/9/2014 2	HL2-SW4 (4-5) 460-77467-6 6/9/2014 1	HL2-B1 (6) 460-77467-7 6/9/2014 1	EX 4-1 (10') 200-25628-1 11/25/2014 1	EX 4-2 (10') 200-25628-2 11/25/2014 1	EX 4-3 (6') 200-25628-3 11/25/2014 1
2-Methylphenol	100,000	330	740 U	360 U	360 U	430 U	420 U	430 U
3 & 4 Methylphenol	100,000	330	740 U	360 U	360 U	430 U	420 U	430 U
Acenaphthene	100,000	98,000	740 U	360 U	360 U	430 U	420 U	430 U
Acenaphthylene	100,000	107,000	740 U	360 U	360 U	430 U	420 U	430 U
Anthracene	100,000	1,000,000	740 U	360 U	360 U	430 U	420 U	430 U
Benzo[a]anthracene	1,000	1,000	74 U	36 U	36 U	43 U	42 U	43 U
Benzo[a]pyrene	1,000	22,000	74 U	36 U	36 U	43 U *	42 U *	43 U *
Benzo[b]fluoranthene	1,000	1,700	74 U	36 U	36 U	43 U *	42 U *	43 U *
Benzo[g,h,i]perylene	100,000	1,000,000	740 U	360 U	360 U	430 U	420 U	430 U
Benzo[k]fluoranthene	3,900	1,700	74 U	36 U	36 U	43 U	42 U	43 U
Chrysene	3,900	1,000	740 U	360 U	360 U	430 U	420 U	430 U
Dibenz(a,h)anthracene	330	1,000,000	74 U	36 U	36 U	43 U	42 U	43 U
Dibenzofuran	59,000	210,000	740 U	360 U	360 U	430 U	420 U	430 U
Fluoranthene	100,000	1,000,000	740 U	360 U	360 U	430 U	420 U	430 U
Fluorene	100,000	386,000	740 U	360 U	360 U	430 U	420 U	430 U
Hexachlorobenzene	1,200	3,200	74 U	36 U	36 U	43 U	42 U	43 U
Indeno[1,2,3-cd]pyrene	500	8,200	74 U	36 U	36 U	43 U	42 U	43 U
Naphthalene	100,000	12,000	740 U	360 U	360 U	430 U	420 U	430 U
Pentachlorophenol	6,700	800	1500 U	740 U	730 U	340 U	340 U	350 U
Phenanthrene	100,000	1,000,000	740 U	360 U	360 U	430 U	420 U	430 U
Phenol	100,000	330	740 U	360 U	360 U	430 U	420 U	430 U
Pyrene	100,000	1,000,000	740 U	360 U	360 U	430 U	420 U	430 U
Total Concentration	NA	NA	0	0	0	0	0	0

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX1-SW1 (6-7) 460-77244-12 6/4/2014 1	EX1-SW2 (6-7) 460-77244-13 6/4/2014 1	EX1-SW3 (6-7) 460-77244-14 6/4/2014 1	EX1-SW4(6-7) 460-77251-1 6/4/2014 1	EX1-B1(8) 460-77251-2 6/4/2014 1	EX1-A(8) 460-77251-3 6/4/2014 1
2-Methylphenol	100,000	330	360 U	380 U	360 U	360 U	360 U	360 U
3 & 4 Methylphenol	100,000	330	360 U	380 U	360 U	360 U	360 U	360 U
Acenaphthene	100,000	98,000	360 U	380 U	360 U	360 U	360 U	360 U
Acenaphthylene	100,000	107,000	360 U	380 U	44 J	360 U	360 U	360 U
Anthracene	100,000	1,000,000	360 U	380 U	62 J	360 U	360 U	360 U
Benzo[a]anthracene	1,000	1,000	36 U	85	490	59	36 U	81
Benzo[a]pyrene	1,000	22,000	36 U	96	570	69	46	97
Benzo[b]fluoranthene	1,000	1,700	36 U	130	790	95	74	140
Benzo[g,h,i]perylene	100,000	1,000,000	360 U	83 J	270 J	36 J	39 J	53 J
Benzo[k]fluoranthene	3,900	1,700	36 U	63	380	46	25 J	56
Chrysene	3,900	1,000	360 U	110 J	660	85 J	56 J	110 J
Dibenz(a,h)anthracene	330	1,000,000	36 U	38 U	84	36 U	36 U	27 J
Dibenzofuran	59,000	210,000	360 U	380 U	360 U	360 U	360 U	360 U
Fluoranthene	100,000	1,000,000	360 U	130 J	880	97 J	70 J	130 J
Fluorene	100,000	386,000	360 U	380 U	360 U	360 U	360 U	360 U
Hexachlorobenzene	1,200	3,200	36 U	38 U	36 U	36 U	36 U	36 U
Indeno[1,2,3-cd]pyrene	500	8,200	36 U	96	310	43	43	65
Naphthalene	100,000	12,000	360 U	380 U	360 U	360 U	360 U	360 U
Pentachlorophenol	6,700	800	720 U	770 U	730 U	730 U	720 U	730 U
Phenanthrene	100,000	1,000,000	360 U	54 J	380	64 J	360 U	61 J
Phenol	100,000	330	360 U	380 U	360 U	360 U	360 U	360 U
Pyrene	100,000	1,000,000	360 U	190 J	950	110 J	110 J	160 J
Total Concentration	NA	NA	0	1,037	5,870	704	463	980

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX2-B1 (6) 460-77467-1 6/9/2014 1	EX2-B2 (6) 460-77467-2 6/9/2014 1	EX3-SW1 (13-14) 460-77553-1 6/10/2014 1	EX3-SW2 (13-14) 460-77553-2 6/10/2014 1	EX3-SW3 (13-14) 460-77553-3 6/10/2014 1	EX3-SW4 (13-14) 460-77553-4 6/10/2014 1
2-Methylphenol	**100,000**	**330**	360 U	360 U	350 U	350 U	350 U	350 U
3 & 4 Methylphenol	**100,000**	**330**	360 U	360 U	350 U	350 U	350 U	350 U
Acenaphthene	**100,000**	**98,000**	360 U	360 U	350 U	350 U	350 U	350 U
Acenaphthylene	**100,000**	**107,000**	360 U	360 U	350 U	350 U	350 U	350 U
Anthracene	**100,000**	**1,000,000**	360 U	360 U	350 U	350 U	350 U	350 U
Benzo[a]anthracene	**1,000**	**1,000**	28 J	36 U	35 U	35 U	35 U	35 U
Benzo[a]pyrene	**1,000**	**22,000**	28 J	36 U	35 U	35 U	35 U	35 U
Benzo[b]fluoranthene	**1,000**	**1,700**	36	36 U	35 U	35 U	35 U	35 U
Benzo[g,h,i]perylene	**100,000**	**1,000,000**	360 U	51 J	350 U	350 U	350 U	350 U
Benzo[k]fluoranthene	**3,900**	**1,700**	16 J	36 U	35 U	35 U	35 U	35 U
Chrysene	**3,900**	**1,000**	360 U	360 U	350 U	350 U	350 U	350 U
Dibenz(a,h)anthracene	**330**	**1,000,000**	36 U	36 U	35 U	35 U	35 U	35 U
Dibenzofuran	**59,000**	**210,000**	360 U	360 U	350 U	350 U	350 U	350 U
Fluoranthene	**100,000**	**1,000,000**	360 U	360 U	350 U	350 U	350 U	350 U
Fluorene	**100,000**	**386,000**	360 U	360 U	350 U	350 U	350 U	350 U
Hexachlorobenzene	**1,200**	**3,200**	36 U	36 U	35 U	35 U	35 U	35 U
Indeno[1,2,3-cd]pyrene	**500**	**8,200**	20 J	36 U	35 U	35 U	35 U	35 U
Naphthalene	**100,000**	**12,000**	360 U	360 U	350 U	350 U	350 U	350 U
Pentachlorophenol	**6,700**	**800**	730 U	740 U	700 U	710 U	700 U	700 U
Phenanthrene	**100,000**	**1,000,000**	360 U	360 U	350 U	350 U	350 U	350 U
Phenol	**100,000**	**330**	360 U	360 U	350 U	350 U	350 U	350 U
Pyrene	**100,000**	**1,000,000**	52 J	360 U	350 U	350 U	350 U	350 U
Total Concentration	**NA**	**NA**	180	51	0	0	0	0

Table 2
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Semi Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX3-B1 (15) 460-77553-5 6/10/2014 1	EX3-B2 (8) 460-77553-6 6/10/2014 1	ST1-1C 460-77251-6 6/4/2014 1	ST2-1 460-77251-7 6/4/2014 10
2-Methylphenol	**100,000**	**330**	340 U	370 U	360 U	3,600 U
3 & 4 Methylphenol	**100,000**	**330**	340 U	370 U	360 U	3,600 U
Acenaphthene	**100,000**	**98,000**	340 U	370 U	360 U	3,600 U
Acenaphthylene	**100,000**	**107,000**	340 U	370 U	360 U	3,600 U
Anthracene	**100,000**	**1,000,000**	340 U	370 U	360 U	3,600 U
Benzo[a]anthracene	**1,000**	**1,000**	34 U	37 U	34 J	360 U
Benzo[a]pyrene	**1,000**	**22,000**	34 U	18 J	42	360 U
Benzo[b]fluoranthene	**1,000**	**1,700**	34 U	43	53	360 U
Benzo[g,h,i]perylene	**100,000**	**1,000,000**	340 U	370 U	33 J	3,600 U
Benzo[k]fluoranthene	**3,900**	**1,700**	34 U	10 J	32 J	360 U
Chrysene	**3,900**	**1,000**	340 U	370 U	54 J	3,600 U
Dibenz(a,h)anthracene	**330**	**1,000,000**	34 U	37 U	36 U	360 U
Dibenzofuran	**59,000**	**210,000**	340 U	370 U	360 U	3,600 U
Fluoranthene	**100,000**	**1,000,000**	340 U	370 U	65 J	3,600 U
Fluorene	**100,000**	**386,000**	340 U	370 U	360 U	3,600 U
Hexachlorobenzene	**1,200**	**3,200**	34 U	37 U	36 U	360 U
Indeno[1,2,3-cd]pyrene	**500**	**8,200**	34 U	27 J	34 J	360 U
Naphthalene	**100,000**	**12,000**	340 U	370 U	360 U	3,600 U
Pentachlorophenol	**6,700**	**800**	690 U	740 U	720 U	7,300 U
Phenanthrene	**100,000**	**1,000,000**	340 U	370 U	360 U	5,400
Phenol	**100,000**	**330**	340 U	370 U	360 U	3,600 U
Pyrene	**100,000**	**1,000,000**	340 U	370 U	82 J	3,600 U
Total Concentration	**NA**	**NA**	0	98	429	5,400

Table 4
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Polychlorinated Biphenyls, Pesticides, and Herbicides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	UST1-SW1 (5-6) 460-77244-2 6/4/2014	UST1-SW2 (5-6) 460-77244-3 6/4/2014	UST1-SW3 (5-6) 460-77244-4 6/4/2014	UST1-SW4 (5-6) 460-77244-5 6/4/2014	UST1-B1 (7) 460-77244-6 6/4/2014	HL1-SW1 (6-7) 460-77244-7 6/4/2014	HL1-SW2 (6-7) 460-77244-8 6/4/2014
Aroclor 1016	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1221	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1232	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1242	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1248	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1254	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1260	NS	NS	74 U	73 U	75 U	76 U	74 U	54 J	73 U
Aroclor-1262	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Aroclor 1268	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Polychlorinated biphenyls, Total	1,000	3,200	74 U	73 U	75 U	76 U	74 U	54 J	73 U
Total Concentration	NA	NA	0	0	0	0	0	108	0
Pesticides - µg/kg	µg/kg	µg/kg							
4,4'-DDD	13,000	14,000	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
4,4'-DDE	8,900	17,000	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
4,4'-DDT	7,900	136,000	7.4 U	7.3 U	7.5 U	7.6 U	13	7.3 U	7.3 U
Aldrin	97	190	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
alpha-BHC	480	20	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
alpha-Chlordane	4,200	2,900	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
beta-BHC	360	90	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Chlordane (technical)	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
delta-BHC	100,000	250	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Dieldrin	200	100	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endosulfan I	24,000 TS	102,000 TS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endosulfan II	24,000 TS	102,000 TS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endosulfan sulfate	24,000 TS	1,000,000 TS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endrin	11,000	60	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endrin aldehyde	NS	NS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Endrin ketone	NS	NS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
gamma-BHC (Lindane)	1,300	100	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Heptachlor	2,100	380	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Heptachlor epoxide	NS	NS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Methoxychlor	NS	NS	7.4 U	7.3 U	7.5 U	7.6 U	7.4 U	7.3 U	7.3 U
Toxaphene	NS	NS	74 U	73 U	75 U	76 U	74 U	73 U	73 U
Herbicides - µg/kg	µg/kg	µg/kg							
Silvex (2,4,5-TP)	100,000	3,800	19 U	19 U	19 U	19 U	19 U	19 U	18 U

Table 4
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Polychlorinated Biphenyls, Pesticides, and Herbicides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL1-SW3 (6-7) 460-77244-9 6/4/2014	HL1-SW4 (6-7) 460-77244-10 6/4/2014	HL1-B1 (8) 460-77244-11 6/4/2014	HL2-SW1 (4-5) 460-77467-3 6/9/2014	HL2-SW2 (4-5) 460-77467-4 6/9/2014	HL2-SW3 (4-5) 460-77467-5 6/9/2014	HL2-SW4 (4-5) 460-77467-6 6/9/2014
Aroclor 1016	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1221	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1232	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1242	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1248	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1254	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1260	**NS**	**NS**	39 J	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor-1262	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Aroclor 1268	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Polychlorinated biphenyls, Total	**1,000**	**3,200**	39 J	73 U	73 U	74 U	74 U	75 U	74 U
Total Concentration	**NA**	**NA**	78	0	0	0	0	0	0
Pesticides - µg/kg	**µg/kg**	**µg/kg**							
4,4'-DDD	**13,000**	**14,000**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
4,4'-DDE	**8,900**	**17,000**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
4,4'-DDT	**7,900**	**136,000**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Aldrin	**97**	**190**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
alpha-BHC	**480**	**20**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
alpha-Chlordane	**4,200**	**2,900**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
beta-BHC	**360**	**90**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Chlordane (technical)	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
delta-BHC	**100,000**	**250**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Dieldrin	**200**	**100**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endosulfan I	**24,000 TS**	**102,000 TS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endosulfan II	**24,000 TS**	**102,000 TS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endosulfan sulfate	**24,000 TS**	**1,000,000 TS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endrin	**11,000**	**60**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endrin aldehyde	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Endrin ketone	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
gamma-BHC (Lindane)	**1,300**	**100**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Heptachlor	**2,100**	**380**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Heptachlor epoxide	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Methoxychlor	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.4 U	7.4 U	7.5 U	7.4 U
Toxaphene	**NS**	**NS**	73 U	73 U	73 U	74 U	74 U	75 U	74 U
Herbicides - µg/kg	**µg/kg**	**µg/kg**							
Silvex (2,4,5-TP)	**100,000**	**3,800**	19 U	18 U	19 U	19 U	19 U	19 U	19 U

Table 4
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Polychlorinated Biphenyls, Pesticides, and Herbicides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	HL2-B1 (6) 460-77467-7 6/9/2014	EX 4-1 (10') 200-25628-1 11/25/2014	EX 4-2 (10') 200-25628-2 11/25/2014	EX 4-3 (6') 200-25628-3 11/25/2014	EX1-SW1 (6-7) 460-77244-12 6/4/2014	EX1-SW2 (6-7) 460-77244-13 6/4/2014	EX1-SW3 (6-7) 460-77244-14 6/4/2014
Aroclor 1016	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1221	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1232	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1242	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1248	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1254	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1260	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor-1262	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Aroclor 1268	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Polychlorinated biphenyls, Total	1,000	3,200	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Total Concentration	NA	NA	0	0	0	0	0	0	0
Pesticides - µg/kg	µg/kg	µg/kg							
4,4'-DDD	13,000	14,000	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
4,4'-DDE	8,900	17,000	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
4,4'-DDT	7,900	136,000	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Aldrin	97	190	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
alpha-BHC	480	20	7.3 U	2.6 U	2.6 U	2.6 U	7.2 U	7.7 U	7.3 U
alpha-Chlordane	4,200	2,900	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
beta-BHC	360	90	7.3 U	2.6 U	2.6 U	2.6 U	7.2 U	7.7 U	7.3 U
Chlordane (technical)	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
delta-BHC	100,000	250	7.3 U	2.6 U	2.6 U	2.6 U	7.2 U	7.7 U	7.3 U
Dieldrin	200	100	7.3 U	2.6 U	2.6 U	2.6 U	7.2 U	7.7 U	7.3 U
Endosulfan I	24,000 TS	102,000 TS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Endosulfan II	24,000 TS	102,000 TS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Endosulfan sulfate	24,000 TS	1,000,000 TS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Endrin	11,000	60	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Endrin aldehyde	NS	NS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Endrin ketone	NS	NS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
gamma-BHC (Lindane)	1,300	100	7.3 U	2.6 U	2.6 U	2.6 U	7.2 U	7.7 U	7.3 U
Heptachlor	2,100	380	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Heptachlor epoxide	NS	NS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Methoxychlor	NS	NS	7.3 U	8.7 U	8.6 U	8.7 U	7.2 U	7.7 U	7.3 U
Toxaphene	NS	NS	73 U	87 U	86 U	87 U	72 U	77 U	73 U
Herbicides - µg/kg	µg/kg	µg/kg							
Silvex (2,4,5-TP)	100,000	3,800	19 U	22 U	22 U	22 U	18 U	20 U	18 U

Table 4
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Polychlorinated Biphenyls, Pesticides, and Herbicides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX1-SW4(6-7) 460-77251-1 6/4/2014	EX1-B1(8) 460-77251-2 6/4/2014	EX1-A(8) 460-77251-3 6/4/2014	EX2-B1 (6) 460-77467-1 6/9/2014	EX2-B2 (6) 460-77467-2 6/9/2014	EX3-SW1 (13-14) 460-77553-1 6/10/2014	EX3-SW2 (13-14) 460-77553-2 6/10/2014
Aroclor 1016	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1221	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1232	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1242	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1248	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1254	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1260	**NS**	**NS**	73 U	73 U	73 U	73 U	60 J	70 U	71 U
Aroclor-1262	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Aroclor 1268	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Polychlorinated biphenyls, Total	**1,000**	**3,200**	73 U	73 U	73 U	73 U	60 J	70 U	71 U
Total Concentration	**NA**	**NA**	0	0	0	0	120	0	0
Pesticides - µg/kg	**µg/kg**	**µg/kg**							
4,4'-DDD	**13,000**	**14,000**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
4,4'-DDE	**8,900**	**17,000**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
4,4'-DDT	**7,900**	**136,000**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Aldrin	**97**	**190**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
alpha-BHC	**480**	**20**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
alpha-Chlordane	**4,200**	**2,900**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
beta-BHC	**360**	**90**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Chlordane (technical)	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
delta-BHC	**100,000**	**250**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Dieldrin	**200**	**100**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endosulfan I	**24,000 TS**	**102,000 TS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endosulfan II	**24,000 TS**	**102,000 TS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endosulfan sulfate	**24,000 TS**	**1,000,000 TS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endrin	**11,000**	**60**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endrin aldehyde	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Endrin ketone	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
gamma-BHC (Lindane)	**1,300**	**100**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Heptachlor	**2,100**	**380**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Heptachlor epoxide	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Methoxychlor	**NS**	**NS**	7.3 U	7.3 U	7.3 U	7.3 U	7.4 U	7 U	7.1 U
Toxaphene	**NS**	**NS**	73 U	73 U	73 U	73 U	74 U	70 U	71 U
Herbicides - µg/kg	**µg/kg**	**µg/kg**							
Silvex (2,4,5-TP)	**100,000**	**3,800**	18 U	18 U	18 U	18 U	19 U	18 U	18 U

Table 4
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Polychlorinated Biphenyls, Pesticides, and Herbicides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/kg	Part 375 Restricted Residential SCO µg/kg	Part 375 Protection of Groundwater SCO µg/kg	EX3-SW3 (13-14) 460-77553-3 6/10/2014	EX3-SW4 (13-14) 460-77553-4 6/10/2014	EX3-B1 (15) 460-77553-5 6/10/2014	EX3-B2 (8) 460-77553-6 6/10/2014	ST1-1C 460-77251-6 6/4/2014	ST2-1 460-77251-7 6/4/2014
Aroclor 1016	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1221	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1232	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1242	NS	NS	70 U	70 U	69 U	74 U	200	73 U
Aroclor 1248	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1254	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1260	NS	NS	70 U	70 U	69 U	74 U	43 J	120
Aroclor-1262	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Aroclor 1268	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Polychlorinated biphenyls, Total	1,000	3,200	70 U	70 U	69 U	74 U	240	120
Total Concentration	NA	NA	0	0	0	0	483	240
Pesticides - µg/kg	µg/kg	µg/kg						
4,4'-DDD	13,000	14,000	7 U	7 U	6.9 U	75	7.2 U	7.3 U
4,4'-DDE	8,900	17,000	7 U	7 U	6.9 U	18	7.2 U	7.3 U
4,4'-DDT	7,900	136,000	7 U	7 U	6.9 U	37	7.2 U	7.3 U
Aldrin	97	190	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
alpha-BHC	480	20	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
alpha-Chlordane	4,200	2,900	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
beta-BHC	360	90	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Chlordane (technical)	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
delta-BHC	100,000	250	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Dieldrin	200	100	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endosulfan I	24,000 TS	102,000 TS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endosulfan II	24,000 TS	102,000 TS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endosulfan sulfate	24,000 TS	1,000,000 TS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endrin	11,000	60	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endrin aldehyde	NS	NS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Endrin ketone	NS	NS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
gamma-BHC (Lindane)	1,300	100	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Heptachlor	2,100	380	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Heptachlor epoxide	NS	NS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Methoxychlor	NS	NS	7 U	7 U	6.9 U	7.4 U	7.2 U	7.3 U
Toxaphene	NS	NS	70 U	70 U	69 U	74 U	72 U	73 U
Herbicides - µg/kg	µg/kg	µg/kg						
Silvex (2,4,5-TP)	100,000	3,800	18 U	18 U	18 U	19 U	18 U	19 U

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	UST1-SW1 (5-6) 460-77244-2 6/4/2014 4	UST1-SW2 (5-6) 460-77244-3 6/4/2014 4	UST1-SW3 (5-6) 460-77244-4 6/4/2014 4	UST1-SW4 (5-6) 460-77244-5 6/4/2014 4	UST1-B1 (7) 460-77244-6 6/4/2014 4	HL1-SW1 (6-7) 460-77244-7 6/4/2014 4
Arsenic	**16**	**16**	1.7 J	1.4 J	1.8 J	1.6 J	1.3 J	1.4 J
Barium	**400**	**820**	64.8	63.4	72.4	67.7	57.3	69.8
Beryllium	**72**	**47**	0.33 J	0.29 J	0.32 J	0.24 J	0.28 J	0.28 J
Cadmium	**4.3**	**7.5**	0.72 U	0.68 U	0.71 U	0.65 U	0.76 U	0.64 U
Chromium	**NS**	**NS**	20.7	19.2	20.5	17.9	17.4	20.4
Copper	**270**	**1,720**	21.2	16.4	21.9	15	14.8	19.5
Cr (III)	**180**	**NS**	20.7	19.2	20.5	17.9	16.7	20.4
Cr (VI)	**110**	**19**	2.2 U	2.2 U	2.2 U	2.3 U	0.65 J	2.2 U
Cyanide, Total	**27**	**40**	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Lead	**400**	**450**	17.5	18.5	45.3	27.6	14.3	12.5
Manganese	**2,000**	**2,000**	360	277	289	296	245	352
Mercury	**0.81**	**0.73**	0.045	0.023	0.028	0.025	0.04	0.018
Nickel	**310**	**130**	17.6	15.3	19.6	15.1	13.5	17.4
Selenium	**180**	**4**	3.6 U	3.4 U	3.6 U	3.3 U	3.8 U	3.2 U
Silver	**180**	**8.3**	1.8 U	1.7 U	1.8 U	1.6 U	1.9 U	1.6 U
Zinc	**10,000**	**2,480**	57.6	54.2	75.6	63.5	46.3	59.4

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	HL1-SW2 (6-7) 460-77244-8 6/4/2014 4	HL1-SW3 (6-7) 460-77244-9 6/4/2014 4	HL1-SW4 (6-7) 460-77244-10 6/4/2014 4	HL1-B1 (8) 460-77244-11 6/4/2014 4	HL2-SW1 (4-5) 460-77467-3 6/9/2014 1/4**	HL2-SW2 (4-5) 460-77467-4 6/9/2014 1/4**
Arsenic	**16**	**16**	1.2 J	1.9 J	1.7 J	1 J	3.5	3.1
Barium	**400**	**820**	58.5	64	66.7	40.6	62.8	60.8
Beryllium	**72**	**47**	0.31 J	0.3 J	0.34 J	0.24 J	0.39 U	0.29 J
Cadmium	**4.3**	**7.5**	0.77 U	0.74 U	0.77 U	0.64 U	0.78 U	0.8 U
Chromium	**NS**	**NS**	18.7	19	23	12	17.8	19.7
Copper	**270**	**1,720**	14.4	16.1	17.2	12.5	19.5	17.5
Cr (III)	**180**	**NS**	18.7	19	23	12	17.8	19.7
Cr (VI)	**110**	**19**	2.3 U	2.2 U	2.2 U	2.1 U	2.2 U	2.3 U
Cyanide, Total	**27**	**40**	0.076 J	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Lead	**400**	**450**	12.6	19	11.8	9.2	109	18.1
Manganese	**2,000**	**2,000**	287	289	331	227	244	333
Mercury	**0.81**	**0.73**	0.017	0.03	0.018 U	0.014 J	0.013 J	0.019
Nickel	**310**	**130**	14.9	15	17.7	10.7	16.7	18.5
Selenium	**180**	**4**	3.9 U	3.7 U	3.8 U	3.2 U	3.9 U	4 U
Silver	**180**	**8.3**	1.9 U	1.8 U	1.9 U	1.6 U	1.9 U	2 U
Zinc	**10,000**	**2,480**	54.7	85.7	69.9	34.1	75.7	50.9

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	HL2-SW3 (4-5) 460-77467-5 6/9/2014 1/4**	HL2-SW4 (4-5) 460-77467-6 6/9/2014 1/4**	HL2-B1 (6) 460-77467-7 6/9/2014 1/4**	EX 4-1 (10') 200-25628-1 11/25/2014 4	EX 4-2 (10') 200-25628-2 11/25/2014 4	EX 4-3 (6') 200-25628-3 11/25/2014 4
Arsenic	**16**	**16**	4.4	4.9	3.7	1.2 J	1.5 J	1.1 J
Barium	**400**	**820**	71.5	214	70.4	38.1 J	26.2 J	24.9 J
Beryllium	**72**	**47**	0.42 U	0.28 J	0.42 U	0.4 J	0.34 J	0.33 J
Cadmium	**4.3**	**7.5**	0.84 U	0.8 U	2.2	1 U	0.93 U	0.93 U
Chromium	**NS**	**NS**	18.7	18.2	16.6	11.2	9	6.8
Copper	**270**	**1,720**	15.2	19.4	15.3	10.2	8.1	8
Cr (III)	**180**	**NS**	18.7	18.2	13.4	11.2	9	6.8
Cr (VI)	**110**	**19**	2.3 U	2.2 U	3.2	2.6 U	2.5 U	2.6 U
Cyanide, Total	**27**	**40**	0.11 U	0.11	0.11 U	0.13 U	0.14 U	0.13 U
Lead	**400**	**450**	20.1	83.3	58.5	2.3 J	2.6	2.1 J
Manganese	**2,000**	**2,000**	334	307	377	171	210	131
Mercury	**0.81**	**0.73**	0.014 J	0.021	0.027	0.022 U	0.022 U	0.022 U
Nickel	**310**	**130**	16.2	13.5	13.8	7 J	6.3 J	6.2 J
Selenium	**180**	**4**	4.2 U	4 U	4.2 U	5.1 U	4.7 U	4.7 U
Silver	**180**	**8.3**	2.1 U	2 U	2.1 U	2.5 U	2.3 U	2.3 U
Zinc	**10,000**	**2,480**	59.6	171	121	30.4	22.8	21

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	EX1-SW1 (6-7) 460-77244-12 6/4/2014 4	EX1-SW2 (6-7) 460-77244-13 6/4/2014 4	EX1-SW3 (6-7) 460-77244-14 6/4/2014 4	EX1-SW4(6-7) 460-77251-1 6/4/2014 4	EX1-B1(8) 460-77251-2 6/4/2014 4	EX1-A(8) 460-77251-3 6/4/2014 4
Arsenic	**16**	**16**	1.3 J	1.6 J	1.7 J	1.9 J	1.4 J	1.3 J
Barium	**400**	**820**	62.7	70.8	62.5	62.5	57.8	57.8
Beryllium	**72**	**47**	0.3 J	0.32 J	0.39 U	0.31 J	0.27 J	0.3 J
Cadmium	**4.3**	**7.5**	0.69 U	0.65 U	0.78 U	0.83 U	0.79 U	0.8 U
Chromium	**NS**	**NS**	20.2	21.1	25.3	21	19.3	21.5
Copper	**270**	**1,720**	15.2	16.3	13	17.2	14.7	14.7
Cr (III)	**180**	**NS**	20.2	21.1	25.3	21	19.3	21.5
Cr (VI)	**110**	**19**	2.2 U	2.4 U	2.1 U	2.2 U	2.1 U	2.2 U
Cyanide, Total	**27**	**40**	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Lead	**400**	**450**	11.2	12.7	13.2	20.5	12.8	13.7
Manganese	**2,000**	**2,000**	312	294	234	292	323	314
Mercury	**0.81**	**0.73**	0.017 U	0.02	0.031	0.019	0.015 J	0.017 J
Nickel	**310**	**130**	16.6	17.7	17.4	15.6	14	14.5
Selenium	**180**	**4**	3.4 U	3.3 U	3.9 U	4.2 U	4 U	4 U
Silver	**180**	**8.3**	1.7 U	1.6 U	1.9 U	2.1 U	2 U	2 U
Zinc	**10,000**	**2,480**	43.7	73.7	54.1	65	53.9	63.5

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	EX2-B1 (6) 460-77467-1 6/9/2014 1/4**	EX2-B2 (6) 460-77467-2 6/9/2014 1/4**	EX3-SW1 (13-14) 460-77553-1 6/10/2014 1/4**	EX3-SW2 (13-14) 460-77553-2 6/10/2014 1/4**	EX3-SW3 (13-14) 460-77553-3 6/10/2014 1/4**	EX3-SW4 (13-14) 460-77553-4 6/10/2014 1/4**
Arsenic	**16**	**16**	2.7 J	2.7 J	2.9 U	1 J	2.8 U	3 U
Barium	**400**	**820**	44.5	64.4	35.6 J	28.6 J	35.3 J	35.3 J
Beryllium	**72**	**47**	0.41 U	0.4 U	0.38 U	0.37 U	0.38 U	0.4 U
Cadmium	**4.3**	**7.5**	0.82 U	0.8 U	0.76 U	0.74 U	0.76 U	0.79 U
Chromium	**NS**	**NS**	17.6	19.5	10.1	10.6	11.9	12.8
Copper	**270**	**1,720**	13	16.8	9.6	10.1	11.6	11.8
Cr (III)	**180**	**NS**	17.1	19.5	10.1	10.6	11.9	12.8
Cr (VI)	**110**	**19**	0.55 J	2.2 U	2.1 U	2.1 U	2.1 U	2 U
Cyanide, Total	**27**	**40**	0.15	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U
Lead	**400**	**450**	13.7	55.3	7.9	4.6	4.4	5.9
Manganese	**2,000**	**2,000**	161	268	202	180	230	210
Mercury	**0.81**	**0.73**	0.013 J	0.02	0.018 U	0.017 U	0.018 U	0.016 U
Nickel	**310**	**130**	16.3	15.2	8.3	9.5	10.1	12.2
Selenium	**180**	**4**	4.1 U	4 U	3.8 U	3.7 U	3.8 U	4 U
Silver	**180**	**8.3**	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
Zinc	**10,000**	**2,480**	78.7	65.2	24.2	25	22.1	26.8

Table 3
Crestwood
300-308 Columbus Avenue
Tuckahoe, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	Part 375 Restricted Residential SCO mg/kg	Part 375 Protection of Groundwater SCO mg/kg	EX3-B1 (15) 460-77553-5 6/10/2014 1/4**	EX3-B1 (15) 460-77553-5 6/10/2014 1/4/10**	ST1-1C 460-77251-6 6/4/2014 4	ST2-1 460-77251-7 6/4/2014 4
Arsenic	**16**	**16**	2.7 U	5.9	1.8 J	2.3 J
Barium	**400**	**820**	23.5 J	65.1	70.2	71.9
Beryllium	**72**	**47**	0.36 U	1 U	0.39	0.28 J
Cadmium	**4.3**	**7.5**	0.73 U	0.97	0.77 U	0.79 U
Chromium	**NS**	**NS**	8.2	23.6	21	19.3
Copper	**270**	**1,720**	7.3	27.2	14.9	24.8
Cr (III)	**180**	**NS**	8.2	23.6	21	18.7
Cr (VI)	**110**	**19**	2.1 U	2.2 U	2.2 U	0.62 J
Cyanide, Total	**27**	**40**	0.1 U	0.11 U	0.11 U	0.11 U
Lead	**400**	**450**	4.2	115	17	28.2
Manganese	**2,000**	**2,000**	202	212	421	300
Mercury	**0.81**	**0.73**	0.016 U	0.03	0.019	0.023
Nickel	**310**	**130**	7.7	21.7	16.5	14.3
Selenium	**180**	**4**	3.6 U	4.1 U	3.9 U	3.9 U
Silver	**180**	**8.3**	1.8 U	2 U	1.9 U	2 U
Zinc	**10,000**	**2,480**	21.4	229	68.3	115

Table 5
300 and 308 Columbus Avenue
Tuckahoe, New York
Confirmatory Indoor Air Quality Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/m³	NYSDOH 2003 Soil Vapor Intrusion Air Guideline Value µg/m³	NYSDOH 2003 Soil Vapor Indoor Upper Fence µg/m³	EPA 2001 BASE 90th percentile µg/m³	IA-1 200-29136-1 8/3/2015	IA-2 200-29136-2 8/3/2015	IA-2A (dup) 200-29136-3 8/3/2015	AA-1 200-29136-4 8/3/2015
1,1,1-Trichloroethane	NS	2.5	20.6	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane	NS	0.4	NS	1.4 U	1.4 U	1.4 U	1.4 U
1,1,2-Trichloroethane	NS	0.4	<1.5	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethane	NS	0.4	<0.7	0.81 U	0.81 U	0.81 U	0.81 U
1,1-Dichloroethene	NS	0.4	<1.4	0.79 U	0.79 U	0.79 U	0.79 U
1,2-Dibromoethane	NS	0.4	<1.5	1.5 U	1.5 U	1.5 U	1.5 U
1,2-Dichlorobenzene	NS	0.5	<1.2	0.81 U	0.81 U	0.81 U	0.81 U
1,2-Dichloroethane	NS	0.4	<0.9	1.6 U	1.6 U	1.6 U	1.6 U
1,2-Dichloropropane	NS	0.4	<1.6	0.92 U	0.92 U	0.92 U	0.92 U
1,3,5-Trimethylbenzene	NS	3.9	3.7	1.4 U	1.4 U	1.4 U	1.4 U
1,3-Butadiene	NS	0.5	<3.0	0.98 U	0.98 U	0.98 U	0.98 U
1,3-Dichlorobenzene	NS	0.5	<2.4	0.44 U	0.44 U	0.44 U	0.44 U
2,2,4-Trimethylpentane	NS	5	NS	1.3	1.2	1.1	0.93 U
3-Chloropropene	NS	NS	NS	1.6 U	1.6 U	1.6 U	1.6 U
4-Ethyltoluene	NS	NS	3.6	0.98 U	0.98 U	0.98 U	0.98 U
Benzene	NS	13	9.4	0.87	0.82	0.82	0.64 U
Bromodichloromethane	NS	NS	NS	1.3 U	1.3 U	1.3 U	1.3 U
Bromoform	NS	NS	NS	0.87 U	0.87 U	0.87 U	0.87 U
Bromomethane	NS	0.5	<1.7	2.1 U	2.1 U	2.1 U	2.1 U
Carbon tetrachloride	NS	1.3	<1.3	0.78 U	0.78 U	0.78 U	0.78 U
Chloroethane	NS	0.4	<1.1	0.5	0.4	0.37	0.38
Chloroform	NS	1.2	1.1	1.3 U	1.3 U	1.3 U	1.3 U
cis-1,2-Dichloroethene	NS	0.4	<1.9	0.98 U	0.98 U	0.98 U	0.98 U
cis-1,3-Dichloropropene	NS	0.4	<2.3	0.79 U	0.79 U	0.79 U	0.79 U
Cyclohexane	NS	6.3	NS	0.91 U	0.91 U	0.91 U	0.91 U
Dibromochloromethane	NS	NS	NS	0.69 U	0.69 U	0.69 U	0.69 U
Dichlorodifluoromethane	NS	10	16.5	1.7 U	1.7 U	1.7 U	1.7 U
Ethylbenzene	NS	6.4	5.7	2.5 U	2.5 U	2.5 U	2.5 U
Heptane	NS	18	NS	0.87 U	0.87 U	0.87 U	0.87 U
Methyl tert butyl ether	NS	14	11.5	0.72 U	0.72 U	0.72 U	0.72 U
Methylene chloride	60	16	10	1.7 U	1.7 U	1.7 U	1.7 U
n-Hexane	NS	14	10.2	2.2 U	2.2 U	2.2 U	2.2 U
o-Xylene	NS	7.1	7.9	1.1	0.9	0.87	0.82 U
p/m-Xylene	NS	11	22.2	1.2	1	1	0.71
Tetrachloroethene	30	2.5	15.9	0.87 U	0.87 U	0.87 U	0.87 U
Toluene	NS	57	43	0.27 U	0.27 U	0.27 U	0.27 U
trans-1,2-Dichloroethene	NS	NS	NS	3	3.2	3.2	1.4
trans-1,3-Dichloropropene	NS	NC	<1.3	0.79 U	0.79 U	0.79 U	0.79 U
Trichloroethene	5	0.5	4.2	0.91 U	0.91 U	0.91 U	0.91 U
Trichlorofluoromethane	NS	12	18.1	0.22 U	0.22 U	0.22 U	0.22 U
Vinyl bromide	NS	NS	NS	1.2	1.1 U	1.1	1.1
Vinyl chloride	NS	0.4	<1.9	0.1 U	0.1 U	0.1 U	0.1 U

Tables 1-4
Crestwood
300-308 Columbus Avenue
Tuckahoe, State
Soil Analytical Results
Notes

GENERAL

NS : No soil cleanup objective listed.

NA : Not applicable.

TS : Value represents a sum total standard.

U / U* : The analyte was not detected at the indicated concentration.

UJ : The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

*** :** ISTD response or retention time outside acceptable limits

J : The concentration given is an estimated value.

J* : ISTD response or retention time outside acceptable limits

JB : The analyte was found in an associated blank, as well as in the sample.

B : The analyte was found in an associated blank, as well as in the sample.

Exceedences for Part 375 Restricted Residential Soil Cleanup Objectives are highlighted in bold font.
Exceedences for Part 375 Protection of Groundwater Soil Cleanup Objectives are highlighted in gray.

SOIL

Part 375 Soil Cleanup Objectives : Soil Clean-up Objectives listed in NYSDEC (New York State Department of Environmental Conservation) "Part 375" Regulations (6 NYCRR Part 375).

µg/kg : micrograms per kilogram = parts per billion (ppb)

mg/kg : milligrams per kilogram = parts per million (ppm)

Metals

**** :** Dilution factor varies.

APPENDIX A – ENVIRONMENTAL EASEMENT

ALBERT J. PIRRO, JR.
ATTORNEY AT LAW

ONE NORTH LEXINGTON AVENUE
WHITE PLAINS, NEW YORK 10601
914-287-6444 • FAX 914-287-6443
ajp@pirrogroup.com • www.pirrolaw.com

July 25, 2014

Via Federal Express

Benjamin Conlon, Esq.
Bureau Chief & Associate Attorney
Office of General Counsel
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B, 12 Floor
625 Broadway
Albany, New York 12233-7016

Re: Environmental Easement for 300-308 Columbus Avenue,
Tuckahoe, New York , Westchester County
Site ID No.: C360136

Dear Mr. Conlon:

Enclosed please find with respect to the above-referenced BCP site the requisite documents for the environmental easement each with the exception of the electronic copy of the survey and easement description in word of which will be sent by e-mail. Also enclosed is a change of use form reflecting a sale of the property to the Volunteer, the prospective purchaser of the site at the time the application was filed.

Please do not hesitate to contact me if you have any concerns with the submittal.

Very truly yours,

Denise J. D'Ambrosio

DJD:dat
Enclosures

cc: George W. Heitzman, P.E., Director, Remedial Bureau C
(via e-mail George.heitzman@dec.ny.gov)
Randy Whitcher, Project Manager (via e-mail rjwhitch@gw.dec.state.ny.us)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership

Required by 6NYCRR Part 375-1.11(d) and 375-1.9(f)

To be submitted at least 60 days prior to change of use to:

Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation, 625 Broadway
Albany NY 12233-7020

I. Site Name: 300-308 Columbus Avenue **DEC Site ID No.** C360136

II. Contact Information of Person Submitting Notification:

Name: Giulio Monaco

Address1: Crestwood Builders Group, LLC c/o Verde Electric Corp.

Address2: 89 Edison Avenue, Mount Vernon, New York 10550

Phone: 914-664-7000 E-mail: gmonaco@verdeelectric.com

III. Type of Change and Date: Indicate the Type of Change(s) (check all that apply):

- [✓] Change in Ownership or Change in Remedial Party(ies)
- [ ] Transfer of Certificate of Completion (CoC)
- [ ] Other (e.g., any physical alteration or other change of use)

Proposed Date of Change (mm/dd/yyyy): 02/27/2014

IV. Description: Describe proposed change(s) indicated above and attach maps, drawings, and/or parcel information.

~~As indicated in the BCP application, the requester was the contact vendee for purchase of the site. The~~ contract of sale was included with the application. The sale of the property has concluded. Deed ~~submitted with Environmental Easement Package.~~

If "Other," the description must explain and advise the Department how such change may or may not affect the site's proposed, ongoing, or completed remedial program (attach additional sheets if needed).

~~The change in ownership will not affect the site's proposed, on-going or completed remedial program.~~

V. **Certification Statement:** Where the change of use results in a change in ownership or in responsibility for the proposed, ongoing, or completed remedial program for the site, the following certification must be completed (by owner or designated representative; see §375-1.11(d)(3)(i)):

I hereby certify that the prospective purchaser and/or remedial party has been provided a copy of any order, agreement, Site Management Plan, or State Assistance Contract regarding the Site's remedial program as well as a copy of all approved remedial work plans and reports.

Name: _____ July 25, 2014
(Signature) (Date)

Denise J. D'Ambrosio, Esq.
(Print Name)

Address1: c/o Albert J. Pirro, Jr., Esq.

Address2: One North Lexington Avenue, White Plains, NY 10601

Phone: 914-287-6444 E-mail: denisedambrosiolaw@gmail.com

VI. **Contact Information for New Owner, Remedial Party, or CoC Holder:** If the site will be sold or there will be a new remedial party, identify the prospective owner(s) or party(ies) along with contact information. If the site is subject to an Environmental Easement, Deed Restriction, or Site Management Plan requiring periodic certification of institutional controls/engineering controls (IC/ECs), indicate who will be the certifying party (attach additional sheets if needed).

☑ Prospective Owner ☐ Prospective Remedial Party ☐ Prospective Owner Representative

Name: Crestwood Builders Group, LLC

Address1: c/o Verde Electric Corp.

Address2: 89 Edison Avenue, Mount Vernon, New York 10550

Phone: 914-664-7000 E-mail: gmonaco@verdeelectric.com

Certifying Party Name: Giulio Monaco

Address1: Crestwood Builders Group, LLC c/o Verde Electric Corp.

Address2: 89 Edison Avenue, Mount Vernon, New York 10550

Phone: 914-664-7000 E-mail: gmonaco@verdeelectric.com

EASEMENTS

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this _____day of _____, 20__, between Owner(s) Crestwood Builders Group, LLC, having an office at c/o Giulio Monaco, Verde Electric Corp., 89 Edison Avenue, Mount Vernon, New York 10550, County of Westchester, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 300-308 Columbus Avenue, Tuckahoe, New York 10707 in the Village of Tuckahoe, County of Westchester and State of New York, known and designated on the tax map of the County Clerk of Westchester as tax map parcel numbers: Section 42 Block 8 Lot (s) 5 and 10, being the same as that property conveyed to Grantor by deed dated February 27, 2014 and recorded in the Westchester County Clerk's Office in Liber and Page Control #54033615. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.746 +/- acres, and is hereinafter more fully described in the Land Title Survey dated November 21, 2013 and revised on July 16, 2014 prepared by Neil Grange, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C360136-02-14, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) if current land use is selected, enter current use.

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Westchester County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C360136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section

Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Crestwood Builders Group, LLC:

By: _____

Print Name: Giulio Monaco, Jr.

Title: Member Date: 7/24/14

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF WESTCHESTER

On the 24TH day of JULY, in the year 2014, before me, the undersigned, personally appeared GIUSEPPE MOBACO JR. personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

PATRICIA KOTSINADELIS
NEW YORK STATE NOTARY PUBLIC
DUTCHESS COUNTY
COMMISSION EXPIRES 5-30-2018
#01KO6042464

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the _____ day of _____, in the year 20__, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

SCHEDULE "A" PROPERTY DESCRIPTION

Enter Property Description

CURRENT DEED

The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.

542033615SDE002T

Westchester County Recording & Endorsement Page

Submitter Information

Name:	Judicial Research- PICK UP	Phone:	914-381-6700
Address 1:	800 Westchester Avenue Suite	Fax:	914-381-6785
Address 2:		Email:	chalpin@judicialtitle.com
City/State/Zip:	Rye Brook NY 10573	Reference for Submitter:	23005/113513

Document Details

Control Number: **542033615** Document Type: **Deed, Correction (SDE)**

Package ID: 201407220029000100l Document Page Count: **4** Total Page Count: **6**

Parties

☐ Additional Parties on Continuation page

1st PARTY		2nd PARTY	
1: CRESTWOOD STATION PLAZA LLC	- Other	1: CRESTWOOD BUILDERS GROUP LLC	- Other
2:		2:	

Property

☑ Additional Properties on Continuation page

Street Address: 300 COLUMBUS AVENUE Tax Designation: 42-8-10

City/Town: EASTCHESTER Village: TUCKAHOE

Cross- References

☐ Additional Cross-Refs on Continuation page

1: 540363126 2: 3: 4:

Supporting Documents

1: RP-5217 2: TP-584

Recording Fees

Statutory Recording Fee:	$40.00
Page Fee:	$25.00
Cross-Reference Fee:	$0.50
Mortgage Affidavit Filing Fee:	$0.00
RP-5217 Filing Fee:	$250.00
TP-584 Filing Fee:	$5.00
Total Recording Fees Paid:	**$320.50**

Transfer Taxes

Consideration:	$0.00
Transfer Tax:	$0.00
Mansion Tax:	$0.00
Transfer Tax Number:	13990

Mortgage Taxes

Document Date:

Mortgage Amount:

Basic:	$0.00
Westchester:	$0.00
Additional:	$0.00
MTA:	$0.00
Special:	$0.00
Yonkers:	$0.00
Total Mortgage Tax:	**$0.00**

Dwelling Type: Exempt: ☐

Serial #:

RECORDED IN THE OFFICE OF THE WESTCHESTER COUNTY CLERK

Recorded: 07/24/2014 at 12:40 PM

Control Number: **542033615**

Witness my hand and official seal

Timothy C.Idoni
Westchester County Clerk

Record and Return To

☐ Pick-up at County Clerk's office

GIULIO MONACO
89 EDISON AVENUE

MOUNT VERNON, NY 10550
Attn: JACKIE MONACO

The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.	*542033615SDE002T*

Westchester County Recording & Endorsement Page

Document Details

Control Number: **542033615** Document Type: **Deed, Correction (SDE)**

Package ID: 20140722002900010001 Document Page Count: 4 Total Page Count: 6

Properties Addendum

308 COLUMBUS AVENUE 10707	EASTCHESTER	TUCKAHOE	42 8 5

23005

— Bargain and Sale Deed, with Covenant against Grantor's Acts — Individual or Corporation (Single Sheet)

CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT—THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY.

CORRECTION DEED

THIS INDENTURE, made the 15th day of July, in the year 2014

BETWEEN
CRESTWOOD STATION PLAZA, LLC
399 Knollwood Road
White Plains, NY 10603

party of the first part, and

CRESTWOOD BUILDERS GROUP, LLC

89 Edison Avenue

Mount Vernon, NY 10550

party of the second part,
WITNESSETH, that the party of the first part, in consideration of

dollars

paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the

SEE ATTACHED SCHEDULE A DESCRIPTION

This deed is a CORRECTION DEED intended to correct the Schedule A Legal Description in Deed made by Crestwood Station Plaza, LLC to Crestwood Builders Group, LLC dated February 27, 2014 and recorded March 5, 2014 as Control Number 540363126 in the Westchester County Clerk's Office Division of Land Records.

Said Premises being known as 300 & 308 Columbus Avenue, Tuckahoe, NY and as Section 42, Block 8, Lots 5 & 10 on the Tax Map of the Tax Map of the Village of Tuckahoe, Town of Eastchester, County of Westchester, State of New York.

Said Premises being the same Premises as was acquired by the party of the first part by deed made by Gaulard Realty Corp., dated 11/21/05, recorded 2/16/06 in Control No. 460250726, as to Parcel 1, Tax Lot 10 and by deed made by Business Brokers Central Jersey Corp., dated 1/24/06, recorded 4/26/06 in Control No. 460980033, as to Parcel 2, Tax Lot 5.

TOGETHER with all right, title and interest, if any, of the party of the first part in and to any streets and roads abutting the above described premises to the center lines thereof; TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises; TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.
AND the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose. The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:

X _____
Giulio Monaco
Authorized signatory

THE JUDICIAL TITLE INSURANCE AGENCY LLC

Title Number: 113513ST-W

SCHEDULE A
Amended 07/11/2014

SECTION 42 BLOCK 8 LOTS 5 & 10

Village of Tuckahoe

ALL that certain plot, piece or parcel of land, situate, lying and being in the Town of Eastchester, County of Westchester and State of New York, show and designated as Lot Nos. 438 through 443 and part of Lots 444 through 446, on a certain map titled "Map of Property belonging to the New York Central Realty Co., W.H. Cooper President, known as Westchester Park, situate on the Harlem Railroad, Westchester County, made by Walter A. Miles, C.E. & S., dated June 30, 1906 and filed in the Office of the Register of Westchester County, Division of Land Records, November 15, 1906 as Map No. 1672, more particularly bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southwesterly line of Lincoln Avenue with the southeasterly line of Columbus Avenue;

THENCE along said southwesterly line of Lincoln Avenue, south 70 degrees 42 minutes 20 seconds east, a distance of 124.10 feet to the division line between filed map Lots 438 and 437;

THENCE along said division line and the division line between filed map Lots 439 through 447, south 25 degrees 33 minutes 20 seconds west, a distance of 263.57 feet to the northerly line of Fisher Avenue;

THENCE along said northerly line of Fisher Avenue, north 80 degrees 15 minutes 25 seconds west, a distance of 49.80 feet to a point;

THENCE passing through filed map Lot 446, north 39 degrees 57 minutes 35 seconds east, a distance of 19.72 feet to the division line between filed map Lots 445 and 446;

THENCE along said division line, north 50 degrees 07 minutes 00 seconds west, a distance of 53.30 feet to a point;

THENCE passing through filed map Lots 444 and 445, north 39 degrees 52 minutes 35 seconds east, a distance of 50.00 feet to the division line between file map Lots 443 and 444;

THE JUDICIAL TITLE INSURANCE AGENCY LLC

Title Number: 113513ST-W

SCHEDULE A (continued)
Amended 07/11/2014

THENCE along said division line, north 50 degrees 07 minutes 25 seconds west, a distance of 85.00 feet to the aforementioned southeasterly line of Columbus Avenue;

THENCE along said southeasterly line of Columbus Avenue, north 39 degrees 52 minutes 35 seconds east, a distance of 167.01 feet to the point or place of BEGINNING.

CONTAINING 32,474 square feet or 0.7455 acres, more or less.

FOR CONVEYANCING ONLY

The policy to be issued under this report will insure the title to such buildings and improvements erected on the premises which by law constitute real property.

TOGETHER with all the right, title and interest of the party in the first part, or, in and to the land lying in the street in front of and adjoining said premises.

ACKNOWLEDGEMENT TAKEN IN NEW YORK STATE

State of New York, County of Westchester, ss:

On the 15th day of July in the year 2014, before me, the undersigned, personally appeared Giulio Monaco

, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

CATERINA L. MASSAREGLI
Notary Public, State of New York
No. 01MA5048069
Qualified in Westchester County
Commission Expires August 14, 2017

ACKNOWLEDGEMENT BY SUBSCRIBING WITNESS TAKEN IN NEW YORK STATE

State of New York, County of , ss:

On the day of in the year , before me, the undersigned, a Notary Public in and for said State, personally appeared , the subscribing witness to the foregoing instrument, with whom I am personally acquainted, who, being by me duly sworn, did depose and say that he/she/they reside(s) in

(if the place of residence is in a city, include the street and street number if any, thereof); that he/she/they know(s)

to be the individual described in and who executed the foregoing instrument; that said subscribing witness was present and saw said

execute the same; and that said witness at the same time subscribed his/her/their name(s) as a witness thereto

ACKNOWLEDGEMENT TAKEN IN NEW YORK STATE

State of New York, County of , ss:

On the day of in the year , before me, the undersigned, personally appeared

, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

ACKNOWLEDGEMENT TAKEN OUTSIDE NEW YORK STATE

*State of , County of , ss:
*(Or insert District of Columbia, Territory, Possession or Foreign County)

On the day of in the year , before me the undersigned personally appeared

Personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), that by his/her/their signature(s) on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual make such appearance before the undersigned in the

(add the city or political subdivision and the state or country or other place the acknowledgement was taken).

CORRECTION DEED
Bargain and Sale Deed
With Covenants

Title No.: N/A

CRESTWOOD STATION PLAZA LLC
TO
CRESTWOOD BUILDERS GROUP, LLC

SECTION: 42

BLOCK: 8

LOT: 5 & 10

COUNTY: Westchester County

TOWN: Eastchester

VILLAGE: Tuckahoe

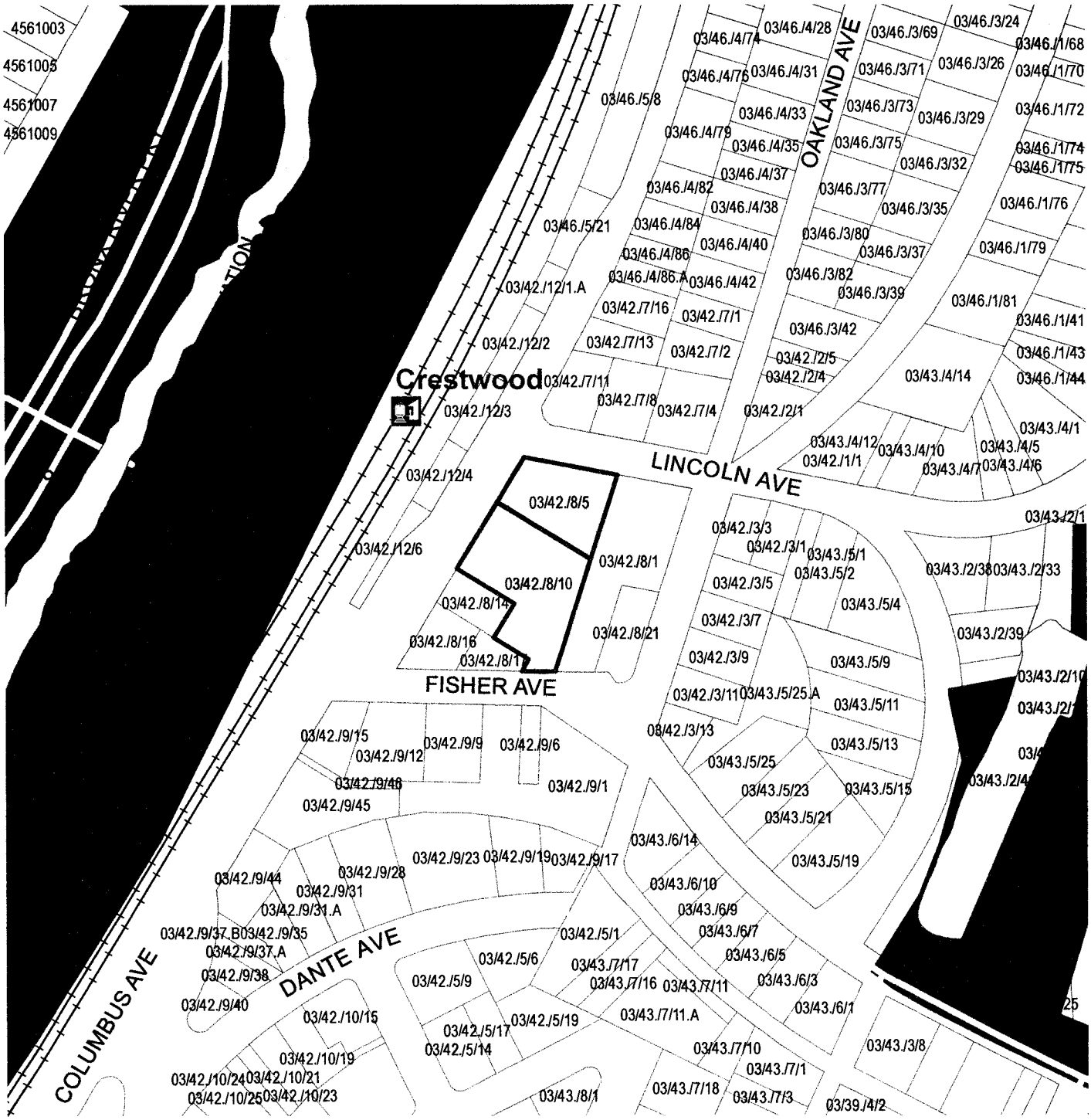
DISTRIBUTED BY

YOUR TITLE EXPERTS
The Judicial Title Insurance Agency LLC
800-281-TITLE (8485) FAX: 800-FAX-9396

RETURN BY MAIL TO:

Jackie Monaco
C/O 89 Edsion Avenue
Mount Vernon, NY 10550

TAX MAP



300 & 308 COLUMBUS AVE
TUCKAHOE, NEW YORK

TAX MAP

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
9/25/2013

PROJECT No.
40405

FIGURE
3

VERIFICATION OF OWNERSHIP OF PROPERTY

LIMITED LIABILITY COMPANY AGREEMENT
OF

CRESTWOOD BUILDERS GROUP LLC

This Limited Liability Company Agreement (this "Agreement") of Crestwood Builders Group LLC is entered into as of the 20 day of February, 2014, by GCMT LLC ("GCMT"), Joseph Rugg, ("Rugg") and Angelo Monaco ("Monaco") and such other persons (as hereinafter defined) who shall become Members (as hereinafter defined) in accordance with this Agreement.

The Members hereby form a limited liability company pursuant to and in accordance with the Act (as hereinafter defined), and hereby agree as follows:

1. Certain Basic Definitions. For purposes of this Agreement:

The term "Act" means the New York Limited Liability Company Law, as the same may be amended from time to time.

The term "Company" means the New York limited liability company formed hereby.

A "Majority in Interest" of the (or any specified group of) Members means, at any time, Members (or Members within such group) whose then Percentage Interests constitute, singly or in the aggregate, at least 67% of the aggregate Percentage Interests of all Members (or all Members within such group) at such time.

The term "Member" means Monaco and GCMT, Rugg and Monaco and each other person, if any, who is admitted as a member of the Company and has a Membership Interest in the Company with the rights, obligations, preferences and limitations specified herein.

The term "Membership Interest" means a Member's aggregate rights in the Company, including, without limitation, the Member's right to Net Income and Net Loss (as such terms are hereinafter defined), the right to receive distributions from the Company and the right to vote, grant consents and participate in the management of the Company to the extent provided herein.

The term "Percentage Interest" with respect to any Member shall mean the percentage set forth on Schedule A hereto opposite the name of such Member.

The term "person" means any association, corporation, estate, general partnership, limited partnership, limited liability company, joint venture, natural person, real estate investment trust, business or other trust, custodian, or nominee, or any individual or other entity in its own or any representative capacity.

2. Formation; Effect of Agreement.

(a) The Company shall be formed upon the filing of the Company's certificate of formation in accordance with the Act. Monaco is hereby designated as an authorized person, within the meaning of the Act, to execute, deliver and file the certificate of formation and his or her actions in so doing are hereby ratified, approved and confirmed in all respects.

(b) It is the express intention of the Members that this Agreement shall be the sole source of agreement of the parties with respect to the subject matter hereof, and, except to the extent a provision of this Agreement is expressly prohibited or ineffective under the Act, this Agreement shall govern, even when inconsistent with, or different than, the provisions of the Act. To the extent any provision of this Agreement is prohibited or ineffective under the Act, this Agreement shall be considered amended to the smallest degree possible in order to make it effective under the Act.

3. Name. The name of the Company is Crestwood Builders Group LLC. The business of the Company may be conducted, upon compliance with all applicable laws, under any other name designated by the Members of the Company.

4. Principal Office; Registered Agent; Qualification.

(a) The principal office of the Company shall be at such place as shall be determined by the Members from time to time.

(b) The name and address of the registered agent of the Company for service of process in the State of New York and the address of the registered office of the Company in the State of New York shall be as reflected in the Company's certificate of formation. The Members may, from time to time, change the registered agent or registered office through appropriate filings with the Secretary of State of the State of New York. In the event the registered agent ceases to act as such for any reason or the registered office shall change, the Members shall promptly designate a replacement registered agent or file a notice of change of address as the case may be.

(c) The Members are authorized to qualify the Company to do business in such jurisdictions as it may determine from time to time, and in furtherance thereof, the Members may qualify the Company using the Company's name or an assumed name to be determined by the Members, as may be required by law.

5. Purposes. The purposes of the Company are (a) to acquire and develop a building site at 300 and 308 Columbus Avenue, Tuckahoe, NY (the "Site"); (b) to manage, operate, lease and/or sell the Site and any development constructed thereon; (c) to do any and all other acts and things which may be necessary, appropriate or incidental to the carrying out of such purposes; and (d) to conduct any other lawful business or activity whatsoever, as permitted by applicable law and as determined from time to time by the Members.

6. Management.

(a) The business and affairs of the Company shall at all times be managed by Monaco and Rugg, who when acting as the managers of the Company shall be referred to herein as the "Managing Members". Any acts of the Managing Members shall be by the unanimous agreement of all of them.

(b) In furtherance of the foregoing, the Managing Members shall have the responsibility and authority for the management, conduct and operation of the Company's business in all respects and matters, the power and authority to authorize and cause to be taken any action, in the name of and/or by or on behalf of the Company, of any kind and to authorize and cause to be done anything and everything, in the name of and/or by or on behalf of the Company, which the Managing Members shall deem necessary or appropriate to carry on the business and affairs of the Company, provided, however, that the Managing Members may delegate certain such powers, responsibilities or authority to certain officers, employees or agents of the Company pursuant hereto, subject to the powers and authority of the Managing Members.

(c) Notwithstanding anything to the contrary contained in this Agreement, without the affirmative approval of a Majority in Interest of the Members, the Company shall not enter into any agreement binding the Company to:

(i) any merger, consolidation or other business combination of the Company with or into another entity;

(ii) any sale, exchange, lease, mortgage, pledge or other transfer of the Site;

(iii) commence, settle or abandon any lawsuit, arbitration, administrative proceeding, or other similar matter, involving a claim for damages by or against the Company in excess of $100,000 (other than claims for which the Company is insured);

(iv) incur any indebtedness, obligation or liability, whether matured or unmatured, liquidated or unliquidated, direct or indirect, absolute or contingent, other than debt to be incurred in connection with the construction budget for the Site; or

(v) file or consent to a petition seeking reorganization, arrangement, moratorium, adjustment or composition of or in respect of the Company under any bankruptcy, insolvency or other similar law, as now or hereafter constituted, of any jurisdiction or appoint a receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Company or any part of its property.

7. Meetings of Members.

(a) There shall be no requirement that the Company hold annual or other meetings of Members; provided, however, subject to Section 7(g) hereof, that meetings of Members shall be held to approve all acts, if any, which, pursuant to the Act or this Agreement, expressly require the vote at a meeting of the Members.

(b) Meetings of the Members may be called by any Managing Member and shall be held on such date and at such time and place as shall be designated by the Managing Member calling the meeting. Except as otherwise provided by the Act or this Agreement, the holders of a Majority in Interest of all Members shall, by their presence in person or representation by proxy, constitute a quorum for the transaction of any business at such meeting. When a quorum is once present to organize a meeting of Members, it is not broken by the subsequent withdrawal of any one or more Members. The holders of a Majority in Interest or those Members present in person or represented by proxy at any meeting of Members, including an adjourned meeting, whether or not a quorum is present, may adjourn such meeting to another time and place.

(c) Written notice (which need not state the purpose or purposes for which the meeting is called) of any meeting of the Members, stating the place, date and hour of the meeting, shall be mailed (including e-mail) or given by the Member calling the meeting to each other Member entitled to vote at the meeting at least three (3) days prior to the meeting; provided, however, that any Member may waive in writing any such notice in person or by proxy, either before or after the meeting. The attendance of any Member at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting shall constitute a waiver of notice by such Member.

(d) At any meeting of the Members, every Member entitled to vote may vote or attend in person or by proxy.

(e) For each one percentage point (or fraction thereof) of a Member's Percentage Interest from time to time, such Member shall be entitled to one vote (or a corresponding fractional vote).

(f) Except as otherwise provided in this Agreement, all limited liability company action required, if applicable, to be approved by vote or consent of the Members shall be authorized if a Majority in Interest of all Members affirmatively vote in favor of or consent to said authorization. Except as may be otherwise expressly required by this Agreement or applicable law, in every instance where this Agreement requires the consent or authorization of Members or of any particular group of Members, such consent or authorization need not be in writing.

(g) Notwithstanding anything herein to the contrary, any action required or permitted to be taken by the Members may be taken without a meeting, without prior notice and without a vote, if a Majority in Interest of the Members (or such other applicable Percentage Interest of Members as required by the terms of this Agreement with respect to such action) consent in writing to such action. Such consent shall have the same effect as a vote of the Members. Prompt notice of the taking of the action without a meeting by less than unanimous written consent shall be given to all Members who shall have not consented in writing but who would have been entitled to vote thereon had such action been taken at a meeting.

(h) Members may participate in a meeting of the Members by means of conference telephone or similar communications equipment by means of which all

persons participating in the meeting can hear each other, and such participation shall constitute presence in person at such meeting.

(i) No Member shall be disqualified from acting on any matter because such Member is interested in the matter to be acted upon by the Members unless, and then solely to the extent, the foregoing shall be prohibited by applicable law.

8. Officers; Authorized Agents.

(a) The Managing Members shall be entitled to designate one or more persons, including, without limitation, any one or more Members or their affiliates, from time to time to act as authorized officers or agents of the Company (each such person, an "Officer"), and to execute, deliver and perform agreements, instruments and documents in the name and on behalf of the Company, consistent with and subject to the powers and authority of the Managing Members.

(b) From time to time, the Managing Members may establish, increase, reduce or otherwise modify responsibilities of any officers of the Company or may create or eliminate offices as the Managing Members may consider appropriate.

(c) Each Officer appointed by the Managing Members shall serve until his or her successor is duly elected as provided herein or, if earlier, until his or her death, resignation or removal. A vacancy in any office because of death, resignation, removal or any other cause shall, if desired by the Managing Members, be filled for the unexpired portion of the term in the manner prescribed in this Agreement for the regular appointment to such office.

(d) Any Officer may resign at any time by so notifying the Managing Members in writing. Such resignation shall take effect upon receipt of such notice or at such later time as is therein specified, and unless otherwise specified, the acceptance of such resignation shall not be necessary to make it effective. The appointment of an individual as an Officer shall not of itself create a right to any employment with the Company. The Managing Members may remove any Officer at any time, for cause or without cause.

(e) Persons dealing with the Company are entitled to rely conclusively upon the power and authority of the Managing Members and/or any Officer(s), and upon the certificate of any Officer(s), to the effect that such Officer(s) is (are) acting as Officer(s), as the case may be, with authority to act for and/or in the name or on behalf of the Company.

9. Construction Budget Indebtedness.

Subject to the approval of a Majority in Interest, the Managing Members may incur, on behalf of the Company, all indebtedness set forth in the construction budget for the development and operation of the Site. In the event the Company incurs any such indebtedness, each of the Members shall personally guaranty such indebtedness to the extent required by any financial institution providing such indebtedness. Each Member shall

personally indemnify, defend and hold harmless the other Members to the extent of liability to such financial institutions in excess of his or her Percentage Interest.

10. Certain Duties of the Members.

The Managing Members, in their capacities as Managing Members and, if applicable, Officers, of the Company, shall each regularly advise each other regarding all business activities undertaken by, on behalf of, or at the direction of such person, and otherwise as the other such person shall reasonably request from time to time.

11. No Liability.

(a) Neither the authorized person (referred to in Section 2(a) hereof) nor any Member shall have any personal liability for any obligations or liabilities of the Company whatsoever except if and then only to the extent expressly provided in the Act. Notwithstanding anything contained herein to the contrary, the failure of the Company to observe any formalities or requirements relating to the exercise of its powers or management of its business and affairs under this Agreement or the Act shall not be grounds for imposing personal liability on the authorized person or the Members for liabilities of the Company.

(b) No Member, whether in such Member's capacity as a Member or, if applicable, manager or Officer, nor any affiliate of any Member, shall have any personal liability to the Company or any of the Members for damages for any breach of duty as a manager or as an Officer of the Company, and/or when acting with the consent of the Members; provided that the foregoing provision shall not eliminate or limit the liability of any Member if a judgment or other final adjudication adverse to such person establishes that the acts or omissions of such person were the result of fraud or bad faith and willful and intentional misconduct or constituted such other conduct which under applicable law precludes the elimination or limitation of such liability.

(c) No Member shall be personally liable for the return or payment of all or any portion of the capital of or profits allocable to or loans to the Company by any Member (or any successor, assignee or transferee thereof), it being expressly agreed that any such return of capital or payment of profits made pursuant to this Agreement, or any payment or repayment in respect of any such loan, shall be made solely from the assets of the Company (which shall not include any right of contribution from any Member).

12. Indemnification.

(a) The Company shall indemnify, defend and hold harmless the authorized person referred to in Section 2(a) hereof and each Member (in their capacities as Members and, if applicable, managers and/or Officers) and any officer, director or controlling person of each Member, from and against any and all loss, liability, damage, cost or expense, including reasonable attorneys' fees, suffered or incurred in defense of any demands, claims or lawsuits against any such person, in or as a result of or relating to such person's capacity, actions or omissions as an authorized person, Member, manager or Officer of the Company or as an officer, director or controlling person of such Member, as the case

may be, or concerning the Company or any activities undertaken on behalf of the Company, including, without limitation, any demand, claim or lawsuit initiated by or on behalf of any Member, provided that the acts or omissions of such person entitled to indemnification are not found by a court of competent jurisdiction upon entry of a final judgment to be the result of fraud or bad faith and willful and intentional misconduct, or to have violated such a lesser standard of conduct as under applicable law prevents indemnification hereunder.

(b) Any indemnifiable person referred to in this Section 12 shall be entitled to receive, upon request therefor, to the extent not prohibited under the Act or other applicable law, advances to cover the costs of defending any claim or action against such person; provided, however, that such advances shall be repaid to the Company if such person is found by a court of competent jurisdiction upon entry of a final judgment to have violated the standards for indemnification set forth in Section 12(a). All rights to indemnification and advances shall continue as to any person who has ceased to be a Member or other person indemnified hereunder and shall inure to the benefit of the executors, administrators, legatees and distributees of such person.

13. Other Member Activities.

(a) Nothing contained in this Agreement shall preclude any Member from acting as a principal, partner, member, manager, director, trustee, shareholder, employee or agent of or investor in any corporation, partnership, limited liability company, trust or other entity or person, or from receiving any compensation or participating in any profits in connection with any of the foregoing, or from making investments or engaging in ventures, activities or businesses for his or its own account or for the account of others; and neither the Company nor any other Member shall have any right to participate in any manner in any profits or income earned or derived by such Member, from or in connection with any such investment, venture, activity or business.

(b) The Members acknowledge that while Monaco shall personally be a Member, an affiliate of Monaco will enter into an agreement with the Company pursuant to which such affiliate will develop the Site on terms which will provide, among other things, that such affiliate will be paid an aggregate construction management fee of $450,000, to be paid in equal weekly installments over a one (1) year period following the execution by the Company of an agreement to acquire the Site.

14. Capital Contributions; Net Income and Net Loss; Distributions.

(a) Definitions.

(i) The "Capital Contributions" of a Member shall be the sum of the amount of money and the agreed value of any property which such Member contributes to the capital of the Company as provided in this Section 14.

(ii) The term "Code" means the Internal Revenue Code of 1986, as amended, and any corresponding provisions of succeeding law.

(iii) A "Company Year" means the fiscal year of the Company for federal income tax purposes.

(iv) The terms "Net Income" or "Net Loss" for any Company Year mean the net income or loss of the Company for such year, determined in accordance with Code Section 703(a), increased by any income exempt from federal income tax and decreased by any expenditure of the Company described in Code Section 705(a)(2)(B), or treated as such pursuant to Regulations Section 1.7041(b)(2)(iv)(i). Without limiting the generality of the foregoing, Net Income and Net Loss shall reflect any gains or losses realized by the Company on the sale, exchange or other disposition of Company assets and all deductible Company expenses.

(v) The term "Priority Return" means an annual return payable to each Member (or its permitted transferee(s), if any) equal to twelve percent (12%) per annum (compounded annually) on its Unrecovered Capital from time to time outstanding.

(vi) The term "Regulations" means the United States Treasury Income Tax Regulations promulgated under the Code, as such regulations may be amended from time to time.

(vii) The term "Unrecovered Capital" shall mean, as to a particular Member at a particular time, the excess, if any, of the aggregate Capital Contributions made by such Member up to such time minus all amounts theretofore distributed to such Member as a return of such Member's Capital Contributions pursuant to Section 14(e) hereof.

(b) Capital Contributions.

(i) The initial Capital Contributions of the Members shall be as set forth on Schedule A hereto. Except as may be expressly set forth in this Agreement, no Member shall have any right or obligation to contribute capital or make advances to the Company or to otherwise undertake any financial commitments to or on behalf of the Company. The Company acknowledges that the source of Monaco's Capital Contribution is a loan from a third party.

(ii) In the event the Managing Members determine the Company requires additional capital, they may request that the Members make loans to the Company in such amounts as determined by the Managing Members and each Member shall have the option to make such loan in its sole discretion ("Loans"). Each such Loan shall bear interest at a rate of twelve percent (12%) per annum from the date such amounts are lent until such amounts are repaid. Any amount so loaned shall be considered a debt of the Company payable in accordance with its terms and not a Capital Contribution to the Company. Unless otherwise expressly provided in the documentation evidencing the Loan, the Loan and the interest thereon shall be payable only out of the assets of the Company and, unless expressly agreed in writing by such Member, no Member shall have any personal liability for the Loan. Except as aforesaid, a Member may make only such Capital

Contributions to the Company on such terms and subject to such conditions as shall be approved by the Managing Members or as required by this Agreement.

(c) Capital Accounts. The Company shall establish and maintain a separate capital account ("Capital Account") for each Member in accordance with the substantial economic effect and special rule provisions of Regulations Sections 1.704-1(b)(2) and 1.704-2. The Members' respective Capital Accounts shall be kept separate and apart from the books in which the Company maintains records of the Company's adjusted tax basis in its assets and the Members' adjusted tax bases in their Membership Interests. Each Member's Capital Account shall be (i) increased by the amount of such Member's Capital Contributions (if any) and any Net Income and items of gross Company income and gain allocated to such Member pursuant to this Section 14 and (ii) reduced by the amount of all distributions made to such Member in respect of its interest in the Company, whether pursuant to this Section 14 or otherwise, and any Net Loss and items of gross Company deduction and loss allocated to such Member pursuant to this Section 14.

(d) Allocations of Net Income and Net Loss.

(i) After giving effect to the regulatory allocations set forth in Section 14(f), the Net Income of the Company for each Company Year shall be allocated to and among the Members as follows:

(1) First, to the Members in proportion to, to the extent of, and in the inverse order in which, Net Losses were previously allocated to them pursuant to Section 14(d)(ii) since the inception of the Company, until the cumulative amount allocated to each Member pursuant to this Section 14(d)(i)(1) for such Company Year and all prior Company Years is equal to the cumulative Net Losses so allocated to such Member;

(2) Second, to the Members entitled to a Priority Return, to the extent of their accrued and unpaid Priority Return; and

(3) Third, the balance, if any, to the Members, pro rata in proportion to their Percentage Interests.

(ii) After giving effect to the regulatory allocations set forth in Section 14(f), the Net Losses of the Company for each Company Year shall be allocated to and among the Members as follows:

(1) First, to each of the Members to the extent and in inverse order of all prior allocations of Net Income pursuant to Section 14(d)(i) that have not previously been reversed by allocations under this Section 14(d)(ii)(1);

(2) Second, to the Members with a positive balance in their Capital Account, in proportion to, and to the extent of, such balances; and

(3) Third, the balance, if any, to the Members, pro rata in proportion to their Percentage Interests.

(e) Distributions. Distributions (other than those made in connection with the liquidation of the Company pursuant to Section 15 hereof) ("Distributions"), whether in respect of the Net Income of the Company or otherwise, shall be made to the Members as and when, and then only to the extent, determined from time to time by the Managing Members in their sole and absolute discretion. Distributions, if and when made, shall be made first, to the Members entitled to a Priority Return in the ratio and to the extent of their respective amounts of their unpaid Priority Returns, up to the amount of each such Member's unpaid Priority Return, determined as and when such distribution is being made (provided, that upon written instructions from a Member the Company shall remit the sum to which such Member is entitled on account of its Priority Return to any third party designated by such Member), second, to the Members in the ratio and to the extent of their respective amounts of Unrecovered Capital then outstanding, and third, to the Members in the ratio of their respective Percentage Interests; provided, no Distributions shall be made to Members at any time any Loan may be outstanding, and Loans shall be repaid, with all accrued interest, prior to any Distributions being made to Members. Notwithstanding the foregoing, the Company shall make such minimum annual distributions as shall be necessary to enable the Members to pay such U.S. federal, state and local income taxes as they may be liable to pay on the cumulative net taxable income, if any, allocated to them pursuant to this Agreement for each fiscal year of the Company or other periods (taking into account allocations of Company taxable income or loss for prior fiscal years or other periods), at a combined marginal tax rate equal to 40% (or such other tax rate as shall be determined by the Managing Members in their reasonable discretion).

(f) Regulatory Allocations. Notwithstanding any other provision of this Agreement to the contrary, all allocations of Net Income and Net Loss provided for in this Section 14 shall be subject to the requirements of Code Section 704 and the Regulations thereunder. The Members shall determine whether and the extent to which the allocations provided for in this Section 14 shall be modified to comply with such requirements, as well as whether any elections or optional adjustments permitted under such Regulations should be made. Without limiting the generality of the foregoing, this Agreement shall be deemed to contain, and the allocations provided in this Section 14 shall be subject to, (i) a qualified income offset provision as required by Regulations Section 1.704-1(b)(2)(ii)(d) (including a related provision limiting allocations of Net Loss that would cause deficit capital account balances), and (ii) minimum gain chargeback provisions as required by Regulations Sections 1.704-2(f) and 1.704-2(i) (including related provisions requiring allocations of tax items attributable to certain indebtedness of the Company to be made to those Members, if any, who bear the economic risk of loss with respect to such indebtedness).

(g) "Tax Matters Partner". The Members shall designate from time to time one Member to be the "tax matters partner" for purposes of Subchapter C of Chapter 63 of Subtitle F of the Code.

(h) No Interest on Capital. Except for the Priority Return, no Member shall be entitled to receive any interest on or in respect of any amount allocated to

its Capital Account (if any) or on or in respect of any distribution or withdrawal therefrom or thereof permitted under this Agreement.

(i) Withdrawals by Members. No Member shall have the right to withdraw any funds or other assets from the Company or its, her or his Capital Account (if any) without the prior consent of the Members.

15. Dissolution.

(a) Grounds. The Company shall dissolve and its affairs shall be a wound up upon the first to occur of the following: (i) the written consent of a Majority in Interest of the Members, or (ii) the entry of a decree of judicial dissolution under Section 18-802 of the Act.

(b) No Right of Withdrawal or to Cause Dissolution. Notwithstanding Section 15(a) hereof, no Member shall have the right to retire, resign or withdraw as a Member or otherwise cause, voluntarily or involuntarily, a dissolution of the Company other than as expressly permitted pursuant to said Section 15(a).

(c) Liquidation. Upon dissolution of the Company, the Managing Members shall (x) within a reasonable time cause the Company's assets to be liquidated in an orderly and business-like manner so as not to involve undue sacrifice, and (y) take the following actions and make the following distributions out of the assets of the Company in the following manner and order:

(i) first, pay or establish adequate reserves for all debts and liabilities of the Company to persons other than Members and expenses of liquidation in the order of priority provided by law;

(ii) then, establish any reserves which the Managing Members reasonably deem necessary to provide for contingent liabilities or obligations of the Company; provided, however, that, at the expiration of such period of time as the Managing Members may reasonably deem advisable, the balance of any reserves shall be paid or distributed as provided in subparagraphs (iii) through (v) of this Section 15(c) (in the order of priority thereof), it being agreed that such reserves may, at the election of the Managing Members, be paid over to an independent institutional escrow agent to be held by it as escrowee for the purpose of disbursing such reserves in payment of any of the aforesaid contingencies;

(iii) then, pay out of the balance of such assets, if any, the outstanding balance of all remaining debts and liabilities of the Company to the Members to whom the same are owed, pro rata;

(iv) then, to the Members entitled to a Priority Return in the ratio and to the extent of their respective amounts of their unpaid Priority Returns, up to the amount of each such Member's unpaid Priority Return, determined as and when such distribution is being made;

(v) then, pay the Members, pro rata, to the extent of their respective positive Capital Account balances (determined after giving effect to all allocations of tax items called for by Section 14 hereof), the balance, if any, of such assets; and

(vi) then pay the balance, if any, of such assets to the Members in the ratio of their respective Percentage Interests.

Except as otherwise expressly provided herein, upon such distribution, no Member shall have any rights or claims against the Company or any other Member, notwithstanding any imbalance in the respective Capital Accounts of the Members. Notwithstanding the previous sentence, upon dissolution of the Company or if there is a Net Loss or deficit upon sale or lease of the Site (or any interest therein), or if the Site is not sold or leased within a reasonable period of time, and if GCMT has not previously received distributions in an amount equal to his Unrecovered Capital (such shortfall, the "Deficit"), each other Member shall make a contribution to the Company in an amount equal to their pro rata share of the Deficit based on their then Percentage Interests and the Company shall distribute such aggregate amount to GCMT.

(d) Deferral of Distribution. Notwithstanding the provisions of Section 15(c), if, upon dissolution of the Company, the Members shall determine that sale of part or all of the Company's assets would cause undue loss to the Members, the Members may, in order to avoid such losses, defer the liquidation of, and withhold from distribution for a reasonable time, any assets of the Company.

(e) No Restoration Obligations. No Member shall have any obligation to restore any deficit balance in its Capital Account following the "liquidation" (as such term is defined in Regulations Section 1.704-1(b)(2)(ii)(g)) of its interest in the Company.

(f) No Right to Partition. The Members, on behalf of themselves and their heirs, personal representatives, successors and assigns, hereby specifically renounce, waive and forfeit all rights, whether arising under contract or statute or by operation of law, to seek, bring or maintain any action in any court of law or equity for partition of the Company, or any interest which is considered to be Company assets, regardless of the manner in which title to any such assets may be held.

16. Restrictions on Transfer.

(a) Except as expressly provided in this Agreement, no Member shall have the right to sell, assign, convey, pledge, transfer or otherwise dispose of (each, a "Transfer") all or any part of its, his or her Membership Interest without the written consent of the Managing Members, which consent may be withheld in their sole and absolute discretion. Any purported Transfer not so approved by the Managing Members shall be null and void ab initio and of no force or effect.

(b) An approved transferee of a Membership Interest shall not be admitted as a Member pursuant to this Agreement unless and until such transferee executes

and delivers an agreement, in form reasonably satisfactory to the Managing Members, to be a party to and to be bound by the provisions of this Agreement and acknowledging the restriction on transfers contained herein and agreeing to be bound thereby.

(c) An approved transferee who becomes a Member shall succeed and shall be subject to the rights, powers, preferences and limitations of Members under this Agreement, and shall be subject to the restrictions on and obligations of its respective transferor Member, except as may otherwise be expressly provided in this Agreement.

(d) Notwithstanding anything herein to the contrary, (i) a Transfer by a Member of all or part of his or its Membership Interest, whether on death or inter vivos (in trust or otherwise), to or for the benefit of any member of his family (or the family of the grantor of any trust which is a Member) or to a charitable, religious or educational organization, or a corporation more than 50% of the voting stock of which is owned by him or it, shall be permitted, provided, that any such transferee shall not be admitted as a Member, unless the Managing Members approve the same. Permissible transferees under this clause (d) who are not admitted as a Member shall have the right to receive Company distributions and allocations under Sections 14 and 15 hereof applicable to the Membership Interest transferred but shall not have any other rights of a Member hereunder (such other rights to remain with the transferor), including, without limitation, the right to receive any information or account of the Company's transactions or to inspect the Company's books.

17. Fiscal Year. The fiscal year of the Company shall be the calendar year or such other period as shall be determined by the Managing Members.

18. Financial Reporting. An accountant's report shall be made annually of the Company's books and records. Such reports shall be in such form as the Managing Members shall determine from time to time. Each Member shall at all times have access to the Company's books and records.

19. Benefits of Agreement. This Agreement shall be binding upon and inure to the benefit of the respective heirs, personal representatives, successors and permitted assigns of the parties hereto; provided that nothing contained herein shall permit any assignment of any Membership Interests or any rights or obligations under this Agreement except as elsewhere permitted in this Agreement. This Agreement shall not inure to the benefit of or be enforceable by any creditor of the Company or of any Member or be deemed to create or be for the benefit of any person not a party hereto.

20. Waivers. No waiver by any party hereto of any failure by any other party hereto to comply with any obligation under this Agreement shall be effective unless in writing and signed by the party granting such waiver, and no such waiver shall be deemed a waiver of any subsequent failure of the same or similar nature.

21. Severability. If any provision of this Agreement would be held to be invalid, prohibited or unenforceable in any jurisdiction for any reason, such provision, as to such jurisdiction only, shall be ineffective to the extent of such invalidity, prohibition, unenforceability, without invalidating the remaining provisions of this Agreement, and the

validity, legality and enforceability of such remaining provisions shall not be affected in any way thereby.

22. Counterparts. This Agreement may be executed by the parties hereto in counterparts, or by separate signature page or instrument, each of which shall be considered an original, and all of which shall together constitute but one and the same agreement.

23. Entire Agreement. This Agreement (inclusive of the Schedules hereto) sets forth the entire agreement and understanding among the parties hereto relating to the subject matter hereof and supersedes and cancels any and all previous agreements, understandings and representations, whether written or oral, in respect thereof among them. This Agreement shall not be modified, amended or terminated (other than in accordance with the provisions hereof) except by a written instrument signed by each of the parties hereto.

24. Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York, without giving effect to contrary choice of law principles of such State.

25. Independent Counsel. Each Member has had the opportunity to obtain independent counsel and advice with respect to the terms of this Agreement and has had ample opportunity to consult with any such counsel. Each Member warrants and represents to the other that it has entered into this Agreement based upon its independent judgment, knowledge and expertise, as well as on the advice of counsel, professional persons or firms consulted by it, and not in reliance upon advice of counsel, professional persons or firms retained by the other Members.

[signature page follows]

IN WITNESS WHEREOF, the undersigned have duly executed this Agreement as of the date first above written.

GCMT LLC
by Giulio C. Monaco Jr Real Estate Trust

By: _____
Joseph Rugg, Trustee

_____
Joseph Rugg

_____
Angelo Monaco

SCHEDULE A

PERCENTAGE INTERESTS AND INITIAL CAPITAL CONTRIBUTIONS

Member	Percentage Interest	Initial Capital Contribution
GCMT LLC	33.33%	$ 1.00
Joseph Rugg	33.33%	$ 1.00
Angelo Monaco	33.33%	$ 1.00
Totals	100%	$ 3.00

N. Y. S. DEPARTMENT OF STATE
DIVISION OF CORPORATIONS AND STATE RECORDS ALBANY, NY 12231-0001

FILING RECEIPT

ENTITY NAME: CRESTWOOD BUILDERS GROUP, LLC

DOCUMENT TYPE: ARTICLES OF ORGANIZATION (DOM LLC) COUNTY: WEST

FILED:03/22/2013 DURATION:********* CASH#:130322000821 FILM #:130322000736
DOS ID:4378178

FILER:
USA CORPORATE SERVOICES INC
19 W 334TH STREET SUITE 1018

NEW YORK, NY 10001

EXIST DATE
03/22/2013

ADDRESS FOR PROCESS:
THE LLC
12 WATER STREET STE 204
WHITE PLAINS, NY 10601

REGISTERED AGENT:

The limited liability company is required to file a Biennial Statement with the Department of State every two years pursuant to Limited Liability Company Law Section 301. Notification that the biennial statement is due will only be made via email. Please go to www.email.ebiennial.dos.ny.gov to provide an email address to receive an email notification when the Biennial Statement is due.

SERVICE COMPANY: USA CORPORATE SERVICES INC. - 57 SERVICE CODE: 57 *

FEES	225.00	PAYMENTS	225.00
FILING	200.00	CASH	0.00
TAX	0.00	CHECK	0.00
CERT	0.00	CHARGE	0.00
COPIES	0.00	DRAWDOWN	225.00
HANDLING	25.00	OPAL	0.00
		REFUND	0.00

DOS-1025 (04/2007)

Articles of Organization

Of

CRESTWOOD BUILDERS GROUP, LLC

Pursuant to Section 203 of the Limited Liability Company Law

1. The name of the Limited Liability Company is **CRESTWOOD BUILDERS GROUP, LLC**

2. The county within this state in which the office of the Limited Liability Company is to be located is **Westchester.**

3. The Secretary of State is designated as agent of the Limited Liability Company upon whom process against the Limited Liability Company may be served. The Post office address within or without this state to which the Secretary of State shall mail a copy of any such process against the Limited Liability Company served upon him or her is:

12 Water Street, Ste. 204
White Plains, NY 10601

4. The Limited Liability Company is to be managed by one or more **members**.

In Witness Whereof, this certificate has been subscribed this March 22, 2013, by the undersigned who affirms that the statements made herein are true under the penalties of perjury.

s/Malika Ahmedova
Malika Ahmedova
USA Corporate Services Inc.
Organizer

Articles of Organization

Of

CRESTWOOD BUILDERS GROUP, LLC

Pursuant to Section 203 of the Limited Liability Company Law

Filer:

USA Corporate Services Inc.
19 W. 34th Street Suite 1018
New York, NY 10001

USA 57 DRAWDOWN

Minutes of the Organization

of

CRESTWOOD BUILDERS GROUP, LLC

I, the undersigned, being the sole organizer named in the articles of formation of the Company, held an organization meeting at the date and place set forth below, at which meeting the following action was taken:

It was resolved that a copy of the articles of formation together with the receipt issued by the Dept. of State showing the date for filing the original articles of formation be appended to these minutes.

The Operating Agreement regulating the conduct of the business and affairs of the Company was adopted and ordered appended hereto.

The persons whose names appear below were named to manage the affairs of the Company.

The proportion of each members share of the profits and losses, and the resulting proportion of the voting rights of the company, as determined in the operating agreement, were determined.

The principal office of the Company was fixed at:

Dated: March 22, 2013

s/Malika Ahmedova
Malika Ahmedova
Sole Organizer

The following accept their nomination to manage the affairs of the Company:
Name: Address:

N. Y. S. DEPARTMENT OF STATE
DIVISION OF CORPORATIONS AND STATE RECORDS ALBANY, NY 12231-0001

FILING RECEIPT

ENTITY NAME: CRESTWOOD BUILDERS GROUP, LLC

DOCUMENT TYPE: CERTIFICATE OF PUBLICATION (DOM LLC) COUNTY: WEST

FILED:06/25/2013 DURATION:********* CASH#:130625000139 FILM #:130625000135

FILER:

HIKARU SHIMIZU
19 W. 34TH STREET, STE. 1018

NEW YORK, NY 10001

ADDRESS FOR PROCESS:

REGISTERED AGENT:

SERVICE COMPANY: USA CORPORATE SERVICES INC. - 57 SERVICE CODE: 57

FEES	50.00	PAYMENTS	50.00
FILING	50.00	CASH	0.00
TAX	0.00	CHECK	0.00
CERT	0.00	CHARGE	0.00
COPIES	0.00	DRAWDOWN	50.00
HANDLING	0.00	OPAL	0.00
		REFUND	0.00

DOS-1025 (04/2007)

New York State
Department of State
Division of Corporations, State Records and Uniform Commercial Code
One Commerce Plaza, 99 Washington Avenue
Albany, NY 12231
www.dos.state.ny.us

CERTIFICATE OF PUBLICATION
OF
CRESTWOOD BUILDERS GROUP, LLC

(Name of Domestic Limited Liability Company)

Under Section 206 of the Limited Liability Company Law

The undersigned is the Authorized Person
(Title)*
of CRESTWOOD BUILDERS GROUP, LLC
(Name of Domestic Limited Liability Company)

If the name of the limited liability company has changed, the name under which it was organized is: _____

The articles of organization were filed by the Department of State on: MARCH 22, 2013

The published notices described in the annexed affidavits of publication contain all of the information required by Section 206 of the Limited Liability Company Law.

The newspapers described in such affidavits of publication satisfy the requirements set forth in the Limited Liability Company Law and the designation made by the county clerk.

I certify the foregoing statements to be true under penalties of perjury.

05/21/2013
(Date)

X _____
(Signature)

Hikaru Shimizu
(Type or Print Name)

* This certificate must be signed by a member, manager, authorized person or attorney-in-fact. If the certificate is signed by an attorney-in-fact, include the name and title of the person for whom the attorney-in-fact is acting. (Example, John Smith, attorney-in-fact for Robert Johnson, member.)

USA - 57 DRAWDOWN

The Journal News

AFFIDAVIT OF PUBLICATION

Under Section 206 of the Limited Liability Company Law

State of New York,

County of Westchester, ss.:

The undersigned is the publisher of **THE JOURNAL NEWS**, a daily newspaper published in White Plains, New York. A notice regarding **CRESTWOOD BUILDERS GROUP, LLC** was published in said newspaper once in each week for **6** successive weeks, commencing on **03/29/2013** and ending on **05/03/2013**. The text of the notice as published in said newspaper is as set forth in the annexed exhibit. This newspaper has been designated by the Clerk of the following county for this purpose:

Westchester

Signature

Florence Bonilla

Printed Name (Authorized designee of Janet Hasson, Publisher of THE JOURNAL NEWS)

Subscribed and sworn to before me,

This 8th day of May 20 13

Notary Signature

JESSIE L ARAUJO DSOUZA
Notary Public, State of New York
No. 01AR6083528
Qualified in Westchester County
Commission Expires November 18, 2014

Notary Public Stamp

AD# 3481094

ACCOUNT#:045696405

Ad Number	Start Date	End Date
3481094	3/29/2013	05/03/2013

Ad Text:

Notice of Formation of CRESTWOOD BUILDERS GROUP, LLC. Arts. of Org. was filed with SSNY on 3/22/13. Office location: Westchester County. SSNY designated as agent of LLC whom process against may be served. SSNY shall mail process to: c/o The LLC, 12 Water St. #204, White Plains, NY 10601. Purpose: all lawful activities.

Run dates: 03/29, 04/05, 04/12, 04/19, 04/26, 05/03

Westchester County Business Journal

3 Gannett Drive
White Plains, New York 10604

Affidavit of Publication
Under Section 206 of the Limited Liability Company Law

State of New York
County of Westchester, ss:

The undersigned is the Publisher of the Westchester County Business Journal, a weekly newspaper published in the City of White Plains, county of Westchester and State of New York. A notice regarding **Crestwood Builders Group, LLC** was published in said newspaper once in each week for six successive weeks, commencing on **04.01.2013** and ending on **05.06.2013.** The text of the notice as published in said newspaper is as set forth below. *This newspaper has been designated by the Clerk of Westchester County for this purpose.*

By: Beverly Visosky
BEVERLY VISOSKY
AUTHORIZED DESIGNEE OF DOLORES DELBELLO,
PUBLISHER OF THE WESTCHESTER COUNTY BUSINESS JOURNAL

Sworn to before me this 7th day of May 2013

Alissa Tracey Frey
Notary Public Westchester County

ALISSA TRACEY FREY
NOTARY PUBLIC-STATE OF NEW YORK
No. 01FR6275936
Qualified in Westchester County
My Commission Expires February 04, 2017

Notice of Formation of CRESTWOOD BUILDERS GROUP, LLC. Arts. of Org. was filed with SSNY on 3/22/13. Office location: Westchester County. SSNY designated as agent of LLC whom process against may be served. SSNY shall mail process to: c/o The LLC, 12 Water St. #204, White Plains, NY 10601. Purpose: all lawful activities.
Ad# 58623

CERTIFICATE OF PUBLICATION
OF
CRESTWOOD BUILDERS GROUP, LLC

(Name of Domestic Limited Liability Company)

Under Section 206 of the Limited Liability Company Law

Filed by: Hikaru Shimizu
(Name)

19 W. 34th Street, Ste 1018
(Mailing Address)

New York, NY 10001
(City, State and ZIP Code)

Note: This form was prepared by the New York State Department of State for filing a certificate of publication for a domestic limited liability company. You are not required to use this form. You may draft your own form or use forms available from legal stationery stores. The Department of State recommends that legal documents be prepared under the guidance of an attorney. This certificate of publication, with the affidavits of publication of the newspapers annexed thereto, must be submitted with a $50 filing fee payable to the Department of State.

(For office use only)

Attach this page after the affidavits of publication.

USA - 57 DRAWDOWN

July 9, 2013

D'Alessio Enterprises, LLC
Jessica Ramos
12 Water Street, Ste. 204
White Plains, NY 10601

Re: CRESTWOOD BUILDERS GROUP, LLC

Dear Jessica:

Thank you for your business. Please find enclosed the original certificate of publication filing receipt & affidavits of publication for the named company.

Please keep the record with the company's other corporate documents.

It was pleasure to help your company to comply with the publication requirements. If in the future, you require any post-incorporation services such as a tailored operating agreement, name change, address change or certified documents etc., please feel free to contact us at USA Corporate Services Inc..

If you have any questions, please do not hesitate to let us know.

Warmest regards,

Hikaru Shimizu

Hikaru Shimizu

SCANNED
7/23/13

SIGNED SURVEY

LEGAL DESCRIPTION OF EASEMENT AREA IN WORD

THE JUDICIAL TITLE INSURANCE AGENCY LLC

Title Number: 113513ST-W

SCHEDULE A
Amended 07/11/2014

SECTION 42 BLOCK 8 LOTS 5 & 10

ALL that certain plot, piece or parcel of land, situate, lying and being in the Town of Eastchester, County of Westchester and State of New York, show and designated as Lot Nos. 438 through 443 and part of Lots 444 through 446, on a certain map titled "Map of Property belonging to the New York Central Realty Co., W.H. Cooper President, known as Westchester Park, situate on the Harlem Railroad, Westchester County, made by Walter A. Miles, C.E. & S., dated June 30, 1906 and filed in the Office of the Register of Westchester County, Division of Land Records, November 15, 1906 as Map No. 1672, more particularly bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southwesterly line of Lincoln Avenue with the southeasterly line of Columbus Avenue;

THENCE along said southwesterly line of Lincoln Avenue, south 70 degrees 42 minutes 20 seconds east, a distance of 124.10 feet to the division line between filed map Lots 438 and 437;

THENCE along said division line and the division line between filed map Lots 439 through 447, south 25 degrees 33 minutes 20 seconds west, a distance of 263.57 feet to the northerly line of Fisher Avenue;

THENCE along said northerly line of Fisher Avenue, north 80 degrees 15 minutes 25 seconds west, a distance of 49.80 feet to a point;

THENCE passing through filed map Lot 446, north 39 degrees 57 minutes 35 seconds east, a distance of 19.72 feet to the division line between filed map Lots 445 and 446;

THENCE along said division line, north 50 degrees 07 minutes 00 seconds west, a distance of 53.50 feet to a point;

THENCE passing through filed map Lots 444 and 445, north 39 degrees 52 minutes 35 seconds east, a distance of 50.00 feet to the division line between file map Lots 443 and

FOR CONVEYANCING ONLY

The policy to be issued under this report will insure the title to such buildings and improvements erected on the premises which by law constitute real property.

TOGETHER with all the right, title and interest of the party in the first part, or, in and to the land lying in the street in front of and adjoining said premises.

THE JUDICIAL TITLE INSURANCE AGENCY LLC

Title Number: 113513ST-W

SCHEDULE A (continued)
Amended 07/11/2014

444;

THENCE along said division line, north 50 degrees 07 minutes 25 seconds west, a distance of 85.00 feet to the aforementioned southeasterly line of Columbus Avenue;

THENCE along said southeasterly line of Columbus Avenue, north 39 degrees 52 minutes 35 seconds east, a distance of 167.01 feet to the point or place of BEGINNING.

CONTAINING 32.474 square feet or 0.7455 acres, more or less.

FOR CONVEYANCING ONLY

The policy to be issued under this report will insure the title to such buildings and improvements erected on the premises which by law constitute real property.

TOGETHER with all the right, title and interest of the party in the first part, or, in and to the land lying in the street in front of and adjoining said premises.

DRAFT NOTICE TO MUNICIPALITY

July __, 2014

Honorable Anthony S. Colavita, Supervisor
Town of Eastchester
40 Mill Road
Eastchester, New York 10709

Re: Environmental Easement

Dear Honorable Supervisor Colavita:

Attached please find a copy of an environmental easement granted to the New York State Department of Environmental Conservation ("DEC") on _____, By Crestwood Builders Group, LLC, for property at 300-308 Columbus Avenue, Tuckahoe, New York 10707, Tax Map No._____, DEC Site No: C360136.

This Environmental Easement restricts future use of the above-referenced property to restricted residential uses. Any on-site activity must be done in accordance with the Environmental Easement and the Site Management Plan which is incorporated into the Environmental Easement. Department approval is also required prior to any groundwater use.)

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

> 1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.
>
> 2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by this Department is available to the public at: http://www.dec.ny.gov/chemical/36045.html. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Albert J. Pirro, Jr.

AJP:dat

July ___, 2014

Honorable Robert P. Astorino, County Executive
County of Westchester
148 Martine Avenue
White Plains, New York 10601

Re: Environmental Easement

Dear Honorable County Executive Astorino:

Attached please find a copy of an environmental easement granted to the New York State Department of Environmental Conservation ("DEC") on _____, By Crestwood Builders Group, LLC, for property at 300-308 Columbus Avenue, Tuckahoe, New York 10707, Tax Map No._____, DEC Site No: C360136.

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An electronic version of every environmental easement that has been accepted by this Department is available to the public at: http://www.dec.ny.gov/chemical/36045.html. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Albert J. Pirro, Jr.

AJP:dat

July __, 2014

Honorable Steve Ecklond, Mayor
Village of Tuckahoe
65 Main Street
Tuckahoe, New York 10707

Re: Environmental Easement

Dear Honorable Mayor Ecklond:

Attached please find a copy of an environmental easement granted to the New York State Department of Environmental Conservation ("DEC") on _____, By Crestwood Builders Group, LLC, for property at 300-308 Columbus Avenue, Tuckahoe, New York 10707, Tax Map No._____, DEC Site No: C360136.

This Environmental Easement restricts future use of the above-referenced property to restricted residential uses. Any on-site activity must be done in accordance with the Environmental Easement and the Site Management Plan which is incorporated into the Environmental Easement. Department approval is also required prior to any groundwater use.)

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>
> 2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by this Department is available to the public at: http://www.dec.ny.gov/chemical/36045.html. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Albert J. Pirro, Jr.

AJP:dat

ATTORNEY CHECKLIST

ENVIRONMENTAL EASEMENT
CHECKLIST/CERTIFICATION
SITE No. C360136

The following requirements and attachments must be included as part of the submission to the Department for an Environmental Easement. Upon completion of the review, an attorney must sign the certification certifying that they have fully completed the checklist. The Department will not accept submissions which have not been signed and certified as complete by both the Owner and Owner's Attorney.

1) Special Circumstances

The last owner search was completed and the deed transfer is by Quit Claim or other restricted transfer deed ☐ Yes ☒ No

The property in the Brownfield Cleanup Agreement includes lands under water ☐ Yes ☒ No

The property has multiple owners ☐ Yes ☒ No

If you answered "Yes" to any of these items, contact the Department's Environmental Easement contact person for a determination as to whether further title work is necessary.

2) Verification of ownership of the property

- ☒ Authorized "Person" is signatory on the Easement.
- ☒ Current Deed has been reviewed and correct name of owner has been verified.
- ☒ Verification reviewed and included for authority to sign Easement.
- ☒ Updated copies of legal organizational documents have been reviewed and are included. Examples of the appropriate documentation will include, for:
  - corporations: articles of incorporation, organizational agreements, minutes of annual meetings, resolutions, authorities for signature;
  - partnerships: a copy of the partnership agreement; verification that necessary parties are participating in the Easement;
  - trusts: trust agreement, affidavit of no change in the trust; and
  - estates: estate letters, powers of attorney.

3) Verification of Property Subject to Easement

- ☒ Description of the property in the Easement and DEC Agreement/Order/SAC matches description of property in the deed (Separate submittal must be included to explain to the satisfaction of the Department why there is any discrepancy).
- ☒ The Tax Map identifier (SBL) matches on all documents.

4) Survey Review

- ☒ Survey includes metes and bounds description.
- ☒ Survey includes a graphic scale.

☒ Survey includes physical Address and is consistent with the DEC Agreement/Order/SAC.

5) Review of Easement

- ☒ Attorney certifies Easement is in the form provided by the Department and that entries have been made only in those sections where authorized.
- ☒ Verification that the proper party has signed the Easement. Acknowledgement is in the proper form, notary stamp is clear and has a current expiration date.
- ☒ Name, property address, SBL, engineering controls/institutional controls, SMP references and any information that was inserted into the Easement form has been verified as correct and accurate.
- ☒ Two original Easements have been signed by the proper party.

6) Submissions

- ☒ The Environmental Easement Package being submitted to the Department includes the applicable documents set forth in Attachment A.

PLEASE READ THE FOLLOWING CAREFULLY

The Owner and the Owner's attorney understand and acknowledge that the New York State Department of Environmental Conservation will rely on each and every answer in this statement: (1) to determine whether the Easement Package can be reviewed in a timely fashion; and (2) to determine whether the Easement Package should be approved. The Owner and the Owner's attorney understand and acknowledge that any false statement or misrepresentation herein will constitute cause for the revocation of the Certificate of Compliance issued in reliance on this checklist and accompanying documentation. The Owner and the Owner's attorney further acknowledge that the failure to provide the Department with valid and enforceable Environmental Easement on the property may be grounds for the Department to revoke any Certificate of Completion for the site.

Statement of Certification and Signatures

1) By Owner:

I hereby affirm that information provided on this form and its attachments is true and complete to the best of my knowledge and belief. I further acknowledge that the failure to provide the Department with valid and enforceable Environmental Easement on the property may be grounds for the Department to revoke any Certificate of Completion for the site.

Date: 7/24/2014 Signature: _____

Print Name: Giulio Monaco, Jr.

2) By Owner's Attorney:

I hereby affirm that I am the attorney for _____(entity); that I am authorized by that entity to make this certification; that this certification was prepared by me or under my supervision and direction; and that information provided on this form and its attachments is true and complete to the best of my knowledge and belief.

Date: 7/25/2014 Signature: _____

Print Name: Denise J. D'Ambrosio

Attachment

Attachment A

Documents required for a complete Environmental Easement package:

1) Copy(ies) of current deed(s).

2) Copy of Tax map.

3) Two original easements and an electronic version submitted to both the project manager and project attorney.

4) Proof of authority to obligate owner of property as set forth in "Verification of ownership of property" on the Easement checklist.

5) Legal description of the easement area in a Department approved electronic form (i.e., Word).

6) Signed Survey, two full size copies and an electronic survey for review to both the project manager and project attorney.

7) A draft Notice to Municipality, with appropriate site-specific provisions.

8) Attorney Checklist with certification signed by attorney and owner.

APPENDIX B – EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the Department. Currently, this notification will be made to:

Randy Whitcher (randy.whitcher@dec.ny.gov)
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C
625 Broadway, 11th Floor
Albany, New York 12233-7014

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for Site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix C of this document,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory, and instrument-based soil screening using a photoionization detector (PID) calibrated with 100 parts per million (ppm) isobutylene gas at the start of each workday will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed

during redevelopment, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-Site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

B-3 STOCKPILE METHODS

Soil excavated from the Site will be placed in separate designated stockpiles based on the results of field screening. Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points. Each soil stockpile will be located based on security, ease of loading onto haul trucks, or ease of reuse as backfill, and stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced. Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and be available for inspection by NYSDEC.

Soil that exhibits evidence (i.e., PID readings, staining, odors) of contamination will be placed in an isolated stockpile designated for off-Site disposal. Soil that does not exhibit evidence of contamination will be placed in separate stockpiles based on the intended use, which include on-Site reuse, or off-Site disposal. On-Site reuse of soil will be managed in accordance with Section B-7.

The location and classification of each stockpile location will be tracked on Site drawings and updated, if necessary, at the end of each workday. Copies of Site drawings will be kept in the field log book. Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material. The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan. The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-Site, as needed. The qualified environmental professional will be responsible for making a determination as to whether outbound trucks will require washing before leaving the Site. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded. Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks loaded with Site materials will exit the vicinity of the Site using pre- approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive Sites; (b) use of city mapped truck routes; (c) prohibiting 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.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development. Queuing of trucks will be performed on-Site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-Site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-Site management of materials from this Site will not occur without formal NYSDEC approval.

Off-Site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Contaminated soil, or any material in direct contact with the contaminated soil, may not be separated for reuse on-Site and will be disposed of as described in Section B-6. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be reused on-Site. Any demolition material proposed for reuse on-Site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-Site will not be performed without prior NYSDEC approval.

Soil that does not exhibit evidence of contamination during field screening and is free of debris will be stockpiled and tested at a frequency of one sample per 500 cubic yards and characterized for reuse below the Site cap. Chemical criteria for on-Site reuse of material will meet the lower of the NYSDEC Part 375 protection of groundwater or the protection of public health for restricted residential use SCOs and can only be used as backfill beneath the composite cover system for the approved use of the Site consistent with the Environmental Easement. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-Site. Contaminated on-Site material, including historic fill and contaminated soil, that is acceptable for re-use on-Site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. Soil from representative samples that meet the SSSCOs can be reused on-Site and below the Site cap as backfill. Soil designated for reuse as part of the Site cap will be tested in accordance with the sampling protocol identified in Table 1 in Section B-10. All sampling of imported backfill will be conducted in accordance with the QAPP included in Appendix F.

B-8 FLUIDS MANAGEMENT

Groundwater exists at depths up to 20 feet below grade, and it is not considered practical for any future excavation completed as part of redevelopment, and under the requirements of this SMP, to encounter groundwater. Any liquids generated during decontamination of excavation and monitoring equipment will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with this SMP and the COC. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

B-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site.

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

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d) and at a frequency indicated by the following table:

Soil will be considered appropriate for use as on-site imported backfill below the site cap if contaminant concentrations are below the lesser of the 6 NYCRR Part 375 Restricted Residential and Groundwater Protection SCOs. Soil being used as part of the site cap will meet the 6 NYCRR Part 375 Unrestricted Use and Groundwater Protection SCOs. Soil that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Native material from a New York State Department of Transportation (NYSDOT) designated virgin quarry source will not be sampled prior to use as backfill on the Site. Non-DOT designated virgin quarry sources, or non-virgin imported material that does not have an approved NYSDEC Beneficial Use Determination will be tested at the originating facility in accordance with Section 5.4(e) 10 of NYSDEC DER 10, and at a frequency indicated by the following table:

Table 1: Soil Sampling Requirements for Import/Export

<table>
<tr><td colspan="4">Recommended Number of Soil Samples for Soil Imported To or Exported From a Site</td></tr>
<tr><td></td><td>VOCs (EPA Method 8260)</td><td colspan="2">SVOCs (EPA Method 8270), Inorganics (EPA Method 600/7000series & PCBs/Pesticides (EPA Methods 8082/8081)</td></tr>
<tr><td>Soil Quantity (cubic Yards)</td><td>Discrete Samples</td><td>Composite Samples</td><td>Composite Sample Protocol</td></tr>
<tr><td>0-50</td><td>1</td><td>1</td><td rowspan="8">3-5 discrete samples from different locations in the fill being provided will comprise a compoSite sample for analysis</td></tr>
<tr><td>50-100</td><td>2</td><td>1</td></tr>
<tr><td>100-200</td><td>3</td><td>1</td></tr>
<tr><td>200-300</td><td>4</td><td>1</td></tr>
<tr><td>300-400</td><td>4</td><td>2</td></tr>
<tr><td>400-500</td><td>5</td><td>2</td></tr>
<tr><td>500-800</td><td>6</td><td>2</td></tr>
<tr><td>800-1000</td><td>7</td><td>2</td></tr>
<tr><td>>1000</td><td colspan="3">Add an additional 2 VOC and 1 composite for each additional 1000 cubic yards or consult with NYSDEC</td></tr>
</table>

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

B-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc., as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full list of analytes (Target Analyte List (TAL) metals; Target Compound List (TCL) volatiles and semi-volatiles, TCL pesticides and polychlorinated biphenyls (PCBs)), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 4 of the SMP.

B-13 COMMUNITY AIR MONITORING PLAN

Work zone monitoring will be performed for the health and safety of workers during interior intrusive work activities in accordance with action levels and guidance outlined in the Site specific HASP. During intrusive activities, all windows and doors at street level will remain closed to prevent exposure to the public and the existing ventilation system and any additional ventilation fans will vent to the roof. Temporary carbon filters will be installed, if necessary, within the existing ventilation fans and HVAC units to prevent potential odors from emanating toward the adjacent apartment building.

Community air monitoring will be performed at the perimeter of the Site continuously during intrusive Site activities including the loading or staging of excavated soil prior to

transportation and off-site disposal. In addition, community air monitoring will be performed periodically (at a minimum once per hour) on a roving basis with a concentration on any active exterior work area(s).

VOC and particulate monitoring equipment will consist of a photoionization detector (PID) capable of detecting the VOCs found in the excavated soil and real-time aerosol or particulate monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM_{10}). VOC monitoring equipment will be calibrated, and the particulate monitoring equipment zeroed, on a daily basis and documented in a dedicated field log book. Both VOC and particulate monitoring equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the prescribed action levels.

If VOC monitoring results in the ambient air concentration of total organic vapors in excess of 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 below 5 ppm over background, work activities can resume with measures taken to reduce vapors and continue monitoring. If total organic vapor levels persist at levels in excess of 5 ppm over background, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. If the organic vapor level is repeatedly over 25 ppm above background, activities will be shut down and the engineering controls and the Site work plan re-evaluated.

If particulate monitoring results in a 15-minute average concentration measurement that is between 100 micrograms per cubic meter ($\mu g/m^3$) and 150 $\mu g/m^3$ above the background level, additional dust suppression techniques will be implemented to reduce the generation of fugitive dust and corrective action taken to protect Site personnel and reduce the potential for contaminant migration. Should dust suppression measures being utilized not lower particulates to an acceptable level (e.g., below 150 $\mu g/m^3$ above the background level, and no visible dust from the work area), work will be suspended until appropriate corrective measures are implemented to remedy the situation.

Details regarding work zone and community air monitoring are outlined in the HASP attached as Appendix C. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

B-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors on- and off-Site. Specific odor control methods to be used on a routine basis will include (a) through (f), described in detail below. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c)

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

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-Site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of an on-Site water source for road wetting. The water source will be capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger Sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX C – HEALTH AND SAFETY PLAN AND COMMUNITY AIR MONITORING PLAN

300-308 Columbus Avenue

TUCKAHOE, WESTCHESTER COUNTY, NEW YORK

Health and Safety Plan and
Community Air Monitoring Plan

AKRF Project Number: 40405

NYSDEC Brownfield Cleanup Program Site Number: C360136

Prepared for:

Crestwood Builders Group, LLC
12 Water Street
White Plains, New York, 10601

Prepared by:

AKRF, Engineering, P.C.
34 South Broadway, Suite 401
White Plains, New York 10601
914-949-7336

SEPTEMBER 2015

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APPENDICES

1.0 INTRODUCTION

The 300-308 Columbus Avenue site is located in the Village of Tuckahoe, New York (Section 42, Block 8, Lots 5 and 10). The site consists of two contiguous properties and is approximately 0.75-acre in size. The 308 Columbus Avenue property (Lot 5) is on the corner of Columbus Avenue and Lincoln Avenue. The 300 Columbus Avenue property (Lot 10) is south-adjacent to the 308 Columbus Avenue property, with a portion of its southern property line extending to Fisher Avenue.

Each property was used historically as a gas station and auto repair shop, and operated underground and above ground storage tanks (USTs and ASTs) for storage and handling waste oil, fuel oil, and gasoline. Following the identification of soil contamination on both properties, Crestwood Builders Group, LLC (CBG) entered into a Brownfield Cleanup Agreement (BCA) as a volunteer in the New York State Department of Environmental Conservation's (NYSDEC's) Brownfield Cleanup Program to remediate the Site.

Previous investigations conducted at the site identified two separate zones of contamination: one zone of petroleum contamination beneath a service bay at 308 Columbus Avenue, and a zone of solvent/petroleum contamination beneath a service bay at 300 Columbus Avenue. UST closure documentation indicted that semi-volatile organic compounds (SVOC) were present in post-excavation soil samples collected from the sidewall and bottom of the UST excavations at concentrations that were consistent with historic fill and not likely from a petroleum release. A fuel oil UST and sub-grade hydraulic lift was identified at 300 Columbus Avenue, and a potential for additional USTs was noted at 308 Columbus Avenue.

The Site was remediated in accordance with BCA Index #C360136, Site #C203061. After completion of the remedial work described in the NYSDEC-approved Remedial Action Work Plan (RAWP), some residual contamination remains in the subsurface at the Site. A Site Management Plan (SMP) was prepared to manage remaining contamination at the Site until the Environmental Easement (an institutional control restricting the type of use at the property to restricted residential, commercial, and industrial use) is extinguished. This Health and Safety Plan (HASP) has been designed to provide workplace safety while completing the requirements of the SMP.

2.0 HEALTH AND SAFETY GUIDELINES AND PROCEDURES

2.1 Hazard Evaluation

2.1.1 Potential Hazards of Concern

Check all that apply		
(**X**) Organic Chemicals	(**X**) Inorganic Chemicals	( ) Radiological
( ) Biological	( ) Explosive/Flammable	( ) Oxygen Deficient Atm.
(**X**) Heat Stress	(**X**) Cold Stress	( ) Carbon Monoxide
Comments: No personnel are permitted to enter permit confined spaces.		

2.1.2 Physical Characteristics

Check all that apply		
(**X**) Liquid	(**X**) Solid	( ) Sludge
(**X**) Vapors	( ) Unknown	( ) Other
Comments:		

2.1.3 Potential Hazardous Materials

Check all that apply					
Chemicals	**Solids**	**Sludges**	**Solvents**	**Oils**	**Other**
( ) Acids	( ) Ash	( ) Paints	(**X**) Halogens	( ) Transformer	( ) Lab
( ) Caustics	() Asbestos	( ) Metals	(**X**) Petroleum	( ) Other DF	( ) Pharm
( ) Pesticides	( ) Tailings	( ) POTW	(**X**) Other Chlorinated Organic Solvents	( ) Motor or Hydraulic Oil	( ) Hospital
(**X**)Petroleum	(**X**) Other	( ) Other		(**X**) Gasoline	( ) Rad
( ) Inks	Fill material			(**X**) Fuel Oil	( ) MGP
( ) PCBs				(**X**) Waste Soil	( ) Mold
(**X**) Metals					( ) Cyanide
(**X**)Other: SVOCs					

2.1.4 Chemicals of Concern

Chemicals	REL/PEL/STEL (ppm)	Health Hazards
Tetrachloroethylene	REL = Lowest possible PEL = 100 ppm STEL = 100 ppm	Irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination, headache, drowsiness, skin erythema (skin redness), and liver damage.
Trichloroethylene	REL = 25 ppm PEL = 100 ppm	Headaches, lung irritation, dizziness, poor coordination, impaired heart function, unconsciousness, and nerve, kidney and liver damage.
1,2-Dichloroethene	REL = 200 ppm PEL = 200 ppm	Nausea, drowsy, tiredness possible heart damage.
1,1-Dichloroethane	REL = 100 ppm PEL = 100 ppm	Irritation skin; central nervous system depression; liver, kidney, lung damage
1,1,1- Trichloroethane	REL = 350 ppm PEL = 350 ppm	Irritation eyes, skin; headache, lassitude (weakness, exhaustion), central nervous system depression, poor equilibrium; dermatitis; cardiac arrhythmias; liver damage
Arsenic	REL= 0.002 mg/m^3 PEL= 0.010 mg/m^3	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen]
Lead	REL= 0.1 mg/m^3 PEL= 0.05 mg/m^3	Weak, lassitude, insomnia; facial pallor, pale eye, anorexia, low-weight, malnutrition, constipation, abdominal pain, colic; anemia; gingival lead line; tremors, paralysis wrists and ankles; encephalopathy; kidney disease; irritation eyes; hypotension.
Mercury	REL= 0.05 mg/m^3 (Hg vapor) REL=0.1 mg/m^3 (other) PEL= 0.1 mg/m^3	Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria
Benzene	REL = 0.1 ppm PEL = 1 ppm STEL = 5 ppm	Irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude, dermatitis; bone marrow depression, potential occupational carcinogen.
Toluene	REL = 100 ppm PEL = 200 ppm STEL = 300 ppm	Irritation eyes, nose; lassitude, confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage.
Ethylbenzene	REL = 100 ppm PEL = 100 ppm	Irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma.
Xylenes	REL = 100 ppm PEL = 100 ppm	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, poor coordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis.
Polyaromatic Hydrocarbons (PAHs)	REL= 0.1 mg/m^3 PEL= 5 mg/m^3	Harmful effects on the skin, body fluids, and ability to fight disease after both short and long term exposure, birth defects, and potential occupational carcinogen.
Polychlorinated Biphenyls (PCBs)	REL= 0.001 mg/m^3 PEL= 0.5 mg/m^3	irritation eyes, chloracne; liver damage; reproductive effects; [potential occupational carcinogen]
Comments: REL = NIOSH Recommended Exposure Limit PEL = OSHA Permissible Exposure Limit STEL = OSHA Short Term Exposure Limit		

2.2 Designated Personnel

AKRF will appoint one of its on-site personnel as the Site Safety Officer (SSO) during detailed inspections and any sampling events associated with the SMP. CBG will appoint one of its on-site personnel as the SSO during routine inspections associated with the SMP. This individual will be responsible for the implementation of the HASP. The SSO during detailed inspections and sampling events will have a 4-year college degree in occupational safety or a related science/engineering field, and experience in implementation of air monitoring and hazardous materials sampling programs. Health and safety training required for the SSO during detailed inspections and sampling events and all field personnel is outlined in Section 2.3 of this HASP.

2.3 Training

All personnel who enter the work area while intrusive activities are being performed will have completed a 40-hour training course that meets OSHA requirements of 29 CFR Part 1910, Occupational Safety and Health Standards. In addition, all personnel will have up-to-date 8-hour refresher training. The training will allow personnel to recognize and understand the potential hazards to health and safety. All field personnel must attend a training program, whose purpose is to:

- Make them aware of the potential hazards they may encounter;
- Provide the knowledge and skills necessary for them to perform the work with minimal risk to health and safety; make them aware of the purpose and limitations of safety equipment; and
- Ensure that they can safely avoid or escape from emergencies.

Each member of the field crew will be instructed in these objectives before he/she goes onto the site. A site safety meeting will be conducted at the start of the project. Additional meetings shall be conducted, as necessary, for new personnel working at the site.

2.4 Medical Surveillance Program

All AKRF and subcontractor personnel performing field work involving subsurface disturbance at the site are required to have passed a complete medical surveillance examination in accordance with 29 CFR 1910.120 (f). A physician's medical release for work will be confirmed by the SSO before an employee can begin site activities. The medical release shall consider the type of work to be performed and the required PPE. The medical examination will, at a minimum, be provided annually and upon termination of hazardous waste site work.

2.5 Site Work Zones

During any activities involving subsurface disturbance, the work area must be divided into various zones to prevent the spread of contamination, ensure that proper protective equipment is donned, and provide an area for decontamination.

The Exclusion Zone is defined as the area where exposure to impacted media could be encountered. The Contamination Reduction Zone (CRZ) is the area where decontamination procedures take place and is located next to the Exclusion Zone. The Support Zone is the area where support facilities such as vehicles, fire extinguisher, and first aid supplies are located. The emergency staging area (part of the Support Zone) is the area where all workers on-site would assemble in the event of an emergency. A summary of these areas is provided below. These

zones may changed by SSO, depending on that day's activities. All field personnel will be informed of the location of these zones before work begins.

Appropriate barriers will be set up to secure the area and prevent any unauthorized personnel from approaching within 15 feet of the work area.

Site Work Zones			
Task	**Exclusion Zone**	**CRZ**	**Support Zone**
Any Excavation Performed that Penetrates the Site Cap	10 ft. from Excavator	15 ft. from Excavator	As Needed

2.6 Air Monitoring

The purpose of the air monitoring program is to identify any exposure of the field personnel to potential environmental hazards in the soil and soil vapor. Results of the air monitoring will be used to determine the appropriate response action, if needed.

2.6.1 Work Zone Air Monitoring

Real time air monitoring will be performed with a photoionization detector (PID) during applicable intrusive activities. Measurements will be taken prior to commencement of work and at a minimum once every half-hour during intrusive work, as outlined in the following table. Measurements will be made as close to the workers as practicable and at the breathing height of the workers. The SSO shall set up the equipment and confirm that it is working properly. The PID will be calibrated with 100 parts per million (ppm) isobutylene standard in accordance with the manufacturer's instructions at the start of each work day. His/her designee may oversee the air measurements during the day. The initial measurement for the day will be performed before the start of work and will establish the background level for that day. The final measurement for the day will be performed after the end of work. The action levels and required responses are listed in the following table.

Work Zone Air Monitoring Action Levels		
Instrument	**Action Level**	**Response Action**
PID	Less than 10 ppm in breathing zone	Level D or D-Modified
	Between 10 ppm and 500 ppm	Level C
	More than 500 ppm	Stop work. Resume work when readings are less then 500 ppm.

2.6.2 Community Air Monitoring Plan

Community air monitoring will be conducted during all intrusive site activities in compliance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP). Real-time air monitoring for volatile

compounds and dust at the perimeter of the exclusion zone will be performed as described below.

VOC Monitoring

Periodic monitoring for VOCs will be conducted during non-intrusive activities such as the collection of soil vapor samples. Periodic monitoring may include obtaining measurements upon arrival at a location, when purging a sampling point, and upon leaving the location.

Continuous monitoring for VOCs will be conducted during all ground intrusive activities, including soil boring installation and excavation activities. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background concentrations. VOCs will be monitored continuously at the downwind perimeter of the exclusion zone. Monitoring will be conducted with a PID equipped with an 10.6 eV lamp capable of calculating 15-minute running average concentrations. The following actions will be taken based on organic vapor levels measured:

- If total organic vapor levels exceed 5 ppm above background for the 15-minute average at the exclusion zone perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the exclusion zone persist at levels in excess of 5 ppm above 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 hot 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 above background for the 15-minute average.
- If the total organic vapor level is above 25 ppm at the perimeter of the exclusion zone, activities will be shutdown.

More frequent intervals of monitoring will be conducted if required as determined by the SSO. All PID readings will be recorded and available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, will also be recorded.

Dust Monitoring

Continuous monitoring for particulate will be conducted during all ground intrusive activities, which will involve the measurement of respirable dust. Community air monitoring for dust particulates will be conducted using a MIE 1000 Personal DataRam or equivalent to measure the concentration of airborne respirable particulates less than 10 micrometers in size (PM_{10}). The dust monitor will be capable of calculating 15-minute running average concentrations and equipped with an audible alarm to indicate exceedance of action levels. An inspection of the monitoring stations will be conducted on at least an hourly basis. Background readings and any readings that trigger response actions will be recorded in the project logbook, which will be available on site for NYSDOH and/or NYSDEC review.If the downwind particulate concentrations are

greater than 100 micrograms per cubic meter ($\mu g/m^3$) above background (upwind concentrations), and no other obvious source is apparent, then it will be assumed that the elevated particulate concentrations are a result of site activities. In such instances, dust suppression measures will be implemented and monitoring will be continued. Work will be allowed to continue with dust suppression if downwind particulate levels do not exceed 150 $\mu g/m^3$ above the background (upwind concentration) and provided that no visible dust is migrating from the work area. If particulate levels persist at 150 $\mu g/m^3$ above the background, work must be stopped until dust suppression measures bring particulate levels to below 150 $\mu g/m^3$ above background.

Major Vapor Emission Response Plan

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work Site, or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted or vapor controls must be implemented.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the exclusion zone, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If either of the following criteria is exceeded in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be implemented:

- Sustained organic vapor levels approaching 1 ppm above background for a period of more than 30 minutes; or
- Organic vapor levels greater than 5 ppm above background for any time period.

Upon activation, the following activities shall be undertaken as part of the Major Vapor Emission Response Plan:

- The NYSDEC, NYSDOH, and local police authorities will be immediately contacted by the SSO and advised of the situation;
- Frequent air monitoring will be conducted at 30-minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Site Health and Safety Officer; and
- All Emergency contacts will go into effect as appropriate.

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

2.6.3 Personal Protection Equipment

The personal protection equipment required for various kinds of site investigation tasks are based on 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, Appendix B, "General Description and Discussion of the Levels of Protection and Protective Gear."

AKRF field personnel and other site personnel shall wear, at a minimum, Level D personal protective equipment. The protection will be based on the air monitoring described in this section.

Personal Protection Equipment Requirements		
LEVEL OF PROTECTION & PPE		**All Tasks**
Level D (**X**) Steel Toe Shoes (**X**) Hard Hat (within 25 ft of drill rig/excavator) (**X**) Work Gloves	(**X**) Safety Glasses ( ) Face Shield (**X**) Ear Plugs (within 25 ft of drill rig/excavator) (**X**) Nitrile Gloves (**X**) Tyvek for drill operator if NAPL present	Yes
Level C *(in addition to Level D)* (**X**) Half-Face Respirator (**X**) Full Face Respirator ( ) Full-Face PAPR	( ) Particulate Cartridge ( ) Organic Cartridge (**X**) Dual Organic/ Particulate Cartridge	If PID > 10 ppm (breathing zone)
Comments: Cartridges to be changed out at least once per shift unless warranted beforehand (e.g., more difficult to breath or any odors detected).		

2.7 General Work Practices

To protect their health and safety, all field personnel will adhere to the guidelines listed below during activities involving subsurface disturbance:

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited, except in designated areas on the site. These areas will be designated by the SSO.
- Workers must wash their hands thoroughly on leaving the work area and before eating, drinking, or any other such activity.
- The workers should shower as soon as possible after leaving the site. Contact with contaminated or suspected surfaces should be avoided.
- The buddy system should always be used; each buddy should watch for signs of fatigue, exposure, and heat/cold stress.

3.0 EMERGENCY PROCEDURES AND EMERGENCY RESPONSE PLAN

The field crew will be equipped with emergency equipment, such as a first aid kit and disposable eye washes. In the case of a medical emergency, the SSO will determine the nature of the emergency and he/she will have someone call for an ambulance, if needed. If the nature of the injury is not serious, i.e., the person can be moved without expert emergency medical personnel, he/she should be driven to the Lawrence Hospital Center in Bronxville by on-site personnel. Directions to the hospital are provided below, and a hospital route map is attached.

3.1 Hospital Directions

Hospital Name:	Lawrence Hospital Center
Phone Number:	(914) 787-1000
Address/Location:	55 Palmer Avenue, Bronxville, NY 10708
Directions:	Head SOUTH on Columbus Avenue (0.7 miles) Continue onto Depot Square (325 feet) Continue onto Sagamore Road (0.7 miles) Go three-quarters around the traffic circle to stay on Sagamore Road Turn RIGHT onto Kraft Avenue (70 feet) Turn RIGHT onto Pondfield Road (500 feet) Take second exit from traffic circle onto Palmer Avenue (0.2 miles) Turn RIGHT into hospital entrance drive (Paxton Avenue)

3.2 Emergency Contacts

Company	Individual Name	Title	Contact Number
AKRF, Inc.	Marc Godick	Project Director	914-922-2356 (office)
	Bryan Zieroff	Project Manager	914-922-2382 (office) 917-583-4924 (cell)
	Rob Andrews	SSO	914-922-2385 (office) 646-315-2616 (cell)
Crestwood Builders Group, LLC	Angelo Monaco	Owner Representative	914-644-7000(office)
New York State Department of Environmental Conservation	Randy Whitcher	Project Manager	518-402-9662 (office)
New York State Department of Health	TBD	Public Health Engineer	TBD
Ambulance, Fire Department & Police Department	-	-	911
NYSDEC Spill Hotline	-	-	800-457-7362

4.0 APPROVAL & ACKNOWLEDGMENTS OF HASP

APPROVAL

Signed: _____ Date: _____

AKRF Project Manager

Signed: _____ Date: _____

AKRF Health and Safety Officer

Below is an affidavit that must be signed by all workers who enter the site. A copy of the HASP must be on-site at all times and will be kept by the SSO.

AFFIDAVIT

I,_____(name), of_____(company name), have read the Health and Safety Plan (HASP) for the 300-308 Columbus Avenue site. I agree to conduct all on-site work in accordance with the requirements set forth in this HASP and understand that failure to comply with this HASP could lead to my removal from the site.

Signed: _____ Company: _____ Date: _____
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ATTACHMENT A

POTENTIAL HEALTH EFFECTS FROM ON-SITE CONTAMINANTS

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TOLUENE
CAS # 108-88-3

Division of Toxicology ToxFAQs™ **February 2001**

This fact sheet answers the most frequently asked health questions (FAQs) about toluene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to toluene occurs from breathing contaminated workplace air, in automobile exhaust, some consumer products paints, paint thinners, fingernail polish, lacquers, and adhesives. Toluene affects the nervous system. Toluene has been found at 959 of the 1,591 National Priority List sites identified by the Environmental Protection Agency

What is toluene?

Toluene is a clear, colorless liquid with a distinctive smell. Toluene occurs naturally in crude oil and in the tolu tree. It is also produced in the process of making gasoline and other fuels from crude oil and making coke from coal.

Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.

What happens to toluene when it enters the environment?

❑ Toluene enters the environment when you use materials that contain it. It can also enter surface water and groundwater from spills of solvents and petrolieum products as well as from leasking underground storage tanks at gasoline stations and other facilities.

❑ When toluene-containing products are placed in landfills or waste disposal sites, the toluene can enter the soil or water near the waste site.

❑ Toluene does not usually stay in the environment long.

❑ Toluene does not concentrate or buildup to high levels in animals.

How might I be exposed to toluene?

❑ Breathing contaminated workplace air or automobile exhaust.

❑ Working with gasoline, kerosene, heating oil, paints, and lacquers.

❑ Drinking contaminated well-water.

❑ Living near uncontrolled hazardous waste sites containing toluene products.

How can toluene affect my health?

Toluene may affect the nervous system. Low to moderate levles can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and

hearing and color vision loss. These symptoms usually disappear when exposure is stopped.

Inhaling High levels of toluene in a short time can make you feel light-headed, dizzy, or sleepy. It can also cause unconsciousness, and even death.

High levels of toluene may affect your kidneys.

How likely is toluene to cause cancer?

Studies in humans and animals generally indicate that toluene does not cause cancer.

The EPA has determined that the carcinogenicity of toluene can not be classified.

How can toluene affect children?

It is likely that health effects seen in children exposed to toluene will be similar to the effects seen in adults. Some studies in animals suggest that babies may be more sensitive than adults.

Breathing very high levels of toluene during pregnancy can result in children with birth defects and retard mental abilities, and growth. We do not know if toluene harms the unborn child if the mother is exposed to low levels of toluene during pregnancy.

How can families reduce the risk of exposure to toluene?

❑ Use toluene-containing products in well-ventilated areas.

❑ When not in use, toluene-containing products should be tightly covered to prevent evaporation into the air.

Is there a medical test to show whether I've been exposed to toluene?

There are tests to measure the level of toluene or its breakdown products in exhaled air, urine, and blood. To determine if you have been exposed to toluene, your urine or blood must be checked within 12 hours of exposure. Several other chemicals are also changed into the same breakdown products as toluene, so some of these tests are not specific for toluene.

Has the federal government made recommendations to protect human health?

EPA has set a limit of 1 milligram per liter of drinking water (1 mg/L).

Discharges, releases, or spills of more than 1,000 pounds of toluene must be reported to the National Response Center.

The Occupational Safety and Health Administration has set a limit of 200 parts toluene per million of workplace air (200 ppm).

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Toluene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

XYLENE
CAS # 1330-20-7

This fact sheet answers the most frequently asked health questions (FAQs) about xylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to xylene occurs in the workplace and when you use paint, gasoline, paint thinners and other products that contain it. People who breathe high levels may have dizziness, confusion, and a change in their sense of balance. This substance has been found in at least 658 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is xylene?

(Pronounced zī′lēn)

Xylene is a colorless, sweet-smelling liquid that catches on fire easily. It occurs naturally in petroleum and coal tar and is formed during forest fires. You can smell xylene in air at 0.08–3.7 parts of xylene per million parts of air (ppm) and begin to taste it in water at 0.53–1.8 ppm.

Chemical industries produce xylene from petroleum. It's one of the top 30 chemicals produced in the United States in terms of volume.

Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.

What happens to xylene when it enters the environment?

- Xylene has been found in waste sites and landfills when discarded as used solvent, or in varnish, paint, or paint thinners.
- It evaporates quickly from the soil and surface water into the air.
- In the air, it is broken down by sunlight into other less harmful chemicals.
- It is broken down by microorganisms in soil and water.
- Only a small amount of it builds up in fish, shellfish, plants, and animals living in xylene-contaminated water.

How might I be exposed to xylene?

- Breathing xylene in workplace air or in automobile exhaust.
- Breathing contaminated air.
- Touching gasoline, paint, paint removers, varnish, shellac, and rust preventatives that contain it.
- Breathing cigarette smoke that has small amounts of xylene in it.
- Drinking contaminated water or breathing air near waste sites and landfills that contain xylene.
- The amount of xylene in food is likely to be low.

How can xylene affect my health?

Xylene affects the brain. High levels from exposure for short periods (14 days or less) or long periods (more than 1 year) can cause headaches, lack of muscle coordination, dizziness, confusion, and changes in one's sense of balance. Exposure of

people to high levels of xylene for short periods can also cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; problems with the lungs; delayed reaction time; memory difficulties; stomach discomfort; and possibly changes in the liver and kidneys. It can cause unconsciousness and even death at very high levels.

Studies of unborn animals indicate that high concentrations of xylene may cause increased numbers of deaths, and delayed growth and development. In many instances, these same concentrations also cause damage to the mothers. We do not know if xylene harms the unborn child if the mother is exposed to low levels of xylene during pregnancy.

How likely is xylene to cause cancer?

The International Agency for Research on Cancer (IARC) has determined that xylene is not classifiable as to its carcinogenicity in humans.

Human and animal studies have not shown xylene to be carcinogenic, but these studies are not conclusive and do not provide enough information to conclude that xylene does not cause cancer.

Is there a medical test to show whether I've been exposed to xylene?

Laboratory tests can detect xylene or its breakdown products in exhaled air, blood, or urine. There is a high degree of agreement between the levels of exposure to xylene and the levels of xylene breakdown products in the urine. However, a urine sample must be provided very soon after exposure ends because xylene quickly leaves the body. These tests are not routinely available at your doctor's office.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 10 ppm of xylene in drinking water.

The EPA requires that spills or accidental releases of xylenes into the environment of 1,000 pounds or more must be reported.

The Occupational Safety and Health Administration (OSHA) has set a maximum level of 100 ppm xylene in workplace air for an 8-hour workday, 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Governmental Industrial Hygienists (ACGIH) also recommend exposure limits of 100 ppm in workplace air.

NIOSH has recommended that 900 ppm of xylene be considered immediately dangerous to life or health. This is the exposure level of a chemical that is likely to cause permanent health problems or death.

Glossary

Evaporate: To change from a liquid into a vapor or a gas.

Carcinogenic: Having the ability to cause cancer.

CAS: Chemical Abstracts Service.

ppm: Parts per million.

Solvent: A liquid that can dissolve other substances.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for xylenes (update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333. Phone:1-888-422-8737, FAX: 404-498-0093. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

1,2-DICHLOROETHENE
CAS # 540-59-0, 156-59-2, and 156-60-5

This fact sheet answers the most frequently asked health questions (FAQs) about 1,2-dichloroethene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to 1,2-dichloroethene occurs mainly in workplaces where it is made or used. Breathing high levels of 1,2-dichloroethene can make you feel nauseous, drowsy, and tired. *cis*-1,2-Dichloroethene has been found in at least 146 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA). *trans*-1,2-Dichloroethene was found in at least 563 NPL sites. 1,2-Dichloroethene was found at 336 sites, but the isomer (*cis*- or *trans*-) was not specified.

What is 1,2-dichloroethene?

(Pronounced 1,2-dī-klôr′ ō-ĕth′ēn)

1,2-Dichloroethene, also called 1,2-dichloroethylene, is a highly flammable, colorless liquid with a sharp, harsh odor. It is used to produce solvents and in chemical mixtures. You can smell very small amounts of 1,2-dichloroethene in air (about 17 parts of 1,2-dichloroethene per million parts of air [17 ppm]).

There are two forms of 1,2-dichloroethene; one is called *cis*-1,2-dichloroethene and the other is called *trans*-1,2-dichloroethene. Sometimes both forms are present as a mixture.

What happens to 1,2-dichloroethene when it enters the environment?

- 1,2-Dichloroethene evaporates rapidly into air.
- In the air, it takes about 5-12 days for half of it to break down.
- Most 1,2-dichloroethene in the soil surface or bodies of water will evaporate into air.
- 1,2-Dichloroethene can travel through soil or dissolve in water in the soil. It is possible that it can contaminate groundwater.
- In groundwater, it takes about 13-48 weeks to break down.
- There is a slight chance that 1,2-dichloroethene will break down into vinyl chloride, a different chemical which is believed to be more toxic than 1,2-dichloroethene.

How might I be exposed to 1,2-dichloroethene?

- Breathing 1,2-dichloroethene that has leaked from hazardous waste sites and landfills.
- Drinking contaminated tap water or breathing vapors from contaminated water while cooking, bathing, or washing dishes.
- Breathing 1,2-dichloroethene, touching it, or touching contaminated materials in the workplace.

How can 1,2-dichloroethene affect my health?

Breathing high levels of 1,2-dichloroethene can make you feel nauseous, drowsy, and tired; breathing very high levels can kill you.

When animals breathed high levels of *trans*-1,2-dichloroethene for short or longer periods of time, their livers and lungs were damaged and the effects were more severe with longer exposure times. Animals that breathed very high

levels of *trans*-1,2-dichloroethene had damaged hearts.

Animals that ingested extremely high doses of *cis*- or *trans*-1,2-dichloroethene died.

Lower doses of *cis*-1,2-dichloroethene caused effects on the blood, such as decreased numbers of red blood cells, and also effects on the liver.

The long-term (365 days or longer) human health effects after exposure to low concentrations of 1,2-dichloroethene aren't known. One animal study suggested that an exposed fetus may not grow as quickly as one that hasn't been exposed.

Exposure to 1,2-dichloroethene hasn't been shown to affect fertility in people or animals.

How likely is 1,2-dichloroethene to cause cancer?

The EPA has determined that *cis*-1,2-dichloroethene is not classifiable as to its human carcinogenicity.

No EPA cancer classification is available for *trans*-1,2-dichloroethene.

Is there a medical test to show whether I've been exposed to 1,2-dichloroethene?

Tests are available to measure concentrations of the breakdown products of 1,2-dichloroethene in blood, urine, and tissues. However, these tests aren't used routinely to determine whether a person has been exposed to this compound. This is because after you are exposed to 1,2-dichloroethene, the breakdown products in your body that are detected with these tests may be the same as those that come from exposure to other chemicals. These tests aren't available in most doctors' offices, but can be done at special laboratories that have the right equipment.

Has the federal government made recommendations to protect human health?

The EPA has set the maximum allowable level of *cis*-1,2-dichloroethene in drinking water at 0.07 milligrams per liter of water (0.07 mg/L) and *trans*-1,2-dichloroethene at 0.1 mg/L.

The EPA requires that any spills or accidental release of 1,000 pounds or more of 1,2-dichloroethene must be reported to the EPA.

The Occupational Health Safety and Health Administration (OSHA) has set the maximum allowable amount of 1,2-dichloroethene in workroom air during an 8-hour workday in a 40-hour workweek at 200 parts of 1,2-dichloroethene per million parts of air (200 ppm).

Glossary

Carcinogenicity: Ability of a substance to cause cancer.

CAS: Chemical Abstracts Service.

Fertility: Ability to reproduce.

Ingest: To eat or drink something.

Milligram (mg): One thousandth of a gram.

ppm: Parts per million.

Solvent: A chemical that can dissolve other substances.

References

This ToxFAQs information is taken from the 1996 Toxicological Profile for 1,2-Dichloroethene produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

TETRACHLOROETHYLENE
CAS # 127-18-4

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Tetrachloroethylene has been found in at least 771 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetrachloroethylene?

(Pronounced tĕt′rə-klôr′ ō-ĕth′ə-lēn′)

Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.

Other names for tetrachloroethylene include perchloroethylene, PCE, and tetrachloroethene. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part tetrachloroethylene per million parts of air (1 ppm) or more, although some can smell it at even lower levels.

What happens to tetrachloroethylene when it enters the environment?

- Much of the tetrachloroethylene that gets into water or soil evaporates into the air.
- Microorganisms can break down some of the tetrachloroethylene in soil or underground water.
- In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain.
- It does not appear to collect in fish or other animals that live in water.

How might I be exposed to tetrachloroethylene?

- When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- When you drink water containing tetrachloroethylene, you are exposed to it.

How can tetrachloroethylene affect my health?

High concentrations of tetrachloroethylene (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Irritation may result from repeated or extended skin contact with it. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used tetrachloroethylene to get a "high."

In industry, most workers are exposed to levels lower than those causing obvious nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not known.

Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethyl-

ene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant.

How likely is tetrachloroethylene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to cause liver tumors in mice and kidney tumors in male rats.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood.

Because it is stored in the body's fat and slowly released into the bloodstream, tetrachloroethylene can be detected in the breath for weeks following a heavy exposure.

Tetrachloroethylene and trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene, can be detected in the blood. These tests are relatively simple to perform. These tests aren't available at most doctors' offices, but can be performed at special laboratories that have the right equipment.

Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to tetrachloroethylene or the other chemicals.

Has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Tetrachloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone:1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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TRICHLOROETHYLENE

CAS # 79-01-6

Division of Toxicology ToxFAQs™ **July 2003**

This fact sheet answers the most frequently asked health questions (FAQs) about trichloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Trichloroethylene is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. Trichloroethylene has been found in at least 852 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is trichloroethylene?

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

Trichloroethylene is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

What happens to trichloroethylene when it enters the environment?

- Trichloroethylene dissolves a little in water, but it can remain in ground water for a long time.
- Trichloroethylene quickly evaporates from surface water, so it is commonly found as a vapor in the air.
- Trichloroethylene evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
- Trichloroethylene may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
- Trichloroethylene does not build up significantly in plants and animals.

How might I be exposed to trichloroethylene?

- Breathing air in and around the home which has been contaminated with trichloroethylene vapors from shower water or household products such as spot removers and typewriter correction fluid.
- Drinking, swimming, or showering in water that has been contaminated with trichloroethylene.
- Contact with soil contaminated with trichloroethylene, such as near a hazardous waste site.
- Contact with the skin or breathing contaminated air while manufacturing trichloroethylene or using it at work to wash paint or grease from skin or equipment.

How can trichloroethylene affect my health?

Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating.

Breathing large amounts of trichloroethylene may cause impaired heart function, unconsciousness, and death. Breathing it for long periods may cause nerve, kidney, and liver damage.

ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html

Drinking large amounts of trichloroethylene may cause nausea, liver damage, unconsciousness, impaired heart function, or death.

Drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.

Skin contact with trichloroethylene for short periods may cause skin rashes.

How likely is trichloroethylene to cause cancer?

Some studies with mice and rats have suggested that high levels of trichloroethylene may cause liver, kidney, or lung cancer. Some studies of people exposed over long periods to high levels of trichloroethylene in drinking water or in workplace air have found evidence of increased cancer. Although, there are some concerns about the studies of people who were exposed to trichloroethylene, some of the effects found in people were similar to effects in animals.

In its 9th Report on Carcinogens, the National Toxicology Program (NTP) determined that trichloroethylene is "reasonably anticipated to be a human carcinogen." The International Agency for Research on Cancer (IARC) has determined that trichloroethylene is "probably carcinogenic to humans."

Is there a medical test to show whether I've been exposed to trichloroethylene?

If you have recently been exposed to trichloroethylene, it can be detected in your breath, blood, or urine. The breath test, if it is performed soon after exposure, can tell if you have been exposed to even a small amount of trichloroethylene.

Exposure to larger amounts is assessed by blood and urine tests, which can detect trichloroethylene and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products, so their detection is not absolute proof of exposure to trichloroethylene. This test isn't available at most doctors' offices, but can be done at special laboratories that have the right equipment.

Has the federal government made recommendations to protect human health?

The EPA has set a maximum contaminant level for trichloroethylene in drinking water at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of TCE per billion parts water.

The EPA has also developed regulations for the handling and disposal of trichloroethylene.

The Occupational Safety and Health Administration (OSHA) has set an exposure limit of 100 parts of trichloroethylene per million parts of air (100 ppm) for an 8-hour workday, 40-hour workweek.

Glossary

Carcinogenicity: The ability of a substance to cause cancer.
CAS: Chemical Abstracts Service.
Evaporate: To change into a vapor or gas.
Milligram (mg): One thousandth of a gram.
Nonflammable: Will not burn.
ppm: Parts per million.
Sediment: Mud and debris that have settled to the bottom of a body of water.
Solvent: A chemical that dissolves other substances.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Trichloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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POLYCHLORINATED BIPHENYLS

Division of Toxicology ToxFAQs™ **February 2001**

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

❑ PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.

❑ PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.

❑ PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.

❑ PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

❑ Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.

❑ Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.

❑ Breathing air near hazardous waste sites and drinking contaminated well water.

❑ In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects

of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risk of exposure to PCBs?

❑ You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.

❑ Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.

❑ Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

❑ If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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BENZENE
CAS # 71-43-2

This fact sheet answers the most frequently asked health questions (FAQs) about benzene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Benzene is a widely used chemical formed from both natural processes and human activities. Breathing benzene can cause drowsiness, dizziness, and unconsciousness; long-term benzene exposure causes effects on the bone marrow and can cause anemia and leukemia. Benzene has been found in at least 813 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is benzene?

(Pronounced bĕn′zēn′)

Benzene is a colorless liquid with a sweet odor. It evaporates into the air very quickly and dissolves slightly in water. It is highly flammable and is formed from both natural processes and human activities.

Benzene is widely used in the United States; it ranks in the top 20 chemicals for production volume. Some industries use benzene to make other chemicals which are used to make plastics, resins, and nylon and synthetic fibers. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Natural sources of benzene include volcanoes and forest fires. Benzene is also a natural part of crude oil, gasoline, and cigarette smoke.

What happens to benzene when it enters the environment?

- Industrial processes are the main source of benzene in the environment.
- Benzene can pass into the air from water and soil.
- It reacts with other chemicals in the air and breaks down within a few days.
- Benzene in the air can attach to rain or snow and be carried back down to the ground.
- It breaks down more slowly in water and soil, and can pass through the soil into underground water.
- Benzene does not build up in plants or animals.

How might I be exposed to benzene?

- Outdoor air contains low levels of benzene from tobacco smoke, automobile service stations, exhaust from motor vehicles, and industrial emissions.
- Indoor air generally contains higher levels of benzene from products that contain it such as glues, paints, furniture wax, and detergents.
- Air around hazardous waste sites or gas stations will contain higher levels of benzene.
- Leakage from underground storage tanks or from hazardous waste sites containing benzene can result in benzene contamination of well water.
- People working in industries that make or use benzene may be exposed to the highest levels of it.
- A major source of benzene exposures is tobacco smoke.

How can benzene affect my health?

Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death.

ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html

The major effect of benzene from long-term (365 days or longer) exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance for infection.

Some women who breathed high levels of benzene for many months had irregular menstrual periods and a decrease in the size of their ovaries. It is not known whether benzene exposure affects the developing fetus in pregnant women or fertility in men.

Animal studies have shown low birth weights, delayed bone formation, and bone marrow damage when pregnant animals breathed benzene.

How likely is benzene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that benzene is a known human carcinogen. Long-term exposure to high levels of benzene in the air can cause leukemia, cancer of the blood-forming organs.

Is there a medical test to show whether I've been exposed to benzene?

Several tests can show if you have been exposed to benzene. There is test for measuring benzene in the breath; this test must be done shortly after exposure. Benzene can also be measured in the blood, however, since benzene disappears rapidly from the blood, measurements are accurate only for recent exposures.

In the body, benzene is converted to products called metabolites. Certain metabolites can be measured in the urine. However, this test must be done shortly after exposure and is not a reliable indicator of how much benzene you have been exposed to, since the metabolites may be present in urine from other sources.

Has the federal government made recommendations to protect human health?

The EPA has set the maximum permissible level of benzene in drinking water at 0.005 milligrams per liter (0.005 mgL). The EPA requires that spills or accidental releases into the environment of 10 pounds or more of benzene be reported to the EPA.

The Occupational Safety and Health Administration (OSHA) has set a permissible exposure limit of 1 part of benzene per million parts of air (1 ppm) in the workplace during an 8-hour workday, 40-hour workweek.

Glossary

Anemia: A decreased ability of the blood to transport oxygen.

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Chromosomes: Parts of the cells responsible for the development of hereditary characteristics.

Metabolites: Breakdown products of chemicals.

Milligram (mg): One thousandth of a gram.

Pesticide: A substance that kills pests.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Benzene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 404-498-0093. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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ETHYLBENZENE
CAS # 100-41-4

Agency for Toxic Substances and Disease Registry ToxFAQs **June 1999**

This fact sheet answers the most frequently asked health questions (FAQs) about ethylbenzene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Ethylbenzene is a colorless liquid found in a number of products including gasoline and paints. Breathing very high levels can cause dizziness and throat and eye irritation. Ethylbenzene has been found in at least 731 of the 1,467 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is ethylbenzene?

(Pronounced ĕthʹ əl bĕnʹ zēnʹ)

Ethylbenzene is a colorless, flammable liquid that smells like gasoline. It is found in natural products such as coal tar and petroleum and is also found in manufactured products such as inks, insecticides, and paints.

Ethylbenzene is used primarily to make another chemical, styrene. Other uses include as a solvent, in fuels, and to make other chemicals.

What happens to ethylbenzene when it enters the environment?

- Ethylbenzene moves easily into the air from water and soil.
- It takes about 3 days for ethylbenzene to be broken down in air into other chemicals.
- Ethylbenzene may be released to water from industrial discharges or leaking underground storage tanks.
- In surface water, ethylbenzene breaks down by reacting with other chemicals found naturally in water.
- In soil, it is broken down by soil bacteria.

How might I be exposed to ethylbenzene?

- Breathing air containing ethylbenzene, particularly in areas near factories or highways.
- Drinking contaminated tap water.
- Working in an industry where ethylbenzene is used or made.
- Using products containing it, such as gasoline, carpet glues, varnishes, and paints.

How can ethylbenzene affect my health?

Limited information is available on the effects of ethylbenzene on people's health. The available information shows dizziness, throat and eye irritation, tightening of the chest, and a burning sensation in the eyes of people exposed to high levels of ethylbenzene in air.

Animals studies have shown effects on the nervous system, liver, kidneys, and eyes from breathing ethylbenzene in air.

How likely is ethylbenzene to cause cancer?

The EPA has determined that ethylbenzene is not classifiable as to human carcinogenicity.

ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html

No studies in people have shown that ethylbenzene exposure can result in cancer. Two available animal studies suggest that ethylbenzene may cause tumors.

How can ethylbenzene affect children?

Children may be exposed to ethylbenzene through inhalation of consumer products, including gasoline, paints, inks, pesticides, and carpet glue. We do not know whether children are more sensitive to the effects of ethylbenzene than adults.

It is not known whether ethylbenzene can affect the development of the human fetus. Animal studies have shown that when pregnant animals were exposed to ethylbenzene in air, their babies had an increased number of birth defects.

How can families reduce the risk of exposure to ethylbenzene?

Exposure to ethylbenzene vapors from household products and newly installed carpeting can be minimized by using adequate ventilation.

Household chemicals should be stored out of reach of children to prevent accidental poisoning. Always store household chemicals in their original containers; never store them in containers children would find attractive to eat or drink from, such as old soda bottles. Gasoline should be stored in a gasoline can with a locked cap.

Sometimes older children sniff household chemicals, including ethylbenzene, in an attempt to get high. Talk with your children about the dangers of sniffing chemicals.

Is there a medical test to show whether I've been exposed to ethylbenzene?

Ethylbenzene is found in the blood, urine, breath, and some body tissues of exposed people. The most common way to test for ethylbenzene is in the urine. This test measures substances formed by the breakdown of ethylbenzene. This test needs to be done within a few hours after exposure occurs, because the substances leave the body very quickly.

These tests can show you were exposed to ethylbenzene, but cannot predict the kind of health effects that might occur.

Has the federal government made recommendations to protect human health?

The EPA has set a maximum contaminant level of 0.7 milligrams of ethylbenzene per liter of drinking water (0.7 mg/L).

The EPA requires that spills or accidental releases into the environment of 1,000 pounds or more of ethylbenzene be reported to the EPA.

The Occupational Safety and Health Administration (OSHA) has set an occupational exposure limit of 100 parts of ethylbenzene per million parts of air (100 ppm) for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1999. Toxicological profile for ethylbenzene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

Agency for Toxic Substances and Disease Registry ToxFAQs **September 1996**

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl′ĭ-sī′klĭk ăr′ə-măt′ĭk hī′drə-kar′bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATTACHMENT B

WEST NILE VIRUS/ST. LOUIS ENCEPHALITIS PREVENTION

WEST NILE VIRUS/ST. LOUIS ENCEPHALITIS PREVENTION

The following section is based upon information provided by the CDC Division of Vector-Borne Infectious Diseases. Symptoms of West Nile Virus include fever, headache, and body aches, occasionally with skin rash and swollen lymph glands, with most infections being mild. More severe infection may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. Most infections of St. Louis encephalitis are mild without apparent symptoms other than fever with headache. More severe infection is marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions (especially infants) and spastic (but rarely flaccid) paralysis. The only way to avoid infection of West Nile Virus and St. Louis encephalitis is to avoid mosquito bites. To reduce the chance of mosquito contact:

- Stay indoors at dawn, dusk, and in the early evening.
- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Spray clothing with repellents containing permethrin or DEET (N, N-diethyl-meta-toluamide), since mosquitoes may bite through thin clothing.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain 35% DEET. DEET in high concentrations (greater than 35%) provides no additional protection.
- Repellents may irritate the eyes and mouth.
- Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's directions for use, as printed on the product.

ATTACHMENT C

REPORT FORMS

WEEKLY SAFETY REPORT FORM

Week Ending: _____ Project Name/Number: _____

Report Date: _____ Project Manager Name: _____

Summary of any violations of procedures occurring that week:

_____

_____

_____

Summary of any job related injuries, illnesses, or near misses that week:

_____

_____

_____

_____

Summary of air monitoring data that week (include and sample analyses, action levels exceeded, and actions taken):

_____

_____

_____

Comments:

_____

_____

_____

Name: _____ Company: _____

Signature: _____ Title: _____

INCIDENT REPORT FORM

Date of Report: _____

Injured: _____

Employer: _____

Site: _____ Site Location: _____

Report Prepared By: _____ _____
Signature Title

ACCIDENT/INCIDENT CATEGORY (check all that applies)

___Injury	___ Illness	___ Near Miss
__ Property Damage	___ Fire	___ Chemical Exposure
__ On-site Equipment	___ Motor Vehicle	___ Electrical
__ Mechanical	___ Spill	___ Other

DATE AND TIME OF ACCIDENT/INCIDENT: Narrative report of Accident/Incident: Identify: 1) actions leading to or contributing to the accident/incident; 2) the accident/incident occurrence; and 3) actions following the accident/incident.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

WITNESS TO ACCIDENT/INCIDENT:

Name:	_____	Company:	_____
Address:	_____	Address:	_____
Phone No.:	_____	Phone No.:	_____
Name:	_____	Company:	_____
Address:	_____	Address:	_____
Phone No.:	_____	Phone No.:	_____

INJURED - ILL:

Name: _____ SSN: _____

Address: _____ Age: _____

Length of Service: _____ Time on Present Job: _____

Time/Classification: _____

SEVERITY OF INJURY OR ILLNESS:

____ Disabling ___ Non-disabling ___ Fatality

____ Medical Treatment ___ First Aid Only

ESTIMATED NUMBER OF DAYS AWAY FROM JOB: _____

NATURE OF INJURY OR ILLNESS: _____

_____

_____

_____

CLASSIFICATION OF INJURY:

__ Abrasions _____ Dislocations ____ Punctures

__ Bites _____ Faint/Dizziness ____ Radiation Burns

__ Blisters _____ Fractures ____ Respiratory Allergy

__ Bruises _____ Frostbite ____ Sprains

__ Chemical Burns _____ Heat Burns ____ Toxic Resp. Exposure

__ Cold Exposure _____ Heat Exhaustion ____ Toxic Ingestion

__ Concussion _____ Heat Stroke ____ Dermal Allergy

__ Lacerations

Part of Body Affected: _____

Degree of Disability: _____

Date Medical Care was Received: _____

Where Medical Care was Received: _____

Address (if off-site): _____

(If two or more injuries, record on separate sheets)

PROPERTY DAMAGE:

Description of Damage: _____

_____

Cost of Damage: $ _____

ACCIDENT/INCIDENT LOCATION: _____

ACCIDENT/INCIDENT ANALYSIS: Causative agent most directly related to accident/incident (Object, substance, material, machinery, equipment, conditions)

_____

_____

_____

_____

Was weather a factor?:_____

_____

Unsafe mechanical/physical/environmental condition at time of accident/incident (Be specific):

_____

_____

_____

Personal factors (Attitude, knowledge or skill, reaction time, fatigue):

_____

_____

ON-SITE ACCIDENTS/INCIDENTS:

Level of personal protection equipment required in Site Safety Plan:

_____

_____

Modifications:

_____

Was injured using required equipment?:

_____

_____

If not, how did actual equipment use differ from plan?:

_____

_____

ACTION TAKEN TO PREVENT RECURRENCE: (Be specific. What has or will be done? When will it be done? Who is the responsible party to insure that the correction is made?

_____

_____

_____

_____

_____

ACCIDENT/INCIDENT REPORT REVIEWED BY:

_____ _____

SSO Name Printed SSO Signature

OTHERS PARTICIPATING IN INVESTIGATION:

_____ _____

Signature Title

_____ _____

Signature Title

_____ _____

Signature Title

ACCIDENT/INCIDENT FOLLOW-UP: Date: _____

Outcome of accident/incident: _____

_____

_____

_____

Physician's recommendations: _____

_____

_____

_____

Date injured returned to work: _____

Follow-up performed by:

_____ _____

Signature Title

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

ATTACHMENT D

EMERGENCY HAND SIGNALS

EMERGENCY SIGNALS

In most cases, field personnel will carry portable radios for communication. If this is the case, a transmission that indicates an emergency will take priority over all other transmissions. All other site radios will yield the frequency to the emergency transmissions.

Where radio communications is not available, the following air-horn and/or hand signals will be used:

EMERGENCY HAND SIGNALS

OUT OF AIR, CAN'T BREATH!

Hand gripping throat

LEAVE AREA IMMEDIATELY, NO DEBATE!

(No Picture) Grip partner's wrist or place both hands around waist

NEED ASSISTANCE!

Hands on top of head

OKAY! – I'M ALL RIGHT!

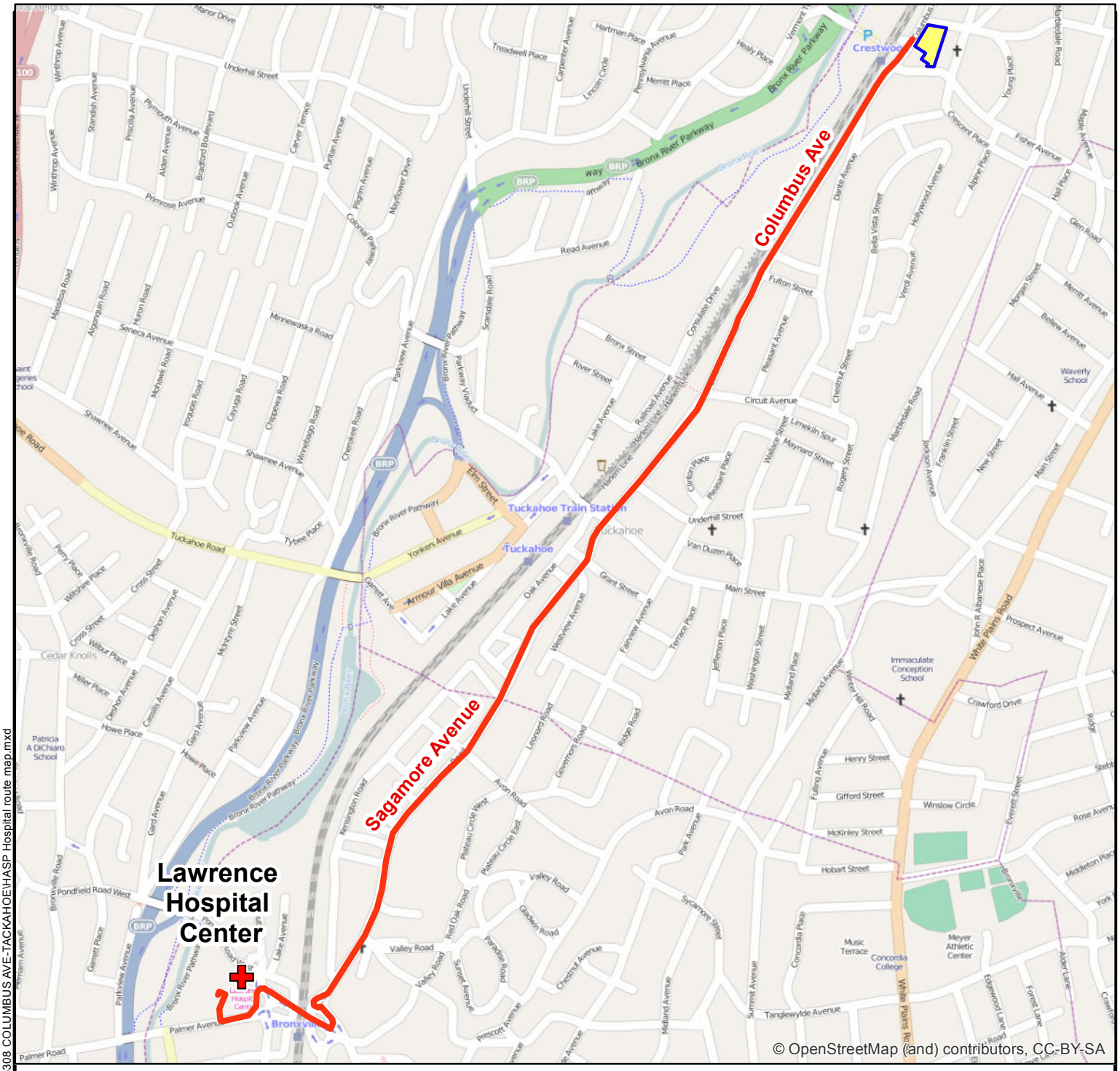
- I UNDERSTAND!

Thumbs up

NO! - NEGATIVE!

Thumbs down

FIGURES



Legend

- Project Site Location
- Route to Hospital
- Hospital Location

0 500 1,000 Feet

Lawrence Hospital Center
55 Palmer Ave
Bronxville, NY 10708

300 - 308 Columbus Ave
Tuckahoe, New York

HOSPITAL LOCATION MAP

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE **9/23/2013**
PROJECT No. **40405**
FIGURE **1**

APPENDIX D – ENGINEERING CONTROL AS-BUILT DRAWINGS

Cover System and SSDS Inspection Form

Overview of Cover System and SSDS Inspection requirements:

1) General Site conditions at time of inspection;

2) Site Cover System Inspection;

3) Passive SSDS Inspection;

4) Last SMP-related Site Activity conducted, upcoming SMP-related tasks;

5) Institutional Control (IC) Checklist (SMP, EWP maintained on-Site, routine SMP tasks being conducted);

6) Evaluation of Engineering Controls (in office); and

7) Site Documentation.

---

1) General Site conditions at time of inspection:

NAME:	**DATE:**
TIME:	**WEATHER:**
Annual Inspection or Emergency Inspection (if emergency, specify nature)?	

Notes:_____

_____

2) Cover System Inspection (Building Foundation, Concrete Parking Areas, Asphalt Parking Lot, Concrete Sidewalks, and Landscaped Areas)

Is the cover system intact:

☐ YES ☐ NO

If no, describe:

_____

_____

Are all access manhole and vapor monitoring point caps in good condition:

☐ YES ☐ NO

If no, describe:

_____

_____

Are the first floor penetrations (utility piping, SSDS, support columns, and wall joints) properly sealed to the concrete floor slab:

☐ YES ☐ NO

If no, describe:

_____

_____

Have any disturbances to the Site cover system occurred over the last reporting period?

☐ YES ☐ NO

Notes/Details:

_____

_____

3) SSDS Inspection (Manifold, Riser Pipes, Roof Stack, Wind Turbine)

Is there any observable damage or evidence of tampering to the piping:

☐ YES ☐ NO

If yes, describe:

_____

_____

Are there any unusual odors or PID readings on the first floor and in the manifold room:

☐ YES ☐ NO

If yes, describe:

_____

_____

Are the valves open and in set in their proper position:

☐ YES ☐ NO

If no, describe:

_____

_____

Is the wind driven turbine operating properly:

☐ YES ☐ NO

Notes/Details:

_____

_____

4) Last SMP-related Site Activity conducted; and next SMP-related task Scheduled?

Notes/Details:

_____

_____

5) IC Checklist (SMP, EWP maintained on-Site, routine SMP tasks being conducted)

Copy of SMP on-Site?	☐ YES ☐ NO
Copy of EWP on-Site?	☐ YES ☐ NO
Building Use Still Consistent with SMP (Restricted Residential)?	☐ YES ☐ NO

Have the Required SMP tasks been conducted?

Annual cover system monitoring ☐ YES ☐ NO

Annual SSDS operations monitoring ☐ YES ☐ NO

Indoor air sampling (if required) ☐ YES ☐ NO

Notes:_____

_____

Any Additional Observations/Notes:

_____

_____

_____

_____

7) Site documentation

Including updates regarding notification to NYSDEC regarding any changes to Site conditions/operations, plans for excavation, or need to conduct indoor air sampling).

Notes:_____

_____

_____

_____

_____

APPENDIX E – COVER SYSTEM AND SSDS INSPECTION FORM

APPENDIX F – QUALITY ASSURANCE PROJECT PLAN

300-308 Columbus Avenue

TUCKAHOE, WESTCHESTER COUNTY, NEW YORK

Quality Assurance Project Plan

AKRF Project Number: 40405

NYSDEC Brownfield Cleanup Program Site Number: C360136

Prepared for:

Crestwood Builders Group, LLC
12 Water Street
White Plains, New York, 10601

Prepared by:

AKRF, Inc.
34 South Broadway, Suite 401
White Plains, New York 10601
914-949-7336

SEPTEMBER 2015

TABLE OF CONTENTS

TABLES

ATTACHMENTS

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) describes the protocols and procedures that will be followed during implementation of the Site Management Plan (SMP) at the 300-308 Columbus Avenue Site (the "Site") located at 300-308 Columbus Avenue, Tuckahoe, New York. The objective of the QAPP is to provide for Quality Assurance (QA) and maintain Quality Control (QC) during sampling performed to evaluate the performance and effectiveness of the remedy (including Engineering Controls as described in the SMP) to reduce or mitigate contamination at the Site. Adherence to the QAPP will ensure that defensible data will be obtained to confirm the successful operation and maintenance of engineering control systems.

2.0 PROJECT TEAM

The project team will be drawn from AKRF professional and technical personnel and AKRF's subcontractors. All field personnel and subcontractors will have completed a 40-hour training course and updated 8-hour refresher course that meet the Occupational Safety and Health Administration (OSHA) requirements of 29 CFR Part 1910. The following sections describe the key project personnel and their responsibilities.

2.1 PROJECT DIRECTOR

The project director will be responsible for the general oversight of all aspects of the project, including scheduling, budgeting, data management, and decision-making regarding the field program. The project director will communicate regularly with all members of the AKRF project team and the New York State Department of Environmental Conservation (NYSDEC) to ensure a smooth flow of information between involved parties. Marc Godick will serve as the project director for the SMP. Mr. Godick's resume is included in Attachment A.

2.2 PROJECT MANAGER

The project manager will be responsible for directing and coordinating all elements of the SMP. He will prepare reports and participate in meetings with the Site owner and/or the NYSDEC. Bryan Zieroff will serve as the project manager for the SMP. Mr. Zieroff's resume is included in Attachment A.

2.3 REMEDIAL ENGINEER

The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program. The Remedial Engineer will certify in the Final Engineering Report (FER) that the remedial activities were observed by qualified environmental professionals under her supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. The Remedial Engineer for this project will be Michelle Lapin, P.E. Ms. Lapin's resume is included in Attachment A.

2.4 FIELD TEAM LEADER

The field team leader will be responsible for supervising the daily sampling and health and safety activities in the field and will ensure adherence to the work plan and HASP. He will report to the Project Manager on a regular basis regarding daily progress and any deviations from the work plan. The field team leader will be a qualified, responsible person, able to act professionally and promptly during soil disturbing activities. Elizabeth Matamoros will be the field team leader for the SMP. Ms. Matamoros's resume is included in Attachment A.

2.5 PROJECT QUALITY ASSURANCE/QUALITY CONTROL OFFICER

The Quality Assurance/Quality Control (QA/QC) Officer will be responsible for adherence to the QAPP. He will review the procedures with all personnel prior to commencing any fieldwork and will assess implementation of the required procedures. Marc Godick will serve as the QA/QC officer for the SMP.

2.6 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL OFFICER

The laboratory QA/QC officer will be responsible for quality control procedures and checks in the laboratory and ensuring adherence to laboratory protocols. He/she will track the movement of samples from the time they are checked in at the laboratory to the time that analytical results are issued. He/she will conduct a final check on the analytical calculations and sign off on the laboratory reports. The laboratory QA/QC officer will be determined upon selection of a contract laboratory(s) for the SMP.

3.0 STANDARD OPERATING PROCEDURES

The following sections describe the standard operating procedures (SOPs) for the activities included in the SMP. During these operations, safety monitoring will be performed as described in the Site specific Health and Safety Plan (HASP) and all field personnel will wear appropriate personal protective equipment. SMP implementation will include annual site inspections, and also includes provisions and appropriate actions to be taken in the event that future renovation or redevelopment of the Site requires the breaching of the composite cover system and excavation/removal of underlying soil.

3.1 EXCAVATION AND REMOVAL OF SOIL/FILL

Any planned disturbance to the composite cover system will comprise the following activities:

1. The location of existing engineering controls (ECs), including the concrete floor slab, asphalt parking area, soil cap, vapor barrier, and SSDS piping. These features are identified in SMP Figures 6 and 7.
2. The existing concrete floor or asphalt parking area will be marked out and saw cut, at a minimum, around the perimeter of the designated removal area.
3. Excavated fill material will be removed using an excavator or hand tools. Fill material excavated from beneath the site cap that exhibits no evidence of contamination may be characterized for potential reuse as backfill material on-site or handled and disposed of as non-hazardous waste. All soil will be handled in accordance with the Excavation Work Plan (EWP) included as Appendix B of the SMP.
4. All excavated material requiring staging for overnight or longer will follow the procedures in Section 3.1.2.

3.1.1 Soil Screening

During any excavation work below the site cap, the excavated material will be inspected by qualified field personnel for evidence of contamination (i.e., separate phase liquid, staining, sheening and/or odors) and field-screened using a photoionization detector (PID) calibrated at the start of each day in accordance with the manufacturer's instructions.

3.1.2 Stockpiling/Staging Area

Prior to excavation and removal of contaminated material, the stockpiling/staging area will be selected and prepared prior to the commencement of excavation activities to

protect building occupants. Staging area(s) will be prepared for staging any contaminated material overnight or longer using the procedures described below:

The material staging area(s) will be prepared by placing 6-mil plastic on the ground and covered with additional 6-mil plastic sheeting. Sealable containers with tight-fitting covers may also be utilized for the staging of VOC-contaminated material overnight or longer, to prevent the migration of VOCs into the site building.

3.1.3 Backfill/Reuse Sampling

Prior to reuse as backfill, the excavated soil will be evaluated using the criteria below:

1. Concrete or demolition debris that does not exhibit signs of contamination will be sampled for asbestos prior to reuse on-Site.
2. Material proposed for reuse will be sampled at a frequency and for the required parameters as outlined in NYSDEC's DER-10, Table 5.4, included in Section B-10 of the EWP.
3. Samples will be collected into laboratory-supplied containers.
4. Samples will be kept in an ice-filled cooler or refrigerator (not asbestos samples) until receipt by the laboratory.
5. Decontaminate all sampling equipment between sampling locations as described in Sections 3.4 of this QAPP.

3.2 EXCAVATION BACKFILL IMPORT

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated properties will not be imported to the Site. All imported soil will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Approval will also be based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria. Soil will be considered appropriate for use as on-site imported backfill if contaminant concentrations are below the lesser of the 6 NYCRR Part 375 Restricted Residential and Groundwater Protection SCOs. Soil that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Native material from a virgin quarry source will not be sampled prior to use as backfill on the site. Non-DOT designated virgin quarry sources, or non-virgin imported material that does not have an approved NYSDEC Beneficial Use Determination will be tested at the originating facility in accordance with Section 5.4(e) 10 of NYSDEC DER 10, included in Section B-10 of the EWP.

3.3 MATERIALS REUSE ON-SITE

Contaminated soil, or any material in direct contact with the contaminated soil, may not be separated for reuse on-site and will be disposed of as described in Section B-6 of the EWP. Organic matter (wood, roots, stumps, etc.) or other solid is prohibited for reuse on-site. All demolished material from the existing vacant buildings, including the concrete slabs, and the existing asphalt, will be disposed of in accordance with all prevailing Federal, State, and local regulations. Soil that does not exhibit evidence of contamination during field screening, as described in Section 3.1.1 and is free of debris will be stockpiled and tested at a frequency of one sample per 500 cubic yards and characterized for reuse.

Each sample will be tested for laboratory parameters listed in Section 4.3. Samples will be shipped to the laboratory with appropriate chain of custody documentation. The samples will be analyzed in a laboratory following New York State Department of Health (NYSDOH) Analytical Services Protocol (ASP) Category B deliverables. Soil from representative samples that meet the SSSCOs can be reused onsite as backfill.

3.4 CONTINGENCY ENDPOINT SOIL SAMPLING

In the event contamination is observed and removed from the site, post-excavation endpoint samples will be collected from each excavation for closure purposes. One sample will be collected from each sidewall and the bottom of the excavation. The sidewall samples will be collected from just above the bottom of the excavation. Each sample will be tested for laboratory parameters listed in Section 4.3.

3.5 DECONTAMINATION OF SAMPLING EQUIPMENT

All non-disposable sampling equipment (hand augers, sampling spoons, etc.) will be either dedicated or decontaminated between sampling locations. The decontamination procedure will be as follows:

1. Scrub using tap water/Simple Green® mixture and bristle brush.
2. Rinse with tap water.
3. Scrub again with tap water/ Simple Green® and bristle brush.
4. Rinse with tap water.
5. Rinse with distilled water.
6. Air-dry the equipment, if possible.

Decontamination will be conducted within five-gallon buckets to capture decontamination water. Decontamination waste will be handled as described in Section 3.6.

3.6 MANAGEMENT OF INVESTIGATION DERIVED WASTE

All excavated soil will be stockpiled and disposed of in accordance with the SMP. When field evidence of gross contamination is identified, decontamination wastewater will be drummed and staged near the point of generation, and will be properly disposed of based on laboratory results. If free of visible contamination, disposable personal protective equipment (PPE) and sampling equipment (scoops, gloves, rope, etc.) will be placed in heavy-duty plastic bags and disposed of properly.

3.7 COVER SYSTEM AND SSDS MONITORING

The location and details of the Site cover system and passive SSDS are shown on Figures 6 and 7 of the SMP, respectively. Monitoring will consist of visual inspection, which shall evaluate the structural integrity of the concrete floor slab of the first floor, support columns into the floor and the wall joints. The exterior inspection will be conducted by traversing the site on foot in a grid pattern with approximately 15 foot centers. Interior inspections will be completed by inspecting each main room on the first floor, including any closet or interior spaces containing sub-grade penetrations and/or exposed support colums. If any cracks or openings are identified, they shall be screened for organic vapors with a PID and any readings shall be noted.

SSDS Monitoring will consist of visual inspection of the SSDS piping for structural integrity and/or damage that would prohibit proper functioning of the SSDS. Inspection will include the entire length of accessible piping from the manifold floor slab up through the roof exhaust. The wind driven turbine will be inspected to confirm proper function. The inspector will look for any cracks or perforations in the piping system, and confirm that the manifold valves are in their proper setting. Results of the inspection will be recorded into the Site Cover System and SSDS Inspection Form that is included in Appendix D of the SMP.

4.0 SAMPLING AND LABORATORY PROCEDURES

4.1 SOIL SAMPLING

Soil sampling will be conducted according to the following procedures:

- Field screening for evidence of contamination (e.g., odors, staining, elevated PID measurements). Using a hand auger or sampling spoon, remove a small amount of soil from the bottom or sidewall of the excavation. A grab sample can also be collected from the excavator bucket after targeted soil removal from the excavation. Place the soil in a zip-lock bag and insert the PID through the sealed bag to obtain an organic vapor concentration measurement.
- After selecting which samples will be analyzed in the laboratory, fill the required laboratory-supplied sample jars with the soil from the selected sampling location or labeled sealable plastic bags. Seal and label the sample jars as described in Section 4.3 of this QAPP and place in an ice-filled cooler.
- Decontaminate any soil sampling equipment between sample locations as described in Section 3.4 of this QAPP.
- Record sample number, sample depth and sample observations (evidence of contamination, PID readings, soil classification) in field log book and boring log data sheet, if applicable.

4.2 INDOOR AIR SAMPLING

To confirm indoor air quality during the operation of the SSDS and SVE system, one round of indoor air samples was collected from within the Site building within the first heating season following system startup and operation (November 2014) in accordance with the NYSDOH Vapor Intrusion Guidance Document. Indoor air quality sampling will be performed at the Site following system failure greater than 48 hours in accordance with the following details:

- The indoor air sampling is to be conducted following the completion of a pre-sampling inspection and chemical inventory of the Site building.

- Place a labeled 6-liter Summa canister at the breathing zone level (3 to 4 feet above ground surface).
- Record the vacuum reading from the vacuum gauge on the canister at the beginning of the 8-hour sampling period.
- Open the valve of the canister and record the time in the field book. At the end of the 8-hour sampling period, close valve, remove flow-rate controllers and vacuum gauges, install caps on canisters, and record time.
- Place canisters in shipping containers for transportation to laboratory.

Repeat procedure for all of the sampling locations.

4.3 LABORATORY METHODS

Table 1 summarizes the laboratory methods that will be used to analyze field samples for soil reuse (Section 3.3) and/or endpoint sampling (Section 3.4), as well as the sample container type, preservation, and applicable holding times. An ELAP Certified laboratory will be used for all chemical analyses in accordance with DER-10 2.1(b) and 2.1(f), including Category B Deliverables.

Table 1
Laboratory Analytical Methods for Analysis Groups

Matrix	Analysis	EPA Method	Bottle Type	Preservative	Hold Time
Soil	TCL VOCs	8260	Encore sampler (3) or Terracore Sampler (1)	4 °C 0°C within 24 hrs	48 hours to extract 14 days to analyze
	TCL SVOCs	8270	Glass 8 oz. Jar	4 °C	14 days to extract 40 days to analyze
	TAL Metals	6000/7000	Glass 8 oz. Jar	4 °C	6 months (28 days for Hg)
	Pesticides	8081	Glass 8 oz. Jar	4 °C	14 days to extract 40 days to analyze
	PCBs	8082	Glass 8 oz. Jar	4 °C	14 days to extract 40 days to analyze
Air	TCL VOCs	TO-15	6-liter summa	none	30 days

4.4 QUALITY CONTROL SAMPLING

In addition to the laboratory analysis of the investigative soil samples and characterization soil samples for reuse and off-site disposal, additional analysis will be included for quality control measures, as required by the Category B sampling techniques. These samples will include field blanks, trip blanks, matrix spike/matrix spike duplicates (MS/MSD), and duplicate/blind duplicate samples at a frequency of one sample per 20 field samples collected. Table 2 provides a summary of the field samples and QA/QC samples to be analyzed by the laboratory.

TABLE 2

FIELD SAMPLE AND QC SAMPLE QUANTITIES

Sample Type	Parameters	EPA Method	Field Samples	QC Samples			
				Field Blank	Trip Blank	MS/MSD	Duplicate
Soil	VOCs	EPA 8260	20	1	1	1	1
	TCL SVOCs	EPA 8270	20	--	--	1	1
	TAL Metals	EPA 6000/7000	20	--	--	1	1
	Pesticides	EPA 8081	20	--	--	1	1
	PCBs	EPA 8082	20	--	--	1	1
Indoor Air	VOCs	TO-15	2	NA	1 Ambient Air	NA	1 (Collected on First Floor)

Notes:
MS/MSD - matrix spike/matrix spike duplicate

4.5 SAMPLE HANDLING

4.5.1 Sample Identification

All samples will be consistently identified in all field documentation, chain-of-custody documents and laboratory reports using an alpha-numeric code. Endpoint sidewall and bottom samples will be identified by the excavation number, collection interval number, followed by the sample depth interval (in parenthesis). Characterization samples collected from soil stockpiles will be designated "ST" and by the designated stockpile number.

The field duplicate sample will be labeled with a dummy sample location to ensure that it is submitted as blind samples to the laboratory. The dummy identification will consist of the sample type followed by a letter. For duplicate soil boring samples, the sample depth will be the actual sample depth interval. Trip blanks and field blanks will be identified with "TB" and "FB", respectively.

Table 3 provides examples of the sampling identification scheme:

Table 3
Examples of Sample Names

Sample Description	Sample Designation
Endpoint soil sample collected from the sidewall of excavation #1	EX1-SW1(3-4)
Endpoint soil sample collected from the bottom of the excavation #2	EX2-B1(5-6)
Matrix spike soil sample from a sidewall of excavation #1	EX-1-SW2(3-4) MS
Duplicate soil sample from a sidewall of excavation #2	EX2-SWB (3-4)
Characterization soil sample from soil stockpile #3	ST3-1
Indoor Air sample collected from the first floor of the building	IA-FL1-1

4.5.2 Sample Labeling and Shipping

All sample containers will be provided with labels containing the following information:

- Project identification

- Sample identification
- Date and time of collection
- Analysis(es) to be performed
- Sampler's initials

Once the samples are collected and labeled, they will be placed in chilled coolers and stored in a cool area away from direct sunlight to await shipment to the laboratory. All samples will be shipped to the laboratory at least twice per week. At the start and end of each workday, field personnel will add ice to the coolers as needed.

The samples will be prepared for shipment by placing each sample in a sealable plastic bag, then wrapping each container in bubble wrap to prevent breakage, adding freezer packs and/or fresh ice in sealable plastic bags and the chain-of-custody (COC) form. Samples will be shipped overnight (e.g., Federal Express) or transported by a laboratory courier. All coolers shipped to the laboratory will be sealed with mailing tape and a COC seal to ensure that the coolers remain sealed during delivery.

4.5.3 Sample Custody

Field personnel will be responsible for maintaining the sample coolers in a secured location until they are picked up and/or sent to the laboratory. The record of possession of samples from the time they are obtained in the field to the time they are delivered to the laboratory or shipped off-site will be documented on COC forms. The COC forms will contain the following information: project name; names of sampling personnel; sample number; date and time of collection and matrix; and signatures of individuals involved in sample transfer, and the dates and times of transfers. Laboratory personnel will note the condition of the custody seal and sample containers at sample check-in.

4.6 FIELD INSTRUMENTATION

Field personnel will be trained in the proper operation of all field instruments at the start of the field program. Instruction manuals for the equipment will be on file at the Site for referencing proper operation, maintenance and calibration procedures. The equipment will be calibrated according to manufacturer specifications at the start of each day of fieldwork, if applicable. If an instrument fails calibration, the project manager or QA/QC officer will be contacted immediately to obtain a replacement instrument. A calibration log will be maintained to record the date of each calibration, any failure to calibrate and corrective actions taken. The PID will be calibrated each day using 100 parts per million (ppm) isobutylene standard gas.

ATTACHMENT A

RESUME OF PROJECT QA/QC OFFICER, PROJECT DIRECTOR, AND PROJECT MANAGER

MARC S. GODICK, LEP

SR. VICE PRESIDENT

Marc S. Godick, a Senior Vice President of the firm, has over 20 years of experience in the environmental consulting industry. Mr. Godick will serve as Principal-in-Charge for this effort and has broad-based environmental experience includes expertise in brownfield redevelopment, site assessment, remedial investigation, design and implementation of remedial measures, compliance assessment, litigation support, and storage tank management.

Education

M.E., Engineering Science/Environmental Engineering, Pennsylvania State University, 1998

B.S., Chemical Engineering, Carnegie Mellon University, 1989

Licenses/Certifications

Licensed Environmental Professional (License # 396) – State of Connecticut – 2003 - Present

40 Hour HAZWOPER and Annual Refresher Training, 1990 - Present

Supervisors of Hazardous Waste Operations (8 Hour), 1990

Professional Memberships

Chairman, Village of Larchmont/Town of Mamaroneck Coastal Zone Management Commission, 1997 - Present

Chairman/Member, Westchester County Soil and Water Conservation District, 2005 - 2010

Board of Directors, Sheldrake Environmental Center, Larchmont, New York, 2006 - 2008

Member, NYSDEC Risk-Based Corrective Action (RBCA) Advisory Group for Petroleum-Impacted Sites, 1997

Community Leadership Alliance, Pace University School of Law, 2001

Years of Experience

Year started in company: 2002

Year started in industry: 1990

RELEVANT EXPERIENCE

Queens West Development Project, Avalon Bay Communities, Queens, NY

For over 20 years, AKRF has played a key role in advancing the Queens West development, which promises to transform an underused industrial waterfront property into one of largest and most vibrant mixed-use communities just across the East River from the United Nations. AKRF has prepared an **E**nvironmental Impact Statement (EIS) that examines issues pertaining to air quality, land use and community character, economic impacts, historic and archaeological resources, and infrastructure. Mr. Godick managed one of the largest remediation projects completed to date under the New York State Department of Environmental Conservation (NYSDEC) Brownfields Cleanup Program (BCP) that was contaminated by coal tar and petroleum. The remedy included the installation of a hydraulic barrier (sheet pile cut off wall), excavation of contaminated soil under a temporary structure to control odors during remediation, a vapor mitigation system below the buildings, and implementation of institution controls. The investigation, remediation design, and remedy implementation, and final sign-off (issuance of Certificate of Completion) were completed in two years. Total remediation costs were in excess of $13 million.

On-Call Environmental Consulting (Various Locations), New York City School Construction Authority

Mr. Godick is managing a $4 million, 2 year on-call contract with the SCA for environmental assessment, remedial design, and plumbing disinfection. For new school sites, initial due diligence involves conducting Phase I

environmental site assessments (ESAs) and multi-media sampling of soil, groundwater, and soil vapor to determine the suitability of a site for development as a school and remediation requirements and associated costs. Once design for a school is underway, AKRF would prepare remediation plans and construction specifications and oversee the construction activities. For existing school sites, the work can involve conducting Phase I ESAs and indoor air quality testing, preparation of specifications, supervision of storage tank removals, and investigation and remediation of spills. AKRF also oversees plumbing disinfection work, which is required prior to new plumbing being placed into service. The assignments involve reviewing and commenting on disinfection plans, supervision of the disinfection and confirmation testing, and preparation of a report documenting the work was conducted in accordance with the specifications and applicable requirements. Due to the sensitivity of school sites, work under this contract is often conducted on short notice and during non-school hours.

Brownfield Opportunity Area (BOA) Grant Program Services for the Town of Babylon, Wyandanch, NY

AKRF was retained by the Town of Babylon to prepare a blight study, market study, NYS BOA Step 2 Nomination, an Urban Renewal Plan, and a Generic Environmental Impact Statement (GEIS) as part of a revitalization and redevelopment effort for downtown Wyandanch. Mr. Godick was responsible for overseeing the environmental data collection effort for the 226 brownfields identified in the 105-acre project area, and for identifying strategic sites for which site assessment funding should be sought. He also prepared the Hazardous Materials section of the Wyandanch Downtown Revitalization Plan (which incorporates the Nomination, Urban Renewal Plan, and GEIS), involving a summary of available environmental reports, a review of regulatory records, and limited street-level site inspections.

Alexander Street Urban Renewal Plan, Master Plan, Brownfield Opportunity Area Plan, Yonkers, NY

AKRF was retained by the City of Yonkers to prepare an Urban Renewal Plan, Master Plan, Brownfield Opportunity Area Plan, and **a** Generic Environmental Impact Statement (GEIS) for a 153 acre industrial area along Alexander Street on the Yonkers Waterfront. Mr. Godick is coordinating the preparation of BOA documents and was responsible for the Hazardous Materials sections of the GEIS and Urban Renewal Plan. Mr. Godick managed the environmental data collection effort for the entire study area which involved review and summary of existing environmental reports, a review of regulatory records, and field inspections. The collected information was used to prioritize individual parcels for funding and remediation. The Master Plan for the area calls for the development of a mixed-use neighborhood consisting of residential, neighborhood retail, and office space uses with substantial public open space, access to the Hudson River, and marina facilities.

Williamsburg Waterfront Redevelopment, RD Management/L&M Equities/Toll Brothers, Brooklyn, NY

The project is one of the largest development projects in the Greenpoint/Williamsburg Rezoning Area, which includes the construction of nearly 1 million square feet of residential and retail space along the Williamsburg waterfront. The site had a variety of industrial uses, including a railyard, junk yard, and waste transfer station. As part of the City's rezoning, the site was assigned an E-designation for hazardous materials. Mr. Godick managed the preparation of the Phase I and II environmental site assessments, remedial action plan (RAP), and construction health and safety plan (CHASP). Mr. Godick obtained NYSDEC closure of an open spill associated with former underground storage tanks at the site. The NYCDEP-approved RAP and CHASP included provisions for reuse of the existing fill material, with the excess being disposed off-site, installation of a vapor barrier below the new buildings, installation of a site cap, and environmental monitoring during the construction activities. Mr. Godick managed the environmental monitoring work. A Notice of Satisfaction has been issued by NYCDEP and NYCOER for the first two phases of the development.

West 37th Street Redevelopment, Rockrose, New York, NY

The project is a redevelopment in the Hudson Yards Rezoning Area, which includes the construction of a 250,000 square foot residential/retail building in Manhattan. The site had several motor vehicle service operations, which resulted in a petroleum release to the underlying soil, bedrock, and groundwater. As part of the City's rezoning,

the site was assigned an E-designation for hazardous materials. Mr. Godick managed the preparation of the Phase I and II environmental site assessments, remedial action plan (RAP), and construction health and safety plan (CHASP). Mr. Godick obtained approval for the RAP and CHASP by both the NYSDEC and NYCDEP. The RAP and CHASP included provisions for excavation of contaminated soil and bedrock, installation of waterproofing that will also serve as a vapor barrier for the new building, environmental monitoring during the construction activities, and post-development groundwater monitoring. Construction of the building was completed in 2009, and a Notice of Satisfaction was issued by NYCOER.

Underground Storage Tank Closure and Site Remediation–Program Management, Con Edison, New York, NY

Mr. Godick provided technical assistance to Con Edison in developing technical submittals and budgets associated with tank closures at over 50 facilities. Technical summaries were prepared for submittal of contractor-prepared closure reports to the NYSDEC. The summaries included a review of historic pre-closure assessments, tank closure data, and provided recommendations for additional assessment, remediation or closure. Subsequently, a three-year program budget was developed for implementation of the UST investigation/remedial program, which Con Edison utilized for internal budgeting purposes.

Site Investigation–Over 20 Facilities, Con Edison, New York, NY

Mr. Godick managed site investigations associated with petroleum, dielectric fluid, and PCB releases at over 20 Con Edison facilities including service centers, substations, generating stations, and underground transmission and distribution systems. Site investigations have included due diligence site reviews, soil boring installation, monitoring well installation, hydrogeologic testing, and water quality sampling. Risk-based closures were proposed for several sites.

Site Investigation–7 World Trade Center Substation, Con Edison, New York, NY

Mr. Godick managed the site investigation at the former 7 World Trade Center Substation in an effort to delineate and recover approximately 140,000 gallons of transformer and feeder oil following the collapse of the building. The project involved coordination with several crews, Con Edison, and other site personnel.

Landfill Closure & Compost Facility Application, White Plains, NY

Mr. Godick is currently managing the closure of a formal ash landfill, which is currently being utilized as a leaf and yard waste compost facility by the City of White Plains. The landfill closure required additional assessment to define the extent of methane and solvent contamination. The closure will involve remediation of a chlorinated solvent plume, placement of landfill cap, and methane recovery. Mr. Godick also managed the preparation of the compost facility permit application, which required modification to the facility's operations necessary to close the landfill and address other regulatory requirements.

Landfill Redevelopment – RD Management, Orangeburg, NY

Mr. Godick is managing the remediation of the former Orangeburg Pipe site under the Voluntary Cleanup Program. The site contains widespread fill material, which has fragments of Orangeburg pipe that is impregnated with asbestos and coal tar. The site is currently being redeveloped for retail use. The closure plan for the site provides for reuse of all fill material on-site. The fill management activities will include dust and sediment control measures and air monitoring to prevent airborne dust in accordance with a closure plan, stormwater pollution prevention plan (SWPPP), and construction health and safety plan (CHASP). In pervious areas, the site cap will consist of 2 feet of clean fill and a liner in larger areas. The site will be redeveloped for retail use.

National Grid – Halesite Manufactured Gas Plant Site, Town of Huntington, NY

Mr. Godick managed the remedial design and engineering work associated with remediation of National Grid's former manufactured gas plant (MGP) located in the Town of Huntington. The site is situated in a sensitive

location along the waterfront, surrounded by commercial and residential properties, and half the property where the remediation was conducted was a steep slope. The remedy consisted of soil removal, oxygen injection, and non-aqueous phase liquid recovery. Mr. Godick was responsible for the development of the remedial work plans, design/construction documents, landscape architecture, confirmatory sampling, air monitoring, supervision, and preparation of close-out documentation in accordance with NYSDEC requirements.

Site Investigation–Former Manufactured Gas Plant (MGP) Facilities, Con Edison, New York, NY

Mr. Godick managed site investigations at four former MGP facilities. The investigations at three of the four sites were completed at a Con Edison substation, flush pit facility, and service center, respectively. The details associated with the fourth site are confidential. Site characterizations at the substation and flush pit facility were conducted in preparation of expansion at these locations. The findings from these characterizations were used by Con Edison to make appropriate changes to the design specifications and to plan for appropriate handling of impacted materials and health and safety protocols during future construction activities.

Storage Tank Management, Citibank, N.A., New York, NY

Mr. Godick managed a storage tank replacement project for a facility located on Wall Street in New York City. The existing underground storage tank was closed in place and replaced with a field-constructed AST system within the building. The project required zero tolerance for service interruptions, disruptions to building operations, or disturbance to occupants of the office space neighboring the new tank location. Responsibilities included the management of design, preparation of specifications, contractor bidding, construction inspections, site assessment for closed-in-place UST, SPCC plan preparation, and responsibility for project budget and documentation.

Storage Tank Management, Verizon, Various Locations, NY, PA, DE, and MA

Mr. Godick managed the removal and replacement of underground and aboveground storage tank systems for Verizon in New York, Pennsylvania, Delaware, and Massachusetts. Responsibilities included the management of design, preparation of specifications, contractor bidding, construction oversight, project budget, and documentation. For selected AST sites, managed the development of Spill Control, Contingency and Countermeasures (SPCC) plans.

Multimedia Compliance and Remediation, Greenburgh Central School District No. 7, Hartsdale, NY

Mr. Godick implemented a multimedia program to address regulatory compliance and remediation at the transportation yard and other facilities. The compliance program included development of an environmental management system including periodic auditing, standard operating procedures, release reporting, and training. Designed and implemented engineering controls and monitoring to satisfy stormwater requirements. Remediation was conducted to address petroleum and solvent contamination from former underground storage tanks and dry wells, which included source removal and natural attenuation of groundwater. Provided support in connection with litigation from the adjoining property owner.

Litigation Support & Remediation, Former Service Station, Brooklyn, New York

Mr. Godick took over management of remediation of an inactive service station (formerly conducted by another firm). His approach outlined additional characterization and remediation efforts which resulted in successful closure of the spill by NYSDEC within two years. Mr. Godick testified as an expert witness at a hearing in the New York State Supreme Court of Kings County to determine the adequacy of the remediation efforts.

Litigation Support & Remediation, Residential Heating Oil Spill, Cranford, New Jersey

Mr. Godick took over management of remediation of a heating oil spill in the basement of a single family residence on behalf of the insurance company. Up until Mr. Godick taking over the remediation, several hundred thousand dollars had been spent on remediation with no resolution of the spill with the NJDEP and homeowners. His

approach outlined additional characterization and remediation efforts to expeditiously and cost-effectively resolve the spill.

Litigation Support, Cost Recovery Action, Town of Carmel, New York

Mr. Godick served as an expert witness representing the owner of a property in a landlord-tenant dispute, which was used as a gasoline station and oil change facility. Mr. Godick prepared exhibits, testified, and participated in meetings with NYSDEC to support the landlord's claim that the oil change tenant's practices were poor and were adversely affecting the environment and the overall facility systems at the site.

Litigation Support, Cost Recovery Action, New York State Superfund Site

Mr. Godick provided technical support for the former owner of a New York State Superfund site in upstate New York. Current owner of the property brought a cost recovery action against client as a potential responsibility party. Completed technical review of draft Remedial Investigation/Feasibility Study prepared by opposing party's consultant to develop more cost effective remedial strategy and to better position the client for liability allocation as part of future settlement negotiations. Developed cost allocation paper and model for settlement negotiations. Participated in mediation process.

Litigation Support, Cost Recovery Action, New York State Petroleum Spill Site, New York, NY

Mr. Godick provided technical support for the former owner of a New York City multi-unit residential apartment building. The State of New York brought a cost recovery action against our client as a result of a previous spill from a former underground storage tank. Reviewed invoices and project documentation to dispute work performed by the NYSDEC, which provided the basis for settlement at a fraction of the initial claim.

Cost Analysis, Environmental Insurance Claims, Various Locations

Mr. Godick provided technical support for cost analyses completed for a large national insurance company related to several former MGP and other industrial sites. Responsibilities included evaluation and development of cost-effective remedial strategies, as well as compilation of detailed costs for remedial action implementation and closure.

Litigation Support, Class Action Lawsuit, Confidential Client, NJ

Mr. Godick provided technical support for a class action suit involving a petroleum-impacted community water supply in southern New Jersey. The technical assistance included analysis of expert testimony and coordination with legal counsel in preparing for cross-examination of the opposing party's lead expert witness.

MICHELLE LAPIN, P.E.

SENIOR VICE PRESIDENT

Michelle Lapin is a Senior Vice President with more than 25 years of experience in the assessment and remediation of hazardous waste issues. She leads the firm's Hazardous Materials group and offers extensive experience providing strategic planning and management for clients. Ms. Lapin has been responsible for the administration of technical solutions to contaminated soil, groundwater, air and geotechnical problems. Her other duties have included technical and report review, proposal writing, scheduling, budgeting, and acting as liaison between clients and regulatory agencies, and project coordination with federal, state, and local authorities.

Ms. Lapin's hydrogeologic experience includes groundwater investigations, formulation and administration of groundwater monitoring programs and remediation throughout the Northeast. Her experience with groundwater contamination includes Level B hazardous waste site investigations; leaking underground storage tank studies, including hazardous soil removal and disposal and associated soil and water issues; soil gas/vapor intrusion surveys; and wetlands issues. Ms. Lapin is experienced in coordinating and monitoring field programs concerning hazardous waste cell closures. She has directed hundreds of Phase I, Phase II, and Phase III investigations and remediations, many of them in conjunction with developers, law firms, lending institutions, and national retail chains. She is also experienced in the cleanup of contaminated properties under Brownfield Cleanup Program (BCP) regulations.

BACKGROUND

Education

M.S., Civil Engineering, Syracuse University, 1985

B.S., Civil Engineering, Clarkson University, 1983

Professional Licenses/Certifications

New York State P.E.

State of Connecticut P.E.

Professional Memberships

Member, National Society of Professional Engineers (NSPE), National and CT Chapters

Member, American Society of Civil Engineers (ASCE), National and CT Chapters

Member, Connecticut Business & Industry Association (CBIA), CBIA Environmental Policies Council (EPC)

Board Member, New York City Brownfield Partnership

Years of Experience

Year started in company: 1994

Year started in industry: 1986

RELEVANT EXPERIENCE

West 61st Street Rezoning/Residential Development, New York, NY

Ms. Lapin is directing the firm's hazardous materials work for this mixed-use development in Manhattan. The Algin Management Company hired AKRF to prepare an environmental impact statement (EIS) for the proposed rezoning of the western portion of the block between West 60th and 61st Streets, between Amsterdam and West End Avenues. The purpose of the proposed action was to facilitate the development of two 30-story residential towers with accessory parking spaces, and landscaped open space. The EIS examined a "worst case" condition for rezoning the block, which allowed Algin to build a residential building of approximately 375,000 square feet at their site. The building now contains 475 apartments, 200 accessory parking spaces, a health club, and community facility space. This site, with the services of AKRF, entered into New York State's Brownfield Cleanup Program (BCP). On-site issues included underground storage tanks remaining from previous on-site buildings, petroleum contamination from these tanks and possibly from off-site sources, and other soil contaminants (metals, semi-volatile organic compounds, etc.) from fill materials and previous on-site buildings. AKRF oversaw the adherence to the Construction Health and Safety Plan (HASP), which was submitted to and approved by the New York State Department of Environmental Conservation (NYSDEC), and

monitored the waste streams, to ensure that the different types of waste were disposed of at the correct receiving facilities. This oversight also included confirmation and characteristic soil sampling for the receiving facilities and NYSDEC. A "Track 1" Clean up of the majority of the property (the portion including the buildings) was completed and the final Engineering Report was approved by the NYSDEC. AKRF has also completed a smaller portion of the property as a "Track 4" cleanup, which includes a tennis court and landscaped areas.

Hudson River Park, New York, NY

Ms. Lapin is directing AKRF's hazardous materials work during construction of Hudson River Park, a five-mile linear park along Manhattan's West Side. As the Hudson River Park Trust's (HRPT's) environmental consultant, AKRF is overseeing preparation and implementation of additional soil and groundwater investigations (working with both NYSDEC and the New York City Department of Environmental Protection (NYCDEP)), all health and safety activities, and removal of both known underground storage tanks and those encountered during construction. Previously, the firm performed hazardous materials assessments as part of the environmental impact statement (EIS) process, including extensive database and historical research, and soil and groundwater investigations. Ms. Lapin has been the senior consultant for the soil and groundwater investigations and remediation, and the asbestos investigations and abatement oversight.

Fiterman Hall Deconstruction and Decontamination Project, New York, NY

The 15-story Fiterman Hall building, located at 30 West Broadway, originally constructed as an office building in the 1950s, had served as an extension of the City University of New York (CUNY) Borough of Manhattan Community College (BMCC) since 1993. The building was severely damaged during the September 11, 2001, World Trade Center (WTC) attack when 7 WTC collapsed and struck the south façade of the building, resulting in the partial collapse of the southwest corner of the structure. The building was subsequently stabilized, with breaches closed and major debris removed. Because extensive mold and WTC dust contaminants remain within the building, it must be taken down. The project required the preparation of two environmental assessment statements (EASs)—one for the deconstruction and decontamination of Fiterman Hall and one for the construction of a replacement building on the site. AKRF prepared the EAS for the Deconstruction and Decontamination project, which included the decontamination of the interior and exterior of the building, the removal and disposal of all building contents, and the deconstruction of the existing, approximately 377,000-gross-square-foot partially collapsed structure. Ms. Lapin reviewed the EAS's deconstruction and decontamination plans. The cleanup plan was submitted to the United States Environmental Protection Agency (USEPA).

Columbia University Manhattanville Academic Mixed-Use Development, New York, NY

Ms. Lapin served as Hazardous Materials Task Leader on this EIS for approximately 4 million square feet of new academic, research and neighborhood uses to be constructed north of Columbia University's existing Morningside campus. The Hazardous Materials work included Phase I Environmental Site Assessments for the properties within the site boundaries, and estimates for a Subsurface (Phase II) Investigation of the entire development area. The firm's Hazardous Materials group has performed over 30 individual Phase I Environmental Site Assessments for properties within the development area. In addition, a Preliminary Environmental Site Assessment (PESA) was completed in conjunction with the EIS. Based on the Phase I studies, AKRF conducted a subsurface (Phase II) investigation in accordance with an NYCDEP-approved investigative work plan and health and safety plan. Subsurface activities included the advancement of soil borings, groundwater monitor wells, and the collection of soil and groundwater samples for laboratory analysis. This study estimated costs to remediate contaminated soil, groundwater and hazardous building materials, including lead-based paint and asbestos-containing materials.

Yonkers Waterfront Redevelopment Project, Yonkers, NY

For this redevelopment along Yonkers' Hudson River waterfront, Ms. Lapin headed the remedial investigation and remediation work that included Phase I assessments of 12 parcels, investigations of underground storage tank removals and

associated soil remediation, remedial alternatives reports, and remedial work plans for multiple parcels. Several of the city-owned parcels were remediated under a Voluntary Cleanup Agreement; others were administered with state Brownfields grants. Hazardous waste remediation was completed on both brownfield and voluntary clean-up parcels, which enabled construction of mixed-use retail, residential development, and parking.

East 75th/East 76th Street Site, New York, NY

Ms. Lapin served as Senior Manager for this project that encompassed coordination and direct remediation efforts of this former dry cleaning facility and parking garage prior to the sale of the property and its ultimate redevelopment for use as a private school. A preliminary site investigation identified 20 current and former petroleum and solvent tanks on the property. A soil and groundwater testing program was designed and implemented to identify the presence and extent of contamination resulting from potential tank spills. This investigation confirmed the presence of subsurface petroleum contamination in the soil and solvent contamination from former dry cleaning activities in the bedrock. AKRF completed oversight of the remediation under the State's Voluntary Cleanup Program. Remediation, consisting of tank removals and excavation of contaminated soil and the removal of solvent-contaminated bedrock down to 30 feet below grade, has been completed. AKRF completed oversight of the pre-treatment of groundwater prior to discharge to the municipal sewer system and an off-site study to determine impacts to groundwater in downgradient locations.

Avalon on the Sound, New Rochelle, NY

For Avalon Bay Communities, Ms. Lapin managed the investigations and remediation of two luxury residential towers and an associated parking garage. Remediation of the first phase of development (the first residential tower and the parking garage) included gasoline contamination from a former taxi facility, fuel oil contamination from multiple residential underground storage tanks, and chemical contamination from former on-site manufacturing facilities. The remediation and closure of the tank spills was coordinated with the New York State Department of Environmental Conservation (NYSDEC). The initial investigation of the Phase II development—an additional high-rise luxury residential building—detected petroleum contamination. A second investigation was conducted to delineate the extent of the contamination and estimate the costs for remediation. AKRF oversaw the remediation and conducted the Health and Safety monitoring. The remediation was completed with closure and approvals of the NYSDEC.

East River Science Park, New York, NY

Originally, New York University School of Medicine (NYUSOM) retained the firm to prepare a full Environmental Impact Statement (EIS) for its proposed East River Science Park (ERSP). As originally contemplated, the proposed complex was to occupy a portion of the Bellevue Hospital campus between East 30th Street and approximately East 28th Street and would have included a clinical practice, research, and biotech facilities, housing units, a child care center, and a conference center and parking.

Ms. Lapin managed the Phase I Environmental Site Assessment and other hazardous materials-related issues. Events relating to September 11, 2001 delayed the project for several years. When it resurfaced with a new developer and a diminished scope, Ms. Lapin updated the hazardous materials issues and consulted with the new developer regarding remediation strategies and involvement of regulatory agencies. For the actual remediation/development, the city requested oversight by AKRF to represent its interests (the city is retaining ownership of the land). Ms. Lapin completed directing the remediation oversight on behalf of the City of New York for the remediation of this former psychiatric hospital building, laundry building and parking areas. The new 550,000 square-foot development includes a biotechnology center, street level retail, and an elevated plaza.

BRYAN ZIEROFF

TECHNICAL DIRECTOR

Bryan Zieroff has 16 years of experience in the environmental consulting industry. Mr. Zieroff's experience includes the conceptual design, implementation and reporting of detailed field investigations including assessments of ground-water supplies for residential, municipal and industrial users, and evaluation, monitoring and remediation of soil and ground-water contamination for sites regulated by CERCLA, RCRA, Connecticut's Remediation Standard Regulations, and the New York State Department of Environmental Conservation cleanup Programs. These studies include investigations at sites impacted by petroleum products, chlorinated solvents, metals and landfill leachate. The scopes of study include characterization of the extent of contamination in soil, ground water, and soil vapor, evaluation of compliance with the established regulatory criteria, and operation and maintenance of remediation systems. His management skills are enhanced by comprehensive hands of familiarity with all forms of field investigation techniques.

Prior to his employment with AKRF, Mr. Zieroff was a Senior Hydrogeologist with Leggette, Brashears and Graham, Inc. in Shelton, Connecticut, where his responsibilities included overseeing fieldwork, preparing and reviewing technical reports, computer modeling, and conceptual design/implementation of investigation programs to characterize contamination release areas.

BACKGROUND

Education

B.S., Geological Sciences, The Ohio State University, 1994

Licenses/Certifications

Certified Professional Geologist-American Institute of Professional Geologists, License # CPG-11197

Connecticut Licensed Environmental Professional, License #532

40 Hour HAZWOPER and Annual Refresher Training

Supervisors of Hazardous Waste Operations (8 Hour)

Professional Memberships

American Institute of Professional Geologists

Association of Ground-Water Scientists and Engineers (National Ground Water Association)

Environmental Professionals' Organization of Connecticut (EPOC)

Years of Experience

Year started in company: 2006

Year started in industry: 1995

RELEVANT EXPERIENCE

Gedney Way Leaf and Yard Waste Composting Facility, White Plains, NY

Mr. Zieroff is Project Manager for a remediation and landfill closure project at an existing composting facility. The project included documenting the complete disposal history and completion of a site-wide investigation to confirm the extent of a solvent release and to provide data necessary to complete landfill closure. The investigation was

completed satisfy the requirements in NYSDEC DER-10 and 6NYCRR Part 360. After receiving State approval of the Site Investigation Report the project has moved into the remediation and landfill closure design phase. The remedial design includes the testing and implementation of a chemical oxidation injection program, and landfill closure includes design, State approval, and construction of a landfill cap.

New City Plaza, New City, NY

Mr. Zieroff is Project Manager for an investigation and remediation project at a former dry cleaning facility. Investigation and remediation at the site is currently being conducted under review of the NYSDEC Brownfield's Cleanup Program. Tasks have included preparation and state approval of a Site Investigation Work Plan Site, Quality Assurance Project Plan, Health and Safety Plan, a Community Participation Plan, and completion of the investigation phase of the Brownfield's program. Interim Remedial activities include contamination source removal from soil and installation of a sub-slab depressurization system to address soil vapor. A feasibility study is currently being completed to determine the optimal remedial approach for site-wide remediation.

Orangeburg Pipe Site, Orangeburg, NY

Mr. Zieroff completed a subsurface investigation to determine the extent of soil and groundwater contamination at the former Orangeburg Pipe facility. The investigation results were used to develop a Remedial Action Plan to address solid waste, petroleum contamination, worker safety during site development, and capping requirements to satisfy the NYSDEC Voluntary Remediation Program.. The Remedial Action Plan included a Heath and Safety Plan, Community Air Monitoring Plan, and specifications for soil management, a vapor mitigation system and dewatering procedures during the construction of multiple commercial buildings.

Magna Metals Facility, Cortlandt, NY

Mr. Zieroff managed a soil-gas investigation project at an existing commercial warehouse and office building. The project included installation of permanent soil gas sampling points and completion of a sampling program that met the requirements of the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Site activities included a pre-sampling investigation with the NYSDOH to document materials storage, air flow specifications, historical uses, site uses and areas of concern for sub-slab and ambient air sampling. The investigation work was being conducted to satisfy an NYSDEC consent order.

Zerega – Federal Jeans Site, Bronx, NY

Mr. Zieroff was the project completed a Construction Health and Safety Plan and a Soil Management Plan for a former materials storage facility associated with Manhattan College. The plans were completed to provide worker safety and soil handling guidelines during the construction of a large retail facility and parking garage. Development activities at the site are being conducted under oversight of the NYCDEP.

Paragon Paint Company Facility, Long Island City, NY

Mr. Zieroff was Project Manager for an investigation and remediation project at a former paint manufacturing facility. The project has included a multiple subsurface investigations to determine the extent of solvent and petroleum contamination at the site. All phases of remediation at the site are being completed under review of the NYSDEC Brownfield's Cleanup Program. Tasks include completion and state approval of a Site Investigation Work Plan, Quality Assurance Project Plan, Health and Safety Plan, Community Participation Plan, Remedial Action Plan, and Final Remediation Report.

Pathmark Stores Site, Bronx, NY

Mr. Zieroff completed a Remedial Action Plan, Construction Health and Safety Plan and a Soil Management Plan for a former materials storage facility associated with Manhattan College. The plans were completed to provide worker safety and soil handling guidelines during the construction of a large retail facility and parking garage.

Development activities at the site were conducted under oversight of the NYCDEP. A Notice of Satisfaction was received after project completion.

Yale and Towne Site, Stamford, CT

Mr. Zieroff provided oversight services for a remediation project at a former industrial site. The site included over 35 buildings and 87 areas of environmental concern that required investigation and remediation. Tasks included providing technical support in understanding the Connecticut regulatory requirements, investigation and remediation costs, and confirmation of appropriate schedules to address the environmental issues during redevelopment of the project site.

Aluminum Company of America (ALCOA) Facility, Guilford, CT

Mr. Zieroff managed a ground-water remediation project at an existing aluminum manufacturing facility. The project included soil, vapor and ground-water sampling to confirm the extent of a solvent release, determination of ground water and aquifer characteristics, operation and maintenance of a ground-water pump-and-treat system and compliance sampling in association with a CTDEP consent order.

Coats North America Facility, Watertown, CT

Mr. Zieroff was the Project Manager for site compliance work at an existing synthetic treads facility. The project included an evaluation of activities, chemical uses and waste handling practices to determine areas of environmental concern. Investigations to determine the status of these areas included installation of monitoring wells, soil and ground-water sampling, soil-vapor sampling, liquid storage tank removal and RCRA closure of waste storage areas. The project activities were completed in compliance with the CTDEP property transfer program.

United Parcel Service, Storm Water Management, 9 Connecticut Facilities

Mr. Zieroff managed the design and implementation of a storm water pollution prevention project at 9 United Parcel Service facilities. The project included analysis of drainage areas, determination of sheet flow characteristics and the collection of storm-water discharge samples and SMR reporting in accordance with the CTDEP General Permit for the Discharge of Storm Water.

Elite Development Investigation, Norwalk, CT

Mr. Zieroff managed an investigation and remediation project related to a release of gasoline from an underground storage tank system. The project included a multi-phase Subsurface (Phase III) Investigation to determine the nature and extent of gasoline in the soil and ground water and a feasibility study to determine the appropriate remedial action plan. The project was being conducted to satisfy a Stipulation of Judgment issued by the Attorney General for the State of Connecticut.

Applera Corporation, Wilton, CT

Mr. Zieroff oversaw the site compliance program associated with the ownership transfer of five adjacent commercial office properties. The project included monitor well installation, design and execution of a remedial action plan to address a petroleum release area, a bus maintenance garage, multiple underground storage tank areas, a lead and mercury release area and ground-water compliance monitoring.

Chubb Group of Insurance Companies, Remediation Oversight, 7 Connecticut Properties

Mr. Zieroff was the Project Manager for the oversight of emergency response and remediation of heating-oil releases from residential underground storage tank systems. The projects included investigations to determine the nature and extent of the release areas and design and implementation of a remedial action plan. The oversight activities were performed as a representative of the insurance carrier to confirm all aspects of project were being conducted in compliance with all applicable Connecticut regulations.

Bank of New York, Southport, CT

Mr. Zieroff managed a ground-water remediation project at a former gasoline station. An investigation and remediation project related to a release of gasoline from an underground storage tank system. The project included a multi-phase Subsurface (Phase III) Investigation to determine the nature and extent of gasoline in the soil and ground water and a feasibility study to determine the appropriate remedial action plan. The project was being conducted to satisfy a Stipulation of Judgment issued by the Attorney General for the State of Connecticut.

Meriden Enterprise Center, Meriden, CT

Mr. Zieroff developed and directed a subsurface investigation to determine the nature and extent of contamination related to releases from multiple underground storage tank farms, silverware plating, machining and furniture stripping operations. Activities included ground-penetrating radar, drilling of test borings, installation of monitoring wells, developing a conceptual site model for the established releases and preparation of a report detailing remedial alternatives for the property and owner requirements under the Connecticut Department of Environmental Protection Property Transfer Act.

Harris Brothers Industrial Complex, New Britain, CT

Mr. Zieroff developed and directed a subsurface investigation to determine the status of recognized areas of environmental concern related to business operations. Activities included drilling of test borings, installation of monitoring wells, collection of soil and ground-water samples, developing a conceptual site model and preparation of a report detailing remedial alternatives for the property and owner requirements under the Connecticut Department of Environmental Protection Property Transfer Act.

Development properties in Kent, Ridgefield, and Greenwich, CT and Mahopac and Brewster, NY

Mr. Zieroff directed an evaluation and testing program of bedrock water-supply wells to determine long-term yield, impact on local users, and water quality results. The project included compilation of data, construction of hydrographs, determination of aquifer characteristics and reporting.

Bettsville Quarry, Bettsville, OH

Mr. Zieroff directed a pumping test of dewatering wells to determine yield requirements for dewatering a carbonate rock quarry. The dewatering program included a determination of offsite impacts to local ground-water users. Mr. Zieroff developed an offsite monitoring program to document and protect local users during the quarry dewatering process.

Mahopac Country Club, Town of Lewisborough, NY

Mr. Zieroff managed an in-situ percolation test in large test pit trenches to determine ground-water recharge rates. The project was conducted to support the proposed upgrade to the facility septic system. Data compilation and reporting included a ground-water recharge model to determine the area mounding potential.

Burning Tree Country Club, Greenwich, CT

Mr. Zieroff directed an in-situ percolation test to determine recharge rates for a proposed upgrade to the facility septic system. The project included compilation of slug test data and software analysis to determine K values.