REMEDIAL INVESTIGATION WORKPLAN

Property Known As:

Waterpointe – Whitestone New York
151-45 6th Road
Whitestone, New York 11357
BCP Site #C241091

Prepared for:

151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group, LLC
725 5th Ave, 24th Floor
New York, NY 10022

April 24, 2007

Submitted by:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, New Jersey 08550
EWMA Case No. 204494

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION AND PURPOSE

Environmental Waste Management Associates, LLC (EWMA) was retained by 151-45 Sixth Road Whitestone Partners, LLC (Whitestone) to prepare this Remedial Investigation Workplan (RIW) concerning the property known as Waterpointe – Whitestone, New York which is located at 151-45 6th Road, Whitestone, New York (subject property and site). An application was previously submitted by Whitestone to the New York State Department of Environmental Conservation (NYSDEC) for participation in the Brownfield Cleanup Program (BCP) as a Volunteer.

This RIW has been prepared on behalf of the Volunteer to fulfill the BCP requirements to address the nature and extent of the contamination at the site and any potential off-site impacts. Additionally, this RIW incorporates the requirements of the NYSDEC's November 3, 2006 comment letter, issued in response to the draft version of this RIW submitted to the NYSDEC in August 2006. The NYSDEC's November 3, 2006 comment letter has been included as **Appendix 1** to this report.

Specifically, this RIW discusses the investigation of both confirmed and potential areas of environmental concern (AOCs) at the site, and provides recommendations if further investigation is necessary for the AOCs. This RIW was prepared in compliance with the *NYSDEC Department of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation* document and the *NYSDEC DER BCP Guide* document.

The AOCs identified at the site and discussed in this work plan are as follows:

- AOC 1 – Nine (9) 550-Gallon Gasoline USTs Adjacent to the Former Edenwald Contracting Company (ECC) Repair Shop (west side of Main Building)
- AOC 2 – Three (3) 550-Gallon Gasoline USTS, Reportedly Closed in Place in 1992, and One 4,000 Gallon Diesel UST Located NE of the Intersection of 151 Street and 6th Road
- AOC 3 – One 3,000 Gallon Diesel UST and One Waste Oil UST Located Approximately 50' North of the Former Grace Repair Shop
- AOC 4 – Three (3) 550-Gallon Oil USTs
- AOC 5 – Two (2) 2,000-Gallon Diesel USTs
- AOC 6 – Spill Number 9214054
- AOC 7 – Possible Additional USTs
- AOC 8 – Misc. Drums and Stained Surface Soils Throughout the Site

- AOC 9 – Down Hill of Drum Cluster and Interior Floor Staining Outside NE Corner of the Former Grace Maintenance Building
- AOC 10 – North Side of Former Asphalt Plant
- AOC 11 – Ground Water
- AOC 12 – Historic Fill Material Impacted with SVOCs and Metals
- AOC 13 – Sump with Unknown Discharge
- AOC 14 – Underground Storm Water Collection Unit
- AOC 15 – Southeast Corner of Property

2.0 SITE DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

The site is an approximate 12.5 acre parcel of land in the Whitestone section of Queens, New York. The site has a street address of 151-45 6th Road, Whitestone, New York, 11357 and is identified as the following lots and blocks: Block 4487, Lots 160, 169, 170 and 200; Block 4524, Lots 77 and 92; and, Block 4531, Lots 79 and 92.

- **Figure 1** is an excerpt of a USGS 7.5 Minute Topographic Quadrangle Site Location Map depicting the physical location of the *Property* and the surrounding area.
- **Figure 2** is a Site Plan of the *Property* with identified Areas of Concern (AOCs).

2.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The site is currently used as a truck/maintenance facility and vehicle storage yard by multiple tenants. These tenants include Globis Bus, US Towing, Ken-Ben Towing, Ras Dairy, Nicmanda Trucking and Tempa Construction. Construction equipment and machinery are also stored at the site by various tenants. The site is currently zoned for manufacturing purposes.

The site is located in an area characterized by commercial/light industrial and residential development. The site is bordered by the East River to the north.

2.3 PHYSICAL CONDITIONS OF SITE AND SURROUNDINGS

2.3.1 Description of Structures, Roads, Other Improvements on the Site

The site is improved with a large building (Building No. 1) located on the northwest portion of the site that is currently utilized as an office and maintenance garage; a garage (Building No. 2) that is utilized for truck maintenance and storage and several storage sheds. The majority of the structures associated with the former asphalt plant and concrete form plant, discussed below in Section 3.1, have been demolished.

Building No. 1 was originally constructed prior to 1903. The current building foot print represents several additions which have occurred over the years. The three-story section of the building was constructed in the 1950s and served as the office for the former asphalt plant; this portion of the building is still used as office space. The two-story portion of the building is currently used as a bus maintenance garage and for storage; some of the garages are also utilized by other tenants for vehicle maintenance.

Building No. 2 is a one-story building located on the southern portion of the site. This building is currently utilized as an auto repair shop. The building was reportedly constructed in the 1960s, and expanded in the 1970s.

Misc. Structures: Several sheds, none of which are currently utilized, and all in varying states of disrepair are located on the site. One of these sheds, a small one-story building located on the southeast portion of the site was reportedly constructed in the 1960s and is believed to have been part of the concrete form plant operations.

2.3.2 Geology and Soils

The site is underlain by unconsolidated clays, silts, sands and gravels that were deposited directly during glacial activity as glacial till or as glaciofluvial deposits. The glacial deposits are anticipated to extend to depths of 175 feet below surface grade (bsg). The glacial deposits in turn, are underlain by Gardiners Clay, Jameco Gravel and the Raritan Formation, followed by bedrock. The bedrock generally consists of Manhattan Schist overlain by Inwood Limestone.

Specifically the soils in the vicinity of the site are classified as urban land. Urban land consists of areas where at least 85 percent of the land surface is covered with asphalt, concrete, or other impervious building materials. Based

on a review of boring logs generated in conjunction with the past environmental work conducted at the site, fill material consisting of brown medium to fine sands, asphalt, gravel, cinder, concrete, brick fragments and wood fragments, generally exists to depths of approximately 2-5 feet bsg. However, fill materials have been detected to depths greater than 10 feet bsg at some historic boring locations. Native till materials underlie the fill and consist of fine to medium sand with trace amounts of medium gravel.

2.3.3 Hydrogeology

Based on data obtained during the initial investigations, the depth to ground water was reported at 8-12 feet bsg. However, more recent data obtained from on-site monitoring wells revealed a depth to ground water ranging from 2-8 feet bsg. The ground water table is largely contained within the glacial deposits and would presumably follow the local topography, which slopes toward the north. However, due to the site's proximity to the East River (and based on the variability in the depth to ground water and the high chloride and total dissolved solids value exhibited by MW-4), the ground water in the vicinity of the site is likely tidally influenced and is expected to be influenced by saline intrusion.

2.3.4 Topography

Based on a review of the USGS 7.5 Minute Series *Flushing, New York* Topographic Quadrangle, the site is approximately 7 feet above mean sea level and slopes downward to the north to the East River, which is located along the northern property boundary. Generally, the site drainage patterns follow the site topography, except where channelized through the stormwater management system, which discharges to the adjacent East River.

2.3.5 Surface Water Bodies

As discussed above in Section 2.3.4, the East River is the nearest downgradient, major surface water body receptor to the site, as it is located adjacent to the northern property boundary. The USGS topographic map depicts the gradient of the property sloping towards the East River.

2.3.6 7.5 Minute USGS Topographic Map

The portion of the 7.5 minute USGS topographic map, *Flushing, New York* Quadrangle, depicting the site is included as **Figure 1**, Site Location Map.

2.3.7 Logs of Borings

Boring logs for prior investigation activities were included with the prior environmental reports submitted to the NYSDEC along with the BCP application, but are attached hereto as **Appendix 2** for your convenience.

2.3.8 Land Use within a Half Mile of Target Property

A map depicting the land use within approximately one-half mile of the property was included with the BCP application as **Figure 2**, which was submitted to the NYSDEC. As discussed above in Section 2.2., the site is located in an area characterized by commercial/light industrial and residential development.

2.3.9 Potential Ground Water Receptors

Ground water at the site is expected to flow to the north toward the East River. However, due to the variability in the depth to ground water (i.e. over 6' during different historic sampling events) and the significantly elevated concentrations of chloride and TDS, in the vicinity of MW-4, the ground water at the site is suspected to be tidally influenced and may exhibit saline characteristics. Therefore, while the site is not located in either a ground water recharge or wellhead protection area, an interconnection between the ground water at the site and the adjacent East River can not be ruled out without further investigation.

The proposed ground water investigation will document ground water flow through the collection of elevational measurements and will also evaluate the potential tidal influence on the ground water pursuant to Section 3.7.2 (a) of DER-10. Additionally, a well search will be conducted as required, if applicable.

3.0 SITE HISTORY

3.1 HISTORICAL USE OF THE SITE

The site was historically occupied by residential houses, a park/pavilion recreation area, a restaurant, a metal shop, a boat manufacturer and a shooting range and shop until circa 1950. An asphalt plant operated from approximately 1952 through 1992. Concrete manufacturing was conducted concurrently with the asphalt manufacturing operations until approximately 1986-1988. The asphalt plant, which was located in the northwest corner of

the site, was razed in March of 2002. From the early 1980's through the present, the site was also used as a maintenance garage for truck, bus and other vehicle repairs.

3.2 PRIOR ENVIRONMENTAL INVESTIGATION ACTIVITIES

Numerous investigative activities have been completed at the site to date. A general summary of these prior activities, along with the reports listed below, were previously submitted to the NYSDEC in conjunction with the Brownfield Cleanup Program (BCP) application for the site:

- "Phase I Environmental Site Assessment", prepared by IVI Environmental, Inc., November 19, 2001
- "Phase II Environmental Site Assessment", prepared by IVI Environmental, Inc., November 20, 2001
- "Preliminary Subsurface Investigation", prepared by Leggette, Brashears & Graham, Inc., March 2002
- "Tank Closure Report", prepared by Enviro-Comp Consultants, Inc., May 23, 2002
- "UST Removal Documentation", prepared by TradeWinds Environmental Restoration, Inc., February 2003
- "Additional Subsurface Investigation", prepared by Leggette, Brashears & Graham, Inc., December 23, 2003
- "Environmental Due Diligence Report", prepared by TRC Environmental Corporation, January 2004
- "Assessment of Environmental Conditions", prepared by ATC Associates, Inc., February 25, 2005
- "Phase I Environmental Site Assessment Update", prepared by ATC Associates Inc., May 10, 2005

Based on a review of these reports, several areas of environmental concern (AOCs) have been identified at the site. Prior investigative activities have been completed at some of these AOCs. All of the previous borings, test pits, temporary well points and sample locations from the prior investigation activities, as identified in the above listed reports, are summarized on **Table 1**. **Table 2** is a summary of the historic soil samples by AOC and includes the sample depths and analytical parameters evaluated for each sample. **Table 3** is a summary of the historic ground water samples by AOC and includes the screened intervals of the monitoring wells and temporary well points, and the analytical parameters evaluated for each sample.

Additionally, all of the previous borings, test pits, temporary well points and sample locations are depicted on the Historic Sample Location Map included as Figure **3**[1]. The historic soil sample results that exceed the applicable cleanup criteria are depicted on **Figure 4**. The historic ground water sample results that exceed the applicable cleanup criteria are depicted on **Figure 5**.

As a note, LB&G used the same boring identifiers as IVI (i.e. B-1, B-2, …) for their borings installed in 2002. Therefore, for clarification purposes, EWMA has added "IVI" as a prefix to all of the IVI boring locations (i.e. IVI-B1, IVI-B2, …) on the historic sample summary tables (**Tables 1** through **3**) and on the historic sample location maps (**Figures 3** through **5**).

Each of the AOCs identified in the above reports are discussed in detail below in Section 5.0.

4.0 WORKPLAN OBJECTIVES, SCOPE, AND RATIONALE

As previously discussed in Section 1.0, an application was previously submitted by Whitestone to the NYSDEC for participation in the BCP as a Volunteer. This RIW was prepared on behalf of the Volunteer to fulfill the BCP requirements to address the nature and extent of the contamination at the site and any potential off-site impacts. Specifically, this RIW discusses the investigation of confirmed areas of environmental concern (AOCs) at the site, and provides recommendations if further investigation is necessary for the AOCs. This RIW was prepared in compliance with the *NYSDEC Department of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation* document and the *NYSDEC DER BCP Guide* document.

As discussed in the BCP Application submitted by the Volunteer to the NYSDEC, the scope of the proposed project for the site includes the development of the property as a waterfront residential community along the East River. The development will consist of approximately 320,000 square feet of living space spread across approximately 115 units, including 97 three-story townhomes and 18 detached single family homes. The current site design includes on-site parking for building residents and an approximately 6,600 square foot clubhouse. In addition to the residential aspect, the development will feature a large amount of open space including a waterfront promenade, which will be available for use by the local community.

[1] Enviro-Comp end point samples #1-N and #2-S are not included on Figure 3, because a map depicting these locations was not included in Enviro-Comp's report.

The objective of this RIW is to investigate the AOCs identified at the property in a manner sufficient to determine compliance with a remedial approach that will allow residential development of the property.

A formal Remedial Workplan describing the proposed remediation will be submitted pursuant to the BCP.

For the purposes of this document, the referenced soil standards are the Unrestricted Use Soil Cleanup Objectives (UUSCO), Table 375-6.8(a) and the Restricted Use Soil Cleanup Objectives (RUSCO), Table 375-6.8(b). If part 375 soil cleanup objectives were not established for a compound, as directed by the NYSDEC, EWMA utilized TAGM 4046 as the referenced soil standards. However, it should be noted that some compounds are not listed in part 375 or TAGM 4046 (i.e. isopropylbenzene). The ground water data was compared to the ground water quality standards (GWQS) outlined in the NYSDEC's Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values for Class GA ground water.

The AOCs identified at the property are discussed in detail in Section 5.0, along with recommendations for each AOC, including any proposed further investigation activities.

5.0 DESCRIPTION OF AOC'S

Based on a review of the reports listed above in Section 3.2, several areas of environmental concern (AOCs) have been identified at the site to date. EWMA conducted site inspections of the property on July 21, 2005 and January 11, 2006 to further evaluate the current conditions at the site, including several AOCs previously identified at the property. Additionally, in the NYSDEC's November 3, 2006 letter, the NYSDEC identified the southeast corner of the property as a potential area of concern based on the review of a high resolution photograph that depicts darker soils in this area. Therefore, EWMA designated the southeast corner of the property as an area of concern (AOC 15).

The AOCs identified at the site to date and discussed in this work plan are as follows:

- AOC 1 – Nine (9) 550-Gallon Gasoline USTs Adjacent to the Former Edenwald Contracting Company (ECC) Repair Shop (west side of Main Building)

- AOC 2 – Three (3) 550-Gallon Gasoline USTS, Reportedly Closed in Place in 1992, and One 4,000 Gallon Diesel UST Located NE of the Intersection of 151 Street and 6th Road
- AOC 3 – One 3,000 Gallon Diesel UST and One Waste Oil UST Located Approximately 50' North of the Former Grace Repair Shop
- AOC 4 – Three (3) 550-Gallon Oil USTs
- AOC 5 – Two (2) 2,000-Gallon Diesel USTs
- AOC 6 – Spill Number 9214054
- AOC 7 – Possible Additional USTs
- AOC 8 – Misc. Drums and Stained Surface Soils Throughout the Site
- AOC 9 – Down Hill of Drum Cluster and Interior Floor Staining Outside NE Corner of the Former Grace Maintenance Building
- AOC 10 – North Side of Former Asphalt Plant
- AOC 11 – Ground Water
- AOC 12 – Historic Fill Material Impacted with SVOCs and Metals
- AOC 13 – Sump with Unknown Discharge
- AOC 14 – Underground Storm Water Collection Unit
- AOC 15 – Southest Corner of the Property
- Miscellaneous Historic Use Concerns

A site plan depicting the AOCs is included as **Figure 2**. The boundaries of the areas proposed for investigation are depicted on **Figure 2A**. Previous investigative activities have been completed at some of these AOCs. **Tables 2** and **3** provide a summary of the soil and ground water samples collected in each AOC during prior environmental investigation activities at the site, respectively. The results for all of the historic soil samples that were analyzed are summarized on **Tables 2A – 2H**. **Figure 3** depicts the locations of all historic samples collected during prior investigation activities at the site. **Figure 4** depicts the location of soil samples collected during prior investigation activities, along with the analytical results that exceed the NYSDEC UUSCO. **Figure 5** depicts the location of ground water samples collected during prior investigation activities, along with the analytical results that exceed the NYSDEC GWQS.

The following sections discuss each of the AOCs in detail, including prior environmental investigation activities conducted, and the proposed investigation activities for each AOC.

5.1 AOC 1 – Nine (9) 550-Gallon Gasoline USTs Adjacent to the Former Edenwald Contracting Company (ECC) Repair Shop (west side of Main Building)

5.1.1 AOC 1 Prior Investigation Activities

IVI's 2001 Phase I Report identified the presence of nine (9) 550-gallon gasoline USTs adjacent to the western side of the main building (i.e. The Former Edenwald Contracting Company [ECC] Repair Shop). According to the LTANK database (#8806403), the gasoline USTs failed an air pressure test on October 31, 1998. Therefore, IVI conducted a Phase II investigation of the gasoline tanks in October of 2001.

On October 29, 2001, IVI supervised the installation of three (3) soil borings (B-1 to B-3) in the vicinity of the nine (9) gasoline tanks. Additionally, soil boring B-1 was converted into a 1" PVC temporary well point to allow for the collection of ground water samples.

Specifically, soil samples were collected for VOCs and lead from borings B-1 to B-3 from 6-7' bsg, 6.5-7.5' bsg, and 6.5-7.5' bsg, respectively. The ground water sample collected from the temporary well point installed at boring B-1 was analyzed for volatile organic compounds (VOCs) and lead (both filtered and unfiltered).

The analytical results for the soil samples collected from the borings installed in the vicinity of the gasoline tanks (B-1 to B-3) revealed the presence of volatile organic compounds (VOCs) in all three borings. Acetone was detected at a concentration of 0.12 part per million (ppm), slightly above the UUSCO of 0.05 ppm in boring B-1. Boring B-2 exhibited benzene (0.69 ppm) and n-propylbenzene (4.2 ppm) at concentrations above the UUSCO. The UUSCOs for these compounds are 0.06 ppm and 3.9 ppm, respectively. Boring B-3 exhibited benzene (2 ppm), toluene (1.6 ppm), ethylbenzene (54 ppm), total xylenes (21.9 ppm), 1,3,5-trimethylbenzene (26 ppm), n-propylbenzene (33 ppm), n-butylbenzene (16 ppm) and naphthalene (33 ppm) at concentrations above the UUSCO. The UUSCO for these compounds are 0.06 ppm, 0.7 ppm, 1 ppm, 0.26 ppm, 8.4 ppm, 3.9 ppm and 12 ppm, respectively. Lead was detected in two of the borings B-1 and B-3 at concentrations above the UUSCO of 63 ppm, at 94.5 ppm and 199 ppm, respectively.

The unfiltered ground water sample collected from boring B-1 exhibited exceedances of the NYSDEC GWQS for benzene, isopropylbenzene, n-propylbenzene, methyl tertiary butyl ether (MTBE) and lead at 8 parts per

billion (ppb), 7 ppb, 14 ppb, 1,200 ppb and 2,300 ppb, respectively. The NYSDEC GWQS for these compounds are 0.7 ppb, 5 ppb, 5 ppb, 10 ppb and 25 ppb, respectively. The lead result for the filtered ground water sample was non-detect (ND).

Based on these findings, IVI concluded that the soil and ground water at the site had been impacted by a discharge from the USTs. Therefore, IVI subsequently notified the NYSDEC of the release and NY Spills #0108301 was assigned to the site. It should also be noted that this spill number is inclusive of the other tanks designated as AOC 2 (and discussed below) that were investigated during IVI's 2001 Phase II activities.

Subsequently, these nine (9) USTs were removed by TradeWinds Environmental Restoration, Inc. (TradeWinds) in February/March of 2003. The former USTs were encased in concrete. Slight contamination was reportedly identified around the USTs. TradeWinds reported the discharge on February 18, 2003 and the NYSDEC assigned case number 0211453 to the discharge. Following the assignment of case number 0211453 to the discharge from the tanks, the 8806403 case number that had been previously assigned to the tanks on October 31, 1998, due to a failed air pressure test, was closed and "rolled over" into the new 0211453 case number on March 4, 2003.

It should also be noted that case number 0211453 also covers the 4,000 gallon diesel UST (AOC 2) and the three (3) 550-gallon oil USTs (AOC 4) removed by TradeWinds in February/March 2003 and discussed herein.

The impacted soils around the nine (9) gasoline USTs were excavated and disposed by TradeWinds. All pumps and piping associated with these USTs were reportedly removed. No end point sampling was conducted by TradeWinds.

Additional testing was performed by Leggette, Brashears & Graham, Inc. (LB&G) in 2003. Specifically, LB&G installed six (6) soil borings (GP-7 to GP-9, and GP-16 to GP-18) in the vicinity of the former nine (9) 550-gallon gasoline USTs. Soil samples were collected from the interval demonstrating the highest photoionization detector (PID) reading. Specifically, samples were collected from GP-7 to GP-9 and GP-16 to GP-18 from 8-12' bsg, 4-8' bsg, 4-8' bsg, 3-4' bsg, 8-12' bsg and 4-8' bsg, respectively. The soil samples were analyzed for VOCs and semi-volatiles (SVOCs).

The analytical results for the soil samples revealed only one VOC exceedance of the UUSCO. GP-17 exhibited total xylenes at a concentration of 0.32 ppm; the

UUSCO for total xylenes is 0.26 ppm. GP-8 was the only sample to exhibited SVOCs in excess of the UUSCO. Specifically, GP-8 exhibited benzo(a)anthracene (1.2 ppm), benzo(a)pyrene (1.2 ppm), benzo(b)fluoranthene (1.4 ppm), benzo(k)fluoranthene (1.6 ppm) and chrysene (1.3 ppm). The UUSCO for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and chrysene is 1 ppm; the UUSCO for benzo(k)fluoranthene is 0.8 ppm.

Additionally, borings GP-7 to GP-9 were converted into 1" diameter PVC temporary well points (MW-7, MW-8 and MW-9, respectively) to allow for the collection of ground water samples. The temporary points were constructed with 10' of 0.020" slot size screen. The GP-7/MW-7 and GP-9/MW-9 temporary well points were installed to 16' bsg, and the GP-8/MW-8 temporary well point was installed to 17' bsg. Approximately two (2) weeks after the installation of the temporary well points, LB&G returned to the site to collect ground water samples from the points for VOC and SVOC analyses via the low-flow sampling method.

The analytical results for the ground water samples collected from GP-7/MW-7 and GP-8/MW-8 exhibited concentrations of VOCs slightly above the NYSDEC GWQS. Specifically, ground water sample GP-7/MW-7 exhibited a concentration of benzene above the NYSDEC GWQS of 0.7 ppb at 2.0 ppb, and ground water sample GP-8/MW-8 exhibited a concentration of MTBE above the NYSDEC GWQS of 10 ppb at 37 ppb. There were no other VOCs or SVOCs detected in the ground water samples collected by LB&G above the NYSDEC GWQS.

As detailed below in Section 5.11.1, one of the monitoring wells installed in February 2006 under ATC's supervision, MW-3, is located downgradient of AOC 1.

No SVOCs were detected above the NYSDEC GWQS in the ground water samples collected from this monitoring well. VOCs were detected in MW-3 above the NYSDEC GWQS. Specifically, MTBE was detected above the NYSDEC GWQS of 10 ppb MW-3 at 30 ppb. Benzene, toluene, ethylbenzene, m & p xylenes, and 1,2,4-trimethylbenzene were detected at 100 ppb, 7.4 ppb, 39 ppb, 14 ppb and 6.8 ppb, respectively. These concentrations exceed their respective NYSDEC GWQS of 1 ppb, 5 ppb, 5 ppb, 5 ppb and 5 ppb. The following metals were detected in MW-3 above the NYSDEC GWQS:

- Aluminum was detected above the NYSDEC GWQS of 0.1 ppb at 14.1 ppb;

- Arsenic was detected above the NYSDEC GWQS of 0.025 ppb at 0.175 ppb; and,
- Cadmium was detected above the NYSDEC GWQS of 0.005 ppb at 0.00893 ppb.

5.1.2 AOC 1 Conclusions and Proposed Actions

Elevated concentrations of SVOCs and lead were minimally detected in the samples obtained from this AOC. It is unknown if these elevated concentrations were related to the former UST systems or the Historic Fill Material.

The VOC analytical results for the soil samples collected by LB&G following the removal of the nine (9) gasoline USTs appear to indicate that the majority of the impacted soils associated with the former gasoline USTs were successfully mitigated during TradeWinds tank removal and excavation activities. However, sample point GP-17 exhibited total xylenes at a concentration above the UUSCO. Additionally, PID readings as high as 1,642 ppm and strong odors were identified in the borings installed within the vicinity of the former tanks. Therefore, soil borings will be installed within the former tank excavation area to confirm the analytical results of the soil samples collected by LB&G. These borings will also be utilized to evaluate the potential impact of the former refueling/trucking operations on the current site conditions, specifically potential impacts to the surface soils.

Four (4) soil borings will be advanced to approximately 12' bsg in the vicinity of LB&G's borings GP-8, GP-16, GP-17 and GP-18. Two samples will be collected from each boring and analyzed for VOCs, SVOCs and lead. The first sample will be collected from 0-2" bsg. The depth of the second sample will be determined by field observations:

- If PID readings above background are detected, the sample will be collected from the 6-inch interval demonstrating the highest PID reading.
- If no PID readings are detected above background levels, the sample will be collected from each boring from 0-6 inches above ground water.

Elevated concentrations of volatile organics and metals were detected in MW-3, which is located downgradient of this AOC. The elevated metals in MW-3 are similar to concentrations detected elsewhere in the site, and thus are believed to be attributed to the historic fill materials. The elevated concentrations of volatile organics may be attributable to the former gasoline USTs in AOC-1. As outlined below in Section 5.11.2 the installation of a monitoring well

downgradient of MW-3 has been proposed. Additionally, if the soil investigation activities proposed above reveal contaminant concentrations in the soils above the NYSDEC UUSCO, EWMA will install one additional monitoring well at the downgradient edge of this area. The well will be sampled pursuant to the parameters outlined in Section 5.11.2.

Additionally, soil vapor samples will be collected from four (4) locations at AOC 1 to evaluate the potential for future exposures since development of the site is planned. All sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (GESV),* as summarized in Section 6.0 of this report.

5.2 AOC 2 – Three (3) 550-Gallon Gasoline USTS, Reportedly Closed in Place in 1992, and One 4,000 Gallon Diesel UST Located NE of the Intersection of 151 Street and 6th Road

5.2.1 AOC 2 Prior Investigation Activities

According to IVI's 2001 Phase I Report, three (3) 550-gallon gasoline USTs, located southwest of the former asphalt plant office (the asphalt plant was located on the northwestern corner of the property), were reportedly closed in place in 1992. Further, IVI identified a 4,000-gallon diesel UST located at the northeastern corner of the intersection of 151st Street and 6th Road, near the 6th Road entrance to the property. According to IVI's Phase I Report, it did not appear that post closure soil sampling was conducted around the gasoline tanks and no documentation was available regarding the integrity of the gasoline or diesel USTs. Therefore, IVI conducted Phase II investigation activities in the vicinity of the tanks.

On October 29, 2001, IVI supervised the installation of four (4) soil borings (B-4 to B-7) in the vicinity of the gasoline and diesel tanks. Specifically, soil samples were collected from borings B-4 to B-7 from 6-7.5' bsg, 4-4.5' bsg, 6-7.5' bsg, and 3-4' bsg, respectively. The soil samples were analyzed for VOCs, SVOCs and lead.

The analytical results for the soil samples collected from borings B-4 and B-6 revealed no VOCs or SVOCs in either sample at concentrations above the UUSCO. The sample collected from B-4, however, exhibited lead at a concentration of 660 ppm; the UUSCO for lead is 63 ppm. The samples collected from B-5 and B-7 exhibited VOs and lead above the UUSCO. Lead was detected in B-5 at 482 ppm and in B-7 at 194 ppm. Acetone was detected

in samples B-5 and B-7 at concentrations of .12 ppm and .15 ppm, respectively. The UUSCO for acetone is .05 ppm. Sample B-7 also exhibited 2-butanone (.038 ppm) above the .12 ppm UUSCO. The sample collected from B-5 also exhibited several SVOCs above their respective UUSCO. Specifically, indeno(1,2,3-cd)pyrene (2.3 ppm), benzo(a)anthracene (3.4 ppm), chrysene (3.3 ppm), benzo(b)fluoranthene (3.6 ppm), benzo(k)fluoranthene (1.5 ppm), benzo(a)pyrene (3.4 ppm) and dibenzo(a,h)anthracene (1.1 ppm) were detected above their respective UUSCO. The UUSCO for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and chrysene is 1 ppm; the UUSCO for indeno(1,2,3-cd)pyrene is 0.5 ppm; the UUSCO for benzo(k)fluoranthene is 0.8 ppm; and the UUSCO for dibenzo(a,h)anthracene is 0.33 ppm.

Additionally, soil boring B-6 was converted into a 1" PVC temporary well point to allow for the collection of ground water samples. The ground water sample was analyzed for VOCs, SVOCs and lead (filtered and unfiltered).

The analytical results for the unfiltered ground water sample collected from B-6 exhibited concentrations of trichloroethylene (TCE) and lead at 1 ppb and 2,800 ppb, respectively. The NYSDEC for these compounds is 0.7 ppb and 25 ppb, respectively. The lead results for the filtered ground water sample were ND.

Based on these findings, IVI concluded that the soil and ground water at the site had been impacted by a discharge from the USTs. Therefore, IVI subsequently notified the NYSDEC of the release and NY Spills #0108301 was assigned to the discharge. It should also be noted that this spill number addressed the other tanks identified as AOC1 (and discussed above) that were also investigated during IVI's 2001 Phase II activities.

Subsequently, the diesel UST was removed by TradeWinds in February/March of 2003. The hand drawn sketch included in the TradeWinds report identifies the diesel fuel UST directly beneath the pump island. Contamination was reportedly identified adjacent to, and beneath, the UST.

TradeWinds reported the discharge on February 18, 2003 and the NYSDEC assigned case number 0211453 to the discharge. As previously discussed case number 0211453 also covers the nine (9) 550-gallon gasoline USTs (AOC 1) and the three (3) 550-gallon oil USTs (AOC 4) removed by TradeWinds in February/March 2003 and discussed herein.

The impacted soils adjacent to the 4,000-gallon diesel UST were excavated and disposed by TradeWinds. No end point sampling was conducted.

Therefore, additional testing was performed by LB&G in November 2003 in the vicinity of the former 4,000 gallon UST and the three (3) abandoned 550-gallon gasoline USTs. Specifically, LB&G installed five (5) borings (GP-10 and GP-19 to GP-22) to investigate the former diesel UST and abandoned gasoline USTs and the pump island. GP-10 was installed directly through the area of the former pump island/diesel UST location, and GP-19 to GP-22 were installed as delineation borings in each of the four (4) cardinal directions (north, south, east and west) away from GP-10. Soil samples were collected from GP-10, and GP-19 to GP-22 from the interval demonstrating the highest PID reading which was from 4-8' bsg, 8-9' bsg, 4-8' bsg, 4-8' bsg, and 4-8' bsg, respectively. The soil samples were analyzed for VOCs and SVOCs.

The analytical results for the soil samples revealed no VOCs or SVOCs in the soil above the UUSCO.

Additionally, GP-10 was converted into a 1" diameter PVC temporary well point (MW-10) to allow for the collection of ground water samples. The temporary point was installed to 17' bsg with 10' of 0.020" slot size screen. Approximately two (2) weeks after the installation of the temporary well point, LB&G returned to the site to collect ground water samples from the point for VOC and SVOC analyses via the low-flow sampling method.

Only MTBE was detected in the ground water sample above the NYSDEC GWQS of 10 ppb at 11 ppb.

5.2.2 AOC 2 Conclusions and Proposed Actions

Since the analytical results for the soil samples collected by LB&G did not exhibit any exceedances of the NYSDEC UUSCO, the impacted soils associated with the former diesel UST appear to have been successfully mitigated during TradeWinds' tank removal and excavation activities, and the operation of the gasoline USTs have not adversely impacted the subsurface soils, as there were no contaminants at concentrations above the NYSDEC UUSCO.

However, elevated PID readings as high as 174 ppm and odors were reportedly identified in the borings installed by LB&G and IVI within the vicinity of the former diesel UST and gasoline USTs (that were supposedly abandoned in place). Therefore, soil borings will be installed to facilitate the collection of soil samples from the area of the former diesel UST and gasoline USTs and pump island. These borings will also be utilized to evaluate the potential impact of

the former refueling/trucking operations on the current site conditions, specifically potential impacts to the surface soils.

Prior to installing the soil borings, a geophysical investigation will be conducted in the vicinity of the three (3) gasoline USTs, which were reportedly abandoned. If the presence of the USTs is confirmed, test pits will be installed to investigate any potential subsurface discharge from the gasoline USTs. Specifically, the test pits will be screened in 6-inch intervals with a PID. Two samples will be collected from each test pit and analyzed for VOCs, SVOCs and lead. The first sample will be obtained from 0-2" bsg. The depth of the second sample will be determined by field observations:

- If PID readings above background are detected, the sample will be collected from the 6-inch interval demonstrating the highest PID reading.
- If no PID readings are detected above background levels, the sample will be collected from each boring from 0-6 inches above ground water.

If the geophysical survey confirms that the gasoline USTs have been removed, EWMA will install soil borings within the area of the former gasoline USTs and the former 4,000-gallon diesel tank to confirm the analytical results of the soil samples collected by LB&G and IVI (if test pits are installed to evaluate the gasoline USTs, borings will still be installed to evaluate the former diesel UST).

Specifically, four (4) soil borings will be installed to approximately 12' bsg. The soils will be screened in 6-inch intervals with a PID. One sample will be collected from each boring and analyzed for VOCs, SVOCs and lead. The depth of the sample will be determined by field observations:

- If PID readings above background are detected, one sample will be collected from the 6-inch interval demonstrating the highest PID reading.
- If no PID readings are detected above background levels, one sample will be collected from each boring from 0-6 inches above ground water.

Further, since the elevated concentrations of MTBE and lead detected in the ground water samples collected from the temporary well points may be associated with the gasoline USTs, further investigation of ground water will be conducted once the disposition of the gasoline USTs is determined and any potential subsurface impacts to the soils are further investigated. Further investigation of ground water in this area is also warranted due to the detection of TCE in the ground water sample collected from the temporary well point installed at boring B-6. The ground water investigation activities are discussed in further detail in Section 5.11, AOC 11 – Ground Water.

Additionally, soil vapor samples will be collected from four locations at AOC 2 to evaluate the potential for future exposures since development of the site is planned. All sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (GESV)* as summarized in Section 6.0 of this report.

5.3 AOC 3 – One 3,000 Gallon Diesel UST and One Waste Oil UST Located Approximately 50' North of the Former Grace Repair Shop

5.3.1 AOC 3 Prior Investigation Activities

IVI's 2001 Phase I Report identified the presence of one 3,000-gallon diesel fuel UST and one waste oil UST located approximately 50' north of the former Grace Repair Shop. According to IVI's Phase I Report, no documentation was available regarding the integrity of the gasoline or diesel USTs. Therefore, IVI conducted a Phase II investigation of the diesel fuel and waste oil tanks in October of 2001.

On October 29, 2001, IVI supervised the installation of two (2) soil borings (B-8 and B-9) in the vicinity of the diesel and waste oil tanks. Additionally, soil boring B-8 was converted into a 1" PVC temporary well point to allow for the collection of ground water samples.

Specifically, soil samples were collected from borings B-8 and B-9 from 7-8' bsg and from 5-6' bsg, respectively. The soil samples from B-8 and B-9 were analyzed for VOCs and SVOCs. Additionally, the soil sample collected from boring B-8 was analyzed for metals. The ground water sample collected from the temporary well point installed at boring B-8 was analyzed for VOCs, SVOCs and metals (filtered and unfiltered).

The soil analytical results revealed no VOCs or SVOCs in excess of the UUSCO. The metal concentrations for B-8 also did not exceed the UUSCO.

No VOCs or SVOCs were detected at concentrations above the NYSDEC GWQS in the ground water samples collected by IVI from the temporary well point installed at boring location B-8. Lead, cadmium and chromium were present at concentrations above their respective NYSDEC GWQS of 25 ppb, 5 ppb and 66 ppb in the unfiltered samples, but were not detected in the filtered samples. The concentrations of lead, cadmium and chromium detected in the B-8

unfiltered ground water sample were 32.6 ppb, 11.2 ppb and 135 ppb, respectively.

Additional testing performed by LB&G in March of 2002 was also believed to correspond to the area of this former UST. Specifically, two (2) soil borings, B-7 and B-8, were installed adjacent to the diesel UST. Soil samples were collected from borings B-7 and B-8 from 7-10' bsg and 4-7' bsg, respectively. The soil samples were analyzed for VOCs and SVOCs.

The analytical results for the soil samples revealed no VOCs or SVOCs above the NYSDEC UUSCO.

Immediately after the completion of each of the two (2) borings, a decontaminated stainless-steel well screen was installed in the borehole to allow for the collection of ground water samples. The ground water samples were collected via polyethylene tubing and a peristaltic pump for VOC and SVOC analyses.

No SVOCs were detected in the ground water samples collected from this area. Toluene was detected above the NYSDEC GWQS of 5 ppb in both of the ground water samples, B-7 and B-8, at 7 ppb and 37 ppb, respectively.

Enviro-Comp Consultants, Inc. removed one 3,000 gallon diesel UST for Grace Industries, Inc. on April 29, 2002. This tank was reportedly located near the 152nd Street entrance. Based on the tank removal documentation included in the Tank Closure Report, dated May 23, 2002, this tank is believed to correspond to the diesel tank investigated by IVI in October of 2001. The tank was found to be bedded in concrete which extended above the mid point of the tank. The tank was partially buried in fill (tree trunks, bricks, concrete and other debris) to a depth of four feet below grade. A visual inspection of the tank upon its removal determined that it was structurally intact. No odors or staining were detected in the excavation except for a limited area of contamination in the vicinity of the former dispenser pipe. The contamination was limited to the top five feet of soil in the immediate vicinity of the dispenser connection. A total of 80 tons of soil were removed from the site and disposed. Two (2) end point samples were collected for VOC and SVOC analyses. The results did not exceed the NYSDEC UUSCO.

In December 2003, TRC conducted investigation activities at the site, including the area of the former diesel UST north of the Grace Shop building. Specifically, TRC supervised the installation of eight (8) soil borings (TRC-01, TRC-02, TRC-09, TRC-10, TRC-26, TRC-27, TRC-28 and TRC-29). Boring TRC-

09 was installed in the immediate vicinity of the former diesel UST; boring TRC-01 was installed to the southeast of the former diesel UST; borings TRC-10, and TRC-26 to TRC-28 were installed to the north of the former diesel UST;, boring TRC-29 was installed to the west of the former diesel UST; TRC-07 was installed to the south of the former diesel UST, inside the Grace Shop building and was used to investigate both the tank and the building; and, boring TRC-02 was installed to the east of the former diesel UST and used to investigate the tank and a former drum and equipment storage area.

Soil samples were not collected from borings TRC-26 and TRC-27 for analysis. Soil samples were collected from the remaining borings from the interval with the highest PID reading, which varied between 0 and 12' bsg. Specifically, the samples from TRC-01, TRC-02, TRC-09, TRC-28 and TRC-29 were collected from 1.5-2.5' bsg, 2-3' bsg, 10.5-12' bsg, 8.5-9.5' bsg, 0.5-1.5' bsg and 10-11' bsg, respectively. All of the samples were analyzed for VOCs and SVOCs. SVOCs were not detected above the UUSCO. VOCs were only detected above the UUSCO in the soil sample collected from TRC-01. Specifically, benzene was detected at a concentration of .094 ppm, above the UUSCO of 0.05 ppm.

Additionally, the samples collected from TRC-01 and TRC-02 were analyzed for metals and PCBs. PCBs and metals were not detected above the UUSCO.

Additionally, ground water samples were collected by TRC from borings TRC-01, TRC-10 and TRC-28 for VOC and SVOC analyses via temporary well points. Only the ground water sample collected from TRC-01 exhibited any contaminant concentrations above the NYSDEC GWQS. Specifically, MTBE was detected in the ground water sample collected from TRC-01 above the NYSDEC GWQS of 10 ppb at 140 ppb.

5.3.2 AOC 3 Conclusions and Proposed Actions

Additional investigation at TRC-01 is warranted to delineate the extent of the benzene impact. A minimum of five soil borings will be advanced to delineate the horizontal and vertical extent of the benzene impact. Samples will be collected from the 1.5-2.5' increment bsg for horizontal delineation purposes. Sampling for vertical delineation purposes will be conducted from discrete six-inch intervals, and will be field determined based upon visual observations and PID readings. The samples will be analyzed for VOCs.

Additionally, since the minimum detection limit (MDL) for the PCB analysis previously performed at location TRC-01 is not known, the interval previously evaluated for PCBs (1.5-2.5' bsg) will be resampled and analyzed for PCBs.

Six additional shallow borings will be installed to evaluate the potential impact of the former refueling/trucking operations on the current site conditions, specifically potential impacts to the surface soils. One sample will be obtained from the 0-2" increment at each location and analyzed for VOCs, SVOCs and lead.

Further investigation of the ground water is warranted following the investigation and abandonment or removal of the waste oil UST as discussed in the following paragraph. The ground water investigation activities are discussed in Section 5.11, AOC 11 – Ground Water.

The disposition of the waste oil UST is unknown. Therefore, EWMA proposes to conduct a geophysical investigation in the vicinity of the waste oil UST to determine its disposition. Test pits will be installed to confirm the presence of the UST if identified via the geophysical investigation. The UST will then be abandoned in place or removed, along with any impacted soils, as feasible.

Additionally, soil vapor samples will be collected from four (4) locations at AOC 2 to evaluate the potential for future exposures since development of the site is planned. All sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (GESV)* as summarized in Section 6.0 of this report.

5.4 AOC 4 – THREE (3) 550-GALLON OIL USTS

5.4.1 AOC 4 Prior Investigation Activities

IVI's 2001 Phase I Report identified the presence of three (3) 550-gallon oil USTs outside the northwest corner of the main building (i.e. the former Edenwald Contracting Company (ECC) Repair Shop). No documentation was available regarding the integrity of these USTs.

These USTs were removed by TradeWinds Environmental Restoration, Inc. in February/March of 2003. Some records indicate two of the tanks contained fuel oil and the third tank contained hydraulic oil; however, other records indicate one tank contained motor oil, one contained waste oil and one contained hydraulic oil. Contamination was reportedly identified around one of the USTs.

TradeWinds reported the discharge on February 18, 2003 and the NYSDEC assigned case number 0211453 to the discharge. As previously discussed case number 0211453 also covers the nine (9) 550-gallon gasoline USTs (AOC 1) and the 4,000 gallon diesel UST (AOC 2) removed by TradeWinds in February/March 2003 as discussed herein.

The impacted soils in the area of the one UST were excavated and disposed by TradeWinds. No end point sampling was conducted. No contamination was reportedly associated with the other two (2) USTs.

Therefore, additional testing was performed by LB&G in November 2003 in the vicinity of the three (3) 550-gallon oil USTs. Specifically, LB&G installed seven (7) borings (GP-5, GP-6 and GP-11 to GP-15) to investigate the former oil USTs. All of the borings were installed to a depth of 20' bsg, except for GP-13, which was installed to a depth of 14' bsg. Soil samples were collected from the interval demonstrating the highest PID reading. Specifically, samples were collected from the first four (4) feet of borings GP-5, GP-6, GP-11 and GP-13. Samples were collected from 4-8' bsg from borings GP-12, GP-14, and GP-15. The samples were analyzed for VOCs and SVOCs.

The analytical results for soil samples collected from the borings installed in the vicinity of the former USTs did not exhibit any VOCs or SVOCs above the NYSDEC UUSCO.

Additionally, borings GP-5 and GP-6 were converted into 1" diameter PVC temporary well points (MW-5 to MW-6) to allow for the collection of ground water samples. The temporary points were constructed with 10' of 0.020" slot size screen. Approximately two (2) weeks after the installation of the temporary well points, LB&G returned to the site to collect ground water samples from the point for VOC and SVOC analyses via the low-flow sampling method. These ground water samples did not exhibit any VOC or SVOC concentrations above the NYSDEC GWQS.

As detailed below in Section 5.11.1, one of the monitoring wells installed in February 2006 under ATC's supervision, MW-3, is located downgradient of AOC 4.

No SVOCs were detected above the NYSDEC GWQS in the ground water samples collected from this monitoring well. VOCs were detected in MW-3 above the NYSDEC GWQS. Specifically, MTBE was detected above the NYSDEC GWQS of 10 ppb MW-3 at 30 ppb. Benzene, toluene, ethylbenzene, m & p xylenes, and 1,2,4-trimethylbenzene were detected at 100 ppb, 7.4 ppb, 39

ppb, 14 ppb and 6.8 ppb, respectively. These concentrations exceed their respective NYSDEC GWQS of 1 ppb, 5 ppb, 5 ppb, 5 ppb and 5 ppb. The following metals were detected in MW-3 above the NYSDEC GWQS:

- Aluminum was detected above the NYSDEC GWQS of 0.1 ppb at 14.1 ppb;
- Arsenic was detected above the NYSDEC GWQS of 0.025 ppb at 0.175 ppb; and,
- Cadmium was detected above the NYSDEC GWQS of 0.005 ppb at 0.00893 ppb.

5.4.2 AOC 4 Conclusions and Proposed Actions

The ground water samples collected from temporary well points installed in the vicinity of the former USTs (GP-5/MW-5 and GP-6/MW-6) did not exhibit any VOC or SVOC concentrations above the NYSDEC GWQS. However, elevated concentrations of volatile organics and metals were detected in MW-3, which is located downgradient of this AOC.

The elevated metals in MW-3 are similar to concentrations detected elsewhere in the site, and thus are believed to be attributed to the historic fill materials. The elevated concentrations of volatile organics may be more attributable to the former gasoline USTs in AOC-1 than the former oil USTs in AOC4, especially since the soil results generated during the course of LB&G's investigation did not reveal any exceedances of the applicable soil standards.

However, since further investigation of the contamination in MW-3 is required, as outlined below in Section 5.11.2 the installation of a monitoring well downgradient of MW-3 has been proposed. The well will be sampled pursuant to the parameters outlined in Section 5.11.2.

5.5 AOC 5 – Two (2) 2,000-Gallon Diesel USTs

5.5.1 AOC 5 Prior Investigation Activities

A map included with the TradeWinds UST report documents the presence of these tanks. However, since the drawing is only a hand sketch of a portion of the site, the exact (former) location of these tanks is not known. The suspected location of these tanks is northwest of the Grace Building, between Buildings D and E. EWMA has not reviewed any information which indicates whether these tanks were removed.

According to a conversation between ATC and Ms. Kerry Foley of the NYSDEC, Ms. Foley indicated that Spill Case #0211453 also covers these USTs and that no investigation activities were performed in the vicinity of these USTs.

In 2003, TRC installed boring TRC-15 adjacent to one of the suspect diesel UST locations, located between Buildings D and E. A soil sample was collected from the interval demonstrating the highest PID reading, 3-4' bsg, for VOC and SVOC analyses. The analytical results revealed that no VOCs or SVOCs were detected above the UUSCO.

5.5.2 AOC 5 Conclusions and Proposed Actions

Since the disposition of the diesel USTs is unknown, EWMA proposes to conduct a geophysical survey in the area of suspected USTs near the Former Grace Building and between Buildings D and E. Subsequently, if the USTs are identified by the geophysical investigation, test pits will be installed to further investigate the presence of the potential USTs and the subsurface conditions surrounding the potential USTs. Any soil samples obtained from this area will be collected and submitted for full Target Compound List/Target Analyte List (TCL/TAL) analysis. In the event tanks are found to exist in this area, they will be registered and their removal will be addressed in a Remedial Action Workplan.

Additionally, if the soil investigation activities proposed for this AOC reveal contaminant concentrations in the soils above the NYSDEC UUSCO, EWMA will install up to two monitoring wells this area (i.e. in each of the two (2) suspect UST areas – north of Buildings B & E and northwest of the former Grace Shop, respectively), adjacent to the downgradient edge of the AOC. The well will be sampled pursuant to the parameters outlined in Section 5.11.2.

If the results of the soil and/or ground water sampling performed in this area are indicative of a release, soil vapor sampling will be performed pursuant to the procedures outlined in Section 6.0.

5.6 AOC 6 – SPILL NUMBER 9214054

5.6.1 AOC 6 Prior Investigation Activities

A spill was reportedly associated with poor housekeeping practices at the Anthony Grace repair shop. The "spill record" obtained from the NYSDEC Spill Incident Database indicates the material spilled was waste oil/used oil and the

spill date was March 23, 1993. The "region close date" on the spill record is May 30, 1993.

Testing conducted by LB&G in March of 2002 is believed to correspond to this former spill area. Specifically, LB&G installed soil borings B-11 to B-13 in the vicinity of the former spill area. Soil samples were collected from borings B-12 and B-13 from the interval demonstrating the highest PID reading. Soil samples collected from boring B-11 were not sent to the laboratory for analysis; however the report does not reference the reason these samples were not submitted for analysis. The samples collected from borings B-12 and B-13 were collected from 4-6' bsg and 4-7' bsg, respectively. The soil samples were analyzed for VOCs and SVOCs.

The analytical results revealed that no VOCs or SVOCs were detected at concentrations above the NYSDEC UUSCO.

Immediately after completion of boring B-13, ground water samples were collected by installing a decontaminated stainless-steel well screen in the borehole. The samples were then collected via polyethylene tubing connected to a peristaltic pump. The ground water samples were analyzed for VOCs and SVOCs.

No VOCs and SVOCs were detected in the ground water sample collected from location B-13 at concentrations above the NYSDEC GWQS.

5.6.2 AOC 6 Conclusions and Proposed Actions

EWMA proposes no further action for this AOC based on the following:

- A review of the NYSDEC Spill Incident Database indicates that the spill previously received closure from the NYSDEC; and
- The results of LB&G's investigation activities indicate that the soil and ground water has not been adversely impacted by the former spill.

5.7 AOC 7 – Possible Additional USTs

5.7.1 AOC 7 Prior Investigation Activities

The AOC summary included as an attachment to the BCP Application stated that prior environmental reports indicate that evidence existed which supported the presence of at least 19 USTs, 14 of which had been removed/closed. The discussion concluded that these USTs would further be

addressed in this RIW. Upon further review of the prior environmental reports, it appears that approximately 21 USTs have been identified at the site and 17 have been removed or closed in place.

The following table summarizes the 21 USTs identified at the site:

Summary of USTs at Site					
Tank #ID	**Contents**	**Capacity (gallons)**	**Location**	**AOC #**	**Status**
1	Gasoline	550	West Side of Main Building	1	Removed
2	Gasoline	550	West Side of Main Building	1	Removed
3	Gasoline	550	West Side of Main Building	1	Removed
4	Gasoline	550	West Side of Main Building	1	Removed
5	Gasoline	550	West Side of Main Building	1	Removed
6	Gasoline	550	West Side of Main Building	1	Removed
7	Gasoline	550	West Side of Main Building	1	Removed
8	Gasoline	550	West Side of Main Building	1	Removed
9	Gasoline	550	West Side of Main Building	1	Removed
10	Diesel Fuel	4,000	Entrance at 6th & 151st	2	Removed
11	Gasoline	550	Near Entrance at 6th & 151st/SW of Main Building	2	Abandoned in Place
12	Gasoline	550	Near Entrance at 6th & 151st/SW of Main Building	2	Abandoned in Place
13	Gasoline	550	Near Entrance at 6th & 151st/SW of Main Building	2	Abandoned in Place
14	Diesel Fuel	3,000	North of Grace Shop	3	Removed
15	Waste Oil	Unknown	North of Grace Shop	3	Unknown
16	Fuel Oil	550	NW Side of Main Building	4	Removed
17	Fuel Oil	550	NW Side of Main Building	4	Removed
18	Hyd. Oil	550	NW Side of Main Building	4	Removed
19	Diesel Fuel	2,000*	Between Building D & E	5	Unknown
20	Diesel Fuel	2,000*	NW Corner of Grace Shop	5	Unknown
21	Fuel Oil	Unknown	NE Corner of Grace Shop	7	Unknown

*Capacity as identified on TradeWinds hand drawn site sketch included in UST removal report.

As noted in the table, twenty (20) of these USTs were already addressed under previous AOCs discussed in this report. Therefore, the only remaining UST to address under AOC 7 is a potential fuel oil UST located off of the northeast corner of the former Grace Shop building.

Specifically, IVI's 2001 Phase I Report identified a suspect fuel oil UST located off of the northeast corner of the former Grace Shop building. This observation was based on the identification of cut feed and return lines protruding through

the concrete floor of the shop in the northeast corner. No additional investigation of this UST has been conducted to date.

5.7.2 AOC 7 Conclusions and Proposed Actions

EWMA proposes to conduct a geophysical survey in the area of the suspect UST, near the northeast corner of the Grace Shop building, to determine the disposition of this suspect UST. If the geophysical survey indicates the presence of a UST, test pits will be installed to confirm its presence and investigate the subsurface conditions surrounding the UST. In the event tanks are found to exist in this area, they will be registered and their removal will be addressed in a Remedial Action Workplan.

If the results of the soil and/or ground water sampling performed in this area are indicative of a release, soil vapor sampling will be performed pursuant to the procedures outlined in Section 6.0.

5.8 AOC 8 – Misc. Drums and Stained Surface Soils Throughout the Site

5.8.1 AOC 8 Prior Investigation Activities

During EWMA's July 21, 2005 and January 11, 2006 site inspections of the property, surface stained soils and drums were noted throughout the site. The staining is suspected to be attributed to petroleum related products. EWMA proposes to remove surface stained soils and dispose of them at a licensed facility. Additionally, the drums will be inspected to confirm their contents and will be removed and properly disposed of in accordance with all local, state and federal regulations.

Testing was conducted by LB&G in March of 2002 at stained areas in the southeast portion of the site adjacent to 55-gallon drum clusters. Specifically, borings B-1 to B-3 and B-6 were installed in this area. Soil samples were collected from the intervals demonstrating the highest PID reading. Specifically, samples were collected from 0-4' bsg from borings B-1 and B-2 and 4-7' bsg from boring B-3. Samples were not collected from boring B-6, due to refusal encountered at this location. The samples were analyzed for VOCs and SVOCs. The analytical results revealed that no VOCs or SVOCs were detected at concentrations above the NYSDEC UUSCO.

Additionally, ground water samples were collected from temporary well points installed at boring locations B-1 to B-3. The samples were analyzed for VOCs and SVOCs. No SVOCs were detected in the ground water samples collected

from this area. Toluene was the only VOC detected above the NYSDEC GWQS of 5 ppb. Toluene was detected in the ground water sample collected from location B-1 at a concentration of 12 ppb.

The elevated concentration of toluene detected in the ground water sample collected from the temporary well point is likely due to the former diesel UST (AOC 3) or potential waste oil UST (also AOC 3) located up gradient of the temporary well point. Therefore, no further action is proposed for the stained areas investigated by LB&G through the installation of borings B-1 to B-3 and B-6. The impacted ground water at the property is addressed under AOC 11 – Ground Water.

In 2003, TRC installed six (6) soil borings, TRC-02, TRC-03, TRC-8, TRC-11, TRC-12, and TRC-13, to evaluate soil conditions within former drum and equipment storage areas at the site. Specifically, TRC-02, TRC-03, TRC-12 and TRC-13 borings targeted former drum and equipments storage areas. As previously discussed under AOC 3, TRC-02 was also used to investigate AOC 3 as well. Borings TRC-08 appeared to target a heavy equipment storage area, and boring TRC-11 appeared to target a sump pit in the asphalt parking lot south of 6th Road

Soil samples were collected from the interval demonstrating the highest PID reading. Specifically, samples were collected from TRC-02, TRC-03, TRC-8, TRC-11, TRC-12 and TRC-13 from 2-3' bsg, 9-10' bsg, 11-12' bsg, 6-7' bsg, 9.5-10.5' bsg, and 3-4' bsg, respectively. The samples were analyzed for VOCs, and SVOCs. All samples except TRC-13 were analyzed for metals. TRC-03 and TRC-08 were also analyzed for PCBs.

No VOCs, SVOCs, metals or PCBs were detected at concentrations above the NYSDEC UUSCO.

Additionally, a ground water sample was collected via a temporary well point from borings TRC-08 and TRC-12 and analyzed for VOCs, SVOCs and metals. No contaminant concentrations were detected in the ground water samples above the NYSDEC GWQS.

5.8.2 AOC 8 Conclusions and Proposed Actions

Due to potential data gaps that exist in this area, as well as the need to evaluate potential exposure concerns, soil borings will be advanced at TRC boring locations TRC-02, TRC-03, TRC-08, TRC-11, TRC-12 and TRC-13 to the water table. One surface (0-2" bsg) soil sample will be collected from each

boring location and submitted for full TCL/TAL analysis. The sample analyzed for the volatile fraction of the TCL/TAL will be collected from 2-4" bsg. The entire soil column will be screened with a PID. A second sample will be collected from the 6-inch soil increment that exhibits the highest PID reading. If no elevated PID readings are detected, the sample will be collected from the 6-inch soil increment above the water table. The soil samples from this second increment will be submitted for full TCL/TAL analysis.

Additionally, since the MDL for the PCB analysis previously performed at locations TRC-02, TRC-03 and TRC-08 are not known, the intervals previously evaluated for PCBs will be resampled: 2-3' bsg at TRC-02; 9-10' bsg at TRC-03; and 11-12' bsg at TRC-08.

One ground water sample will also be collected from a temporary ground water sampling point installed at each boring location and submitted for full TCL/TAL analysis.

5.9 AOC 9 – Down Hill of Drum Cluster and Interior Floor Staining Outside NE Corner of the Former Grace Maintenance Building

5.9.1 AOC 9 Prior Investigation Activities

LB&G conducted testing in March of 2002 in the area down hill (west) of a drum cluster and staining at the northeast corner of the former Grace Shop building. Specifically, boring B-5 was installed to investigate this area. A soil sample was collected from the interval demonstrating the highest PID reading, 13-16' bsg. The sample was analyzed for VOCs and SVOCs. The analytical results revealed no VOCs or SVOCs at concentrations above the UUSCO.

Additionally, a ground water sample was collected from this boring location via a temporary well point. The samples were analyzed for VOCs and SVOCs. No VOCs or SVOCs were detected in the ground water sample above the NYSDEC GWQS.

5.9.2 AOC 9 Conclusions and Proposed Actions

Due to potential data gaps that exist in this area, as well as the need to evaluate potential exposure concerns, a soil boring will be advanced at LB&G boring location B-5 to the water table. One surface (0-2" bsg) soil sample will be collected from each boring location and submitted for full TCL/TAL analysis. The sample analyzed for the volatile fraction of the TCL/TAL will be collected from 2-4" bsg. The entire soil column will be screened with a PID. A second

sample will be collected from the 6-inch soil increment that exhibits the highest PID reading. If no elevated PID readings are detected, the sample will be collected from the 6-inch soil increment above the water table. The soil samples from this second increment will be submitted for full TCL/TAL analysis.

One ground water sample will also be collected from a temporary ground water sampling point installed at each boring location and submitted for full TCL/TAL analysis.

5.10 AOC 10 – FORMER ASPHALT PLANT

5.10.1 AOC 10 Prior Investigation Activities

LB&G conducted testing in the area north of the former asphalt plant in March of 2002. Borings B-9, B-10 and B-14 were installed in this area. Soil samples were collected from borings B-9 and B-10 from the interval demonstrating the highest PID reading, 4-7' bsg in each of the borings. Soil samples were not collected from boring B-14. The samples were analyzed for VOCs and SVOCs. The analytical results revealed no VOCs or SVOCs at concentrations above the NYSDEC UUSCO.

Additionally, a ground water sample was collected via a temporary well point installed at boring location B-10. The sample was analyzed for VOCs and SVOCs. No SVOCs were detected in the ground water sample collected from this point. Toluene was detected at a concentration above the NYSDEC GWQS of 5 ppb at 18 ppb.

Additional testing was performed north of the asphalt plant by LB&G in 2003. Specifically, LB&G supervised the installation of two (2) soil borings (GP-1 and GP-2) to the north of the asphalt plant, along the northern property boundary that borders the East River. These two (2) borings were installed in the suspected downgradient direction of ground water flow relative to the former asphalt plant (i.e. north of the asphalt plant). The GP-1 and GP-2 borings were installed to depths of 14' bsg and 20' bsg, respectively. Soil samples were collected from the interval demonstrating the highest PID reading, which was from 4-8' bsg and 8-12' bsg from borings GP-1 and GP-2, respectively. The samples were analyzed for VOCs and SVOCs. The soil samples collected from the two (2) borings (GP-1 and GP-2) did not exhibit any VOC or SVOC concentrations above the NYSDEC UUSCO.

Additionally, ground water samples were collected from the boring locations via 1" diameter PVC temporary well points (MW-1 and MW-2). GP-1 was constructed with 10' of 0.020" slot size screen. Due to an obstruction encountered at 7' bsg in the borehole at location GP-2/MW-2, the temporary well could only be set at 7' bsg and was constructed with 5' of screen. Approximately two (2) weeks after the installation of the temporary well points, LB&G returned to the site to collect ground water samples from the point for VOCs and SVOCs analyses via the low-flow sampling method.

The ground water sample collected from GP-1/MW-1 exhibited a benzene concentration above the NYSDEC GWQS of 1.0 ppb at 2.0 ppb, and the ground water sample collected from GP-2/MW-2 exhibited a MTBE concentration above the NYSDEC GWQS of 10.0 ppb at 34 ppb. There were no other VOC or SVOC contaminant concentrations detected above the NYSDEC GWQS in either of the temporary well points.

TRC completed additional investigation activities in this area following LB&G's investigation. TRC's investigation included the installation of one test pit (TP-01) and six (6) soil borings (TRC-20 to TRC-25). Soil samples were collected from the interval demonstrating the highest PID reading. Specifically, samples were collected from TP-01 from 5.5' bsg, from 6-7' bsg in borings TRC-21 and TRC-22 and from 7-8' bsg in boring TRC-24. Samples were not collected for analysis from borings TRC-20, TRC-23 and TRC-25. The sample from TP-01 was analyzed for VOCs, SVOCs, metals and PCBs. The samples collected from the borings (TRC-21, TRC-22 and TRC-24) were analyzed for VOCs and SVOCs.

VOCs, SVOCs, PCBs and metals were not detected at concentrations above the UUSCO.

Additionally, ground water samples were collected from TRC-21 and TRC-22 via temporary well points and analyzed for VOCs, SVOCs and metals. Naphthalene was detected above the NYSDEC GWQS of 10 ppb in TRC-21 at 430 ppb. No other VOCs were detected in either of the ground water samples above the NYSDEC GWQS. No SVOCs were detected in TRC-22 above the NYSDEC GWQS. The following SVOCs were detected in TRC-21 above the NYSDEC GWQS:

- Naphthalene was detected at 430 ppb, above the GWQS of 10 ppb (it should be noted that naphthalene was included in the analyte list for both the VOC and SVOC analysis);
- Acenaphthene was detected at 190 ppb, above the GWQS of 20 ppb;
- Phenanthrene was detected at 62 ppb, above the GWQS of 50 ppb;

- Fluoranthene was detected at 82 ppb, above the GWQS of 50 ppb;
- Pyrene was detected at 56 ppb, above the GWQS of 50 ppb;
- Benzo(a)anthracene was detected at 12 ppb, above the GWQS of 0.002 ppb;
- Chrysene was detected at 11 ppb, above the GWQS of 0.002 ppb;
- Benzo(b)fluoranthene was detected at 4 ppb, above the GWQS of 0.002 ppb;
- Benzo(k)fluoranthene was detected at 2.9 ppb, above the GWQS of 0.002 ppb; and,
- Indeno(1,2,3-cd)pyrene was detected at 1.6 ppb, above the (GWQS of 0.002 ppb).

Several metals were detected above the NYSDEC GWQS in both TRC-21 and TRC-22. The following metals were detected in the ground water samples collected from TRC-21 and TRC-22 above the NYSDEC GWQS:

- Antimony was detected above the GWQS of 3 ppb in TRC-22 at 11.4 ppb;
- Barium was detected above the GWQS of 1,000 ppb in TRC-22 at 1,250 ppb;
- Beryllium was detected above the GWQS of 3 ppb in TRC-22 at 7.8 ppb;
- Cadmium was detected above the GWQS of 5 ppb in TRC-22 at 29.6 ppb;
- Copper was detected above the GWQS of 200 ppb in TRC-22 at 728 ppb;
- Iron was detected above the GWQS of 300 ppb in TRC-21 and TRC-22 at 32,100 ppb and 222,000 ppb, respectively;
- Lead was detected above the GWQS of 25 ppb in TRC-21 and TRC-22 at 869 ppb and 1,050 ppb, respectively;
- Magnesium was detected above the GWQS of 35,000 ppb in TRC-22 at 102,000 ppb;
- Manganese was detected above the GWQS of 300 ppb in TRC-21 and TRC-22 at 501 ppb and 5,060 ppb, respectively;
- Mercury was detected above the GWQS of 1 ppb in TRC-21 at 5.3 ppb;
- Nickel was detected above the GWQS of 100 ppb in TRC-21 at 100 ppb;
- Sodium was detected above the GWQS of 20,000 ppb in TRC-21 and TRC-22 at 53,300 ppb and 105,000 ppb, respectively;
- Thallium was detected above the GWQS of 1 ppb in TRC-21 and TRC-22 at 20.2 ppb and 18.2 ppb, respectively; and,
- Zinc was detected above the GWQS of 2,000 ppb in TRC-22 at 2,060 ppb.

As detailed below in Section 5.11.1, one of the monitoring wells installed in February 2006 under ATC's supervision, MW-2, was located in the vicinity of the former asphalt plant. Sampling of this well revealed 0.02 feet of free product on the water table.

No SVOCs were detected above the NYSDEC GWQS in the ground water sample collected from this monitoring well. VOCs were detected in MW-2 above the NYSDEC GWQS. Specifically, MTBE was detected above the NYSDEC GWQS of 10 ppb in MW-2 at 12 ppb. The following metals were detected in MW-2 above the NYSDEC GWQS:

- Aluminum was detected above the NYSDEC GWQS of 0.1 ppb at 30.2 ppb;
- Arsenic was detected above the NYSDEC GWQS of 0.025 ppb at 0.13 ppb; and,
- Cadmium was detected above the NYSDEC GWQS of 0.005 ppb at 0.00806 ppb.

5.10.2 AOC 10 Conclusions and Proposed Actions

In order to further evaluate the potential impact of the former asphalt plant operations on the current site conditions, surface soil samples will be collected from within the entire footprint of the former asphalt plant for VOCs, MTBE, TAL metals and SVOCs at a rate of one surface soil sample per 900 square feet. Based on an estimate of the footprint of the former asphalt plant at approximately 10,000 square feet, EWMA proposes to collect eleven (11) surface soil samples from this area, each from a depth of 0-2" bsg. The approximate extent of the footprint of the former asphalt plant (based on a review of historic aerial photographs), along with the proposed surface soil sample locations, is depicted on **Figure 2A**.

Additionally, since the MDL for the PCB analysis previously performed at location TP-01 is not known, the interval previously evaluated for PCBs (5.25-5.75' bsg) will be resampled and analyzed for PCBs.

The elevated concentrations of toluene, benzene and MTBE detected in the ground water samples collected from the temporary well points and MW-2 is likely due to the former gasoline USTs (AOC 1) located up gradient of the temporary well points. Additionally, the elevated concentrations of SVOCs and metals detected in the ground water samples collected from the temporary well points is likely due to the historic fill material located at the property and the intrusion of sediment into the temporary points which skewed the sample

results artificially high. The source of the free product detected in MW-2 has not been determined at this time.

As outlined below in Section 5.11.2 a test pit investigation will be completed in the vicinity of MW-2 to investigate the source of the free product in each of these areas. The proposed test pit locations are depicted on **Figure 2A**. Subsequently, additional test pits or borings will be installed in the vicinity of the initial test pits to further delineate the product, if needed. Additionally, the installation of a monitoring well downgradient of MW-2 has also been proposed. The well will be sampled pursuant to the parameters outlined in Section 5.11.2.

Additionally, soil vapor samples will be collected from a minimum of six (6) locations at AOC 10 to evaluate the potential for future exposures since development of the site is planned. All sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (GESV)* as summarized in Section 6.0 of this report.

5.11 AOC 11 – GROUND WATER

5.11.1 AOC 11 Prior Investigation Activities

Preliminary investigation of the ground water beneath the subject site was conducted via the collection of samples from twenty-nine (29) temporary ground water points installed during prior investigation activities performed by IVI, LB&G, TRC and ATC. The ground water samples collected from these temporary points initially revealed that the ground water at the site had been impacted by VOCs, SVOCs and metals.

The temporary well points were installed to target specific AOCs identified at the site. The ground water results for the samples collected from these temporary well points are discussed within this report under the appropriate AOC headings. These samples are referenced in **Table 3** – Summary of Historic Ground Water Samples by AOC, along with the parameters they were analyzed for and the AOCs they targeted. **Figure 5** is a historic ground water sample location plan depicting the location of the temporary well points along with those results that exceed the NYSDEC GWQS.

Subsequently, six (6) monitoring wells were installed in February 2005 under ATC's supervision at various locations on the property to investigate ground water. These wells were also intended to target specific AOCs. **Table 3** –

Summary of Historic Ground Water Samples by AOC - lists the targeted AOC for each monitoring well. ATC then sampled MW-1 to MW-6 for VOCs, SVOCs, metals, chloride and total dissolved solids (TDS).

Free product (0.02 feet) was encountered in MW-2 and sheen was encountered in MW-4.

No SVOCs were detected above the NYSDEC GWQS in the ground water samples collected from all six (6) monitoring wells. VOCs were detected in MW-2 and MW-3 above the NYSDEC GWQS. Specifically, MTBE was detected above the NYSDEC GWQS of 10 ppb in MW-2 and MW-3 at 12 ppb and 30 ppb, respectively. Benzene, toluene, ethylbenzene, m & p xylenes, and 1,2,4-trimethylbenzene were detected at 100 ppb, 7.4 ppb, 39 ppb, 14 ppb and 6.8 ppb, respectively. These concentrations exceed their respective NYSDEC GWQS of 1 ppb, 5 ppb, 5 ppb, 5 ppb and 5 ppb.

The following metals were detected in MW-1 to MW-6 above the NYSDEC GWQS:

- Aluminum was detected above the NYSDEC GWQS of 0.1 ppb in MW-1 to MW-6 at 13 ppb, 30.2 ppb, 14.1 ppb, 68.4 ppb, 2.23 ppb and 112 ppb, respectively;
- Antimony was detected above the NYSDEC GWQS of 0.003 ppb in MW-1 and MW-4 at 0.105 ppb and 0.0151 ppb, respectively;
- Arsenic was detected above the NYSDEC GWQS of 0.025 ppb in MW-2 to MW-4 at 0.13 ppb, 0.175 ppb and 0.0374 ppb, respectively; and,
- Cadmium was detected above the NYSDEC GWQS of 0.005 ppb in MW-2 to MW-4 and MW-6 at 0.00806 ppb, 0.00893 ppb, 0.00634 ppb and 0.00782 ppb, respectively.

Additionally, chloride was detected above the NYSDEC GWQS of 250 ppb in MW-4 at 7,783 ppb, and total dissolved solids (TDS) were detected above the NYSDEC GWQS of 500 ppb in MW-1, MW-2 and MW-4 at 577 ppb, 503 ppb and 14,137 ppb, respectively. The significantly elevated concentrations of chloride and TDS detected in MW-4 suggest that the ground water in the vicinity of MW-4 is saline.

Figure 5 is a historic ground water sample location plan depicting the locations of MW-1 to MW-6 along with those results that exceed the NYSDEC GWQS.

5.11.2 AOC 11 Conclusions and Proposed Actions

The sampling of the ground water at the site via the temporary well points and six (6) permanent monitoring wells revealed the primary ground water impact to be VOCs and metals. The detected VOCs are indicative of petroleum products. The current data suggests that the VOC and lead contamination in ground water at the site is likely due to prior discharges; and, the SVOC and other metal contaminants detected in the ground water at the site is likely due to the historic fill material located at the property. However, additional monitoring points are required as the site has not been fully investigated.

Ground water at the site is expected to flow to the north toward the East River. However, due to the variability in the depth to ground water (i.e. over 6' during different sampling events) and the significantly elevated concentrations of chloride and TDS, in the vicinity of MW-4, the ground water at the site is suspected to be tidally influenced and may exhibit saline characteristics. Therefore, while the site is not located in either a ground water recharge or wellhead protection area, an interconnection between the ground water at the site and the adjacent East River can not be ruled out without further investigation.

During EWMA's site inspection of the property, several of the permanent monitoring wells installed by ATC were noted to be damaged or destroyed. Following the completion of the proposed investigation activities for the suspected UST areas, EWMA proposes to install monitoring wells to replace the damaged or destroyed ATC monitoring wells.

Additionally, EWMA proposes to install two (2) downgradient monitoring wells (MW-7 and MW-8) along the northern property boundary, one north of MW-2/AOC 10 (i.e. the former asphalt plant) and one north of the main building (i.e. MW-3/AOC 4). The proposed monitoring well locations are depicted on **Figure 2A**.

EWMA will collect ground water samples from the existing, replaced/repaired and proposed monitoring wells (MW-1 to MW-8) for VOCs, SVOCs and TAL metals.

Additionally, if the soil investigation activities proposed for AOC 1, AOC 2 and AOC 5 (as discussed in Sections 5.1, 5.2 and 5.5) reveal contaminant concentrations in the soils above the NYSDEC UUSCO, EWMA will install one monitoring well in each of those areas (in the case of AOC 5, in each of the two (2) suspect UST areas – north of Buildings B & E and northwest of the former

Grace Shop, respectively), adjacent to the downgradient edge of the AOC. Any additional wells that are installed will initially be sampled for VOCs, SVOCs and TAL metals.

Furthermore, the extent and nature of the product detected in MW-2 and MW-4 during ATC's sampling activities in 2005 will be investigated. Specifically, EWMA proposes to install a series four (4) test pits (one in each cardinal direction) in the areas of MW-2 and MW-4 to investigate the source of the product in each of these areas. The proposed test pit locations are depicted on **Figure 2A**. Subsequently, additional test pits or borings will be installed in the vicinity of the initial test pits to further delineate the product, if needed.

The supplemental investigation activities currently proposed by EWMA will be performed in strict accordance with the QA/QC requirements outlined in Section 2 of DER-10, as mandated under Section 3.7.2(a)1.

Once the nature and extent of the ground water contamination has been adequately investigated, an appropriate remedy will be selected. Since the preliminary ground water data is not indicative of gross contamination, monitored natural attenuation may be an appropriate remedy for this site. Therefore, the proposed ground water investigation will include an evaluation of the criteria outlined in Section 3.3(c)1 of DER-10.

If the results of the proposed supplemental investigation activities confirm that on-site ground water contamination extends to the adjacent East River, then additional sampling will be implemented in accordance with DER-10, 3.8.2(a)1-4. Specifically, surface water and sediment samples will be collected at locations upstream and downstream of the subject property, as well as at any point source discharges on the subject property. The sampling protocol will be designed to accommodate variations in regional hydrogeologic patterns and site-specific contaminant characteristics. Those samples would be analyzed for the contaminants of concern at the subject property; namely, VOCs, SVOCs and TAL metals. In addition, all sediment samples would also be analyzed for total organic carbon (TOC). Sampling of the East River, if warranted, is expected to be conducted concurrently as part of the Fish and Wildlife Assessment.

5.12 AOC 12 – HISTORIC FILL MATERIAL

5.12.1 AOC 12 Prior Investigation Activities

Based on a review of boring logs generated in conjunction with the past environmental work conducted at the site, and confirmed through the evaluation of land surface area changes exhibited by historic aerial photographs, fill material consisting of brown medium to fine sands, asphalt, gravel, cinder, concrete, brick fragments and wood fragments, generally exists to depths of approximately 2-5 feet bsg. However, fill materials have been detected to depths greater than 10 feet bsg at some historic boring locations.

Further, prior investigation activities have been conducted at the site to investigate background conditions and historic fill material. Specifically, in 2003, LB&G installed borings on the eastern portion of the site to investigate background conditions. Subsequently, in 2003, TRC conducted additional investigation activities on this portion of the property. The TRC activities included the installation of test pits to investigate geophysical anomalies identified by a geophysical survey conducted on the eastern portion of the property by Naeva in 2001. Also, TRC installed several borings throughout the property to further investigate background conditions. The following paragraphs discuss these activities in further detail.

In 2003, LB&G installed two (2) soil borings (GP-3 and GP-4) along the northern property boundary that borders the East River, on the eastern portion of the property. These two (2) borings were installed in the suspected downgradient direction of ground water flow at the property (i.e. south to north). The GP-3 and GP-4 borings were installed to depths of 13' bsg and 11' bsg, respectively. Soil samples were collected from the interval demonstrating the highest PID reading, which was from 4-8' bsg in each of the borings. The samples were analyzed for VOCs and SVOCs.

The soil samples collected from GP-3 and GP-4 did not exhibit any VOCs or SVOCs above the NYSDEC UUSCO.

Additionally, ground water samples were collected from boring locations GP-3 and GP-4 via 1" diameter PVC temporary well points (MW-3 and MW-4, respectively) installed to the boring termini (13' bsg and 11' bsg, respectively). Approximately two (2) weeks after the installation of the temporary well points, LB&G returned to the site to collect ground water samples from the points for VOC and SVOC analyses via the low-flow sampling method.

The ground water samples collected from GP-3/MW-3 and GP-4/MW-4 did not exhibit any VOCs or SVOCs above the NYSDEC GWQS. However, sheen was observed on MW-4.

In 2003, TRC installed twenty-one (21) test pits on the eastern portion of the property to further investigate twenty-one (21) anomalies identified by Naeva's geophysical survey in 2001. The results of the test pit investigation activities revealed that field evidence of contamination was identified at only two (2) of the anomalies (Anomaly 05 and Anomaly 20). The other nineteen (19) anomalies consisted of buried concrete with steel reinforcing bars, and no evidence of contamination was detected during the installation of the test pits. Therefore, there were no samples collected for laboratory analysis from these nineteen (19) test pits.

Anomaly 20 was determined to be a concrete structure suspected to be an underground storm water collection unit, and is addressed as such under AOC 14 – Underground Storm Water Collection Unit. During the installation of the test pit in the location of Anomaly-05, TRC encountered buried concrete that exhibited minor evidence of field contamination. Therefore, a soil sample was collected from the interval demonstrating the highest PID reading, and analyzed for VOCs, SVOCs and metals.

No VOC compounds were detected above the NYSDEC UUSCO. One SVOC compound, benzo(b)fluoranthene, was detected above the UUSCO of 1 ppm. The benzo(b)fluoranthene concentration at this location was 1.1 ppm. Additionally, lead was detected in the soil sample above the NYSDEC RSCO of 63 ppm at 125 ppm.

TRC also installed two (2) test pits (TP-3 and TP-4), and one soil boring (TRC-14), on the eastern portion of the property and three (3) soil borings (TRC-04, TRC-05 and TRC-06), beneath the main building on the property, to investigate these areas which had not previously been investigated. Soil samples were collected from the interval demonstrating the highest PID reading. Specifically, samples were collected from 4.9' bsg, 3.3' bsg and 2.5-3.5' bsg from test pits TP-3 and TP-4 and boring TRC-14, respectively. Soil samples were collected from the 6-7' bsg, 3-4' bsg and 4.5-5.5' bsg from borings TRC-04, TRC-05 and TRC-06, respectively. The samples were analyzed for VOCs, SVOCs and metals. The samples collected from TP-3, TP-4 and TRC-14 were also analyzed for PCBs.

No VOCs were detected above the NYSDEC UUSCO in any of the samples. Sample TP-04 was the only sample to exhibit SVOCs in excess of the UUSCO.

Benzo(a)anthracene and chrysene were detected in TP-4 at 1.6 ppm. Benzo(a)pyrene was in TP-4 at 1.4 ppm, and benzo(b)fluoranthene was detected in TP-4 at 1.8 ppm. The UUSCO for these four compounds is 1 ppm.

No metals were detected above the UUSCO in TRC-05 and TRC-14. Lead was detected above the UUSCO of 63 ppm in samples TP-3, TP-4 and TRC-04, at concentrations of 78.7 ppm, 119 ppm and 264 ppm, respectively. Mercury was detected above the UUSCO of .18 ppm in sample TRC-06 at a concentration of .19 ppm.

Additionally, SVOCs and metals were detected in the soil at AOCs 1 and 14 and ground water samples collected by LB&G and TRC from borings and temporary well points installed throughout the property to investigate other specific AOCs. These investigation activities are discussed in detail under the appropriate AOC headings within this report. The low concentrations of SVOCs and metals detected in these borings have been attributed to the historic fill material present throughout the site and not related to a specific discharge investigated under those AOCs.

5.12.2 AOC 12 Conclusions and Proposed Actions

A complete list of the historic soil samples collected at the property during prior investigation activities is included as **Table 1** – Historic Sample Summary Table. A complete list of the historic soil and ground water samples by AOC that were collected at the property during prior investigations is included as **Tables 2** and **3**, respectively. **Figure 3** depicts the historic sample locations at the property. **Figure 4** depicts the historic soil sample locations and contaminants detected above the NYSDEC RSCO at each of the borings installed during prior investigations. **Figure 5** depicts the historic ground water sample locations, along with those results that exceed the NYSDEC GWQS. For reference, the table below lists those samples collected by LB&G and TRC that were not targeted towards a specific AOC, but rather used to investigate the historic fill material present at the site, as discussed in Section 5.12.1 above:

Summary of Historic Fill Investigation Soil Samples					
Sample ID	**Soil Sample Interval**	**VOCs**	**SVOCs**	**Metals**	**PCBs**
GP-3/MW-3*	4-8'	X	X		
GP-4/MW-4*	4-8'	X	X		
TRC-04	6-7'	X	X	X	
TRC-05	3.4'	X	X	X	
TRC-06	4.5-5.5'	X	X	X	
TRC-14	2.5-3.5'	X	X	X	X
TP-03 (Test Pit)	4.9'	X	X	X	X
TP-04 (Test Pit)	3.3'	X	X	X	X
Anomaly-05 (Test Pit)	2'	X	X	X	X

*Ground water samples were also collected from these locations for VOC and SVOC analyses via PVC temporary well points installed to 14' bsg and 11' bsg at GP-3 and GP-4, respectively.

The concentrations of SVOCs and metals exhibited in those samples collected to investigate historic fill material at the site, as well as specific AOCs, are relatively low and are indicative of those concentrations typically associated with historic fill material in the New York City area and not specific discharges.

Based on a review of boring logs generated in conjunction with the past environmental work conducted at the site, fill material consisting of brown medium to fine sands, asphalt, gravel, cinder, concrete, brick fragments and wood fragments, generally exists to depths of approximately 2-5 feet bsg. However, fill materials have been detected to depths greater than 10 feet bsg at some historic boring locations.

ATC, in their report of February 25, 2005, stated that the NYSDEC case manager indicated the SVOCs and metals are attributed to historic fill. Although the NYSDEC UUSCO are exceeded in some instances, the detected concentrations are below the applicable USEPA Region III risk-based guidance levels for residential properties in most instances.

Additionally, EWMA's review of aerial photographs revealed that fill material was placed into the East River in the vicinity of the property; thus, extending the shoreline further to the north and increasing the usable land. The aerial photographs reviewed by EWMA are included in **Appendix 3**. A site plan depicting the extent of the historic fill material, based on EWMA's review of aerial photographs is included as **Figure 6**.

As required, the historic fill material will be further characterized during the soil and ground water investigation activities proposed for the other AOCs discussed in this report. Specifically, the soils encountered during the investigation activities will be visually examined and their characteristics recorded in a soil boring log. If historic fill material is encountered that varies significantly from the prior fill material encountered at the site, soil samples will be collected and analyzed as necessary to further characterize the historic fill material. Additionally, adjustments will be made to **Figure 6** if it is determined through the field investigation activities that the fill material extends beyond the limit depicted on **Figure 6**.

Due to potential data gaps that exist in this area, as well as the need to evaluate potential exposure concerns, one soil boring will be advanced at historic locations TP-03, B-6 and TRC-14 to the water table. One surface (0-2" bsg) soil sample will be collected from each boring location and submitted for full TCL/TAL analysis. The sample analyzed for the volatile fraction of the TCL/TAL will be collected from 2-4" bsg. The entire soil column will be screened with a PID. A second sample will be collected from the 6-inch soil increment that exhibits the highest PID reading. If no elevated PID readings are detected, the sample will be collected from the 6-inch soil increment above the water table. The soil samples from this second increment will be submitted for full TCL/TAL analysis.

Additionally, since the MDL for the PCB analysis previously performed at locations TP-03, TP-04 and TRC-14 are not known, the interval previously evaluated for PCBs will be resampled and analyzed for PCBs: 4.5-5.0' bsg at TP-03'; 3-3.5' bsg at TP-04; and 2.5-3.5' bsg at TRC-14.

Additionally, the installation of a monitoring well downgradient of MW-3 has also been proposed (Section 5.11.2). MW-4 will also be further evaluated via sampling to determine if the sheen is related to potential SVOC or VOC contamination. The well will be evaluated pursuant to the parameters outlined in Section 5.11.2.

5.13 AOC 13 – SUMP WITH UNKNOWN DISCHARGE

5.13.1 AOC 13 Prior Investigation Activities

EWMA identified two sump pits within the main building at the property during a site inspection of the property on July 21, 2005. Additionally, IVI's 2001 Phase I Report identified a floor sump with an unknown discharge located in the northwestern portion of the garage area of the main building. Although

this sump is not described in detail, the picture of the sump provided in IVI's Phase I Report appears to resemble a hydraulic truck lift.

5.13.2 AOC 13 Conclusions and Proposed Actions

EWMA proposes to re-inspect the "sump" to confirm the structure as either a sump or lift. If it is confirmed to be a sump, EWMA proposes to clean out the sump to allow for determination of the sump construction and conduct a dye test to determine the sump discharge location. Additionally, EWMA proposes to clean out and inspect the two sump pits identified during EWMA's site inspections. Subsequently, if the discharge locations of the sumps can not be readily determined, a dye test will be performed to determine the discharge locations of the sumps identified by EWMA.

A sample will be obtained (one per sump) from any material in the sumps and submitted for full TCL/TAL analysis. Additionally one soil sample will be collected from each discharge point (0-2") and submitted for full TCL/TAL analysis. The sample analyzed for the volatile fraction of the TCL/TAL will be collected from 2-4".

5.14 AOC 14 – UNDERGROUND STORM WATER COLLECTION UNIT

5.14.1 AOC 14 Prior Investigation Activities

A geophysical survey conducted at the site by Naeva Geophysics in June of 2002 reportedly identified the presence of a buried concrete structure located in the center of the north end of the site (Anomaly-20). The structure was identified as an underground storm water collection unit. The structure is located near former drum and equipment storage areas where evidence of petroleum staining was observed.

In 2003 TRC installed one test pit (Anomaly-20) and four (4) soil borings (TRC-16 to TRC-19) to investigate this area. Two (2) soil samples were collected from the test pit, one 2.5' from the southeast corner of the concrete structure and one 3' bsg from the south side of the concrete structure. Soil samples were collected from the soil borings from the interval demonstrating the highest PID reading. Soil samples were collected from soil boring TRC-16 from 2.5-3' bsg and from borings TRC-17 to TRC-19 from 3-4' bsg. The soil samples were analyzed for VOCs, SVOCs and metals.

No VOCs, SVOCs or metals were present at concentrations above the UUSCO in sample TR-17.

Three VOC compounds were detected at concentrations above the UUSCO. Benzene at .138 ppm and total xylenes at 1.03 ppm were detected in Anomaly-20 (2.5' depth). The UUSCO for these compounds are 0.06 ppm and 0.26 ppm, respectively. Acetone was detected in TRC-19 at a concentration of 0.061 ppm. The UUSCO for this compound is 0.05 ppm.

SVOCs were detected in two of the samples at concentrations above the UUSCO. Anomaly-20 (3') exhibited 1.1 ppm of benzo[a]anthracene, chrysene and benzo[a]pyrene and 1.4 ppm of benzo[b]fluoranthene. TRC-18 exhibited 4.6 ppm of benzo[a]anthracene, 4.4 ppm of chrysene, 5.2 ppm of benzo[b]fluoranthene, 2.6 ppm of benzo[k]fluoranthene, 4.1 ppm of benzo[a]pyrene and 0.95 ppm of indeno(1,2,3-cd)pyrene. The UUSCO for benzo[a]anthracene, chrysene, benzo[b]fluoranthene and benzo[a]pyrene is 1 ppm. The UUSCO for benzo[k]fluoranthene is 0.8 ppm, and the UUSCO for indeno(1,2,3-cd)pyrene is 0.5 ppm.

Lead was detected above the UUSCO of 63 ppm in Anomaly-20 (2.5'), Anomaly-20 (3'), TRC-16, TRC-18 and TRC-19 at concentrations of 72.1 ppm, 86.6 ppm, 94.8 ppm, 72.8 ppm and 96.7 ppm, respectively. Mercury was detected above the UUSCO of 0.18 ppm in Anomaly-20 (3') at a concentration of 0.28 ppm. Zinc was detected above the UUSCO of 109 ppm in TRC-16 at a concentration of 116 ppm.

Additionally, a ground water sample was collected from the test pit for VOC and SVOC analysis. The analytical results revealed that no VOCs or SVOCs were detected above the NYSDEC GWQS.

5.14.2 AOC 14 Conclusions and Proposed Actions

The elevated concentrations of SVOCs and metals appear to be related to the Historic Fill Material. However, the elevated concentrations of VOCs are not related to the Historic Fill Material.

EWMA proposes to install test pits in the area of Anomaly 20 to further determine the construction of, and confirm the purpose of, the buried concrete structure detected during TRC's test pit investigation activities.

Mitigation of the elevated VOC concentrations exhibited at sample locations Anomaly-20 (2.5') and TRC-19 will be addressed in a Remedial Action Workplan.

5.15 AOC 15 – Southeast Corner of the Property

According to the NYSDEC's November 3, 2006 letter, a high resolution photograph reviewed by the NYSDEC revealed an area in the extreme southeast corner of the property that is a potential area of concern. According to the NYSDEC's letter, the soil in this area appears to be darker than the surrounding soil. Based on this observation, and since prior investigation activities do not appear to have been conducted in this area, the NYSDEC required surface soil sampling and soil vapor sampling in this area.

The historic aerial photographs reviewed by EWMA do not appear to depict a darker area in the southeast corner of the property. The aerial photographs reviewed by EWMA (1951, 1962, 1966, 1977 and 1992) are included in **Appendix 3**. However, a high resolution photograph of the property reviewed by EWMA (between 1977 and 1992, exact year unknown) depicts what appears to be a large pile of asphalt millings in the southeast corner of the property. The high resolution photograph reviewed by EWMA that depicts the asphalt millings pile is included in **Appendix 4**.

5.15.1 AOC 15 Conclusions and Proposed Actions

Since the primary contaminants of concern typically associated with asphalt millings are semi volatile compounds, EWMA proposes to collect five (5) surface soil samples (0-2" bsg) for SVOC and TAL Metals analysis from the southeast corner of the property (AOC 15). Five (5) additional soil samples (2-4" bsg) will be collected from these same locations for VOC analysis. Once the samples are obtained, a test pit will then be installed at each sample location and advanced to ground water to characterize the subsurface environment. The excavated soils will be returned to the pit after the characterization activities area completed. The approximate extent of the asphalt milling pile and proposed surface soil sample locations are depicted on **Figure 2A**.

No soil vapor sampling is proposed at this time due to the identification of this area as an asphalt milling pile.

5.16 Miscellaneous Historic Use Concerns

Historic documents indicate that a shooting range & shop formerly occupied the property. While the exact location of this operation it is suspected to have occurred in the vicinity of the original building. Sampling specific to concerns associated with shooting ranges, specifically the impact of surface soils with lead have not been conducted.

5.16.1 Proposed Actions

Surface sampling for lead is proposed at AOCs 1, 2 and 10. Additional surface samples will be collected and analyzed for lead from the following locations:

- Four soil samples will be collected from 0-2" bsg between AOC 1 and AOC 2.
- Eight soil samples will be collected from 0-2" bsg between AOC 10 and AOC 14.

6.0 SOIL VAPOR SAMPLING PROTOCOL

The existing site structures will be demolished as part of the proposed site redevelopment and, as such, an evaluation of the potential for current on-site exposures, as they relate to existing building structures will not be performed.

Soil vapor sampling, however, is required to evaluate the potential for off-site exposures and the potential for future on-site exposures associated with the proposed development. Currently, it is anticipated that the proposed buildings will be of slab on-grade construction. Additionally, due to the location of a portion of the site within the 100-year floodplain, some of the proposed single family structures will be elevated above the ground surface.

Due to the uncertainty of the historic results (i.e. these results suggest that many areas of potential VO impact may have successfully been mitigated) the current site conditions are not well defined. Therefore, since ground water, soil and other information gathered during the proposed sampling program will be used to guide the investigation of the soil vapor intrusion pathway the exact location of the soil vapor sample locations cannot be determined at this time.

Any proposed soil vapor sample locations will be based on the location of proposed structures, as well as likely migration pathways and source areas. Once the soil and ground water sampling which is proposed herein has been completed, and the findings have been compared to the proposed development plans, the soil vapor sampling locations can be finalized. At a minimum, EWMA anticipates the collection of soil vapor samples along the eastern, southern and western perimeters of the property and in the vicinity of AOCs 1, 2, 3, 10, MW-2 and MW-4.

It is anticipated that all proposed locations will be reviewed and approved by the New York State Department of Health (NYSDOH) prior to the implementation of the sampling program.

All sampling will be conducted in accordance with the NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (GESV).*

- Temporary soil vapor probes will be installed to facilitate the collection of soil vapor samples. Temporary probes will be installed due to the high traffic nature of the site (i.e. there is a high probability that permanent or semi-permanent probes will be subject to damage shortly after installation) and due to the suspected tidal influence on the ground water beneath the site.
- The probes will be installed to a depth comparable to the expected depth of the foundation footings or one foot above ground water (whichever is shallower).
- Measures will be taken to ensure that an adequate surface seal is used at every sampling location (i.e. a tracer gas will be utilized in accordance with the protocols outlined in Section 2.7.5 of the DOH *GESV*).
- The probes will be left in the ground overnight and the samples will be collected twenty-four (24) hours after installation of each temporary probe.
- Three implant volumes (i.e. the volume of the sample probe and tube) will be purged prior to collecting the samples.
- The flow rate for purging and sample collection shall not exceed 0.2 liters/min.
- The samples will be collected utilizing Summa canisters and analyzed via EPA Method TO-15.
- Volatile chemicals utilized during normal operations of the facility shall be identified.
- An outdoor sketch shall be constructed depicting the site, area streets, neighboring commercial or industrial facilities (with estimated distance to the site), sampling locations and compass orientation.
- Weather conditions shall be noted for the past 24 – 48 hours.
- Any pertinent observations shall be recorded (i.e. odors, readings from field instruments, etc.).
- The field sampling team shall maintain a sample log sheet summarizing the following:
    a. Sample identification,
    b. Date and time of sample collection,
    c. Sampling depth,
    d. Identify of samplers,

e. Sampling methods and devices,
f. Purge volumes
g. Volume of soil vapor extracted
h. The canister vacuum pressure before and after the samples are collected,
i. Apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
j. Chain of custody protocols and records used to track samples from sampling point to analysis.

- The appropriate QA/QC procedures as outlined in Section 2.8 of the DOH *GESV* will be followed during all aspects of sample collection and analysis.

A schematic of the soil vapor sampling point, including installation instructions in included in **Appendix 5**.

7.0 DATA USABILITY SUMMARY REPORT (DUSR)

A Data Usability Summary Report (DUSR) for the samples collected during the prior investigation activities conducted at the site, as discussed in Section 5.0, is included as **Appendix 6** to this workplan.

8.0 HUMAN EXPOSURE ASSESSMENT

A Human Exposure Assessment for the proposed activities in this workplan, as discussed in Section 5.0, is included as **Appendix 7**.

9.0 FISH & WILDLIFE IMPACT ANALYSIS WORKPLAN

A Fish and Wildlife Impact Analysis Workplan for the property is included as **Appendix 8**.

10.0 COMMUNITY AIR MONITORING PLAN (CAMP)

A Community Air Monitoring Plan (CAMP) for the proposed activities in this workplan, as discussed in Section 5.0, is included as **Appendix 9**.

11.0 FIELD ACTIVITIES PLAN

11.1 PROPOSED SAMPLING & ANALYSIS SUMMARY TABLE

The specific sample designations and analytical parameters that are proposed herein are summarized on **Table 5**. Additional samples beyond those included

in **Table 5** may be obtained if field conditions/observations necessitate the need for additional sampling.

11.2 PROPOSED MONITORING WELL, SOIL BORING AND TEST PIT LOCATIONS

The monitoring wells, soil borings and test pits will be installed as proposed in Section 5.0 (see **Figure 2A**).

12.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN

The Quality Assurance Project Plan (QAPP) document for the activities proposed in this work plan is included in **Appendix 10**.

13.0 HEALTH AND SAFETY PLAN

The Health and Safety Plan (HASP) for the activities proposed in this work plan is included in **Appendix 11**.

14.0 SCHEDULE OF REPORTS AND ACTIVITIES

The detailed schedule of all remedial investigation activities proposed in this work plan is included as **Table 4**, Schedule of Implementation.

14.1 PRINCIPAL PERSONNEL

The Remedial Investigation (RI) activities proposed within this work plan will be implemented upon approval by the NYDEC and under the supervision of personnel identified in the table on the following page. The table identifies the primary personnel connected with implementing the work plan and describes their responsibilities. The list is subject to change. The site-specific Health and Safety Plan (HASP) lists the actual EWMA representatives that supervise the implementation of the tasks.

Personnel	Affiliation	Responsibilities
Liz Davis	Environmental Waste Management Associates, LLC 51-A Everett Drive West Windsor, New Jersey 08550 609-799-7300 x107 609-799-0108-fax	• Senior Project Manager (SPM). • Provides overall directions from the office upon consultation with the SM.
Scott Bisbort	Environmental Waste Management Associates, LLC 51-A Everett Drive West Windsor, New Jersey 08550 609-799-7300 x147 609-799-0108-fax	• Site Manager (SM); reports to SPM. • Supervises all on-site activities in connection with the work plan. • Assures adherence with the technical requirements of the work plan. • Primary contact for on-site H&S emergencies. • Primary contact concerning activities, field personnel, contact with the SPM and public inquiries.
Justin Piegaro	Environmental Waste Management Associates, LLC 51-A Everett Drive West Windsor, New Jersey 08550 609-799-7300 x141 609-799-0108-fax	• Site Safety Manager (SSM); reports to SM. • Assures adherence with the HASP of the work plan. • Assists in ensuring adherence with the QA/QC procedures of the work plan. • Has authority in stopping work per SM approval when H&S concerns arise.
Shawn Tibbetts	ZEBRA Environmental Corp. 30 No. Prospect Avenue Lynbrook, New York 11563 516- 596-6300 516- 596-4422-fax	• Consults with the SM for activities. • Supervises personnel associated with Contractor Name. • Coordinates activities under the direction of the SM.

15.0 CITIZEN PARTICIPATION ACTIVITIES

Volunteer, NYSDEC, and NYSDOH are committed to keeping the public informed and involved throughout the process of investigating and remediating the site. All citizen participation activities will be conducted in accordance with ECL §27-1417 of the New York State Environmental Conservation Law. Numerous Citizen Participation activities occur throughout the timeline of the project.

An outline of these activities and associated milestones are listed below:

Milestone	Activity
Completed Application	• 30-day comment period was conducted between December 19, 2005 and January 18, 2006. • Citizen Participation Plan, including contact list and document repository submitted to DEC 7/28/06. • Notice of Applicant's request to participate in the BCP was submitted to the site contact list via a NYSDEC approved Notice.
Before Remedial Investigation Work Plan is Finalized	• 30-day comment period. • Notice of Fact Sheet describing Plan.
Before Proposed Remedial Investigation Report is Approved	• 45-day comment period (if No Action or No Further Action). • Notice and Fact Sheet describing the RI Report.
Before Proposed Remedial Action Work Plan is Finalized	• 45-day comment period. • Notice and Fact Sheet describing Plan. • Public Meeting, if required.
Before Construction	• Notice and Fact Sheet to announce construction.
Before Final Engineering Report is Approved	• Notice and Fact Sheet describing the Report.
Certificate of Completion	• Notice and Fact Sheet describing controls within 10 days of issuance of certificate.

Individuals and groups included in the contact list will receive all mailings. The list will be updated as needed. All project documents will be available in the document repository on or before the first day of the comment period.

Table 2A: IVI 2001 Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	B-1 (IVI)	B-2 (IVI)	B-3 (IVI)	B-4 (IVI)	B-5 (IVI)	B-6 (IVI)	B-7 (IVI)	B-8 (IVI)	B-9 (IVI)
Depth (ft bsg):		6-7'	6.5-7.5'	6.5-7.5'	6-7.5'	4-4.5'	6-7.5'	3-4'	7-8'	5-6'
Volatiles (ppm)										
benzene	**0.06**	ND	0.69	2	ND	ND	ND	0.005	NA	NA
toluene	**0.7**	ND	0.081	1.6	ND	ND	ND	ND	NA	NA
ethylbenzene	**1**	0.009	0.62	54	0.067	ND	ND	0.002	NA	NA
Xylene (mixed)	**0.26**	0.056	0.71	21.9	0.144	ND	ND	0.003	NA	NA
1,2,4-trimethylbenzene	**3.6**	0.021	0.093	ND	0.11	ND	ND	0.004	NA	NA
1,3,5-trimethylbenzene	**8.4**	ND	0.087	26	0.1	ND	ND	0.003	NA	NA
isopropylbenzene	**NS**	0.33	2.3	10	0.51	ND	ND	ND	NA	NA
n-propylbenzene	**3.9**	0.75	4.2	33	0.94	ND	ND	ND	NA	NA
sec-butylbenzene	**11**	0.2	2.1	4.6	1.2	0.002	ND	ND	NA	NA
n-butylbenzene	**12**	0.34	3.6	16	1.6	ND	ND	ND	NA	NA
p-Isopropyltoluene	**NS**	ND	0.11	2.8	ND	ND	ND	ND	NA	NA
naphthalene	**12**	ND	ND	33	ND	ND	ND	ND	NA	NA
acetone	**0.05**	0.12	0.0059	ND	ND	0.12	0.051	0.15	NA	NA
2-butanone	**0.12**	ND	ND	ND	ND	ND	ND	0.038	NA	NA
Semivolatiles (ppm)										
indeno(1,2,3-cd)pyrene	**0.5**	NA	NA	NA	ND	2.3	ND	0.14	ND	ND
naphthalene	**12**	NA	NA	NA	ND	0.11	ND	ND	ND	ND
2-methylnaphthalene	**36.4^**	NA	NA	NA	33	0.17	ND	ND	24	23
dibenzofuran	**6.2^**	NA	NA	NA	3.1	0.24	ND	ND	3.2	2.6
flourene	**30**	NA	NA	NA	12	0.6	ND	ND	7.9	4.8
pyrene	**100**	NA	NA	NA	2.1	6.2	ND	0.46	1.4	1.1
phenanthrene	**100**	NA	NA	NA	18	4.9	ND	0.2	15	8.3
di-n-octylphthalate	**50^**	NA	NA	NA	ND	ND	ND	ND	ND	0.057
flouranthene	**100**	NA	NA	NA	1.6	6	ND	0.42	0.46	0.47
benzo[a]anthracene	**1**	NA	NA	NA	ND	3.4	ND	0.2	ND	ND
chrysene	**1**	NA	NA	NA	0.49	3.3	ND	0.27	ND	ND
benzo[b]fluoranthene	**1**	NA	NA	NA	ND	3.6	ND	0.19	ND	ND
benzo[k]fluoranthene	**0.8**	NA	NA	NA	ND	1.5	ND	0.23	ND	ND
benzo[a]pyrene	**1**	NA	NA	NA	ND	3.4	0.079	0.22	ND	ND
benzo[g,h,i]perylene	**100**	NA	NA	NA	ND	2.4	ND	0.15	ND	ND
dibenzo[a,h]anthracene	**0.33**	NA	NA	NA	ND	1.1	ND	0.078	ND	ND
acenaphthene	**20**	NA	NA	NA	5.4	0.73	ND	ND	4	1.6
anthracene	**100**	NA	NA	NA	1.2	1.5	ND	0.044	1.3	1.1
N-nitrosodiphenylamine	**NS**	NA	NA	NA	16	ND	ND	ND	10	5.6
Metals (ppm)										
Lead	**63**	94.5	49.6	199	660	482	33.9	194	ND	NA
Arsenic	**13**	NA	NA	NA	NA	NA	NA	NA	1.57	NA
Cadmium	**2.5**	NA	NA	NA	NA	NA	NA	NA	2.45	NA
Chromium, trivalent*	**30**	NA	NA	NA	NA	NA	NA	NA	15.6*	NA
Chromium, hexavalent	**1**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	**50**	NA	NA	NA	NA	NA	NA	NA	9.59	NA
Nickel	**30**	NA	NA	NA	NA	NA	NA	NA	17.7	NA
Zinc	**109**	NA	NA	NA	NA	NA	NA	NA	19.1	NA

Notes:

1. Most, if not all, of IVI sample locations are believed to have been excavated in conjunction with UST removal activities.
2. Shaded concentration exceeds the NYSDEC UUSCO.
3. ND = Not detected above method detection limit
4. ppm = Parts per million
5. NA = Not analyzed
6. NS = No standard (part 375 or TAGM 4046)

^ = As directed by the DEC, for those compounds that do not have a cleanup objective set by part 375, the TAGM 4046 standard was used.

* = Assumes reported total chromium concentration consists entirely of trivalent chromium. RIWP proposes analysis of samples for hexavalent and trivalent chromium to confirm this.

Table 2B: LBG 2002 Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	B-1 (LBG)	B-2 (LBG)	B-3 (LBG)	B-5 (LBG)	B-7 (LBG)	B-8 (LBG)	B-9 (LBG)	B-10 (LBG)	B-12 (LBG)	B-13 (LBG)
Depth (ft bsg):		0-4'	0-4'	4-7'	13-16'	7-10'	4-7'	4-7'	4-7'	4-6'	4-7'
Volatiles (ppm)											
ethylbenzene	1	ND	ND	ND	ND	ND	0.012	ND	ND	ND	ND
1,2,4-trimethylbenzene	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-trimethylbenzene	8.4	0.03	ND	ND	ND	0.007	ND	ND	ND	ND	ND
isopropylbenzene	NS	ND	ND	ND	ND	ND	0.18	ND	ND	ND	ND
naphthalene	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-butylbenzene	NS	0.013	ND	ND	ND	ND	0.12	ND	ND	ND	ND
n-propylbenzene	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (mixed)	0.26	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	NS	0.008	ND	ND	ND	ND	0.01	ND	ND	ND	ND
sec-butylbenzene	11	ND	ND	ND	ND	ND	0.091	ND	ND	ND	ND
tert-butylbenzene	5.9	ND	ND	ND	ND	ND	0.014	ND	ND	ND	ND
toluene	0.7	ND	ND	ND	ND	ND	0.03	ND	ND	ND	ND
tetrachloroethylene	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semilvolatiles (ppm)											
phenanthrene	100	0.67	ND	ND	ND	ND	1.2	0.86	1.3	ND	ND
flourene	30	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND
flouranthene	100	ND	ND	ND	ND	ND	ND	0.83	1.2	ND	ND
bis (2-ethylhexyl) phthalate	50^	ND	ND	ND	ND	ND	0.42	ND	ND	ND	ND
pyrene	100	ND	ND	ND	ND	ND	ND	0.76	1.1	ND	ND
2-methylnaphthalene	36.4^	ND	ND	ND	ND	ND	ND	ND	0.66	ND	ND
chrysene	1	ND	ND	ND	ND	ND	ND	ND	0.82	ND	ND

Notes:

Borings were also advanced at locations B-4, B-6, B-11 and B-14; however no samples were obtained from these borings for analysis.

1. Shaded concentration exceeds the NYSDEC UUSCO
2. ND = Not detected above method detection limit
3. ppm = Parts per million
4. NS = No standard (part 375 or TAGM 4046)

^ = As directed by the DEC, for those compounds that do not have a cleanup objective set by part 375, the TAGM 4046 standard was used.

Table 2C: Enviro Comp 2002 Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	Tank Endpoint #1-N	Tank Endpoint #2-S
Depth (ft bsg):		unknown	unknown
Volatiles (ppm)			
MTBE	**0.93**	ND	ND
benzene	**0.06**	ND	ND
n-butylbenzene	**12**	ND	ND
sec-butylbenzene	**11**	ND	ND
tert-butylbenzene	**5.9**	ND	ND
isopropylbenzene	**NS**	ND	ND
p-Isopropyltoluene	**NS**	ND	ND
n-propylbenzene	**3.9**	ND	ND
ethylbenzene	**1**	ND	ND
naphthalene	**12**	ND	ND
toluene	**0.7**	ND	ND
1,2,4-trimethylbenzene	**3.6**	ND	ND
1,3,5-trimethylbenzene	**8.4**	ND	ND
Xylene (mixed)	**0.26**	ND	ND
Semivolatiles (ppm)			
naphthalene	**12**	ND	ND
anthracene	**100**	ND	0.053
flourene	**30**	0.043	ND
phenanthrene	**100**	0.12	0.35
pyrene	**100**	ND	0.31
acenaphthene	**20**	ND	ND
benzo[a]anthracene	**1**	ND	0.138
flouranthene	**100**	ND	0.368
benzo[b]fluoranthene	**1**	ND	0.166
benzo[k]fluoranthene	**0.8**	ND	0.139
chrysene	**1**	ND	0.235
benzo[a]pyrene	**1**	ND	0.11
benzo[g,h,i]perylene	**100**	ND	0.106
indeno(1,2,3-cd)pyrene	**0.5**	ND	0.1
dibenzo[a,h]anthracene	**0.33**	ND	ND

Notes:

1. Shaded concentration exceeds the NYSDEC UUSCO.
2. ND = Not detected above method detection limit
3. ppm = Parts per million
4. NS = No standard (part 375 or TAGM 4046)

^ = As directed by the DEC, for those compounds that do not have a cleanup objective set by part 375, the TAGM 4046 standard was used.

Table 2D: LBG 2003 Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7	GP-8	GP-9	GP-10	GP-11	GP-12	GP-13	GP-14	GP-15	GP-16	GP-17	GP-18	GP-19	GP-20	GP-21
Depth (ft bsg):		4-8'	8-12'	4-8'	4-8'	0-4'	0-4'	8-12'	4-8'	8-10'	4-8'	1-4'	4-8'	1-4'	4-8'	4-8'	3-4'	8-12'	4-8'	8-9'	4-8'	4-8'
Volatiles (ppm)																						
benzene	**0.06**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	**0.7**	0.008	ND	ND	ND	ND	0.007	ND	0.013	0.12	0.013	0.01	ND	0.006	0.008	0.006	0.036	0.16	0.29	0.006	ND	0.023
ethylbenzene	**1**	ND	ND	ND	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	0.36	0.19	ND	ND	0.021
Xylenes (mixed)	**0.26**	ND	ND	ND	ND	ND	ND	ND	0.017	0.227	ND	ND	ND	ND	ND	ND	0.059	0.32	0.12	ND	ND	0.164
1,2,4-trimethylbenzene	**3.6**	ND	ND	ND	ND	ND	0.008	ND	0.32	0.23	0.15	ND	0.12	ND	ND	ND	ND	0.38	ND	0.16	ND	0.33
1,3,5-trimethylbenzene	**8.4**	ND	ND	ND	ND	ND	ND	ND	ND	0.094	0.01	0.008	ND	ND	ND	ND	ND	0.99	ND	ND	ND	0.1
isopropylbenzene	**NS**	0.032	ND	ND	ND	ND	ND	ND	0.079	0.47	0.051	ND	0.41	ND	ND	ND	0.05	0.22	0.23	0.019	ND	0.014
n-propylbenzene	**3.9**	0.018	ND	ND	ND	ND	ND	ND	0.15	1.1	0.061	ND	0.92	ND	ND	ND	0.15	0.72	0.39	0.039	ND	0.032
tert-butylbenzene	**5.9**	ND	ND	ND	ND	ND	ND	ND	0.025	0.18	0.02	ND	0.11	ND	ND	ND	ND	ND	0.18	0.009	ND	ND
sec-butylbenzene	**11**	0.017	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	0.14	0.008	ND	ND	0.1	ND	0.99	ND	ND	0.029
n-butylbenzene	**12**	0.021	ND	ND	ND	ND	0.006	ND	0.24	1.3	0.3	ND	1.7	0.01	ND	ND	0.16	1.1	0.98	0.16	ND	0.078
p-Isopropyltoluene	**NS**	1.2	ND	ND	ND	ND	ND	ND	0.008	0.052	0.091	ND	1.2	ND	ND	ND	ND	0.26	0.32	0.034	ND	0.021
naphthalene	**12**	0.057	ND	ND	ND	ND	ND	ND	0.071	0.36	0.077	0.15	0.37	0.011	ND	ND	0.058	0.62	0.33	0.044	0.006	0.3
MTBE	**0.93**	ND	ND	ND	ND	ND	ND	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semivolatiles (ppm)																						
acenaphthene	**20**	0.91	ND	ND	ND	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND	0.81	ND	ND
anthracene	**100**	ND	ND	ND	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[a]anthracene	**1**	ND	ND	ND	0.84	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[a]pyrene	**1**	ND	ND	ND	0.61	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[b]fluoranthene	**1**	ND	ND	ND	0.59	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[g,h,i]perylene	**100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[k]fluoranthene	**0.8**	ND	ND	ND	0.66	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chrysene	**1**	ND	ND	ND	0.84	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibenzo[a,h]anthracene	**0.33**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
flouranthene	**100**	ND	ND	ND	2.3	ND	ND	0.59	1.7	1.2	0.47	ND	ND	2.8	ND	ND	ND	ND	ND	1.4	ND	ND
flourene	**30**	1.3	ND	ND	ND	ND	ND	ND	ND	1	1.2	ND	ND	ND	ND	ND	ND	0.34	ND	1.5	ND	ND
indeno(1,2,3-cd)pyrene	**0.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
naphthalene	**12**	ND	ND	ND	ND	ND	ND	ND	0.69	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND
phenanthrene	**100**	ND	ND	ND	1.9	ND	ND	0.68	0.89	1.6	1.8	2.4	ND	2.0	ND	ND	ND	0.46	ND	3.7	ND	5.0
pyrene	**100**	1.6	ND	ND	1.9	ND	ND	0.55	1.5	1.2	ND	2.6	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. Shaded concentration exceeds the NYSDEC UUSCO
2. ND = Not detected above method detection limit
3. ppm = Parts per million
4. NA = Not analyzed
5. NS = No standard (part 375 or TAGM 4046)

GP-22
4-8'
ND
ND
ND
ND
ND
ND
ND
ND
ND
0.013
0.019
ND
0.022
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND
ND

Table 2E: TRC 2003 VOC Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	Anomaly-05	Anomaly-20	Anomaly-20	TP-01	TP-03	TP-04	TRC-01	TRC-02	TRC-03	TRC-04	TRC-05	TRC-06	TRC-07	TRC-08	TRC-09
Depth (ft bsg):		2' bsg	2.5' bsg	3' bsg	5.5' bsg	4.9' bsg	3.3' bsg	1.5-2.5' bsg	2-3' bsg	9-10' bsg	6-7' bsg	3-4' bsg	4.5-5.5' bsg	4.5-5' bsg	11-12' bsg	10.5-12' bsg
Volatiles (ppm)																
1,2,4-trimethylbenzene	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-trimethylbenzene	**8.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
2-butanone	**0.12**	ND	ND	ND	ND	ND	ND	0.024	0.063	ND	ND	ND	ND	ND	ND	NA
acetone	**0.05**	ND	ND	ND	ND	ND	ND	0.094	0.044	ND	ND	ND	ND	ND	ND	NA
benzene	**0.06**	ND	0.138	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0026
bromodichloromethane	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0009	ND	ND	ND	NA
ethylbenzene	**1**	ND	0.15	ND	ND	0.051	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.81
isopropylbenzene	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0
methylene chloride	**0.05**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MTBE	**0.93**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0036
naphthalene	**12**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-butylbenzene	**12**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7
n-propylbenzene	**3.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5
p-Isopropyltoluene	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.021
sec-butylbenzene	**11**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7
tert-butylbenzene	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11
toluene	**0.7**	ND	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (mixed)	**0.26**	0.025	1.03	ND	ND	0.104	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.084

Sample ID:	NYSDEC UUSCO	TRC-10	TRC-11	TRC-12	TRC-13	TRC-14	TRC-15	TRC-16	TRC-17	TRC-18	TRC-19	TRC-21	TRC-22	TRC-24	TRC-28	TRC-29
Depth (ft bsg):		8.5-9.5' bsg	7-8' bsg	9.5-10.5' bsg	3-4' bsg	2.5-3.5' bsg	3-4' bsg	2.5-3' bsg	3-4' bsg	3-4' bsg	3-4' bsg	7-8' bsg	7-8' bsg	7-8' bsg	0.5-1.5' bsg	10-11' bsg
Volatiles (ppm)																
1,2,4-trimethylbenzene	**3.6**	0.0082	ND	ND	ND	ND	0.0023	ND	ND	ND	ND	ND	ND	ND	0.0053	ND
1,3,5-trimethylbenzene	**8.4**	0.0045	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	**0.12**	NA	ND	ND	NA	0.0062	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
acetone	**0.05**	NA	ND	ND	NA	ND	NA	0.035	0.048	0.021	0.061	NA	NA	NA	NA	NA
benzene	**0.06**	ND	ND	ND	ND	ND	ND	0.0016	0.0068	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	**NS**	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
ethylbenzene	**1**	ND	ND	ND	ND	ND	ND	0.0019	ND	ND	ND	ND	ND	ND	0.0078	ND
isopropylbenzene	**NS**	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND
methylene chloride	**0.05**	NA	ND	ND	NA	ND	NA	0.0056	ND	ND	ND	NA	NA	NA	NA	NA
MTBE	**0.93**	0.0027	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
naphthalene	**12**	ND	ND	ND	0.0038	ND	0.0028	ND	ND	ND	ND	0.0078	ND	ND	0.018	ND
n-butylbenzene	**12**	0.064	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0075	ND
n-propylbenzene	**3.9**	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0058	ND
p-Isopropyltoluene	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND
sec-butylbenzene	**11**	0.065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.032	ND
tert-butylbenzene	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0022	ND
toluene	**0.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (mixed)	**0.26**	0.0045	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0125	ND

Notes:

1. UUSCO = NYSDEC Unrestricted Use Soil Cleanup Objectives
2. Shaded concentration exceeds the NYDEC UUSCO.
3. ND = Not detected above method detection limit
4. NS = No standard (part 375 or TAGM 4046)
5. ppm = Parts per million
6. NA = Not analyzed

Borings and/or test pits were advanced, but not sampled at locations TRC-20, 23, 25 - 27, Anomaly-01 - 04 and -06 - 19.

Table 2F: TRC 2003 SVOC Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	Anomal -05	Anomaly-20	Anomaly-20	TP-01	TP-03	TP-04	TRC-01	TRC-02	TRC-03	TRC-04	TRC-05	TRC-06	TRC-07	TRC-08	TRC-09
Depth (ft bsg):		2' bsg	2.5' bsg	3' bsg	5.5' bsg	4.9' bsg	3.3' bsg	1.5-2.5' bsg	2-3' bsg	9-10' bsg	6-7' bsg	3-4' bsg	4.5-5.5' bsg	4.5-5' bsg	11-12' bsg	10.5-12' bsg
Semivolatiles (ppm)																
naphthalene	**12**	ND	1.4	ND	ND	1.1	ND	ND	ND	ND	0.052	ND	ND	ND	ND	ND
acenaphthene	**20**	ND	0.54	0.45	0.093	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5
flourene	**30**	ND	0.76	0.51	0.12	0.44	ND	ND	ND	ND	ND	ND	ND	0.1	ND	9.1
phenanthrene	**100**	1.0	1.3	1.6	0.34	0.81	3.1	0.062	ND	ND	0.21	0.066	ND	ND	ND	21
anthracene	**100**	ND	0.42	ND	0.14	0.27	ND	ND	ND	ND	0.055	ND	ND	ND	ND	5.3
flouranthene	**100**	1.5	0.5	2.1	0.17	0.33	4.1	ND	ND	ND	0.3	0.064	0.039	ND	ND	1
pyrene	**100**	1.7	0.62	2.2	0.23	0.44	4.0	ND	ND	ND	0.31	0.069	0.041	ND	ND	2.7
benzo[a]anthracene	**1**	0.87	0.24	1.1	0.074	0.17	1.6	ND	ND	ND	0.16	ND	ND	ND	ND	ND
chrysene	**1**	0.84	ND	1.1	0.081	0.2	1.6	ND	ND	ND	0.15	ND	ND	ND	ND	ND
benzo[b]fluoranthene	**1**	1.1	0.22	1.4	0.079	0.18	1.8	ND	ND	ND	0.13	0.045	ND	ND	ND	ND
benzo[k]fluoranthene	**0.8**	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[a]pyrene	**1**	0.84	ND	1.1	0.061	0.16	1.4	ND	ND	ND	0.14	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	**0.5**	ND	ND	ND	ND	0.081	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibenzo(a,h)anthracene	**0.33**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[g,h,i]perylene	**100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.074	ND	ND	ND	ND	ND
dibenzofuran	**6.2^**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
4-nitroaniline	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
carbazole	**NS**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
bis(2-ethylhexyl)phthalate	**50^**	ND	0.41	ND	0.1	0.32	ND	0.09	0.075	0.051	0.073	0.079	0.089	0.094	ND	NA
2-methylnaphthalene	**36.4^**	ND	7.8	ND	0.36	4.2	ND	ND	ND	ND	0.055	0.072	ND	ND	ND	NA

Sample ID:	NYSDEC UUSCO	TRC-10	TRC-11	TRC-12	TRC-13	TRC-14	TRC-15	TRC-16	TRC-17	TRC-18	TRC-19	TRC-21	TRC-22	TRC-24	TRC-28	TRC-29
Depth (ft bsg):		8.5-9.5' bsg	7-8' bsg	9.5-10.5' bsg	3-4' bsg	2.5-3.5' bsg	3-4' bsg	2.5-3' bsg	3-4' bsg	3-4' bsg	3-4' bsg	7-8' bsg	7-8' bsg	7-8' bsg	0.5-1.5' bsg	10-11' bsg
Semivolatiles (ppm)																
naphthalene	**12**	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	ND	ND	ND	ND	ND
acenaphthene	**20**	ND	ND	ND	ND	ND	ND	ND	ND	0.96	ND	0.16	ND	ND	ND	ND
flourene	**30**	0.37	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND
phenanthrene	**100**	1.7	ND	ND	0.36	ND	ND	0.18	0.1	6.8	0.4	0.079	ND	ND	ND	ND
anthracene	**100**	0.56	ND	ND	ND	ND	ND	ND	0.055	2.8	ND	ND	ND	ND	ND	ND
flouranthene	**100**	1.4	ND	ND	0.5	ND	ND	0.33	0.24	8.9	0.17	0.12	0.041	ND	0.19	0.043
pyrene	**100**	1.3	ND	ND	0.85	0.56	ND	0.4	0.26	8.9	0.21	0.11	ND	0.046	0.23	0.04
benzo[a]anthracene	**1**	0.53	ND	ND	0.39	ND	ND	0.22	0.15	4.6	0.1	0.054	ND	ND	ND	ND
chrysene	**1**	0.52	ND	ND	ND	ND	ND	ND	0.15	4.4	0.098	ND	ND	ND	ND	ND
benzo[b]fluoranthene	**1**	0.53	ND	ND	0.44	ND	ND	0.33	0.18	5.2	0.089	0.059	ND	ND	0.22	0.22
benzo[k]fluoranthene	**0.8**	ND	ND	ND	ND	ND	ND	ND	0.12	2.6	ND	ND	ND	ND	ND	ND
benzo[a]pyrene	**1**	0.46	ND	ND	ND	ND	ND	ND	0.17	4.1	0.09	0.086	ND	ND	0.37	0.37
indeno(1,2,3-cd)pyrene	**0.5**	ND	ND	ND	ND	ND	ND	ND	0.058	0.95	ND	ND	ND	ND	ND	ND
dibenzo(a,h)anthracene	**0.33**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzo[g,h,i]perylene	**100**	ND	ND	ND	ND	ND	ND	ND	0.074	1.5	ND	ND	ND	ND	ND	ND
dibenzofuran	**6.2^**	NA	ND	ND	NA	ND	NA	ND	ND	0.55	ND	NA	NA	NA	NA	NA
4-nitroaniline	**NS**	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
carbazole	**NS**	NA	ND	ND	NA	ND	NA	ND	ND	0.68	ND	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	**50^**	NA	0.22	0.051	NA	ND	NA	ND	0.088	0.088	0.087	NA	NA	NA	NA	NA
2-methylnaphthalene	**36.4^**	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA

Notes:

1. UUSCO = NYsDEC Unrestricted Use Soil Cleanup Objectives
2. Shaded concentration exceeds the NYDEC UUSCO
3. ND = Not detected above method detection limit
4. NS = No standard (part 375 or TAGM 4046)
5. NA = Not analyzed
6. ppm = Parts per million

^ = As directed by the DEC, for those compounds that do not have a cleanup objective set by part 375, the TAGM 4046 standard was used.

Borings and/or test pits were advanced, but not sampled at locations TRC-20, 23, 25 - 27, Anomaly-01 - 04 and -06 - 19.

Table 2G: TRC 2003 PCB Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	TP-01	TP-03	TP-04	TRC-01	TRC-02	TRC-03	TRC-08	TRC-14
Depth (ft bsg):		5.5' bsg	4.9' bsg	3.3' bsg	1.5-2.5' bsg	2-3' bsg	9-10' bsg	11-12' bsg	2.5-3.5' bsg
PCBs (ppm)	0.1	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. UUSCO = NYSDEC Unrestricted Use Soil Cleanup Objectives
2. Shaded concentration exceeds the NYDEC UUSCO
3. ND = Not detected above method detection limit
4. ppm = Parts per million

Table 2H: TRC 2003 Metals Soil Sample Results Summary Table

Sample ID:	NYSDEC UUSCO	Anomaly-05	Anomaly-20	Anomaly-20	TP-01	TP-03	TP-04	TRC-01	TRC-02	TRC-03	TRC-04	TRC-05	TRC-06	TRC-07	TRC-08	TRC-11	TRC-12	TRC-14	TRC-16	TRC-17	TRC-18	TRC-19
Depth (ft bsg):		2' bsg	2.5' bsg	3' bsg	5.5' bsg	4.9' bsg	3.3' bsg	1.5-2.5' bsg	2-3' bsg	9-10' bsg	6-7' bsg	3-4' bsg	4.5-5.5' bsg	4.5-5' bsg	11-12' bsg	7-8' bsg	9.5-10.5' bsg	2.5-3.5' bsg	2.5-3' bsg	3-4' bsg	3-4' bsg	3-4' bsg
Metals (ppm)																						
Aluminum	SB	NA	NA	NA	2,290	4,800	3,220	NA	NA	NA	NA	NA	NA	NA	4,430	7,450	4,410	1,680	4,350	7,480	6,180	7,110
Antimony	SB	NA	NA	NA	0.74	ND	0.28	NA	NA	NA	NA	NA	NA	NA	ND	0.49	0.3	0.57	ND	0.36	0.4	0.99
Arsenic	13	2.8	3	4	9.3	3.9	2.4	5.1	6.5	0.41	8.4	6.1	2.5	2.1	0.89	1.1	1.3	3.1	3.3	4	5.4	8.6
Barium	350	93.1	64.4	44.3	54.6	60.5	49.9	31.6	72.6	42.8	119	61.2	43.3	33.5	44.1	52	53	25.2	63.5	46.8	61.3	63.6
Beryllium	7.2	NA	NA	NA	0.34	0.27	0.22	NA	NA	NA	NA	NA	NA	NA	0.17	0.36	0.22	0.13	0.22	0.32	0.32	0.35
Cadmium	2.5	ND	0.11	0.34	ND	ND	0.19	0.06	ND	ND	0.82	0.09	0.25	ND	ND	ND	ND	0.08	0.23	ND	0.29	ND
Calcium	SB	NA	NA	NA	11,100	127,000	41,000	NA	NA	NA	NA	NA	NA	NA	1110	2,650	639	31,400	29,200	2,630	6,220	4,720
Chromium	30*	21.1	8.8	12.8	6.4	15.7	10	18.8	24.8	13.9	9.7	12.7	13	24.7	13.2	27.6	11.5	5.1	16.7	19.6	17.6	15.6
Cobalt	30^	NA	NA	NA	5.2	4.9	3.1	NA	NA	NA	NA	NA	NA	NA	5.6	5.6	5.9	2.4	5.2	6.1	6.6	7.9
Copper	50	NA	NA	NA	24	31.9	27.1	NA	NA	NA	NA	NA	NA	NA	11.3	19.8	8.5	15.1	28.4	17.6	34.4	27.9
Iron	SB	NA	NA	NA	6,660	9,280	6,690	NA	NA	NA	NA	NA	NA	NA	8,290	11,200	8,190	4,220	10,800	13,100	13,800	14,200
Lead	63	125	72.1	86.6	36.9	78.7	119	56.1	12	4.7	264	31.3	56.1	12.2	4	7.6	4	30.3	94.8	26.1	72.8	96.7
Magnesium	SB	NA	NA	NA	3,890	5,150	17,500	NA	NA	NA	NA	NA	NA	NA	1,690	3530	1,650	17,400	11,500	2,280	3,040	3,570
Manganese	1,600	NA	NA	NA	224	197	169	NA	NA	NA	NA	NA	NA	NA	236	88	332	91.5	167	240	214	235
Mercury	0.18	0.14	0.15	0.28	0.18	0.12	0.12	0.12	ND	0.01	0.09	0.06	0.19	0.04	0.01	0.03	ND	0.04	0.07	0.14	0.18	0.13
Nickel	30	NA	NA	NA	11.3	10	7.6	NA	NA	NA	NA	NA	NA	NA	23.2	22.9	15.9	5.2	11.8	14.7	14.9	22.1
Potassium	SB	NA	NA	NA	496	787	1,010	NA	NA	NA	NA	NA	NA	NA	849	1,410	806	413	1,090	810	982	1,670
Selenium	3.9	0.17	ND	3.4	0.89	0.52	ND	ND	0.68	0.36	0.65	0.93	ND	ND	ND	ND	ND	ND	ND	ND	1.6	0.8
Silver	2	ND	ND	ND	0.41	ND	ND	ND	1	0.41	ND	ND	ND	0.57	ND	ND	ND	ND	0.82	ND	0.83	0.71
Sodium	SB	NA	NA	NA	147	117	167	NA	NA	NA	NA	NA	NA	NA	114	121	92.8	158	258	111	159	229
Thallium	SB	NA	NA	NA	1.2	0.7	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.76	1.1	0.69
Vanadium	150	NA	NA	NA	8.9	18.6	13.5	NA	NA	NA	NA	NA	NA	NA	13.9	19.4	12	9	21.6	23.6	24.6	27.6
Zinc	109	NA	NA	NA	49	100	77	NA	NA	NA	NA	NA	NA	NA	16.7	37.7	17.6	37.2	116	33.7	66.1	91.4

Notes:

1. UUSCO = NYSDEC Unrestricted Use Soil Cleanup Objectives
2. Shaded concentration exceeds the NYSDEC UUSCO
3. ND = Not detected above method detection limit
4. NA = Not analyzed
5. ppm = parts per million
6. NS = No standard (part 375 or TAGM 4046)

* = Assumes reported total chromium concentration consists entirely of trivalent chromium.
^ = As directed by the DEC, for those compounds that do not have a cleanup objective set by part 375, the TAGM 4046 standard was used.
SB = site background

Table 4

Schedule of Implementation

The actual start date is dependent upon review and approval of the RIWP by the NYSDEC. A schedule denoting the specific dates for the work activities will be provided to the NYSDEC within 3 days of receipt of RIWP approval.

Task	Anticipated Start Date
Geophysical Survey	14 days after RIWP approval
Test Pit/Soil Boring Installation	14 days after Geophysical Survey
NYSDEC UST Removal Notification (if required)	within 7 days of test pit installation
UST Removal (if required)	30 days after NYSDEC notification
Ground Water Investigation	21- 28 days after UST removal*

* If no additional USTs are located during the geophysical and/or test pit investigation, the ground water investigation activities will be initiated 21 – 28 days after completion of the test pits.

Table 5
Proposed Sample Summary

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	Matrix	TCL/TAL	VOCs	SVOCs	Metals	PCBs	AOC #
GP-8A	12'	0-2" & to be determined	soil		x	x	Pb		1
GP-16A	12'	0-2" & to be determined	soil		x	x	Pb		1
GP-17A	12'	0-2" & to be determined	soil		x	x	Pb		1
GP-18A	12'	0-2" & to be determined	soil		x	x	Pb		1
MW-3	NA	NA	ground water		x	x	TAL		1
MW-8	NA	NA	ground water		x	x	TAL		1
2A	12'	0-2" & to be determined	soil		x	x	Pb		2
2B	12'	0-2" & to be determined	soil		x	x	Pb		2
2C	12'	0-2" & to be determined	soil		x	x	Pb		2
2D	12'	0-2" & to be determined	soil		x	x	Pb		2
3A	12'	1.5-2.5' & to be determined	soil		x				3
3B	12'	1.5-2.5' & to be determined	soil		x				3
3C	12'	1.5-2.5' & to be determined	soil		x				3
3D	12'	1.5-2.5' & to be determined	soil		x				3
3E	12'	1.5-2.5' & to be determined	soil		x				3
3F	2'	0-2"	soil		x	x	Pb		3
3G	2'	0-2"	soil		x	x	Pb		3
3H	2'	0-2"	soil		x	x	Pb		3
3I	2'	0-2"	soil		x	x	Pb		3
3J	2'	0-2"	soil		x	x	Pb		3
3K	2'	0-2"	soil		x	x	Pb		3
TRC-01	4'	1.5-2.5'	soil					x	
MW-1	NA	NA	ground water		x	x	TAL		3
MW-3	NA	NA	ground water		x	x	TAL		4
	dependent upon field findings		soil	x					5
	dependent upon field findings		ground water		x	x	TAL		5
	no further sampling proposed								6
	dependent upon field findings		soil						7

Table 5
Proposed Sample Summary

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	Matrix	TCL/TAL	VOCs	SVOCs	Metals	PCBs	AOC #
8-TRC-02	water table	2-3'	soil					x	8
8-TRC-03	water table	9-10'	soil					x	8
8-TRC-08	water table	11-12'	soil					x	8
8-TRC-02	water table	0-2" bsg (all TCL/TAL except VO to be collected from 2-4") and highest PID or 0-6" above water table	soil	x					8
8-TRC-03	water table		soil	x					8
8-TRC-08	water table		soil	x					8
8-TRC-11	water table		soil	x					8
8-TRC-12	water table		soil	x					8
8-TRC-13	water table		soil	x					8
8-TRC-02-GW	NA	NA	ground water	x					8
8-TRC-03-GW	NA	NA	ground water	x					8
8-TRC-08-GW	NA	NA	ground water	x					8
8-TRC-11-GW	NA	NA	ground water	x					8
8-TRC-12-GW	NA	NA	ground water	x					8
8-TRC-13-GW	NA	NA	ground water	x					8
9-LB&G B-5	water table	0-2" bsg (all TCL/TAL except VO to be collected from 2-4") and highest PID or 0-6" above water table	soil	x					9
9-LB&G B-5 GW	NA	NA	ground water	x					9
10A	4'	0-2"	soil		x	x	TAL		10
10B	4'	0-2"	soil		x	x	TAL		10
10C	4'	0-2"	soil		x	x	TAL		10
10D	4'	0-2"	soil		x	x	TAL		10
10E	4'	0-2"	soil		x	x	TAL		10
10F	4'	0-2"	soil		x	x	TAL		10
10G	4'	0-2"	soil		x	x	TAL		10
10H	4'	0-2"	soil		x	x	TAL		10
10I	4'	0-2"	soil		x	x	TAL		10
10J	4'	0-2"	soil		x	x	TAL		10
10K	4'	0-2"	soil		x	x	TAL		10

Table 5
Proposed Sample Summary

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	Matrix	TCL/TAL	VOCs	SVOCs	Metals	PCBs	AOC #
TP-01	6'	5.25-5.75'	soil					x	10
MW-2	NA	NA	ground water		x	x	TAL		10
MW-7	NA	NA	ground water		x	x	TAL		10
MW-1	NA	NA	ground water		x	x	TAL		11
MW-2	NA	NA	ground water		x	x	TAL		11
MW-3	NA	NA	ground water		x	x	TAL		11
MW-4	NA	NA	ground water		x	x	TAL		11
MW-5	NA	NA	ground water		x	x	TAL		11
MW-6	NA	NA	ground water		x	x	TAL		11
MW-7	NA	NA	ground water		x	x	TAL		11
MW-8	NA	NA	ground water		x	x	TAL		11
TP-03	water table	0-2" bsg (all TCL/TAL except VO to be collected from 2-4") and highest PID or 0-6" above water table	soil	x					12
B-6	water table		soil	x					12
TRC-14	water table		soil	x					12
TP-03	water table	4.5-5'	soil					x	12
B-6	water table	3-3.5'	soil					x	12
TRC-14	water table	2.5-3.5'	soil					x	12
13-Sump 1 Material	grab	NA	sludge	x					13
13-Sump 1 Discharge	4'	0-2", 2-4" (VO)	soil	x					13
13-Sump 2 Material	grab	NA	sludge	x					13
13-Sump 2 Discharge	4'	0-2", 2-4" (VO)	soil	x					13
13-Sump 3 Material	grab	NA	sludge	x					13
13-Sump 3 Discharge	4'	0-2", 2-4" (VO)	soil	x					13
15A	4'	0-2"	soil			x			15
15B	4'	0-2"	soil			x			15
15C	4'	0-2"	soil			x			15
15D	4'	0-2"	soil			x			15
15E	4'	0-2"	soil			x			15

Table 5
Proposed Sample Summary

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	Matrix	TCL/TAL	VOCs	SVOCs	Metals	PCBs	AOC #
16A	2'	0-2"	soil				Pb		Misc His
16B	2'	0-2"	soil				Pb		Misc His
16C	2'	0-2"	soil				Pb		Misc His
16D	2'	0-2"	soil				Pb		Misc His
16E	2'	0-2"	soil				Pb		Misc His
16F	2'	0-2"	soil				Pb		Misc His
16G	2'	0-2"	soil				Pb		Misc His
16H	2'	0-2"	soil				Pb		Misc His
16I	2'	0-2"	soil				Pb		Misc His
16J	2'	0-2"	soil				Pb		Misc His
16K	2'	0-2"	soil				Pb		Misc His
16L	2'	0-2"	soil				Pb		Misc His

Additional samples may be collected during the course of the RI investigation as dictated by field conditions.

Table 2
Summary Table of Historic Soil Samples by AOC

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	VOCs	SVOCs	Metals	PCB's	AOC #	Company/ Report Date
IVI-B1*	12'	6-7'	x		Pb		1	IVI Ph II/2001
IVI-B2*	8'	6.5-7.5'	x		Pb		1	IVI Ph II/2001
IVI-B3*	8'	6.5-7.5'	x		Pb		1	IVI Ph II/2001
GP-7/MW-7	20'	8-12'	x	x			1	LBG/2003
GP-8/MW-8	20'	4-8'	x	x			1	LBG/2003
GP-9/MW-9	20'	8-10'	x	x			1	LBG/2003
GP-16	20'	3-4'	x	x			1	LBG/2003
GP-17	20'	8-12'	x	x			1	LBG/2003
GP-18	20'	4-8'	x	x			1	LBG/2003
IVI-B4*	8'	6-7.5'	x	x	Pb		2	IVI Ph II/2001
IVI-B5*	4.5'	4-4.5'	x	x	Pb		2	IVI Ph II/2001
IVI-B6*	12'	6-7.5'	x	x	Pb		2	IVI Ph II/2001
IVI-B7*	8'	3-4'	x	x	Pb		2	IVI Ph II/2001
GP-10/MW-10	24'	4-8'	x	x			2	LBG/2003
GP-19	16'	8-9'	x	x			2	LBG/2003
GP-20	20'	4-8'	x	x			2	LBG/2003
GP-21	16'	4-8'	x	x			2	LBG/2003
GP-22	16'	4-8'	x	x			2	LBG/2003
IVI-B8*	12'	7-8'	x	x	PPM		3	IVI Ph II/2001
IVI-B9*	8'	5-6'	x	x			3	IVI Ph II/2001
B-7	at least 10'	7-10'	x	x			3	LBG/2002
B-8	at least 7'	4-7'	x	x			3	LBG/2002
Endpoint #1-N	NA - Enpoint Sample	Unknown	x	x			3	Enviro-Comp/2002
Endpoint #1-S	NA - Enpoint Sample	Unknown	x	x			3	Enviro-Comp/2002
TRC-01	12'	1.5-2.5'	x	x	RCRA	x	3	TRC/2003
TRC-02	4'	2-3'	x	x	RCRA	x	3 & 8	TRC/2003
TRC-07	5'	4.5-5'	x	x	RCRA		3	TRC/2003
TRC-09	12'	10.5-12'	STARS	STARS			3	TRC/2003
TRC-10	12'	8.5-9.5'	STARS	STARS			3	TRC/2003
TRC-26	12'	NOT SAMPLED					3	TRC/2003
TRC-27	12'	NOT SAMPLED					3	TRC/2003
TRC-28	12'	0.5-1.5'	STARS	STARS			3	TRC/2003
TRC-29	12'	10-11'	STARS	STARS			3	TRC/2003
GP-5/MW-5	20'	0-4'	x	x			4	LBG/2003
GP-6/MW-6	20'	0-4'	x	x			4	LBG/2003
GP-11	20'	1-4'	x	x			4	LBG/2003
GP-12	20'	4-8'	x	x			4	LBG/2003
GP-13	14'	1-4'	x	x			4	LBG/2003
GP-14	20'	4-8'	x	x			4	LBG/2003
GP-15	20'	4-8'	x	x			4	LBG/2003

Table 2
Summary Table of Historic Soil Samples by AOC

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	VOCs	SVOCs	Metals	PCB's	AOC #	Company/ Report Date
B-4	4'	NOT SAMPLED					5	LBG/2002
TRC-15	4'	3-4'	STARS	STARS			5	TRC/2003
B-11	unknown	NOT SAMPLED					6	LBG/2002
B-12	at least 6'	4-6'	x	x			6	LBG/2002
B-13	at least 7'	4-7'	x	x			6	LBG/2002
B-1	7'	0-4'	x	x			8	LBG/2002
B-2	7'	0-4'	x	x			8	LBG/2002
B-3	7'	4-7'	x	x			8	LBG/2002
B-6	unknown	NOT SAMPLED					8	LBG/2002
TRC-02	4'	2-3'	x	x	RCRA	x	3 & 8	TRC/2003
TRC-03	12'	9-10'	x	x	RCRA	x	8	TRC/2003
TRC-08	12'	11-12'	x	x	TAL	x	8	TRC/2003
TRC-11	8'	6-7'	x	x	TAL		8	TRC/2003
TRC-12	12'	9.5-10.5'	x	x	TAL		8	TRC/2003
TRC-13	4'	3-4'	STARS	STARS			8	TRC/2003
B-5	at least 16'	13-16'	x	x			9	LBG/2002
B-9	at least 7'	4-7'	x	x			10	LBG/2002
B-10	at least 7'	4-7'	x	x			10	LBG/2002
B-14	unknown	NOT SAMPLED					10	LBG/2002
GP-1/MW-1	14'	4-8'	x	x			10	LBG/2003
GP-2/MW-2	20'	8-12'	x	x			10	LBG/2003
TP-01	7'	5.5'	x	x	TAL	x	10	TRC/2003
TRC-20	12'	NOT SAMPLED					10	TRC/2003
TRC-21	12'	6-7'	STARS	STARS			10	TRC/2003
TRC-22	12'	6-7'	STARS	STARS			10	TRC/2003
TRC-23	3'	NOT SAMPLED					10	TRC/2003
TRC-24	12'	7-8'	STARS	STARS			10	TRC/2003
TRC-25	3'	NOT SAMPLED					10	TRC/2003
GP-3/MW-3	13'	4-8'	x	x			12	LBG/2003
GP-4/MW-4	11'	4-8'	x	x			12	LBG/2003
TRC-04	8'	6-7'	x	x	RCRA		12	TRC/2003
TRC-05	12'	3-4'	x	x	RCRA		12	TRC/2003
TRC-06	8'	4.5-5.5'	x	x	RCRA		12	TRC/2003
TRC-14	4'	2.5-3.5'	x	x	TAL	x	12	TRC/2003
TP-03	9'	4.9'	x	x	TAL	x	12	TRC/2003
TP-04	7'	3.3'	x	x	TAL	x	12	TRC/2003
Anomaly-05	2.9'	2'	x	x	RCRA		12	TRC/2003
Anomaly-01	0.25'	NOT SAMPLED					12	TRC/2003
Anomaly-02	0.5'	NOT SAMPLED					12	TRC/2003

Table 2
Summary Table of Historic Soil Samples by AOC

Sample ID	Boring Depth (ft bsg)	Sample Interval (ft bsg)	VOCs	SVOCs	Metals	PCB's	AOC #	Company/ Report Date
Anomaly-03	0.5'	NOT SAMPLED					12	TRC/2003
Anomaly-04	2.9'	NOT SAMPLED					12	TRC/2003
Anomaly-06	3.1'	NOT SAMPLED					12	TRC/2003
Anomaly-07	2.5'	NOT SAMPLED					12	TRC/2003
Anomaly-08	3.3'	NOT SAMPLED					12	TRC/2003
Anomaly-09	2.5'	NOT SAMPLED					12	TRC/2003
Anomaly-10	4'	NOT SAMPLED					12	TRC/2003
Anomaly-11	0.5	NOT SAMPLED					12	TRC/2003
Anomaly-12	1.25'	NOT SAMPLED					12	TRC/2003
Anomaly-13	0.5'	NOT SAMPLED					12	TRC/2003
Anomaly-14	2'	NOT SAMPLED					12	TRC/2003
Anomaly-15	1'	NOT SAMPLED					12	TRC/2003
Anomaly-16	1.4'	NOT SAMPLED					12	TRC/2003
Anomaly-17	2'	NOT SAMPLED					12	TRC/2003
Anomaly-18	2.2'	NOT SAMPLED					12	TRC/2003
Anomaly-19	1.6'	NOT SAMPLED					12	TRC/2003
TRC-16	5'	2.5-3'	x	x	TAL		14	TRC/2003
TRC-17	6.8'	3-4'	x	x	TAL		14	TRC/2003
TRC-18	6'	3-4'	x	x	TAL		14	TRC/2003
TRC-19	9'	3-4'	x	x	TAL		14	TRC/2003
Anomaly-20	3'	2.5' & 3'	x	x	RCRA		14	TRC/2003

* = The "IV1" prefix to IV1's sample locations was added in this table by EWMA to distinguish these samples from LBG's 2002 borings that used the same identifiers

Table 1
Historic Sample Summary Table

Sample ID	Soil	GW	Company/ Report Date
IVI-B1*	x	x	IVI Ph II/2001
IVI-B2*	x		IVI Ph II/2001
IVI-B3*	x		IVI Ph II/2001
IVI-B4*	x		IVI Ph II/2001
IVI-B5*	x		IVI Ph II/2001
IVI-B6*	x	x	IVI Ph II/2001
IVI-B7*	x		IVI Ph II/2001
IVI-B8*	x	x	IVI Ph II/2001
IVI-B9*	x		IVI Ph II/2001
B-1	x	x	LBG/2002
B-2	x	x	LBG/2002
B-3	x	x	LBG/2002
B-4			LBG/2002
B-5	x	x	LBG/2002
B-6			LBG/2002
B-7	x	x	LBG/2002
B-8	x	x	LBG/2002
B-9	x		LBG/2002
B-10	x	x	LBG/2002
B-11			LBG/2002
B-12	x		LBG/2002
B-13	x	x	LBG/2002
B-14			LBG/2002
Endpoint Sample #1-N	x		Enviro-Comp/2002
Endpoint Sample #2-S	x		Enviro-Comp/2002
GP-1/MW-1	x	x	LBG/2003
GP-2/MW-2	x	x	LBG/2003
GP-3/MW-3	x	x	LBG/2003
GP-4/MW-4	x	x	LBG/2003
GP-5/MW-5	x	x	LBG/2003
GP-6/MW-6	x	x	LBG/2003
GP-7/MW-7	x	x	LBG/2003
GP-8/MW-8	x	x	LBG/2003
GP-9/MW-9	x	x	LBG/2003
GP-10/MW-10	x	x	LBG/2003
GP-11	x		LBG/2003
GP-12	x		LBG/2003
GP-13	x		LBG/2003
GP-14	x		LBG/2003
GP-15	x		LBG/2003
GP-16	x		LBG/2003
GP-17	x		LBG/2003
GP-18	x		LBG/2003
GP-19	x		LBG/2003
GP-20	x		LBG/2003
GP-21	x		LBG/2003
GP-22	x		LBG/2003

Table 1
Historic Sample Summary Table

Sample ID	Soil	GW	Company/ Report Date
TRC-01	x	x	TRC/2003
TRC-02	x		TRC/2003
TRC-03	x		TRC/2003
TRC-04	x		TRC/2003
TRC-05	x		TRC/2003
TRC-06	x		TRC/2003
TRC-07	x		TRC/2003
TRC-08	x	x	TRC/2003
TRC-09	x		TRC/2003
TRC-10	x	x	TRC/2003
TRC-11	x		TRC/2003
TRC-12	x	x	TRC/2003
TRC-13	x		TRC/2003
TRC-14	x		TRC/2003
TRC-15	x		TRC/2003
TRC-16	x		TRC/2003
TRC-17	x		TRC/2003
TRC-18	x		TRC/2003
TRC-19	x		TRC/2003
TRC-20			TRC/2003
TRC-21	x	x	TRC/2003
TRC-22	x	x	TRC/2003
TRC-23			TRC/2003
TRC-24	x		TRC/2003
TRC-25			TRC/2003
TRC-26			TRC/2003
TRC-27			TRC/2003
TRC-28	x	x	TRC/2003
TRC-29	x		TRC/2003
TP-01	x		TRC/2003
TP-03	x		TRC/2003
TP-04	x		TRC/2003
Anomaly-01			TRC/2003
Anomaly-02			TRC/2003
Anomaly-03			TRC/2003
Anomaly-04			TRC/2003
Anomaly-05	x		TRC/2003
Anomaly-06			TRC/2003
Anomaly-07			TRC/2003
Anomaly-08			TRC/2003
Anomaly-09			TRC/2003
Anomaly-10			TRC/2003
Anomaly-11			TRC/2003
Anomaly-12			TRC/2003
Anomaly-13			TRC/2003
Anomaly-14			TRC/2003
Anomaly-15			TRC/2003
Anomaly-16			TRC/2003
Anomaly-17			TRC/2003
Anomaly-18			TRC/2003
Anomaly-19			TRC/2003
Anomaly-20		x	TRC/2003

Table 1
Historic Sample Summary Table

Sample ID	Soil	GW	Company/ Report Date
MW-1		x	ATC/2005
MW-2		x	ATC/2005
MW-3		x	ATC/2005
MW-4		x	ATC/2005
MW-5		x	ATC/2005
MW-6		x	ATC/2005

Notes:

Samples were not collected from locations not marked with an "x".

* = The "IVI" prefix to IVI's boring locations was added in this table by EWMA to distinguish these borings from LBG's 2002 borings that used the same identifiers.

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B
625 Broadway, Albany, New York 12233-7016
Phone: (518) 402-9768 • **FAX:** (518) 402-9020
Website: www.dec.state.ny.us

NOV - 3 2006

Mr. Jody Kriss
151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group LLC
725 5th Avenue, 24th Floor
New York, NY 10022

Dear Sir:

Re: Site No. C241091
Waterpointe-Whitestone
Queens County

We have reviewed the Remedial Investigation Work Plan (RIWP) and have the following comments:

1. Section 5 of the RIWP divides the previous investigations into 14 areas of concern (AOC) and discusses the previous investigations at each area. Our comments on the AOCs are as follows:

a) AOC-1. This area is the subject of spill #0211453. There is a discrepancy between the field observations and the results included in Subsurface Investigation Report prepared by Legette, Brashears and Graham. Field observations showed extensive contamination as well as hits on the PID as high as 1642 ppm while the report shows no exceedances of TAGM 4046 for VOCs. A plan for sampling the area must be included in the report;

b) AOC-2. This area is also in the area of the above referenced spill. The report must be revised to reflect this and the investigation expanded to include this area;

c) AOC-3. Soil samples must be collected from this area and analyzed for VOCs;

d) AOC-10. Since asphalt plants utilize large amount of semi-volatile compounds, it is not acceptable to say that the contamination is due to historic fill. Please revise this section to state that the contamination in this area shows possible contamination from the former asphalt plant;

e) AOC-11. The report must include a plan for determining the extent and nature of the product in MW-2 and MW-4. Additionally, the locations of the proposed

monitoring wells must be included, as well as the parameters that the wells will be tested for. Also, sampling in the East River, as proposed in the last paragraph on page 30 will be required ;

f) AOC-12. Please include a plan for determining the nature and extent of the historic fill on the site.

2. Previous Investigations. In order for the Department to accept work generated without Department oversight, you must show that the results are valid and usable. For analytical data, this is best shown through the submittal of validation reports or Data Useasibility Summary Reports (DUSRs). The requirements for writing a DUSR can be found in DER-10, App 2B.

3. The RIWP must include a plan for a qualitative on and off-site public health exposure assessments. The purpose of the human exposure assessment is to qualitatively evaluate actual or potential exposures to site contaminants. It also describes the nature and size of the population exposed, or potentially exposed, to the contaminants that are present at or migrating from a site. A qualitative exposure assessment consists of characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. Some off-site investigation will be required to support the exposure assessment.

4. The RIWP must include a plan for a Fish & Wildlife exposure assessment. The purpose of the exposure assessments is to qualitatively determine the route, intensity, frequency, and duration of actual or potential exposures to chemicals. It also describes the nature and size of the population exposed to the contaminants that are present at or migrating from a site. An exposure assessment consists of characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. Some off-site investigation will be required to support the exposure assessment. The plan must include sediment sampling in the East River. Guidance is found in the Division of Fish and Wildlife &Marine Resources publication dated 10/94 see:http://www.dec.state.ny.us/webside/dfwmr/habitat/fwia.pdf.

5. Please provide a site plan that identifies all previous boring and sampling location. Additionally, the location of some borings documented in the boring logs provided in Appendix 1 are not clearly identified on Figure 3. For instance, the identifying numbers for some boring locations around Building #1 are superimposed on nearby locations, making it impossible to match the locations of all borings.

6 The RIWP does not adequately address the potential for future public health effects from exposure to surface soils contaminated with VOCs, MTBE, metals and SVOCs. The information provided on Figure 3 and Appendix 1 indicates that material within two feet of ground surface is contaminated in some areas. The New York State Department Of Health (NYSDOH) considers soil within the first 0-2 inches, the zone readily available for direct contact by the public, to be surface soil. Soil sampling conducted during the advancement of test pits is not adequate for this purpose. Surface soil samples should be analyzed for VOCs, MTBE, metals and SVOCs. Surface soil sampling must be conducted at the following areas during the remedial investigation.

- Former Asphalt Plant - Based on comparison of high resolution aerial photographs of the site taken prior to razing of the asphalt plant, and Figure 3, it

does not appear that the entire footprint of the former asphalt plant has been thoroughly evaluated in former investigations. It is also not clear if the footprint of the plant is intended to be part of Area of Concern (AOC) 10 as depicted on Figure 2A.

- South-East Corner of Site - The high resolution photograph shows an area in the extreme south-east corner of the site that is a potential source of concern. The soil in this area is darker than the surrounding soil, and there is no reference to any sampling being conducted in this area during previous investigations. Surface soil sampling in this area must be conducted.

8. A Community Air Monitoring Plan (CAMP) is required for all ground intrusive activities (excavation, surface soil sampling, installation of monitoring wells) and must be included in the Remedial Investigation Work Plan. The intent of the CAMP is to provide a measure of protection for on-site and off-site workers, and visitors not directly involved with the implementation of the Work Plan from potential airborne contaminant releases which could occur during the work at the site. Please use the NYSDOH CAMP as a guide when preparing the site specific CAMP; a copy of the CAMP is attached.

9. The nature and extent of potential soil vapor contamination must be characterized on the site to evaluate the potential for human exposures. Based on the results of previous investigations, and on the former/current uses of the site, there appears to be a reasonable expectation that soil vapor intrusion into future buildings constructed on the site could occur. At a minimum, soil vapor sampling, in accordance with the New York State Department of Health's document titled *Guidance for Evaluating Soil Vapor Intrusion in the State of New York,* should be conducted at AOC #'s 1, 2, 3, 10 (including the full footprint of the asphalt plant) and the extreme south-east corner of the site. This document is available online at www.health.state.ny.us/nysdoh/gas/svi_guidance/.

10. Appendix 1, page 10 and 11. The column headings on tables 1 and 2 are illegible. Please provide a legible copy.

If you have any questions, please call me at (518) 402-9774.

Sincerely,

James Drumm
Rememedial Bureau B

ec: David J. Freeman
S. Karpinski, DOH
L. Davis, EWMA

Analytical Methods/Quality Assurance Summary Table

Parameter	Matrix	Sample Container & Volume	Sample Preservation	Maximum Allowable Holding Time	Field Duplicate	Analytical Method
Volatiles	Soils	2 oz. glass container with Teflon lined caps	cool, 4°C, dark	14 days	One per matrix	EPA Method 8021 or 8260 B
SemiVolatile	Soils	8oz. glass container with Teflon lined caps	cool, 4°C, dark	14 days extraction, 40 days analysis	One per matrix	EPA Method 8270 C
Metals	Soils	2 oz glass continers with Teflon lined caps	cool, 4°C, dark	180 days/Mercury 28 days	One per matrix	EPA Method 6020C
PCBs	Soils	8oz. glass container with Teflon lined caps	cool, 4°C, dark	14 days extraction, 40 days analysis	One per matrix	EPA Method 8082
Volatiles	Ground Water	2x40ml glass container	cool, 4°C, dark	14 days	One per matrix	EPA Method 624
SemiVolatile	Ground Water	2x950ml Amber glass container	cool, 4°C, dark	7 days extraction, 40 days analysis	One per matrix	EPA Method 625
Metals	Ground Water	250ml plastic jar	cool, 4°C, dark	180 days/Mercury 28 days	One per matrix	EPA Method 200.8/245.1
PCBs	Ground Water	2x950ml Amber glass container	cool, 4°C, dark	7 days extraction, 40 days analysis	One per matrix	EPA Method 8082
Volatiles	Soil Vapor	6 L Summa Canisters	none	30 days	One per matrix	EPA Method TO 15

Notes:

New York State Department of Conservation 1995 Analytical Services Protocol (ASP), October 1995 Revisions, Albany, NY.
MS/MSD indicates matrix spike/matrix spike duplicate sample.
PCBs indicate polychlorinated biphenyls that are listed with pesticides in Table 8-4B.

QUALITY ASSURANCE
QUALITY CONTROL PLAN

Property Known As:

Waterpointe – Whitestone New York
151-45 6th Road
Whitestone, New York 11357
BCP Site #C241091

Prepared for:

151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group, LLC
725 5th Ave, 24th Floor
New York, NY 10022

April 24, 2007

Submitted by:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, New Jersey 08550
EWMA Case No. 204494

TABLE OF CONTENTS

ATTACHMENTS

1.0 PROJECT SCOPE

This Quality Assurance/Quality Control Plan (QA/QC) document was prepared in accordance with the New York State Department of Environmental Conservation (NYSDED) December 2002 *Draft DER-10 Technical Guidance for Site Investigation and Remediation* and applies to the investigation of soils, ground water and soil vapor in the area of suspect and/or former underground storage tanks. The following activities are proposed as part of this investigation:

Soils Investigation

(1) EWMA will supervise the excavation of test pits to confirm the existence of suspect USTs at the property, and soil samples will be collected as appropriate to confirm whether or not a discharge has occurred from the suspect USTs. Subsequently, soil borings may be installed as needed to delineate impacted soils, if any are confirmed through field observations and/or the analytical results of soil samples collected during the test pit installation activities. Further, if any suspect USTs are confirmed to exist at the property and are removed, endpoint sampling will be conducted following UST closure activities.

Ground Water Investigation

(1) EWMA will install and sample temporary and/or permanent monitoring wells to further investigate ground water at the property.

Soil Vapor Investigation

(1) EWMA will install and sample temporary soil vapor probes to evaluate the potential for future exposures to the planned development of the property and, if necessary, to evaluate the potential for off-site exposures.

This QA/QC provides directions in implementing the activities that would generate data of known and defensible quality. It complies with the September 1992 NYSDEC Division of Water Sampling Guidelines and Protocols ("NYSDEC DWSGP") and the October 2006 *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (GESVI).

2.0 DATA QUALITY OBJECTIVES

Collection of samples will be performed as described within this document and the NYSDEC DWSGP and GESVI. Soil and ground water samples collected for volatile organic compounds and a forward library search (VO+10) will be analyzed via EPA Method 8260+10. Soil samples collected for semi-volatile organic compounds and a forward library search (BN+15) will be analyzed via EPA Method 8270+15. Soil samples collected for priority pollutant metals (PPM) will be analyzed via EPA Method series SW-846. Ground water samples collected for BN+15 will be analyzed via EPA Method 625+15. Ground water samples obtained for PPM analysis will be analyzed via EPA 610A Series. All soil vapor samples will be analyzed for VO constituents utilizing EPA Method TO-15.

3.0 ANALYTICAL LABORATORY

All soil and ground water samples will be analyzed by:

Integrated Analytical Laboratory, Inc. (IAL)
273 Franklin Road
Randolph, New Jersey 07869
New York DOH Certification #11402

All soil vapor samples will be analyzed by:

Princeton Analytical Laboratories (PAL)
273 Franklin Road
Randolph, New Jersey 07869
New York Lab ID No 11586

4.0 PROJECT COORDINATION

Overall Project Management: Liz Davis, Director, EWMA, 609-799-7300

Sampling Activities (+QA/QC): Justin Piegaro, Environmental Technician, EWMA

Laboratory Activities: The personnel will be identified in the laboratory analytical report.

The personnel listed above are subject to change. The Health and Safety Plan will document the actual field personnel that complete the activities at the site.

5.0 ANALYTICAL METHODS / QUALITY ASSURANCE SUMMARY

The Analytical Methods / Quality Assurance Summary table is included as Attachment 1 of this document.

6.0 SITE SPECIFIC SAMPLING METHODS

Collection of samples from the site will be performed following the NYSDEC DWSGP and GESVI. In general, the samples will be collected as described below.

6.1 Ground Water Sampling

1. Temporary and permanent monitoring well sampling will begin at the least contaminated well based on available information. This strategy will minimize cross-contamination.
2. For the permanent monitoring wells, upon removal of the cap, the well headspace will be screened using a PID.
3. Ground water field data will be collected before purging the well. Any equipment making contact with the ground water and used to obtain data will be decontaminated prior to and after each use. A copy of a blank Monitoring Well Purge Information is included as Attachment 2. It lists the parameters that will be collected in the field.
4. Data collected in the field will be recorded in a Field Log Book. Deviation from the sampling protocol and observed events that could affect the samples will be noted in the log book.
5. A peristaltic pump with dedicated Teflon® tubing or a Teflon® bailer will be used to purge the wells. Three (3) well volumes will be purged from the well and the well will not be evacuated to dryness. The well will be allowed to recharge to the original water level noted upon opening or within 2 hours. Purge water will be either disposed of off-site or discharged on-site after treatment through an activated carbon filter unit.
6. Ground water field data will be collected after purging the well.
7. Ground water samples will be collected using disposable Teflon® bailers. The collected sample will be placed directly from the bailer into amber glass jars. The appropriate preservative will be utilized, if required.
8. The sample jar will be labeled: job/site name, sample ID, sample date, sample time, preservation used, and sampler name/affiliation. It will be stored in a cooler with ice.

9. A Chain of Custody will be completed for the collected samples. Refer to Attachment 3 for a copy of the COC.
10. Ground water field data will be collected after sampling the well.
11. The samples will be delivered to the designated laboratory within 48 hours and analyzed within 14 days of collection.

6.2 Subsurface Soil Sampling

1. Sample locations will be located using appropriate measurements assuring that if resampling for further investigation is necessary, the sample locations can be identified at a later date. Next, at the desired location, all inconsequential surface debris (e.g., vegetation, rocks, etc.) will be cleared.
2. All down-hole devices (or the bucket of the machine in the case of the installation of test pits) will be thoroughly decontaminated. Once the desired depth is reached, a decontaminated sampling device (e.g., split spoon or Shelby tube) will be advanced by the drill rig in accordance with ASTM #D1586-84 for disturbed (split spoon) samples, or, ASTM #D1586-83 for undisturbed (Shelby tube) samples, or in the case of test pits, the sample will be collected from the bucket of the machine from soils not in contact with the bucket.
3. Upon retrieval the split spoon will be opened, its contents logged, and then, proceeding in the appropriate manner, the sample will be transferred into a sample bottle using a dedicated, disposable, polyethylene scoop.
4. When using a split spoon sampling device, the retaining basket will be in place, preventing the representative interval contained within the spoon from falling back into the bore hole while mechanically raising the spoon to the surface.
5. Once retrieved, the drive shoe and drive head will be removed and the spoon will be struck to open (being cautious to retain all soil in only one split barrel). The volatile fraction will be immediately collected from a discrete six-inch interval.
6. A PID will be used to record the presence of any volatiles. To obtain the most representative monitor reading, a dedicated, disposable, polyethylene scoop will be used to make a cross sectional slice(s) of the soil core to expose a porous surface. Simultaneously the PID probe will be placed into the opened area (being careful not to touch the sample). In the case of test pits, the soils will be continuously screened as they are removed from the test pit. A dedicated, disposable, polyethylene scoop will be used to expose the inner soils in the bucket, and simultaneously the PID probe will be placed into the opened area (being careful not to touch the sample).

7. In addition to soil classification logs, accurate field logs will be prepared for each sampling point. Field logs will include the following: date/time/weather; sampler/geologist/soil scientist name(s); sample point identification (same number used in sampling plan summary table); sketch showing the sampling point location (including reference distances); depth to water and/or bedrock (refusal) when encountered; soil profile with Unified Soil Classification System (USCS), Burmeister or USDA classification system textual classification and blow counts; sample recovery (and portion submitted for analysis); sampling equipment used; field measurements of any monitoring devices, their calibration, and settings; and general comments (e.g., odor, staining, etc.).
8. When sampling is completed, the tailings from the unused portion of the sample will be placed back down the borehole. Bore holes which extend at or near the water table will be sealed with non-shrinking impermeable material. All bore holes installed through concrete or asphalt will be sealed and capped with either concrete or asphalt, where appropriate. When test pit excavations are completed, the excavated soils will be returned to the excavation and compacted in place.
9. In all cases, samples will be initially collected in discrete six-inch increments. If more or less than a six-inch increment is collected because of poor sample recovery or other field logistical problems, an explanation will be provided in the soil log.
10. Care will be taken in collecting and handling the sample for volatile analysis. The sample will be transferred into the sample bottle as quickly as possible, without mixing and only with the aid of dedicated, disposable polyethylene scoops. This will assure that the volatile fraction is not lost or compromised. Soil samples collected for volatile organics analysis will be placed within wide mouth bottles (4 ounce). The sample will be packed tightly, but not at the risk of creating more volatile loss than necessary. Small rocks or vegetation will be avoided to the extent most practical.

6.3 Soil Vapor Sampling

1. Representative samples will be collected from locations in areas of known or suspected subsurface sources of volatile chemicals, in areas where elevated readings were obtained with field equipment during previous environmental investigations, and in areas of varying concentrations of contamination in upper ground water; and at multiple depths to a depth comparable to the expected depth of foundation footings, or at least 1 foot above the water table in areas where the ground water table is less than 6 feet below grade.
2. If sampling to evaluate the potential for off-site soil vapor contamination is required, samples will be collected along the site's perimeter, in areas of off-site ground water plume migration, and at depths comparable to the depth of foundation footings, or at least 1 foot above the water table in areas where the ground water table is less than 6 feet below grade.
3. All soil vapor sample locations will be located approximately 10 feet away from buildings to avoid influence from the building operations.
4. All soil vapor probes will be installed with the procedures outlined in Section 2.7.1 of the GESVI. Tracer gas will be utilized to verify the annulus seal of each probe point. The analytical laboratory will be contacted beforehand to ensure that the tracer gas is different than that used to evacuate the SUMMA canisters. The soil vapor probes will be constructed in the same manner at all sampling locations.
5. Soil vapor samples will be collected at least 24 hours after the installation of permanent proves and 1 hour after the installation of temporary probes. One to three implant volumes will be purged prior to collecting the samples.
6. The flow rate for both purging and collecting should not exceed 0.2 liters per minute.
7. The soil vapor samples will be collected in 6 L SUMMA canisters.
8. If the soil vapor samples are collected near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility will be identified.
9. The location of all soil vapor samples will be plotted on a scaled site map
10. Weather conditions will be noted for the past 24 to 48 hours.
11. Any pertinent observations will be recorded, such as odors and readings from field instrumentation.

12. A sample log will be maintained for all soil vapor locations. The log will include the sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, purge volumes, volume of soil vapor extracted, the canister vacuum before the sample is collected, apparent moisture content of the sampling zone and chain of custody protocols and records used to track samples from sampling point to analysis.

7.0 FIELD INSTRUMENTATION

Field instrument calibration and preventative procedures are included as Attachment 4 of this document.

8.0 DUPLICATE AND SPLIT SAMPLES

Duplicate samples will be collected during each daily sampling event at a rate of one duplicate sample for each media sampled on that day.

9.0 CHAIN OF CUSTODY

Generally, a Chain of Custody (COC) is generated to track the samples from the time of collection and delivery to the laboratory.

Refer to Attachment 3 for a copy of the field Chain of Custody forms that will be used for the samples. The COC utilized by the analytical laboratory analyzing the samples will be included with the analytical data report.

10.0 LABORATORY STORAGE

Laboratory storage of collected samples would be in accordance with approved procedures as required for certified laboratories by the New York Department of Health.

11.0 LABORATORY DELIVERABLE FORMAT

Laboratory deliverables will be completed in the format recommended in Appendix A of the NYDEC DWSGP and Section 2.8 of the GESVI.

Attachment 1

Analytical Methods / Quality Assurance Summary

Attachment 2

Monitoring Well Purge Information (Blank)

Attachment 3

Chain of Custody (Blank)

Attachment 4

Field Instrument Calibration and Preventative Procedures

IVI Boring Logs
October 2001

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Date: October 29, 2001
Project Name: Stonite Realty
Location: AOC 1
Project Manager: Chuck Mulligan
Drilling Company: Baltec
Total Depth: 12'
Method Used: Geoprobe
Water Table Depth: 7.5'
Boring No.: B1

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			70	200	0-4" Concrete
					4"-3" Gravel Fill
					3'-4' Grey M-C SAND, some Silt
4-8	B1	6-7	100	300	Grey M-C SAND, some Silt
					Heavy staining at 6'-8'
					Moist at 7'
8-12			20	20	Grey M-C SAND, some Silt and Gravel
					Staining noted
					Groundwater collected

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Date: October 29, 2001
Project Name: Stonite Realty
Location: AOC 1
Project Manager: Chuck Mulligan
Drilling Company: Baltec
Total Depth: 8'
Method Used: Geoprobe
Water Table Depth: 7.5'
Boring No.: B2

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			90	20	0-4" Concrete
					4"-4" Gravel Fill/ Grey M-C SAND, some Silt
					Odor noted
4-8	B2	6.5-7.5	90	1,000	Grey M-C SAND, some Silt
					Wet at 7.5'

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287 Date: October 29, 2001

Project Name: Stonite Realty Location: AOC 1

Project Manager: Chuck Mulligan Drilling Company: Baltec

Total Depth: 8' Method Used: Geoprobe

Water Table Depth: 7.5' Boring No.: B3

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			90	1000	0-4" Concrete
					4"-4" Gravel Fill/ Black M-C SAND, some Silt, Wood Debris
					Odor noted
4-8	B3	6.5-7.5	90	1,000	Black M-C SAND, some Silt
					Wet at 7.5'
					Odor noted

IVI Environmental, Inc.

105 Corporate Park Drive
'hite Plains, New York 10604
,914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Project Name: Stonite Realty
Project Manager: Chuck Mulligan
Total Depth: 8'
Water Table Depth: 7.5'

Date: October 29, 2001
Location: AOC 2
Drilling Company: Baltec
Method Used: Geoprobe
Boring No.: B4

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (Include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			60	2	0-4" Asphalt
					4"-4" Gravel Fill/-C SAND, some Silt,
					Odor noted
4-8	B4	6-7.5	90	140	Grey M-C SAND, some Silt, brick debris
					Wet at 7.5'
					Odor noted

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Date: October 29, 2001
Project Name: Stonite Realty
Location: AOC 2
Project Manager: Chuck Mulligan
Drilling Company: Baltec
Total Depth: 4.5'
Method Used: Geoprobe
Water Table Depth: Not Encountered
Boring No.: B5

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			100	0	0-4" Asphalt
					4"-4" Gravel Fill/-C SAND, some Silt,
4-4.5	B5	4-4.5	90	100	Grey M-C SAND, some Silt, brick debris
					Odor noted

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Project Name: Stonite Realty
Project Manager: Chuck Mulligan
Total Depth: 12'
Water Table Depth: 7.5'

Date: October 29, 2001
Location: AOC 2
Drilling Company: Baltec
Method Used: Geoprobe
Boring No.: B6

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			80	0	0-4" Asphalt
					4"-4" Gravel Fill/-C SAND, some Silt,
4-8	B6	6-7.5	85	10	Grey M-C SAND, some Silt, brick debris
					Wet at 7.5'
8-12			50	0	Grey M-C SAND, some Silt, wet

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287 Date: October 29, 2001

Project Name: Stonite Realty Location: AOC 2

Project Manager: Chuck Mulligan Drilling Company: Baltec

Total Depth: 8' Method Used: Geoprobe

Water Table Depth: 7.5' Boring No.: B7

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4	B7-	3-4	60	50	0-4" Asphalt
					4"-4" Gravel Fill/-C SAND, some Silt,
4-8			20	0	Grey M-C SAND, some Silt,
					Wet at 7.5'

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Project Name: Stonite Realty
Project Manager: Chuck Mulligan
Total Depth: 12'
Water Table Depth: 7.5'

Date: October 29, 2001
Location: AOC 3
Drilling Company: Baltec
Method Used: Geoprobe
Boring No.: B8

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			90	5	0-4" Asphalt
					4"-4" Gravel Fill/-C SAND, some Silt,
4-8	B8	7-8	100	100	Grey M-C SAND, some Silt,
					Wet at 8'
					Odor Noted
8-12			100	10	Grey M-C SAND, some Silt,
					Wet throughout
					Odor Noted

IVI Environmental, Inc.

105 Corporate Park Drive
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-2903 (fax)

Boring Log

Project No.: E1106287
Date: October 29, 2001
Project Name: Stonite Realty
Location: AOC 3
Project Manager: Chuck Mulligan
Drilling Company: Baltec
Total Depth: 8'
Method Used: Geoprobe
Water Table Depth: 7.5'
Boring No.: B9

Depth (feet)	Sample No.	Sample Interval	Recovered (%)	Field Screening Result (ppm)	Soil Identification and Remarks (include color, composition, moisture, and visual and olfactory observations of contamination)
0-4			90	200	0-4" Asphalt
					4"-4" Gravel and Brick Fill/ Grey M-C SAND, some Silt,
4-8	B9	5-6	100	300	Grey M-C SAND, some Silt,
					Wet at 8'
					Odor Noted

Leggette, Brachears & Graham Boring Logs
March 2002 & November 2003

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: CJ Fallon BORING NO.: B-1 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 6th Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: March 1, 2002	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: ADT	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe	SEAL TYPE: SETTING:
SAMPLING METHOD: Macrocore	BACKFILL TYPE:
OBSERVER: P. Woodell	STATIC WATER LEVEL:
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: &Sent to lab, water sampled 0900.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID 1/ READING	DESCRIPTION
0	4	MC	–	3.5	4.6*	0-2: Sand and gravel, fill, black.
					1.1	2-3.5: Sand, fine-medium, brown. Abrupt transition between, moist.
4	7			4	0.0	Sand, fine to medium, saturated at 5 foot. Sampled 4.5-5.5.

1/ Units are ppm calibration gas equivalent

dmd
April 3, 2002
reports\furman\whitestone\blthroughbl4 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: CJ Follini
	BORING NO.: B-2
	PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 6th Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: March 1, 2002	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: ADT	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe	SEAL TYPE: SETTING:
SAMPLING METHOD: Macrocore	BACKFILL TYPE:
OBSERVER: P. Woodell	STATIC WATER LEVEL:
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: *Sent to lab.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID 1/ READING	DESCRIPTION
0	4	MC	–	3.5	1.1*	0-2.5: Sand and gravel fill, gray to black.
					0.0	2.5-3.5: Sand, fine to medium, brown, some silt, moist in tip.
4	7	MC		4	0.0	Sand, fine, some medium sand, saturated, brown-gray, becoming more brown with depth, sampled 4-5 feet.

1/ Units are ppm calibration gas equivalent

dmd
April 3, 2002
reports\furman\whitestone\b1throughb14 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: CJ Fulton
	BORING NO.: B-3
	PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 6th Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: March 1, 2002	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: ADT	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe	SEAL TYPE: SETTING:
SAMPLING METHOD: Macrocore	BACKFILL TYPE:
OBSERVER: P. Woodell	STATIC WATER LEVEL:
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: *Sent to lab.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID 1/ READING	DESCRIPTION
0	4	MC	–	4	0.0	0-2: Asphalt, sand and gravel fill, black.
					0.0	2-4: Sand, fine to medium, little gravel, little silt, brown to black, moist at tip, tight.
4	7	MC			9.0*	Sand, medium to coarse, some silt, little gravel, brown, saturated, sampled 4-5 feet.

1/ Units are ppm calibration gas equivalent

dmd
April 3, 2002
reports\furman\whitestone\blthroughbl4 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: CJ Follini BORING NO.: B-4 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 6th Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: March 1, 2002	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: ADT	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe	SEAL TYPE: SETTING:
SAMPLING METHOD: Macrocore	BACKFILL TYPE:
OBSERVER: P. Woodell	STATIC WATER LEVEL:
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS:	

ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube
REC = recovery PPM = parts per million

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1					Concrete.
1	4					

1/ Units are ppm calibration gas equivalent

dmd
April 3, 2002
Reports\furman\whitestone\blthroughbl4 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-1/MW-1 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 14-4 ft bg
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 14 ft bg - 2 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: 1-inch PVC SETTING: 4 ft bg - 2 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~9 ft bg
STICK-UP: ~2 feet	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 1015.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	NA	3	216	Asphalt/gravel/concrete fill; black/brown; gray; moist; strong odor.
4	8	GP	NA	3	241	Gravel, some fine sand, some wood/organics, moist, brown/black, strong odor (can see sheen at 8 ft bg).
8	12	GP	NA	2	15.7	Fine sand, some silt and clay, some organics, trace gravel, brown, black, saturated, slight odor.
12	14	GP	NA	2	7.5	Silt and clay, trace fine sand and organics, black, slight odor, saturated.
	14					Refusal

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-2/MW-2 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 7-2 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 7-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: 1-inch PVC SETTING: 2 ft bg - 3 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: Asphalt SETTING: 1-0 ft bg
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~6 ft bg
STICK-UP: 3 feet stick up	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 8-12 ft bg at 0935.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID 1/ READING	DESCRIPTION
0	4	GP	–	3	0.0	Sand (fine to medium), trace silt, trace gravel; tan, moist, no odor.
4	8	GP	–	4	1.2	Sand (fine to medium) and silt, some gravel/ash, brown/gray/black, wet, no odor.
8	12	GP	–	1	1.8	Gravel, some wood, some sand (fine) and silt, black, saturated, no odor.
12	16	GP	–	4	0.2	Gravel, some wood, some sand (fine) and silt, black, saturated, no odor.
16	20	GP	–	4	0.2	Gravel, some wood, some sand (fine) and silt, black, saturated, no odor.
	20					End boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kfhgspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-3/MW-3 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 14-4 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 14 ft bg - 2 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch PVC SETTING: 4 ft bg - 2 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~9 ft bg
STICK-UP: ~2 feet stick up	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 1145.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	1	0.2	Gravel/crushed rock, some fine sand and silt, gray, moist, no odor.
4	8	GP	–	1	5.8	Gravel/crushed rock/brick, some silt, trace fine sand, brown, wet, no odor.
8	12	GP	–	3	0.8	Gravel, some silt, trace fine sand and organics, gray saturated.
12	13	GP	–	1	1.2	Gravel, some silt, trace fine sand and organics, gray saturated.
	13					End boring - refusal.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-4/MW-4 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 11-1 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter sand SETTING: 11-0.5 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch diameter PVC SETTING: 1 ft bg - 3 ft bg
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: Asphalt SETTING: 0.5-0 ft bg
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~4 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP: 3 feet stick up	
SURFACE COMPLETION:	
REMARKS: Sample taken from 4-8 ft bg at 1240.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1	GP	–	1	0.8	Asphalt.
1	4	GP	–	3	0.2	Sand (fine) and silt, some gravel, trace organics (wood), black/brown, moist, no odor.
4	8	GP	–		1.2	Gravel, some silt and fine sand, trace brick, red/black/gray, wet, no odor.
8	11	GP	–		0.2	Gravel, some silt and fine sand, trace crushed rock, black/gray, saturated, no odor.
	11					End of boring - refusal.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-5/MW-5 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch diameter PVC SLOT NO.: 20 SETTING: 16-6 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter sand SETTING: 16-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch diameter PVC SETTING: 6 ft bg - 3 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: Asphalt SETTING: 1 - 0 ft bg
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~7-8 ft bg
STICK-UP: 3 feet stick up	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 0-4 ft bg at 1500.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	3	103	Silt and fine sand, trace gravel, brown to black, moist, strong odor.
4	8	GP	–	1	58	Sand, fine to medium, and silt, black, wet, some odor.
				2	3.8	Silt, some fine sand, brown, wet, no odor.
8	12	GP	–	4	3.3	Sand, fine to medium, some silt, trace organics, black, saturated, no odor.
12	16	GP	–	2	2.0	Silt and peat, trace shells, trace fine sand, black, wet, no odor.
				1	1.4	Sand, fine to medium, some wood, trace silt, gray, saturated.
16	20	GP	–	4	1.4	Sand, fine to medium, some silt, gray, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-6/MW-6 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 16-6 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 16-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch PVC SETTING: 6-0 ft bg
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: Asphalt cap SETTING: 1-0 ft bg
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~8 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP: Flush cap	
SURFACE COMPLETION:	

REMARKS: Sample taken from 0-4 ft bg at 0825.

ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID 1/ READING	DESCRIPTION
0	4	GP	–	3	2.0	Gravel, and silt, some fine sand, trace organics, brown/black, moist, no odor.
4	8	GP	–	2	0.8	Sand, fine to medium, some silt, trace gravel, brown, wet, no odor.
8	12	GP	–	4	0.8	Fine sand and silt, brown, saturated, no odor.
12	16	GP	–	4	1.4	Fine sand and silt, brown, saturated, no odor.
16	20	GP	–	4	0.8	Sand, fine to medium and silt, brown/gray, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

GEOLOGIC LOG	OWNER: Mr. C. J. Follini
LEGGETTE, BRASHEARS & GRAHAM, INC.	WELL NO.: GP-7/MW-7
WHITE PLAINS, NEW YORK	PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 16-6 ft bg
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 16-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch PVC SETTING: 6-0 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: Asphalt patch SETTING: 9-0 ft bg
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8 ft bg
+STICK-UP: Flush	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 8-12ft bg at 0725.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	2.5	0.0	Silt and fine sand, trace gravel, gray, wet, no odor.
4	8	GP	–	3	1.4	Sand, fine and silt, trace gravel, brown/gray, wet, no odor.
8	12	GP	–	1	1.6	Gravel, some silty sand, black, brown, saturated, no odor.
12	16	GP	–	1	0.4	Peat/clay, trace gravel, black, wet, slight odor (organics).
				1	0.8	Sand, fine to medium, race silt, gray, wet, no odor.
16	20	GP	–	3	1.4	Sand, fine to medium, some silt, trace gravel, brown, saturated, no odor.
	20					End of boring.

[1/] Units are ppm calibration gas equivalent

lmd
January 15, 2004
eports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-8/MW-8 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 17-7 ft bg
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 17-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch PVC SETTING: 7-0 ft bg
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: Asphalt cap SETTING: Grade
SAMPLING METHOD: 4-foot macrocore liner	
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~9 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 0840.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1					Concrete and void.
1	4	GP	–	3	107	Sand, fine and silt, some gravel, black, moist, some odor.
4	8	GP	–	2	633	Sand, fine and silt, trace gravel, brown, wet, strong odor.
8	12	GP	–	0.5	226	Sand, fine and silt, some gravel, brown, saturated, some odor, sleeve was clogged with ceramic tile.
12	16	GP	–	2	7.1	Top: Gravel/slag fill, some silt and fine sand, black, saturated, no odor.
					0.0	Bottom: Peat/clay, black, wet, no odor.
16	20	GP	–	4	0.1	Fine sand and silt, trace shells and gravel, gray, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-9/MW-9 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 16 ft bg-6 ft bg
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 10 ft bg - 1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: 1-inch PVC SETTING: 6 ft bg - 1 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: Cuttings SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8-9 ft bg
STICK-UP: 1 foot	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 8-10 ft bg at 0930.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	2	0.0	Sand, fine to medium, trace gravel/silt, wet, brown, no odor.
4	8	GP	–	3	263	Sand, medium to coarse, some silt and gravel, trace concrete, gray, dry/moist, no odor.
8	10	GP	–	2	367	Sand, fine to medium and gravel, brown/gray, saturated, strong odor.
10	12	GP	–	2	63	Sand, medium to coarse, and gravel, some silt, gray, saturated, slight odor.
12	16	GP	–	4	26	Gravel, some sand, fine to medium, trace organic (silt/clay), gray/blue, saturated, slight odor.
16	20	GP	–	2.5	0.0	Sand, fine to medium, brown, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-10/MW-10 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: 1-inch PVC SLOT NO.: 20 SETTING: 17-7 ft bg
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: #2 filter SETTING: 17-1 ft bg
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: 1-inch PVC SETTING: 7-0 ft bg
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: Asphalt SETTING: 1-0 ft bg
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8-9 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 1350.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	2	107	Silt and fine sand, some gravel, black/dark brown, moist, slight odor.
4	8	GP	–	3.5	174	Silt, some fine sand, dark brown, wet, some odor.
8	12	GP	–	2	115	Silt, some fine sand, trace organics, dark brown, saturated, some odor.
				2	0.0	Sand, fine to medium, some silt, trace gravel, brown, wet, odor.
12	16	GP	–	~4	2.6	Silt, some fine sand, trace gravel, moist, brown, no odor.
16	24	GP	–			Point boring.
	24					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gplthrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-11 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 1-4 ft bg at 1600.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1					Concrete.
1	4	GP	–	3	24.0	Sand, fine to medium, and gravel, trace silt, blue/gray, moist, slight odor.
4	8	GP	–	4	0.6	Sand, fine to medium, trace silt, trace gravel, brown, moist, no odor.
8	12	GP	–	4	0.0	Sand, fine to medium, trace silt/gravel, brown, saturated, no odor.
12	16	GP	–	4	0.0	Sand, fine to medium, trace silt, gravel, brown, saturated, no odor.
16	20	GP	–	4	0.0	Sand, fine to medium, trace silt, gravel, brown, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-12 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 26, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 1550.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	3	3.2	Fine sand, some silt and gravel, trace brick, brown, black, wet, slight odor.
4	8	GP	–	3	911	Silt and fine sand, black/brown, wet, strong odor.
8	12	GP	–	3	824	Silt, some fine sand, black and tan, saturated, strong odor.
12	16	GP	–	4	737	Sand, fine to medium, some silt, trace gravel, brown, saturated, strong odor.
16	20	GP	–	4	312	Sand, fine to medium, some silt, trace gravel, brown, saturated, strong odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-13 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~7-8 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 1-4 ft bg at 1130.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1					Concrete, fill.
1	4	GP	–	3	2.7	Sand, fine to medium, some gravel, trace silt, brown/gray, no odor.
4	8	GP	–	3	1.2	Sand, fine to medium, some gravel, trace silt, brown/gray and no odor.
8	12	GP	–	4	0.0	Sand, fine to medium, trace silt, trace gravel, brown, saturated, no odor.
12	14	GP	–	4	0.0	Sand, fine to medium, trace gravel, brown, saturated, no odor.
	14					Refusal.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-14 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL:
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: Sample taken from 4-8 ft bg at 1425.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	3					Concrete ~30 inches.
3	4	GP	— —	0.5	0.0	Crushed concrete, fine sand, brown/gray, dry, no odor.
4	8	GP	—	3.5	0.0	Sand, fine, some silt, some gravel, trace organics, brown/gray, moist, no odor.
8	12	GP	—	0.4	0.0	Sand, fine to medium, some gravel, brown, saturated, no odor.
12	16	GP	—	4	0.0	Sand, fine to medium and silt, trace gravel, brown, saturated, no odor.
16	20	GP	—	4	0.0	Sand, fine to medium, trace gravel, trace clay, gray/brown, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-15 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~6-7 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 1700.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	3	8.4	Sand, fine to medium and gravel, trace silt and organics, black/gray, moist, slight odor.
4	8	GP	–	3	128	Sand, fine to medium, some gravel, trace silt, dark brown, saturated, strong odor (hydrocarbons).
8	12	GP	–	2	0.3	Sand, fine to medium, some gravel, trace silt/clay/organics, black/gray, saturated, no odor.
12	16	GP	–	3	0.0	Sand, fine to medium and silty clay, trace gravel and organics, black/gray, saturated, no odor.
16	20	GP	–			Sand, fine to medium, trace silt, gray, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-16 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 20, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL:
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 3-4 ft bg at 1350.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	1	GP	–	–	–	0.5 foot concrete/0.5 foot void.
1	3	GP	–	2	5.7	Sand, fine to medium, trace silt and gravel, brown/black, moist, no odor.
3	4	GP	–	1	1,071	Sand, fine to medium and silt, gray, moist, strong odor.
4	5	GP	–	1	586	Sand, fine to medium and silt, trace gravel/ash, black, moist, strong odor.
5	8	GP	–	3	888	Sand, fine to medium, and silt, trace gravel, brown/black, wet, strong odor.
8	12	GP	–	2	8.0	Silt and gravel/ash, trace, fine sand, black, slight odor, saturated.
12	14	GP	–	1	0.6	Clay and peat, trace silt, black, moist, no odor.
14	16	GP	–	1	0.9	Sand, fine to medium, trace silt, gray, saturated, no odor.
16	20	GP	–	3	0.6	Sand, fine to medium, some silt, trace gravel, black/gray, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-17 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 20, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8-9 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 8-12 ft bg.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	.5					Concrete.
0.5	4	GP	–	2	432	Sand, fine to medium, some gravel, gray/black, wet, strong odor.
4	8	GP	–	3	962	Sand, fine to medium and gravel/slag, black/brown, wet, strong odor.
8	12	GP	–	3.5	1,642	Sand, fine to medium, some gravel, trace silt, trace ash, black/gray, wet to saturated, strong odor.
12	16	GP	–		167	Sand, fine to medium, trace gravel, gray/brown, saturated, slight odor.
16	20	GP	–	2.5	1.3	Sand, fine to medium, trace gravel, brown, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-18 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 19, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~8-9 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: Sample taken from 4-8 ft bg at 0810.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	3	4.1	1-3: Sand, fine to medium and silt, trace gravel/wood, brown, moist, no odor.
				1	210	3-4: Sand, fine to medium, and silt, trace gravel, gray, moist, no odor.
4	8	GP	–	3	614	Sand, fine to medium, some gravel, trace silt, brown/gray, moist, no odor.
8	12	GP	–	1	63	Gravel, ash fill, some sand, fine to medium, gray, saturated, hydrocarbon odor.
12	16	GP	–	1	18	Gravel, ash fill, some sand, fine to medium, gray, saturated, slight odor.
16	20	GP	–	2	1.2	Sand, fine to medium, brown, saturated, no odor.
	20					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-19 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 21, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~8-9 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: Sample taken from 8-9 ft bg at 1110. Core overfilling at 12-16 ft bg.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	4	1.3	Silt, some fine sand, some gravel, black, moist, no odor.
4	8	GP	–	2	126	Silt, some fine sand and gravel, black, wet, strong odor.
8	12	GP	–	1	142	8-9: Gravel, some silt, trace fine sand, black, wet, strong odor.
				3	8.7	9-12: Sand, fine and silt, brown, saturated.
12	16	GP	–	4		Sand, fine and silt, brown, saturated, no odor.
	16					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-20 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 21, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	
SAMPLING METHOD: 4-foot macrocore liner	SEAL TYPE: SETTING:
OBSERVER: Sean Groszkowski	
REFERENCE POINT (RP): Grade	BACKFILL TYPE: #2 filter sand
ELEVATION OF RP:	STATIC WATER LEVEL: ~8-9 ft bg
STICK-UP:	DEVELOPMENT METHOD:
SURFACE COMPLETION:	DURATION: YIELD:
REMARKS: Sample taken from 4-8 ft bg at 0950.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	3	1.7	Sand, fine and silt, trace gravel, dark brown, moist, no odor.
4	8	GP	–	2	0.0	Sand, fine and silt, brown, moist, no odor.
					16.3	In the middle of the recovery, there was a 4-inch lens (silt, some fine sand, some gravel, black, wet, slight odor).
8	12	GP	–	4	0.7	Sand, fine to medium and silt, trace gravel, brown, saturated, no odor.
12	16	GP	–	4	0.0	Sand, fine to medium and silt, brown, saturated, no odor.
16	20	GP	–	4	1.3	Sand, fine to medium and silt, brown, saturated, no odor.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-21 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 21, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~8-9 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: Sample taken from 4-8 ft bg at 1210. Sample tube overfilled at 12-16 ft bg.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	2	0.0	Silt, some fine sand, some gravel, gray/brown, moist, no odor.
4	8	GP	–	2	70.2	Silt and gravel, some fine sand, black, moist, some odor.
				1	0.0	Broken rock.
8	12	GP	–	1	26.9	Silt and gravel, trace fine sand, dark brown, saturated, slight odor.
				3	4.2	Silt, some fine sand, trace gravel, brown, moist, no odor.
12	16	GP	–	4	1.8	Silt, some fine sand, trace gravel, brown, moist, no odor.
	16					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

GEOLOGIC LOG LEGGETTE, BRASHEARS & GRAHAM, INC. WHITE PLAINS, NEW YORK	OWNER: Mr. C. J. Follini WELL NO.: GP-22 PAGE: 1 OF 1 PAGES
SITE LOCATION: 151-45 Sixth Road Whitestone, New York	SCREEN SIZE & TYPE: SLOT NO.: SETTING:
DATE COMPLETED: November 21, 2003	SAND PACK SIZE & TYPE: SETTING:
DRILLING COMPANY: American Environmental Assessment Corporation Driller: Santos	CASING SIZE & TYPE: SETTING:
DRILLING METHOD: Geoprobe/Direct Push	SEAL TYPE: SETTING:
SAMPLING METHOD: 4-foot macrocore liner	BACKFILL TYPE: #2 filter sand
OBSERVER: Sean Groszkowski	STATIC WATER LEVEL: ~8-9 ft bg
REFERENCE POINT (RP): Grade	DEVELOPMENT METHOD:
ELEVATION OF RP:	DURATION: YIELD:
STICK-UP:	
SURFACE COMPLETION:	
REMARKS: Sample taken from 4-8 ft bg at 1530.	
ABBREVIATIONS: SS = split spoon W = wash C = cuttings G = grab ST = shelby tube REC = recovery PPM = parts per million GP = geoprobe	

DEPTH (FEET) FROM	DEPTH (FEET) TO	SAMPLE TYPE	BLOW COUNT	REC. (FEET)	PID[1/] READING	DESCRIPTION
0	4	GP	–	2	71	Silt, some gravel, trace fine sand, black, wet, strong odor.
4	8	GP	–	3	147	Silt, some fine sand, trace gravel, gray, wet, strong odor.
8	12	GP	–	3	15	Silt and fine sand, trace gravel, brown, wet, slight odor.
12	16	GP	–	4	1.6	Fine sand and silt, gray and brown, saturated, no odor.
	16					End of boring.

1/ Units are ppm calibration gas equivalent

dmd
January 15, 2004
reports\kingspointrealty\additionalsubsurfaceinvestigation2003\gp1thrugp22 log

TRC Boring Logs
December 2003

BORING LOG

BORING TRC-01
SHEET 1 OF 1

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above; f - fine m - medium c - coarse; Lt - light Dk - dark tr - trace lit - little)	REMARKS (PID, STAINING, ODORS, ETC.; N/S = No Staining N/O = No odors)
				0-0.3'		Asphalt.	
	1	3.7'		2		Med Brown, f sand, tr gravel, concrete and brick fragments, moist. Sample (including GW) collected 1.5'-2.5' bgs (ID: TRC-01-1.5-2.5).	Blk staining 1.6'-1.9'. Slight petroleum odor. PID: 3.0 ppm max.
				4		4'-4.3': As above.	N/S, N/O PID: 0.5 ppm max.
	2	4'		6		4.3'-8': Tan f sand, tr m gravel, moist.	N/S, N/O PID: 0.5 ppm max.
				8		8'-8.5': As above (4.3'-8').	N/S, N/O PID: 0.5 ppm max.
	3	4'		10		8.5'-12': Orange, f-m sand, tr m gravel, last 0.1' saturated.	N/S, N/O PID: 0.8 ppm max.
				12		EOB @ 12' bgs (Refusal)	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-02

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Drum Storage Area	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 4-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace Rt - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-1'		Asphalt.	
						1'-1.9': Gray f-m sand, f-m gravel.	
						1.9'-2.1': Black wood, petroleum staining.	PID: 10.2 ppm
	1	4'		2		2.1'-3.2': Black f-m sand, f-m gravel, clay	PID: 10.8 ppm
						Sample collected 2'-3' bgs (ID: TRC-02-2-3).	
					▼	3.2'-4': Tan, f-m sand, moist, slight odor	N/S
				4		EOB @ 4' bgs	
				6			
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-03
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.7'		Asphalt.	
						0.7'-2.5': Dk Brown sandy silt and asphalt, concrete, wood, moist.	Black staining, N/O PID: 0.1 ppm
	1	4'		2		0.7'-4': Dk Brown sandy silt and lr gravel, concrete and brick fragments, moist.	Black staining, N/O PID: 0.1 ppm
				4		4'-4.5': SAA (0.7'-4').	PID: 0.3 ppm
	2	4'		6		4.5'-8': Silty f sand, lr clay and gravel, brick and concrete, moist to wet.	PID: 0.1 ppm
				8		8'-9.6': SAA (4.5'-8'), wet.	N/S, N/O PID: 0.5 ppm max.
	3	3'		10		9.6'-11': Gray f-c sand, lr silt, saturated. Sample collected 9'-10' bgs (ID: TRC-03-9-10).	N/S, N/O PID: 0.1 ppm
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-04

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 8-feet bgs	WATER LEVEL N/A

WELL	CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
					0-0.6'		Concrete.	Oil/petroleum staining.
		1	2.1'		2		Med Brown, f sandy silt, tr clay and f md gravel, concrete, cinders, ash, coal fragments, slightly moist.	Intermittent blk staining, N/O PID: 1.0 ppm max.
					4		As above.	
		2	3.0'		6		Sample collected 6'-7' bgs (ID: TRC-04-6-7). Saturated 7'-8' bgs.	Intermittent blk staining, N/O PID: 1.0 ppm max.
					8		EOB @ 8' bgs	
					10			
					12			
					14			
					16			
					18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-05

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE Geoprobe	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Concrete.	Oil/petroleum staining.
	1	2.9'		2		Orange/Brown, f sand, tr silt and f md gravel up to 1/4" diam., moist. Sample collected 3'-4' bgs (ID: TRC-05-3-4).	Blk staining 2.2'-3.0', slight petrol odor PID: 2 ppm max.
				4			
	2	3.1'		6		Med Brown, silty f sand, some f md gravel up to 1/4" diam, very moist.	Blk staining 6.1'-6.3', slight petrol odor PID: 2 ppm
				8			
	3	2.8'		10		As above, tr clay, saturated 11'-12' bgs	N/S, N/O.
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-06

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 8-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace lit - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Concrete.	Oil/petroleum staining.
	1	2.6'		2		Dk Brown, f sandy silt, tr clay and f md gravel, moist, wet at 3.9' bgs.	N/S, N/O PID: 1.2 ppm max.
				4		4'-4.5': As above. 4.5'-5.5': Orange/Brown, f sandy silt, tr m-c sand, saturated.	N/S, N/O PID: 0.5 ppm max.
	2	1.5'		6		NOTE: Most likely perched conditions within the fill material, minimal recovery (< 1.5') after two attempts. Sample collected 4.5'-5.5' bgs (ID: TRC-06-4.5-5.5).	
				8		EOB @ 8' bgs	
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-07
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE Hand Auger	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 5-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN INCHES	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.45'		Concrete.	
				0.45'-0.47'		Gravel.	
						Brown, f-m sand, some angular gravel to 1/2 inch diam., tr. silt, brick, concrete, and wood fragments.	PID: 0.9 ppm N/S, N/O
				2		As above, tr. Gravel	PID: 0.8 ppm N/S, N/O
				3		Orange/Brown, f sand, tr. Silt and md gravel up to ~ 1" diam.	PID: 0.8 ppm N/S, N/O
				4		As above.	PID: 0.5 ppm N/S, N/O
				5		E.O.B. @ 5' bgs	
				6			
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-08

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.3'		Asphalt.	
						0.3'-2.6': Dk Brown, Silty f sand, tr f-m gravel, brick, concrete, wood, moist.	N/S, N/O PID: 0.1 ppm
	1	4'		2		2.6'-3.3': Gray f sand, tr silt, moist.	N/S, N/O PID: 0.1 ppm
						3.3'-4': Orange f sand, tr silt and clay, moist.	N/S, N/O PID: 0.1 ppm
				4		4'-4.8': Orange f sand and gray f sand, tr silt, moist.	Red/orange staning, N/O PID: 0.1 ppm
	2	4'		6		4.8'-8': Lt to m brown silt, tr f sand and gravel, moist.	N/S, N/O PID: 0.1 ppm
				8		8'-9.5': SAA (4.8'-8').	Some black staining, N/O PID: 0.1 ppm
	3	4'		10		9.5'-12': Tan to lt brown, f sand, tr m-c sand, silt and clay (native material), last .2' is saturated.Orange, f-m sand, tr m gravel, last 0.1' saturated. Sample collected (including GW 11'-12' bgs (ID: TRC-08-11-12).	N/S, N/O PID: 0.1 ppm
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-09

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL	CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS	REMARKS
					0-1'		Concrete.	
		1	3'		2		1.5'-2.5': Dk brown, f sand and gravel, and silt, concrete and brick fragments, moist.	Blk staining, slight petroleum odor. PID: 61 ppm max.
					4		2.5'-4': Tan f sand, very moist.	N/S, N/O. PID: 1.1 ppm max.
		2	4'		6		As above (2.5'-4').	Slight petrol odor. 4'-5.5' PID: 2.5 ppm 6'-7' PID: 65 ppm 7'-8' PID: 9.3 ppm
		3	3.8'		8		8'-11': Brown, f sand, some m-c sand and f gravel, very moist.	Strong petroleum odor. PID: 120 ppm
					10		Sample collected 10.5'-12' bgs (ID: TRC-09-10.5-12).	
					12		11'-12': Tan and gray interbedded f sand, wet.	Strong petroleum odor PID: 91 ppm
					14		EOB @ 12' bgs (Refusal)	
					16			
					18			

Sand

Bentonite Seal

Concrete

Well Screen

TRC

BORING TRC-10
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine, m - medium, c - coarse Lt - light, Dk - dark, tr - trace, ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Asphalt.	
	1	4'		2		0.5'-2.4': Tan to gray f sand, tr silt and f gravel, brick and concrete fragments, moist.	Blk staining from 1.2-1.5 feet bgs. Slight petroleum odor. PID: 10.1 ppm max.
						2.4'-4.0': Tan, silty f sand, some m-c sand and f gravel, brick and concrete fragments, very moist.	N/S, Slight petroleum odor PID: 4.2 ppm max.
	2	4'		4 6		Tan f sand, some m-c sand, tr m gravel, brick, concrete, and wood fragments.	Orange staining 4.6'-4.9'. Slight petroleum odor. PID: 2.5 ppm
				8		As above 4'-8' bgs.	
	3	4'		10		Wet from 8.5'-9.5' bgs. Saturated from 9.5'-12' bgs. Sample (including GW) collected 8.5'-9.5' bgs (ID: TRC-10-8.5-9.5).	Visible petroleum sheen in saturated zone. Strong petroleum odor. PID: 120 ppm
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-11
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 8-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-1'		Asphalt.	
						1'-2.4': Gray f-sand, tr gravel, moist.	N/S, N/O PID: 0.2 ppm
	1	4'		2		2.4'-3': Gray f-sand, very moist.	N/S, N/O PID: 0.2 ppm
						3'-4': Tan f-sand, wet.	N/S, N/O PID: 0.1 ppm
				4		4'-5': SAA. Tr m-gravel, moist.	N/S, N/O
						5'-7': Tan to gray clay, tr cobble, moist.	N/S, N/O
	2	4'		6		Sample collected 6'-7' bgs (ID: TRC-11-6-7).	PID: 0.3 ppm
						Tan to gray f-sand, tr-clay, saturated.	N/S, N/O PID: 0.21 ppm
				8		EOB @ 8' bgs	
	3			10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-12
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS	REMARKS
				0-0.3'		Asphalt.	
	1	4'		2		Dk Brown, silty f sand, some f gravel, moist, concrete, brick and wood fragments.	Blk staining throughout. Slight petroleum odor. PID: 0.2 ppm max.
				4		4'-4.5': SAA.	N/O PID: 0.2 ppm max.
	2	4'		6		4.5'-8': Tan f-m sand, tr c sand and f round gravel. Tr silt and clay (7'-8'). Wet (7'-8').	Orange staining (6.5'-7.5'), N/O. PID: 0.2 ppm.
				8		8'-8.5': Gray-Black cinders and ash, sand and gravel.	N/O PID: 0.2 ppm
	3	2.5'		10		8.5'-10.5': Tan f-m sand, tr silty, saturated last 0.3'. Sample collected 9.5'-10.5' bgs (ID: TRC-12-9.5-10.5).	N/S, N/O PID: 0.2 ppm
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-13
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 4-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace lit - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.8'		Asphalt.	
						0.8'-1.6': Dk Brown f-m sand, some f-m gravel.	N/O, N/S. PID: 0.1 ppm
				2		1.6'-1.9': Red fractured brick.	N/O, N/S. PID: 0.1 ppm
	1	3.8'				1.9'-3.8': Black f-m sand and f-m gravel, fill material, tr cobble.	N/O, N/S.
				4		Sample collected 3'-4' bgs (ID: TRC-13-3-4).	PID: 0.2 ppm
						EOB @ 4' bgs (Refusal)	
	2			6			
				8			
	3			10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-14
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 4-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
	1	4'		0-0.7		Asphalt. 0.7'-4': Dk Brown silty f sand, tr c sand, and f gravel, wood, asphalt, concrete, moist. Sample collected 2.5'-3.5' bgs (ID: TRC-14-2.5-3.5).	Intermittent black staining. Slight petroleum odor. PID: 0.1 ppm
	2			2			
				4		EOB @ 4' bgs (Refusal)	
	3			6			
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-15
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Inferred UST beneath a former AST	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/19/2003	END DATE 12/19/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 4-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) NFS = No Staining NO = No odors
				0-0.5'		Asphalt.	
						1.5'-3': Concrete Pad.	
	1	1'		2		3'-4': Dk brown, silty f sand, some f-m gravel, wet (probably due to surface runoff). Sample collected 3'-4' bgs (ID: TRC-15-3-4).	Blk staining. Petroleum odor. PID: 1.0 ppm
				4		EOB @ 4' bgs (Refusal)	
	2			6			
				8			
	3			10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING LOG

BORING TRC-16
SHEET 1 OF 1

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 5-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace lit - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.6'		Asphalt.	
						0.6'-3.2': Gray silty sand, tr f-m gravel, brick, concrete, wood, moist.	N/S, N/O PID: 0.0 ppm max.
	1	3'		2		Sample collected 2.5'-3' bgs (ID: TRC-16-2.5-3).	
						3.2'-4.0': Concrete.	N/S, Slight petroleum odor. PID: 0.3 ppm max.
				4		4'-4.3': Concrete.	N/S, N/O
						4.3'-5': Dk Brown, silty fine sand, tr c sand and f gravel, moist, last 0.1' is asphalt.	PID: 0.5 ppm max.
	2	1'		6		EOB @ 5' bgs	
						Second attempt met refusal at 2.5' bgs.	
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-17

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 6.8-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace lit - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.3'		Asphalt.	
	1	4'		2		Med-Dk Brown, silty f sand, some f-m gravel, brick, concrete, wood, glass, moist. Sample collected 3'-4' bgs (ID: TRC-17-3-4).	Blk staining 3'-3.2', Slight petrol odor. PID: 0.0 ppm
				4		As above.	N/S, N/O PID: 0.0 ppm
	2	1.8'		6			
				8		EOB @ 6.8' bgs (Refusal)	
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-18

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 6-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace lit - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.7'		Asphalt.	
	1	4'		2		Med Brown, silty f sand, some f-m gravel, brick, concrete, wood, glass, moist. Sample collected 3'-4' bgs (ID: TRC-18-3-4).	Blk staining 2.6'-2.8', N/O. PID: 0.1 ppm
				4		As above.	N/S, N/O PID: 0.0 ppm
	2	2'		6		EOB @ 6' bgs (Refusal)	
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-19

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000		
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Scott Fischer	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/11/2003	END DATE 12/11/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 9-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.3'		Asphalt.	
	1	4'		2		Med Brown, silty f sand, some f-m gravel, brick, concrete, wood, glass, moist. Sample collected 3'-4' bgs (ID: TRC-19-3-4).	N/S, N/O PID: 0.6 ppm
	2	4'		4 6		As above.	Blk Staining 4.5'-5.5' Slight petroleum odor. PID: 0.1 ppm
	3	1'		8		Orange, m-c sand and gravel, very moist.	N/S, N/O PID: 0.0 ppm
				10 12 14 16 18		EOB @ 9' bgs (Refusal)	

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-20
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above; f - fine m - medium c - coarse Lt - light Dk - dark tr - trace Bl - Brtle)	REMARKS (PID, STAINING, ODORS, ETC.) (NS = No Staining NO = No odors)
				0-0.5'		Asphalt.	
						0.5'-1.5': Med Brown, f-m sand,f-m gravel.	PID: 1.2 ppm
	1	4'		2		1.5'-4': Gray brown, f-m sand, f-m gravel.	Petroleum odor. PID: 30.3 ppm max.
				4		4'-6.3': SAA (1.5'-4'), tr silt, last 1.3' moist	Petroleum odor. PID: 8.6 ppm
	2	2.3'		6			
				8		8'-12': SAA (4'-6.3'), moist.	Petroleum odor. PID: 17.3 ppm
	3	4'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-21
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Gravel.	
						0.5'-2': Brown, f-m sand,f-c gravel.	N/S, N/O PID: 1.2 ppm
	1	2.3'		2		2'-2.3': Brown, f-m sand, silt, tr clay, staining	PID: 8.0 ppm
				4		4'-6': Brown, f-m sand, f-m gravel, tr clay moist.	
	2	3'		6		6'-7': Sand and silt, oil stained, petroleum odor, moist. Sample (including GW) collected 6'-7' bgs (ID: TRC-21-7-8).	Petroleum odor PID: 22.6 ppm
				8		8'-8.7': Black, f-m sand, gravel, silts, saturated.	PID: 35 ppm
	3	.7'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-22

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 1151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Asphalt.	
						0.5'-1.2': Brown, f-c sand,gravel.	N/S, N/O PID: 1.2 ppm
	1	4'		2		1.2'-4': Dark brown, f-m sand, gravel, slight staining.	PID: 1.4 ppm
				4		4'-5': Dark brown-gray, f-m sand, gravel, slight staining.	N/O PID: 1.5 ppm
	2	3'		6		5'-7': Brown, f-sand, gravel, moist. Sample (including GW) collected 6'-7' bgs (ID: TRC-22-7-8).	N/S, N/O PID: 1.3 ppm
				8		8'-9.5': SAA (5'-7'), saturated.	N/S, N/O PID: 1.3 ppm
	3	1.5'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand

Bentonite Seal

Concrete

Well Screen

TRC

BORING TRC-23
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 3-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light DK - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) NS = No Staining NO = No odors
				0-0.6'		Asphalt, black f-sand, gravel, tr clay, petroleum odor.	PID: 8.2 ppm max.
	1	0.6'		2			
				4		EOB @ 3' bgs (Refusal)	
				6			
				8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-24

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.5'		Asphalt.	
						0.5'-1.2': Brown, f-c sand, gravel.	N/S, N/O PID: 1.0 ppm
	1	4'		2		1.2'-4': Dk brown, f-m sand, gravel.	
				4		4'-7': Dk brown-gray, f-m sand, gravel.	N/O PID: 1.0 ppm
	2	4'		6		7'-8': Brown, f-sand, gravel, moist. Slight odor and staining. Sample collected 7'-8' bgs (ID: TRC-24-7-8).	PID: 1.0 ppm
				8		8'-8.5': SAA (7'-8'), saturated.	PID: 1.0 ppm
	3	1.5'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-25

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Asphalt Plant	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 3-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace Bl - Black	REMARKS (PID, STAINING, ODORS, ETC.) NS = No Staining NO = No odors
	1	0.5'		0-0.5'		Asphalt	N/S, N/O
				2			
	2			4		EOB @ < 3' bgs (Refusal)	
				6			
	3			8			
				10			
				12			
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-26
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT Whitestone Phase II	PROJECT NO. 41911-0000-00000	AREA OF CONCERN Former Grace Maintenance Garage	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) NS = No Staining NO = No odors
				0-0.7'		Asphalt.	
						0.7'-2.2': Black f-m sand, f-m gravel, strong petroleum odor, staining.	PID: 35 ppm
	1	4'		2		2.2'-2.7': Tan f sand, f-m gravel.	
						2.7'-4': Tan-greenish clay, f sand, slight sweet odor.	PID: 1.3 ppm
				4		4'-6.3': SAA.	
	2	4'		6		6.3'-7.3': Tan, f sand, f-m gravel, moist.	PID: 1.7 ppm
				8		8'-12': SAA.	
	3	4'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-27
SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Grace Maintenance Garage	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.7'		Asphalt.	
						0.7'-1.8': Black f-m sand, f-m gravel, petroleum odor, staining.	PID: 26.8 ppm
	1	4'		2			
						2.1'-4': Tan-greenish clay.	PID: 1.2 ppm
				4			
	2	4'		6		4'-8': Tan clay, f-m sand, moist.	
				8			
	3	0'		10			
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand
Bentonite Seal
Concrete
Well Screen

TRC

BORING TRC-28

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Grace Maintenance Garage	
ADDRESS 151-46, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A.	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above; f - fine m - medium c - coarse Lt - light Dk - dark tr - trace Bl - little)	REMARKS (PID, STAINING, ODORS, ETC.) (NS = No Staining NO = No odors)
				0-0.3'		Asphalt.	
	1	4'		2		0.3'-1.8': Black f-m sand, f-m gravel, petroleum odor, staining.	PID: 43.7 ppm
				4		2.1'-4': Tan-greenish clay.	PID: 1.7 ppm
	2	4'		6		4'-8': Tan clay, f-m sand, moist.	PID: 1.5 ppm
				8			
	3	4'		10		SAA.	
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand

Bentonite Seal

Concrete

Well Screen

TRC

BORING TRC-29

SHEET 1 OF 1

BORING LOG

JOB NAME/ CLIENT	PROJECT NO.	AREA OF CONCERN	
Whitestone Phase II	41911-0000-00000	Former Grace Maintenance Garage	
ADDRESS 151-45, 6th Road, Whitestone, NY		ELEVATION/DATUM	
DRILLING CONTRACTOR Zebra Environmental	DRILLER Charles Green	INSPECTOR Geraldine Tan & Patrick Narea	
DRILLING RIG Geoprobe Unit	TYPE/SIZE BIT N/A	START DATE 12/12/2003	END DATE 12/12/2003
SAMPLER TYPE 2-inch macro core	HAMMER WEIGHT/DROP N/A	TOTAL DEPTH 12-feet bgs	WATER LEVEL N/A

WELL CONSTRUCTION	SAMPLES: NUMBER	SAMPLES: RECOVERY IN FEET	SAMPLES: BLOWS PER 6"	DEPTH	WATER	DESCRIPTION OF SOILS (SAA = Same As Above) f - fine m - medium c - coarse Lt - light Dk - dark tr - trace ltl - little	REMARKS (PID, STAINING, ODORS, ETC.) N/S = No Staining N/O = No odors
				0-0.8'		Asphalt.	
						0.8'-1.3': Sand, brick asphalt.	
	1	4'		2		1.3'-4': Tan f sand, tr cobble.	N/S, N/O
				4			
	2	4'		6		4'-8': SAA	N/S, N/O PID: 1.0 ppm
				8			
						8'=10': SAA	
	3	4'		10		10'-12': Tan orange, f-m sand, gravel, moist. Sample collected 10'-11' bgs (ID: TRC-29-10-11).	N/S, N/O PID: 1.0 ppm
				12		EOB @ 12' bgs	
				14			
				16			
				18			

Sand

Bentonite Seal

Concrete

Well Screen

TRC

TRC Test Pit Logs
December 2003

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	**Client**
Location Whitestone, NY	
Contractor Brookside	**Operator** Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. TP-01	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	**Completion Status** Backfilled
Total Depth (ftbg) ~ 7'	**Water Level (ftbg)** Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.2'		Asphalt.	
0.2'- 7'	5.5'	: Orange/tan to dark gray silty f-m sand, fill material, including brick, concrete, and wood fragments. : Extensive concrete pad along S edge of TP. : Extensive staining and sheen on soil with strong petroleum odor. (No sheen on water, Kerosene?) : Product emanating from beneath concrete slab covering the S face of excavation.	PID: 44.5 ppm
		E.O.TP 7' bgs TP Dimensions: Trending E-W 12' x 3' x 7' Sample collected at 5.5' bgs (TP-01-5.5)	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	

Test Pit No. TP-03	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 9'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/OID, ETC)
0-1.2'		Asphalt.	
1.2'-3.9'		: Med Brown silt, sand, gravel, and cobble fill material, brick, concrete, metal, and wood (C&D).	Petroleum Odor.
3.9'-9'		: Gray, f-m sand, tr gravel, black staining 4.9'.	PID: 21.3 ppm max.
		Sample collected at 4.9' (TP-03-4.9)	From stained interval.
		E.O.TP 9' bgs	
		TP Dimensions: 10.5' x 4' x 9'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location: Whitestone, NY	Test Pit No.: TP-04
Contractor: Brookside	Operator: Brian Graham
Excavator: CAT 14A Tire Hoe	Elevation & Datum
Sampler Type	TRC Inspector: Geraldine Tan & Scott Fischer
	Date Started/Completed: 12/9/03-12/9/03
	Completion Status: Backfilled
	Total Depth (ftbg): ~ 7'
	Water Level (ftbg): Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.6'		Asphalt.	
0.6'-3'		: Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, and wood.	
3'-3.5'		: As above, black staining.	PID: 0.1 ppm
3.5'-7'		Sample collected at 3.3' (TP-04-3.3)	From stained interval.
		: Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, and wood.	
		E.O.TP 7' bgs	
		TP Dimensions: 14' x 6' x 7'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	

Test Pit No. Anomaly-01	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 0.25'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.075'		Asphalt.	
0.075'-0.25'		Dk Brown silt, sand, and gravel fill material. No visible staining or odors.	PID: 0.1 ppm
		CONCRETE: Flat surface, extensive. TP Dimensions: 7' x 5' x 0.25'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	Test Pit No. Anomaly-02
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	Elevation & Datum
Sampler Type	TRC Inspector Geraldine Tan & Scott Fischer
Total Depth (ftbg) ~ 0.5'	Date Started/Completed 12/9/03-12/9/03
Water Level (ftbg) Obs. Stab.	Completion Status Backfilled

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.1'		Asphalt.	
0.1'-0.5'		Dk Brown silt, sand, and gravel fill material, brick, concrete, and wood fragments. No visible staining or odors.	PID: 0.3 ppm
		CONCRETE: Flat surface, extensive.	
		TP Dimensions: 7' x 3' x 0.5' (N-S Orientation)	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911 / Client	Test Pit No. Anomaly-03
Location Whitestone, NY	Elevation & Datum
	TRC Inspector Geraldine Tan & Scott Fischer
Contractor Brookside / Operator Brian Graham	Date Started/Completed 12/9/03-12/9/03 / Completion Status Backfilled
Excavator CAT 14A Tire Hoe	Total Depth (ftbg) ~ 0.5' / Water Level (ftbg) Obs. Stab.
Sampler Type	

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.1'		Asphalt.	
0.1'-0.5'		Med Brown silt, sand, gravel, and cobble fill, material, including brick, concrete, wood. Anomaly- 0.25" x 1.2' x 1.8' steel plate. No visible staining or odors.	PID: 0.5 ppm
		E.O.TP 0.5' bgs	
		TP Dimensions: 5' x 3' x 0.5'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	**Client**
Test Pit No. Anomaly-04	
Location Whitestone, NY	**Elevation & Datum**
TRC Inspector Geraldine Tan & Scott Fischer	
Contractor Brookside	**Operator** Brian Graham
Date Started/Completed 12/9/03-12/9/03	**Completion Status** Backfilled
Excavator CAT 14A Tire Hoe	**Total Depth (ftbg)** ~ 2.9'
Water Level (ftbg) Obs. Stab.	
Sampler Type	

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-06'		Asphalt.	
0.6'-2.9'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, and rebar. Anomaly- Rebar and concrete blocks.. No visible staining or odors.	PID: 0.3 ppm
		E.O.TP at 2.9' bgs Concrete- flat and extensive. TP Dimensions: 6' x 4' x 2.9'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-05	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 2.9'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.4'		Asphalt.	Sheen on meltwater at 2.0'.
0.4'-2.0'		: Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, ceramic tile, and rebar. : Sample collected at 2.0' bgs (Anomaly-05-02). from N wall of excavation. : Building footer/foundation in eastern area of TP. concrete and brick ~ 10" thick.	PID: 61 ppm Chemical/solvent odor.
2.0'-2.9'		Fill / C&D material as above, no stains or odors from bottom of TP.	
		E.O.TP 2.9' bgs TP Dimensions: 18' (N-S) x 9' (E-W) x 2.9'	

TRC Environmental Inc.	TEST PIT LOG	Sheet 1 Of 1
Project No. 41911	Client	Test Pit No. Anomaly-06
Location Whitestone, NY		Elevation & Datum
		TRC Inspector Geraldine Tan & Scott Fischer
Contractor Brookside	Operator Brian Graham	Date Started/Completed 12/9/03-12/9/03
		Completion Status Backfilled
Excavator CAT 14A Tire Hoe		Total Depth (ftbg) ~3.1'
		Water Level (ftbg) Obs. Stab.
Sampler Type		

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.8'		Asphalt	
0.8'-3.1'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, and rebar. Anomaly- Rebar and concrete blocks.. No visible staining or odors.	PID: 0.2 ppm
		E.O.TP 3.1' bgs	
		TP Dimensions: 12' x 6' x 3.1'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	

Test Pit No. Anomaly-07	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 2.5'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.3'		Asphalt.	
0.3'-2.5'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, and rebar. Anomaly- Rebar and concrete blocks.. No visible staining or odors.	PID: 0.2 ppm
		E.O.TP 2.5' bgs	
		TP Dimensions: 8' x 8' x 2.5'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-08	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 3.3'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.3'		Asphalt.	
0.3'-3.3'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, and rebar. No visible staining or odors.	PID: 0.2 ppm
		E.O.TP 3.3' bgs Concrete- flat and extensive. TP Dimensions: V-Shaped trending NE and NW each pit is ~ 11' x 3' x 3.3'.	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-09	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 2.5'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.2'		Asphalt.	
0.2'-2.5'		Med Brown silt, sand, gravel, and cobble fill, material, including brick, concrete, wood, plastic, and rebar. Anomaly- 6" x 8' concrete filled steel ballard. No visible staining or odors.	PID: 0.7 ppm
		E.O.TP 2.5' bgs	
		TP Dimensions: 10' x 4' x 2.5'	

TRC Environmental Inc.	TEST PIT LOG	Sheet 1 Of 1
Project No. 41911	Client	Test Pit No. Anomaly-10
Location Whitestone, NY		Elevation & Datum
		TRC Inspector Geraldine Tan & Scott Fischer
Contractor Brookside	Operator Brian Graham	Date Started/Completed 12/9/03-12/9/03
		Completion Status Backfilled
Excavator CAT 14A Tire Hoe		Total Depth (ftbg) ~ 4.0'
		Water Level (ftbg) Obs. Stab.
Sampler Type		

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DIO, ETC)
0-0.8'		Asphalt.	
0.8'-2'		: Med Brown silt, sand, and gravel fill material, brick, concrete, metal, and wood. : No visible staining or odors.	PID: 0.2 ppm
2'-2.85'		Concrete pad (~ 10" thick) breached with hydraulic hammer attachment. Flat surface as in other areas, rebar reinforced.	
2.85'-4'		: Fill material below concrete pad.	
		E.O.TP 4.0' bgs	
		TP Dimensions: 9' x 7' x 4'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-11	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 0.5'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.1'		Asphalt.	
0.1'-0.5'		Dk Brown silt, sand, and gravel fill material. No visible staining or odors.	PID: 0.3 ppm
		CONCRETE: Flat surface; extensive. TP Dimensions: 7' x 5' x 0.5'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	Test Pit No. Anomaly-12
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	Elevation & Datum
Sampler Type	TRC Inspector Geraldine Tan & Scott Fischer
	Date Started/Completed 12/9/03-12/9/03
	Completion Status Backfilled
	Total Depth (ftbg) ~ 1.25'
	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.15'		Asphalt.	
0.15'-1.25'		Dk Brown silt, sand, and gravel fill material; brick, concrete, and wood fragments. No visible staining or odors.	PID: 0.3 ppm
		CONCRETE: Flat surface, extensive.	
		TP Dimensions: 9' x 3' x 1.25' (N-S Orientation)	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-13	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 0.5'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.1'		Asphalt.	
0.1'-0.5'		Dk Brown silt, sand, and gravel fill material, brick, concrete, and wood fragments. No visible staining or odors.	PID: 0.3 ppm
		CONCRETE: Flat surface, extensive.	
		TP Dimensions: 7' x 3' x 0.5' (N-S Orientation)	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	

Test Pit No. Anomaly-14	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 2.0'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.3'		Asphalt.	
0.3'-2.0'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, No visible staining or odors.	
		E.O.TP 2.0' bgs Concrete- flat and extensive. TP Dimensions: 5' x 3' x 2'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location: Whitestone, NY	
Contractor: Brookside	Operator: Brian Graham
Excavator: CAT 14A Tire Hoe	
Sampler Type	
Test Pit No.: Anomaly-15	
Elevation & Datum	
TRC Inspector: Geraldine Tan & Scott Fischer	
Date Started/Completed: 12/9/03-12/9/03	Completion Status: Backfilled
Total Depth (ftbg): ~ 1.0'	Water Level (ftbg): Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.8'		Asphalt.	
0.8'-1'		: Med Brown silt, sand, and gravel fill material, brick, concrete, metal, and wood. Anomaly uncovered at 1' bgs: 1.5" steel road plate (3' x 3' x 1.5"). No visible staining or odors.	PID: 0.5 ppm
		E.O.TP 1.0' bgs	
		TP Dimensions: 4' x 3' x 1'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-16	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 1.4'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-1' 1'-1.4'		Asphalt. : Med Brown silt, sand, gravel, and cobble fill material, brick, concrete, metal, and wood. Anomaly uncovered at 1.4' bgs: 2.5" steel road plate of unknown dimensions. No visible staining or odors.	PID: 0.2 ppm
		E.O.TP 1.4' bgs TP Dimensions: 6' x 6' x 1.4'	

TRC Environmental Inc.	TEST PIT LOG	Sheet 1 Of 1
Project No. 41911	Client	Test Pit No. Anomaly-17
Location Whitestone, NY		Elevation & Datum
		TRC Inspector Geraldine Tan & Scott Fischer
Contractor Brookside	Operator Brian Graham	Date Started/Completed 12/9/03-12/9/03
		Completion Status Backfilled
Excavator CAT 14A Tire Hoe		Total Depth (ftbg) ~ 2.0'
		Water Level (ftbg) Obs. Stab.
Sampler Type		

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.3'		Asphalt.	
0.3'-2.0'		Med Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood,	
		No visible staining or odors.	
		E.O.TP 2.0' bgs	
		Concrete- flat and extensive.	
		TP Dimensions: 5' x 3' x 2'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-18	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~2.2'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.7'		Asphalt.	
0.7'-2.2'		Dk Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, Anomaly: uncovered at 1.5' bgs, 1/8" x 1' x 2.2' steel plate. No visible staining, slight petroleum odor.	PID: 0.3 ppm
		E.O.TP 2.2' bgs Concrete- flat and extensive. TP Dimensions: 9' x 5' x 2.2'	

TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location: Whitestone, NY	Test Pit No.: Anomaly-19
Contractor: Brookside	Operator: Brian Graham
Excavator: CAT 14A Tire Hoe	Elevation & Datum
Sampler Type	TRC Inspector: Geraldine Tan & Scott Fischer
	Date Started/Completed: 12/9/03-12/9/03
	Completion Status: Backfilled
	Total Depth (ftbg): ~ 1.6'
	Water Level (ftbg): Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.6'		Asphalt.	
0.6'-1.6'		: Dk Brown silt, sand, gravel, and cobble fill material, including brick, concrete, wood, plastic, and rebar.	PID: 0.1 ppm
		: Anomaly- Steel road plate 14' x 8' x 2"	
		: Fill material below road plate, as above. No visible staining or odors.	PID: 0.1 ppm
		E.O.TP 1.6' bgs	
		TP Dimensions: 16' x 10' x 1.6'	

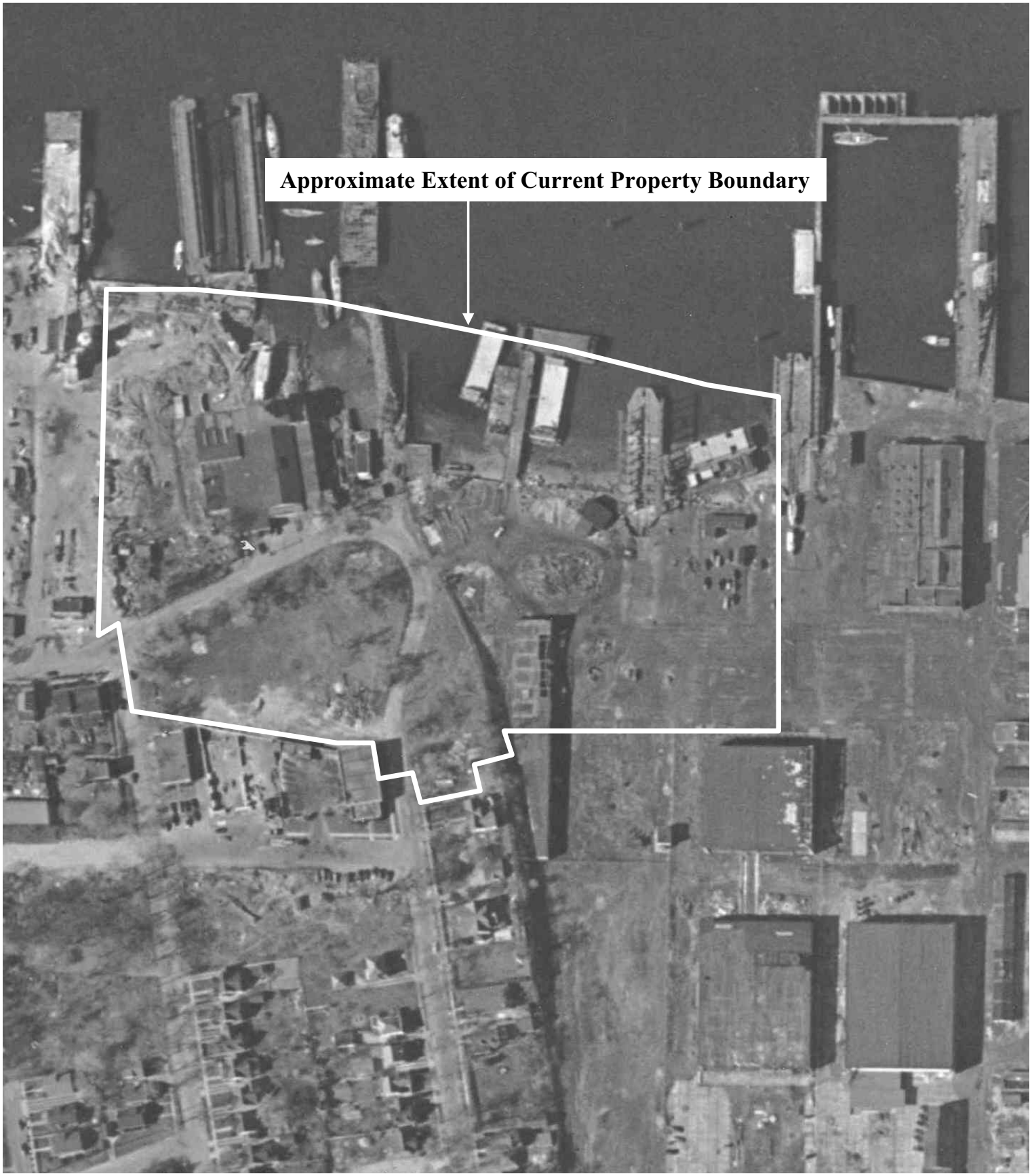
TRC Environmental Inc.

TEST PIT LOG

Sheet 1 Of 1

Project No. 41911	Client
Location Whitestone, NY	
Contractor Brookside	Operator Brian Graham
Excavator CAT 14A Tire Hoe	
Sampler Type	
Test Pit No. Anomaly-20	
Elevation & Datum	
TRC Inspector Geraldine Tan & Scott Fischer	
Date Started/Completed 12/9/03-12/9/03	Completion Status Backfilled
Total Depth (ftbg) ~ 3'	Water Level (ftbg) Obs. Stab.

DEPTH IN FEET bgs	WATER	SAMPLE DESCRIPTION	REMARKS (PID/DID, ETC)
0-0.7'		Asphalt.	
0.7'-3'		: Med Brown silt, sand, and gravel fill material, including brick, concrete, wood, plastic, and rebar. Blk stained soil and gravel, Strong petroleum odors.	PID: 82 ppm
		E.O.TP 3' bgs : TP Dimensions for soil samples: 3' x 3' x 3' : Two (2) Samples collected: (Anomaly-20-2.5) and (Anomaly-20-03): : Samples collected SE and S of the UST respectively. : TP Dimensions over exposed UST: 12' x 12' x 1.6' UST: Round (10' diameter), concrete, with ~ 2" piping heading south from the structure. : Overall depth of structure unknown due to the saturated nature of soils from snow and meltwater.	

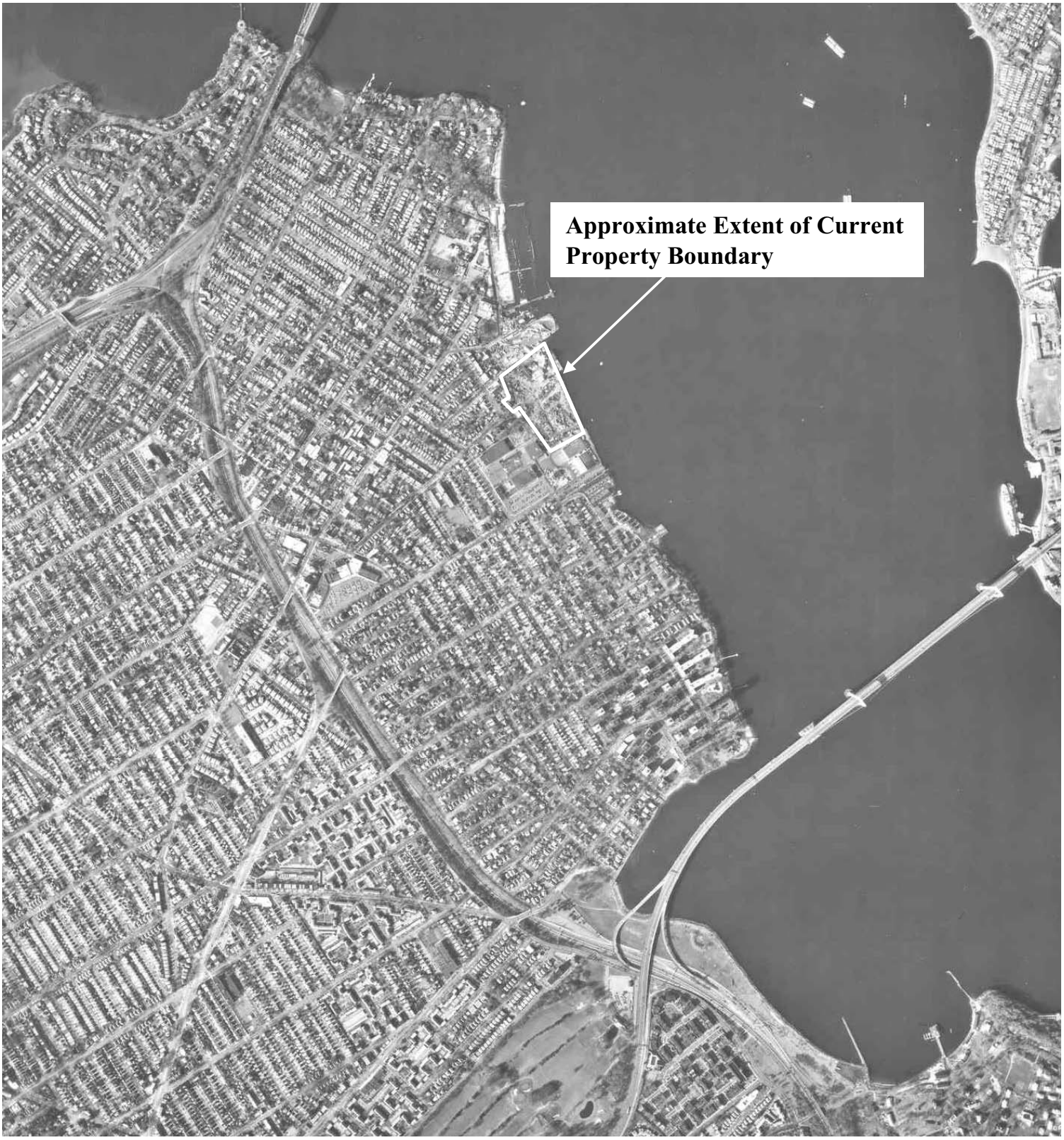


ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: 1"=200' DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1951 Aerial Photograph 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-2

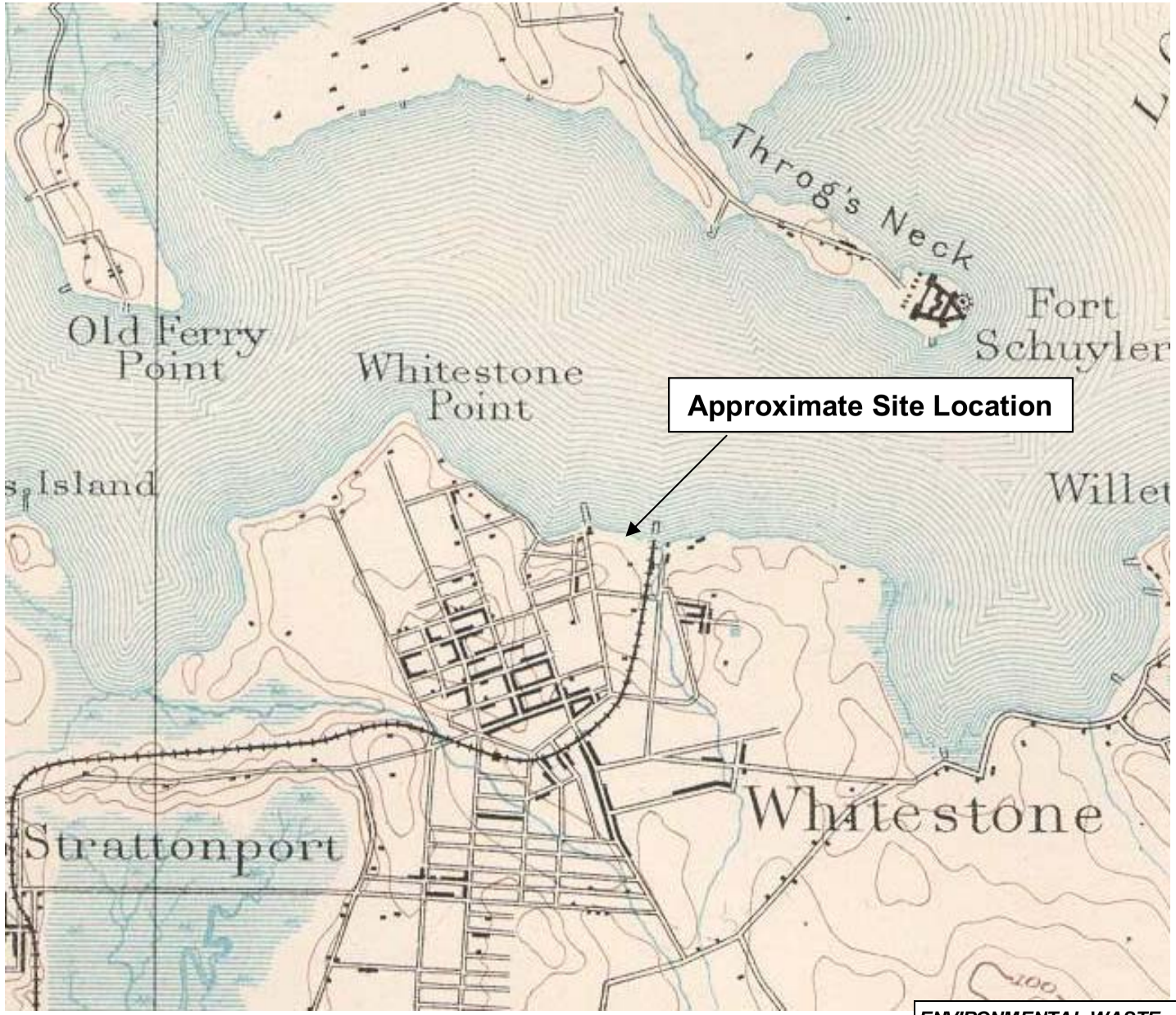
ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: 1"=200' DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1962 Aerial Photograph 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-3

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: 1"=1500' DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1966 Aerial Photograph 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-4

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: 1"=200' DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1977 Aerial Photograph 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-5

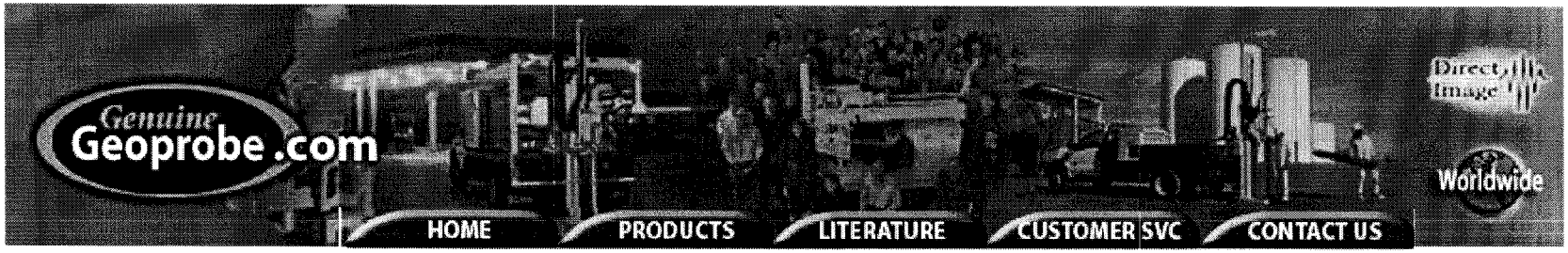


ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: 1"=1600' DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1992 Aerial Photograph 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-6



ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: Unknown DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
1891 Historic USGS 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 3-1

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: Unknown	PROJECT # 204494
	DATE: 2/8/2007	
	ASSEMBLED BY: SB CHECKED BY: LD	
High Resolution Photograph of Site 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Appendix 4



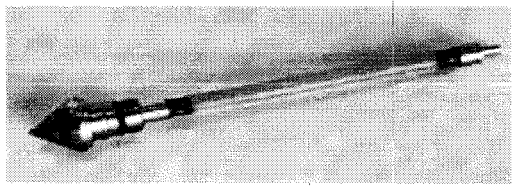
Geoprobe Tools
>> Back to Tools Menu

► Main Info

Soil Gas Implants Operation Instructions

InstantDownload

Permanent Implants



Geoprobe® owners have been using permanent implants for a number of years; for soil gas sampling, air sparging, and groundwater sampling. Geoprobe® implants are stainless steel screens that can be inserted down the bore of a probe rod and anchored at depth.

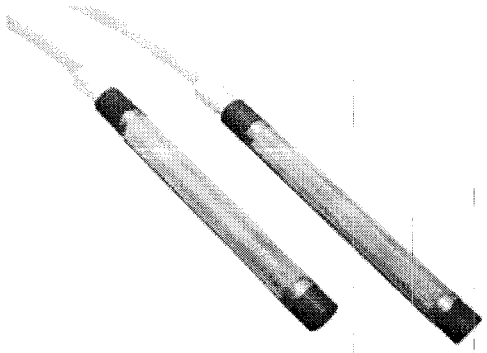
Geoprobe® implants are unique in their ability to be "Post Run"... they are not carried in the rod during probe driving, but rather inserted down the bore when the appropriate depth has been reached. Once the implant is slid down the bore, it is simply rotated to attach it to the anchor point used during driving. As probe rods are removed from the hole, the implant and associated tubing remain firmly anchored at the bottom.

Geoprobe® implants are constructed of double woven stainless steel wire screen. All end fittings are stainless steel as well. Implants are available in 6-in. (152 mm) lengths with the AT86 series, 21-in. (533 mm) lengths with the AT87 series, or 14-in. (356 mm) lengths with the latest AT96 series. The user can also connect multiple 21-in. (533 mm) lengths together using the AT89 series implants. Geoprobe® implants have a pore diameter of 0,0057 inch (0.145 mm).

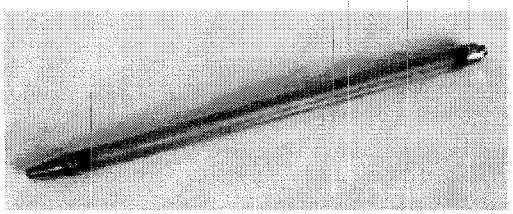
The bottom end of Geoprobe® implants use our standard "PRT" style thread, the same fitting style used with our popular PRT vapor sampling tools. The AT89 implant uses a PRT socket thread at its top end, allowing multiple lengths to be coupled together.

Geoprobe® Permanent Implants Advantages...

- Placed through bore after rods have been driven to depth.
- Variety of implant lengths to suit the application.
- Designed to fit a wide array of tubing materials and sizes.
- Can be set at any depth attainable by soil probe (100+ ft. [30 m]).
- Convenient and inexpensive devices for both long-term soil gas monitoring, air sparging, and groundwater sampling.
- Screens made entirely of stainless steel.
- 0.0057-in. (0,15 mm) pore screen size.
- For use with 5/8-in. and 1/2-in. ID rods.

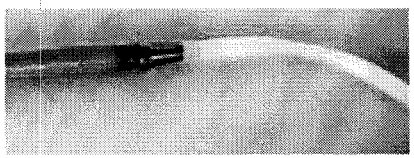


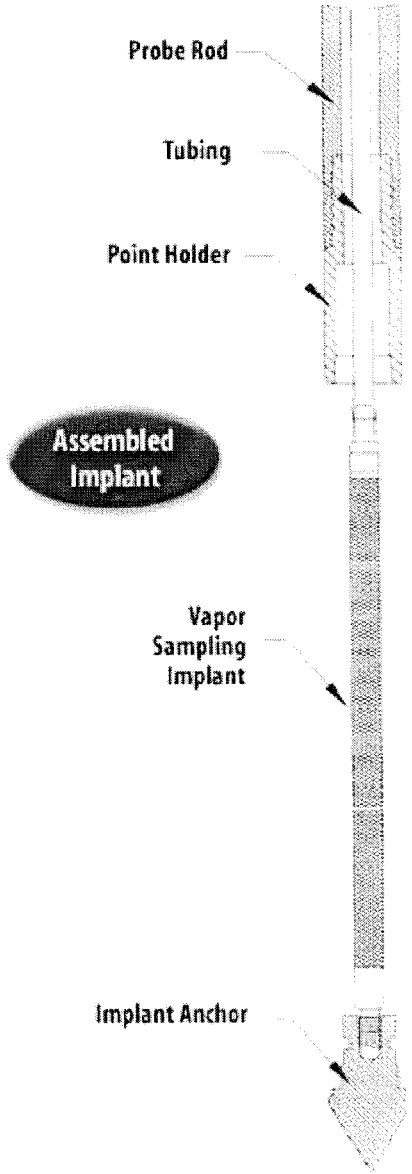
Prepacked Sparge Points
An alternative to using implants for air sparging. Installed through 2.25 in. probe rod using flexible tubing instead of PVC riser. Includes a compression fitting for connecting 0.625 in. OD tubing. Less extensive than typical implants.



Geoprobe's stainless steel implants for the 1.25-in. probe rod system. PRT fitting at the base attaches to Implant Anchor. Top end fits poly tubing with 0.5-in. OD x 0.375 ID.

The taper screw on the AT96 series implant forms an incredibly strong connection. As shown here, TB25L tubing fails in tension before it will pull away from the connection.



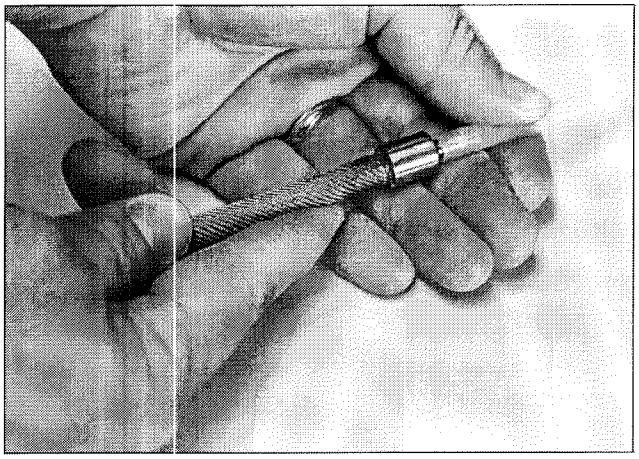


Permanent Implant Applications
-- Permanent Soil Gas Monitoring
-- UST Monitoring

Implants Operation

from Geoprobe Systems®

www.geoprobe.com
1-800-436-7762



Attaching polyethylene tubing to the sampling implant.

Sampling Implants – Operation

Installation Instructions for Soil Gas Implants

1. Drive probe rods to the desired depth using a Point Holder (AT-13B) and an Implant Anchor/Drive Point (PR-14). DO NOT disengage the drive point when depth has been reached.

2. Attach appropriate tubing to the implant **(Figure 1)**. If tubing is pre-cut, allow it to be approximately 48 in. (1219 mm) longer than the required depth of the implant. Cover or plug the open end of the tubing.

3. Remove pull cap and lower the implant and tubing down inside the diameter of the probe rods until the implant hits the top of the Anchor/Drive Point. Note the length of the tubing to assure that proper depth has been reached.

4. Rotate tubing counterclockwise while exerting a gentle downward force to engage the PRT threads **(Figure 2)**. Pull up on the tubing lightly to test the connection. DO NOT cut excess tubing.

5. Position a Probe Rod Pull Plate or Manual Probe Rod Jack on the top probe rod. Exert downward pressure on the tubing while pulling the probe rods up. Pull up about 12 in. (305 mm).

6. If using 1/4-in. (6,4 mm) O.D. tubing or smaller, thread the excess tubing through the Implant Funnel and position it over the top probe rod. If using larger tubing, it may not be possible to install the glass beads.

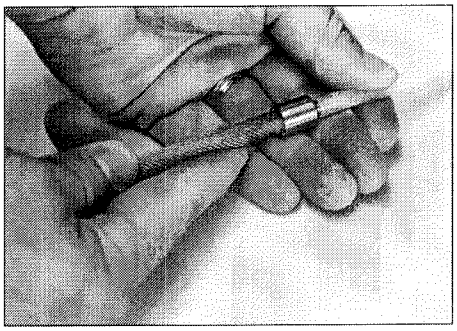


Figure 1. Attaching tubing to the sampling implant.

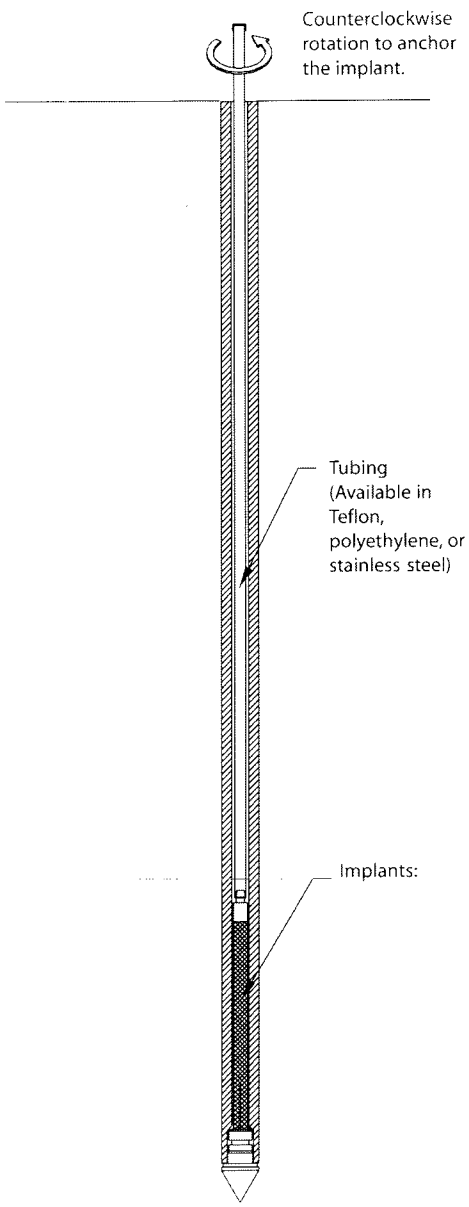


Figure 2. Once depth is achieved, the selected implant and tubing are inserted through the rods. The tubing is rotated to lock the implant into the drive point.

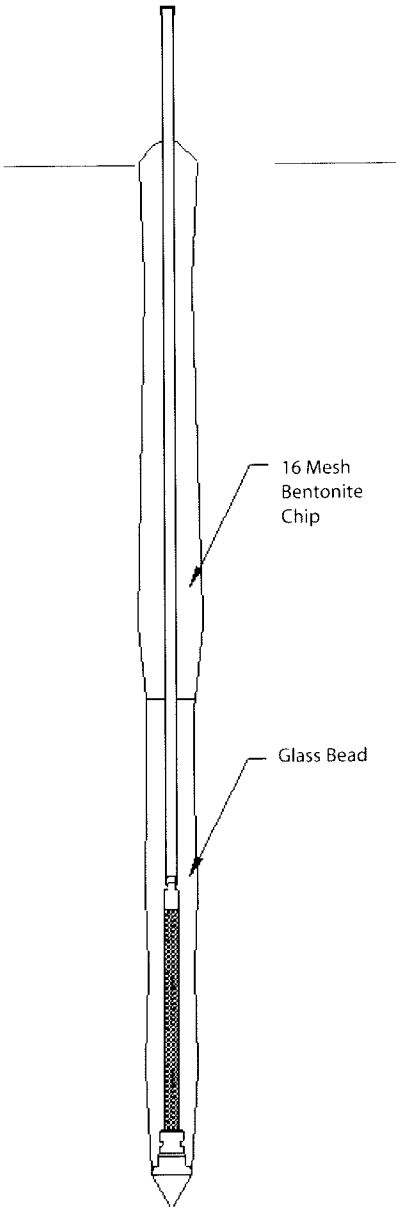


Figure 4. After the implant has been secured, the rods are removed and the annulus backfilled as appropriate.

7. Pour glass beads down the inside diameter of the probe rods around the outside of the tubing. Use the tubing to "stir" the glass beads into place around the implant. Do not lift up on tubing. It should take less than 150 mL of glass beads to fill the space around the implant.

   NOTE: Backfilling through the rods with glass beads or glass beads/bentonite mixes can only be performed in the Vadose Zone, not below the water table.

8. Lift up an additional 18 to 24 in. (457 to 610 mm) and pour the bentonite seal mixture into place as in Step 7. The volume to be filled is about 154 mL per foot. It may be necessary to "chase" the seal mixture with distilled water to initiate the seal.

9. Pull the remaining rods out of the hole as in Step 5. Backfilling with sackcrete (cement/sand) or bentonite/sand may be done while removing the rods **(Figure 4)**. If the PR-14 Implant Anchor is used, the tubing may be cut flush with the top probe rod and a regular pull cap may be used to remove the remaining probe rods after Step 8.

10. After the probe rods have been removed, cut the tubing at the surface, attach a connector or plug, and mark the location with a pin flag or stake. The point is ready for sampling now.

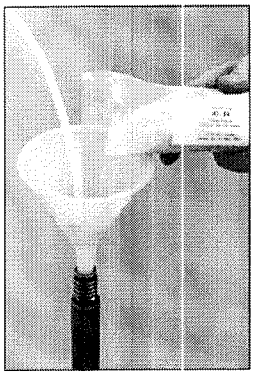
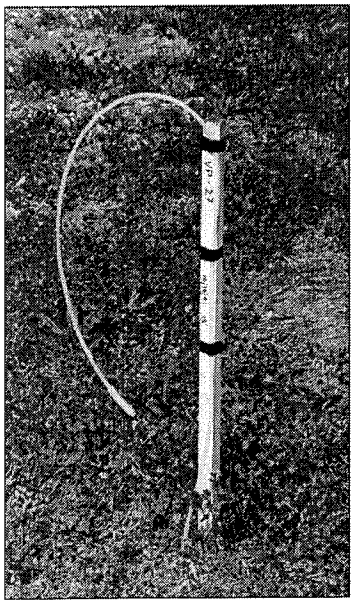
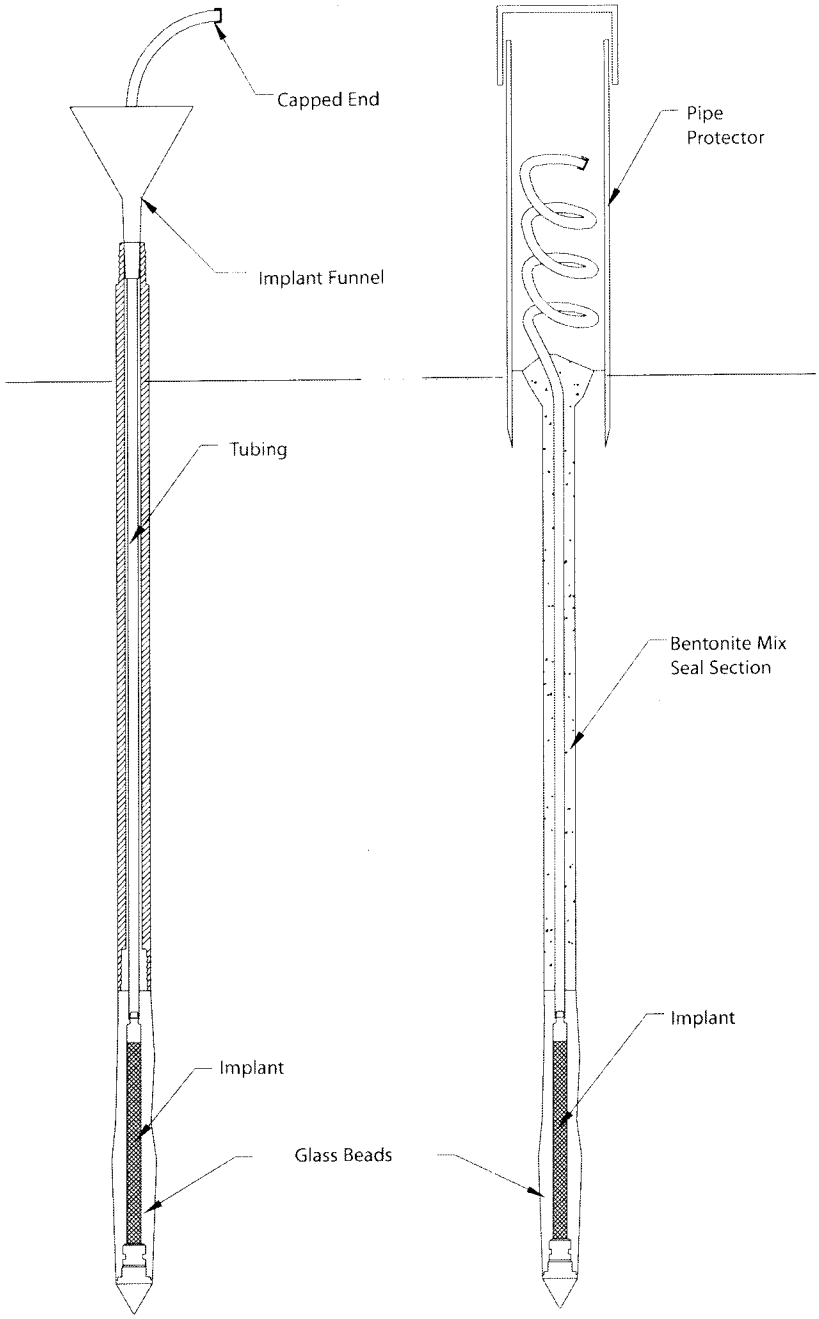


Figure 3. Glass Beads create a permeable layer around vapor sample implants.



A vapor implant location.

Sampling Implants – Operation



Backfill materials include glass beads and bentonite sealants.

Example of completed permanent soil gas monitoring point.

DATA USABILITY SUMMARY REPORT

Property Known As:

Waterpointe – Whitestone New York
151-45 6th Road
Whitestone, New York 11357
BCP Site #C241091

Prepared For:

151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group, LLC
725 5th Ave, 24th Floor
New York, NY 10022

Submitted by:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, New Jersey 08550
EWMA Case No. 204494

January 2007

Prepared By: Richard S. Greenberg, Ph.D.

TABLE OF CONTENTS

1.0) INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared in accordance with the New York State Department of Environmental Conservation Division of Environmental Remediation document entitled '*Guidance for the Development of Data Usability Summary Reports*' to document the evaluation of the analytical data relied upon by Environmental Waste Management Associates, LLC (EWMA) to prepare a Remedial Investigation Workplan (RIW) for the property known as Waterpointe – Whitestone, New York which is located at 151-45 6th Road, Whitestone, New York (subject property and site).

Numerous investigative activities have been completed at the site to date by other consultants. A general summary of these prior activities, along with the reports listed below, were previously submitted to the NYSDEC in conjunction with the Brownfield Cleanup Program (BCP) application for the site:

- "Phase I Environmental Site Assessment", prepared by IVI Environmental, Inc. (IVI), November 19, 2001;
- "Phase II Environmental Site Assessment", prepared by IVI, November 20, 2001;
- "Preliminary Subsurface Investigation", prepared by Leggette, Brashears & Graham (LB&G), Inc., March 2002;
- "Tank Closure Report", prepared by Enviro-Comp Consultants (Enviro-Comp), Inc., May 23, 2002;
- "UST Removal Documentation", prepared by TradeWinds Environmental Restoration, Inc., February 2003;
- "Additional Subsurface Investigation", prepared by LB&G, December 23, 2003;
- "Environmental Due Diligence Report", prepared by TRC Environmental Corporation (TRC), January 2004;
- "Assessment of Environmental Conditions", prepared by ATC Associates, Inc. (ATC), February 25, 2005; and
- "Phase I Environmental Site Assessment Update", prepared by ATC, May 10, 2005.

Samples were collected from the property by IVI, LB&G, Enviro-Comp, TRC and ATC during the investigative and remedial activities discussed in the above listed reports. The following table includes a summary of the reports that discuss the samples collected from the site, the

laboratory that performed the analyses and the laboratory analytical data package identification number, if available.

Report	Laboratory	Data Package ID #
IVI Phase II Environmental Assessment Report	Accredited Laboratories, Inc.	4259
LB&G Preliminary Subsurface Investigation Report	York Analytical Laboratories, Inc.	02030170
Enviro-Comp Tank Closure Report	Long Island Analytical Laboratories, Inc.	0215501/0215502
LB&G Additional Subsurface Investigation Report	York Analytical Laboratories, Inc.	03110684, 03120072 & 03120362
TRC Environmental Due Diligence Report	Chemtech Laboratory	Unknown
ATC Assessment of Environmental Conditions Report	AmeriSci Laboratory	0502-00273

The samples presented in each of the reports listed in the above table are discussed in detail in the following sections.

2.0) IVI PHASE II ENVIRONMENTAL ASSESSMENT SAMPLES

The IVI Phase II Environmental Assessment Report included laboratory analytical summary tables for nine (9) soil and three (3) ground water samples collected by IVI in 2001. The samples were analyzed by Accredited Laboratories, Inc. (Accredited), a New York-certified laboratory. The Accredited case number assigned to these samples was 4259. The samples are summarized in the table below:

IVI Sample ID	Laboratory Sample ID	Matrix	VOCs	SVOCs	Pb	PPM
B1	0112076	Soil	X		X	
B2	0112077 & 0112077DL (diluted sample for VOC anaylsis)	Soil	X		X	
B3	0112078	Soil	X		X	
B4	0112079	Soil	X	X	X	
B5	0112080	Soil	X	X	X	
B6	0112081	Soil	X	X	X	
B7	0112082	Soil	X	X	X	

IVI Sample ID	Laboratory Sample ID	Matri	VOCs	SVOC	Pb	PPM

		x		s		
B8	0112083	Soil	X	X		X
B9	0112084& 0112084DL (diluted sample for SVOC anaylsis)	Soil	X	X		
B1	0112085 (unfiltered) & 0112086 (filtered)	GW	X		X	
B6	0112087 (unfiltered) & 0112088 (filtered)	GW	X	X	X	
B8	0112089 (unfiltered) & 0112090 (filtered)	GW	X	X		X

According to IVI's Phase II Report, the VOCs were analyzed via EPA method 8260, the SVOCs were analyzed via EPA method 8270, and the lead and priority pollutant metals (PPM) were analyzed via EPA method 6010 (7470 for Hg).

2.1) DUSR REVIEW OF LABORATORY DATA FOR CASE #4259

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided.**
2. Have all of the holding times been met? **Yes – Based on a review of sample times, and extraction and analysis times reported in IVI's report and on the analytical summary tables.**
3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**
4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as provided in IVI's report.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Yes – Based on a review of qualifiers used on the analytical summary tables.**

2.3) CONCLUSIONS FOR LABORATORY DATA FOR CASE #4259:

The IVI report includes the laboratory analytical summary tables for case number 4259, but not the full QA/QC laboratory data package. However, according to IVI's report, all samples were collected in the appropriate sample containers, packed on ice in a cooler, shipped under proper chain-of-custody protocol and analyzed according to EPA and NYSDEC approved methods. Additionally, based on the sample collection dates provided in IVI's report, and the extraction and analysis dates listed on the laboratory analytical summary tables, the samples were analyzed within the proper holding times. Also, the correct data qualifiers are identified on the laboratory analytical summary tables. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Since the data could not be thoroughly evaluated, EWMA's RIW proposes to collect additional soil and ground water samples from the AOCs previously investigated by IVI to further investigate these AOCs and confirm the results of IVI's previous samples.

3.0) LB&G PRELIMINARY SUBSURFACE INVESTIGATION SAMPLES

The LB&G Preliminary Subsurface Investigation Report included laboratory analytical summary tables for ten (10) soil samples, one sediment sample and eight (8) ground water samples collected from the site by LB&G in 2002. The samples were analyzed by York Analytical Laboratories, Inc. (York), a New York-certified laboratory (#10854). The York case number assigned to these samples was 02030170. The samples are summarized in the table below:

LB&G Sample ID	Laboratory Sample ID	Matrix	VOCs	SVOCs
B-1	02030170-01	Soil	X	X
B-2	02030170-02	Soil	X	X
B-3	02030170-03	Soil	X	X
B-5	0203170-04	Soil	X	X
B-7	02030170-05	Soil	X	X
B-8	02030170-06	Soil	X	X
B-9	02030170-07	Soil	X	X
B-10	02030170-08	Soil	X	X
B-12	02030170-09	Soil	X	X

LB&G Sample ID	Laboratory Sample ID	Matrix	VOCs	SVOCs
B-13	02030170-10	Soil	X	X
Drain1	02030170-11	Sediment	X	X
B-1	02030170-12	GW	X	X
B-2	02030170-13	GW	X	X
B-3	02030170-14	GW	X	X
B-5	02030170-15	GW	X	X
B-7	02030170-16	GW	X	X
B-8	02030170-17	GW	X	X
B-10	02030170-18	GW	X	
B-13	02030170-19	GW	X	X

According to York's data package, the VOCs were analyzed via EPA method 8260 and the SVOCs were analyzed via EPA method 8270.

3.2) DUSR REVIEW OF LABORATORY CASE #02030170

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided.**
2. Have all of the holding times been met? **Yes – Based on a review of the sample collection dates, extraction dates and analysis dates listed on the analytical summary tables.**
3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**
4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as reported on the analytical summary tables.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Unknown – Data qualifiers not listed on laboratory analytical summary tables.**

3.3) CONCLUSIONS FOR LABORATORY CASE #02030170

The LB&G report includes the laboratory analytical summary tables and signature (i.e. certification) page, but not the full laboratory data package for case number 02030170. However, York is a New York-certified laboratory (#10854) and all the samples were analyzed via EPA and NYSDEC approved methods. Also, based on the sample collection dates and the extraction and analysis dates listed on the laboratory analytical summary tables, the samples were analyzed within the proper holding times. Further, according to the signature page (signed by the Managing Director of York), the samples were received in proper condition for analysis with the proper documentation, and all analyses conducted met the method or Laboratory SOP requirements. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Since the data could not be thoroughly evaluated, EWMA's RIW proposes to collect additional soil and ground water samples from the AOCs previously investigated by LB&G to further investigate these AOCs and confirm the results of LB&G's previous samples.

4.0) ENVIRO-COMP TANK CLOSURE SAMPLES

The Enviro-Comp Tank Closure Report included laboratory analytical summary tables for two (2) end-point soil samples collected by Enviro-Comp following the removal of a former diesel UST in April 2002. The samples were analyzed by Long Island Analytical Laboratories, Inc. (LIAL), a New York-certified laboratory (#11693). LIAL assigned sample numbers 0215501 and 0215502 to these samples. The samples are summarized in the table below:

Enviro-Comp Sample ID	Laboratory Sample ID	Matrix	VOCs	SVOCs
Endpoint #1-N	0215501	Soil	X	X
Endpoint #2-S	0215502	Soil	X	X

According to LIAL's analytical summary tables, the VOCs were analyzed via EPA method 8021 and the SVOCs were analyzed via EPA method 8270.

4.1) DUSR REVIEW OF DATA FOR SAMPLE ID'S 0215501 & 0215502

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided.**
2. Have all of the holding times been met? **Yes – Based on a review of the sample collection dates, extraction dates and analysis dates listed on the analytical summary tables.**
3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**
4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as reported on the analytical summary tables.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Unknown – Data qualifiers not listed on laboratory analytical summary tables.**

4.2) CONCLUSIONS FOR SAMPLE ID'S 0215501 & 0215502

The Enviro-Comp report includes the laboratory analytical summary tables, but not a complete laboratory data package. However, LIAL is a New York-certified laboratory (#11693) and the samples were analyzed via EPA and NYSDEC approved methods. Also, each of the data summary sheets is signed by the laboratory director, and attests to the accuracy and quality of the data. Additionally, based on the sample collection dates and the extraction and analysis dates listed on the laboratory analytical summary tables, the samples were analyzed within the proper holding times. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Since the data could not be thoroughly evaluated, EWMA's RIW proposes to collect additional soil samples from the area of the former diesel UST to confirm Enviro-Comp's results.

5.0) LB&G ADDITIONAL SUBSURFACE INVESTIGATION SAMPLES

The LB&G *Additional Subsurface Investigation Report* included laboratory analytical summary tables for twenty-two (22) soil samples and ten (10) ground water samples collected by LB&G in November 2003. The samples were analyzed by York, a New York-certified laboratory (#10854). The analytical results for the samples were reported under three (3) separate laboratory case numbers, 03110684, 03120072 and 03120362. The samples are summarized in the tables below and on the next page:

York Laboratory Case Number 03110684				
LB&G Sample ID	**Laboratory Sample ID**	**Matrix**	**VOCs**	**SVOCs**
GP-1	03110684-01	Soil	X	X
GP-8	0311684-02	Soil	X	X
GP-9	0311684-03	Soil	X	X
GP-10	0311684-04	Soil	X	X
GP-11	0311684-05	Soil	X	X
GP-13	0311684-06	Soil	X	X
GP-14	0311684-07	Soil	X	X
GP-15	0311684-08	Soil	X	X
GP-16	0311684-09	Soil	X	X
GP-17	0311684-10	Soil	X	X
GP-18	0311684-11	Soil	X	X
GP-19	0311684-12	Soil	X	X
GP-20	0311684-13	Soil	X	X
GP-21	0311684-14	Soil	X	X
GP-22	0311684-15	Soil	X	X

York Laboratory Case Number 03120072				
LB&G Sample ID	**Laboratory Sample ID**	**Matrix**	**VOCs**	**SVOCs**
GP-2	03120072-01	Soil	X	X
GP-3	03120072-02	Soil	X	X
GP-4	03120072-03	Soil	X	X
GP-5	03120072-04	Soil	X	X
GP-6	03120072-05	Soil	X	X
GP-7	03120072-06	Soil	X	X
GP-12	03120072-07	Soil	X	X

York Laboratory Case Number 03120362				
LB&G Sample ID	**Laboratory Sample ID**	**Matrix**	**VOCs**	**SVOCs**

GP-1/MW-1	03120362-01	GW	X	X
GP-2/MW-2	03120362-02	GW	X	X
GP-3/MW-3	03120362-03	GW	X	X
GP-4/MW-4	03120362-04	GW	X	X
GP-5/MW-5	03120362-05	GW	X	X
GP-6/MW-6	03120362-06	GW	X	X
GP-7/MW-7	03120362-07	GW	X	X
GP-8/MW-8	03120362-08	GW	X	X
GP-9/MW-9	03120362-09	GW	X	X
GP-10/MW-10	03120362-10	GW	X	X

According to York's analytical summary tables, the VOCs were analyzed via EPA method 8260 and the SVOCs were analyzed via EPA method 8270.

5.1) DUSR Review of Laboratory Cases #03110684, 03120072 and 03120362

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided.**
2. Have all of the holding times been met? **Yes – Based on a review of the sample collection dates, extraction dates and analysis dates listed on the analytical summary tables.**
3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**
4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as reported on the analytical summary tables.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Unknown – Data qualifiers not listed on laboratory analytical summary tables.**

5.2) CONCLUSIONS FOR LABORATORY CASES #03110684, 03120072 AND 03120362

The copy of the LB&G report includes the laboratory analytical summary tables and signature (i.e. certification) pages, but not the full laboratory data packages for case numbers 03110684, 03120072 and 03120362. However, York is a New York-certified laboratory (#10854) and all the samples were analyzed via EPA and NYSDEC approved methods. Also, based on the sample collection dates and the extraction and analysis dates listed on the laboratory analytical summary tables, the samples were analyzed within the proper holding times. Further, according to the signature page (signed by the Managing Director of York), the samples were received in proper condition for analysis with the proper documentation, and all analyses conducted met the method or Laboratory SOP requirements. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Since the data could not be thoroughly evaluated, EWMA's RIW proposes to collect additional soil and ground water samples from the AOCs previously investigated by LB&G to further investigate these AOCs and confirm the results of LB&G's previous samples.

6.0) TRC ENVIRONMENTAL DUE DILIGENCE SAMPLES

The TRC report includes TRC's sample summary tables for thirty (30) soil samples and seven (7) ground water samples collected by TRC in December 2003. According to TRC's report, the samples were analyzed by ChemTech Laboratory, a New York-certified laboratory. However, no other information from ChemTech Laboratory is provided in TRC's report, including the laboratory case number, the laboratory sample identification numbers and the laboratory analytical summary tables. The samples are summarized on the table below:

TRC Sample ID	Matrix	VOCs	SVOCs	PCBs	Metals

TRC-01 – 1.5-2.5’	Soil	X	X	X	X
TRC-01	GW	X	X		
TRC-02 – 2-3’	Soil	X	X	X	X
TRC-03 – 9-10’	Soil	X	X	X	X
TRC-04 – 6-7’	Soil	X	X		X
TRC-05 – 3-4’	Soil	X	X		X
TRC-06 – 4.5-5.5’	Soil	X	X		X
TRC-07 – 4.5-5’	Soil	X	X		X
TRC-08 – 11-12’	Soil	X	X	X	X
TRC-08	GW	X	X		X
TRC-09 – 10.5-12’	Soil	X			
TRC-10 – 8.5-9.5’	Soil	X			
TRC-10	GW	X	X		
TRC-11 – 7-8’	Soil	X	X		X
TRC-12 – 9.5-10.5’	Soil	X	X		X
TRC-12	GW	X	X		X
TRC-13 – 3-4’	Soil	X			
TRC-14 – 2.5-3.5’	Soil	X	X	X	X
TRC-15 – 3-4’	Soil	X			
TRC-16 – 2.5-3’	Soil	X	X		X
TRC-17 – 3-4’	Soil	X	X		X
TRC-18 – 3-4’	Soil	X	X		X
TRC-19 – 3-4’	Soil	X	X		X
TRC-21 – 7-8’	Soil	X			
TRC-21	GW	X	X		X
TRC-22 – 7-8’	Soil	X			
TRC-22	GW	X	X		X
TRC-24 – 7-8’	Soil	X			
TRC-28 – 0.5-1.5’	Soil	X			
TRC-28	GW	X	X		
TRC-29 – 10-11’	Soil	X			
TP-01 – 5.5’	Soil	X	X	X	X
TP-03 – 4.9’	Soil	X	X	X	X
TP-04 – 3.3’	Soil	X	X	X	X
Anomaly-05 – 2’	Soil	X	X		X
Anomaly-20 – 2.5’	Soil	X	X		X
Anomaly-20 – 3’	Soil	X	X		X
Anomaly-20	GW	X	X		

According to TRC’s report, the VOCs were analyzed via EPA method 8260, the SVOCs were analyzed via EPA method 8270, PCBs were analyzed via EPA method 8082 and Metals were analyzed via EPA methods 6010/7471.

6.1) DUSR REVIEW OF CHEMTECH LABORATORY PACKAGE

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided**
2. Have all of the holding times been met? **Unknown – Analytical summary tables with extraction and analysis dates not provided.**
3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**
4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as reported in TRC's report.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Unknown – Data with qualifiers not provided.**

6.2) CONCLUSIONS FOR CHEMTECH LABORATORY PACKAGE

TRC's report does not include the laboratory data package or analytical summary tables for these samples provided directly from ChemTech Laboratory. However, according to TRC's report, ChemTech is a New York-certified laboratory, and the samples were analyzed via EPA and NYSDEC approved methods. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Since the data could not be thoroughly evaluated, EWMA's RIW proposes to collect additional soil and ground water samples from the AOCs previously investigated by TRC to further investigate these AOCs and confirm the results of TRC's previous samples.

7.0) ATC ASSESSMENT OF ENVIRONMENTAL CONDITIONS SAMPLES

The ATC Subsurface Investigation Report included laboratory analytical summary tables for ground water samples collected from six (6) on-site

monitoring wells by ATC in February 2005. The samples were analyzed by AmeriSci Laboratories, Inc. (AmeriSci). According to ATC's report, AmeriSci is a New York-certified laboratory (#10982). The AmeriSci case number assigned to these samples was 0502-00273. The samples are summarized in the table below:

ATC Sample ID	Laboratory Sample ID	Matrix	VOCs	SVOCs	Metals	TDS	Chloride
MW-1	0502-00273-001	GW	X	X	X	X	X
MW-2	0502-00273-002	GW	X	X	X	X	X
MW-3	0502-00273-003	GW	X	X	X	X	X
MW-4	0502-00273-004	GW	X	X	X	X	X
MW-5	0502-00273-005	GW	X	X	X	X	X
MW-6	0502-00273-006	GW	X	X	X	X	X

According to AmeriSci's analytical summary tables, the VOCs were analyzed via EPA method 8260, the SVOCs were analyzed via EPA method 8270, the metals were analyzed via EPA method 200.7, total dissolved solids (TDS) were analyzed via Standard Method 2540C and Chloride was analyzed via Standard Method 4500 CL.

7.1) DUSR REVIEW OF LABORATORY CASE #0502-00273

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables? **Unknown – Complete laboratory data package not provided.**
2. Have all of the holding times been met? **Yes – Based on a review of the sample collection dates, extraction dates and analysis dates listed on the analytical summary tables.**

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications? **Unknown – Detailed QC data not provided.**

4. Have all of the data been generated using established and agreed upon analytical protocols? **Yes – Based on the analytical methods used as reported on the analytical summary tables.**
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms? **Unknown – Raw data not provided.**
6. Have the correct data qualifiers been used? **Unknown – Data qualifiers not listed on laboratory analytical summary tables.**

7.3) CONCLUSIONS FOR LABORATORY CASE #0502-00273

The ATC report includes the laboratory analytical summary tables, but not the complete analytical data package for case number 0502-00273. However, AmeriSci is a New York-certified laboratory (#10982) and the samples were analyzed via EPA and NYSDEC approved methods. Additionally, the laboratory analytical summary tables included a chain of custody and a signature page signed by the laboratory technical director certifying that the analytical data report is true and accurate. Further, based on a review of the sampling dates listed on the chain of custody and the analyses dates listed on the analytical summary tables, all of the samples were analyzed within the proper holding times. Based on this information, the data appears to meet the site/project specific criteria for data quality and data use.

Several of the wells at the site have been damaged or destroyed since they were sampled by ATC. Therefore, EWMA's RIW recommends the reinstallation and/or repair of any damaged or destroyed wells and the resampling of all six (6) monitoring wells. Additionally, EWMA's RIW recommends the installation and sampling of additional monitoring wells to further characterize ground water at the site.

8.0) CONCLUSIONS

Although the complete laboratory analytical data packages were not provided for the historic sampling activities conducted at the site, the information provided in the reports and attached analytical summary tables appears sufficient to determine that the analytical data meets the site/project specific criteria for data quality and data use, especially since additional sampling will be performed by EWMA. Therefore, the analytical data generated during prior investigation activities at the site

is useful for the preliminary investigation and characterization of the site.

As previous discussed, based on EWMA's review of the prior sampling work conducted, further investigation activities, including the collection of additional soil and ground water samples at the site is required to fully evaluate the AOCs. This sampling is outlined in detail in the accompanying RIW.

The analytical data generated from the sampling and investigation activities proposed in the RIW will be utilized to confirm the prior analytical data and to determine the status (i.e. whether the AOC requires further action or if no further action can be proposed) for the AOCs requiring additional investigation.

Qualitative Human Health Exposure Assessment

Property Known As:

Waterpointe – Whitestone New York
151-45 6th Road
Whitestone, New York 11357
BCP Site #C241091

Prepared For:

151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group, LLC
725 5th Ave, 24th Floor
New York, NY 10022

Prepared by:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, New Jersey 08550
EWMA Case No. 204494

April 24, 2007

TABLE OF CONTENTS

1.0 INTRODUCTION

Environmental Waste Management Associates, LLC (EWMA) has prepared this Qualitative Human Health Exposure Assessment for the property known as Waterpointe – Whitestone, New York, which is located at 151-45 6th Road, Whitestone, New York (subject property and site). This assessment has been included as an appendix to EWMA's December 2006 Remedial Investigation Workplan (RIWP). EWMA was retained by 151-45 Sixth Road Whitestone Partners, LLC (Whitestone) to prepare and implement the RIWPP.

The RIWP has been prepared on behalf of the Volunteer (i.e. Whitestone) to fulfill the Brownfield Cleanup Program (BCP) requirements to address the nature and extent of the contamination at the site and any potential off-site impacts.

The work proposed in the accompanying RIWP will provide additional data to supplement this Assessment, and as such, the opinions and conclusions purported herein, are subject to modification upon the receipt and review of any additional data generated during the course of the proposed remedial investigation, and if ultimately deemed necessary, any completed remedial actions.

The purpose of this assessment is to characterize the exposure setting (including the physical environment and potentially exposed on and off-site human populations), identify exposure pathways, and evaluate contaminant fate and transport for the subject property of those contaminants identified to exist at the site, at concentrations above regulatory concern, currently and during the remedial investigation.

An exposure pathway is the means by which an individual may be exposed to contaminants originating from the site. The exposure pathway consists of five elements: 1) a contaminant source; 2) contaminant release and transport mechanisms; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population. In order for the exposure pathway to be complete, all five of these elements must be documented. If any one of the five elements has not existed in the past, does not exist in the present and will never exist in the future, an exposure pathway may be eliminated from consideration.

In performing this assessment, the proposed endpoint of the project was utilized in the evaluation. The proposed endpoint includes the development of a significant portion of the site for residential purposes with an open space area along the East River. As part of the proposed development, a substantial portion of the site will be covered with impervious surfaces, consisting of roadway, driveways, and building foundations.

This assessment considers a scenario that includes the removal of potential contaminant pathways through the proposed site development plan that is further discussed in the following sections.

2.0 SITE CHARACTERIZATION - EXISTING CONDITIONS

The site is located in an area characterized by commercial/light industrial and residential development. The site is bordered by the East River to the north.

The site is underlain by unconsolidated clays, silts, sands and gravels that were deposited directly during glacial activity as glacial till or as glaciofluvial deposits. The glacial deposits are anticipated to extend to depths of 175 feet below surface grade (bsg). The glacial deposits in turn, are underlain by Gardiners Clay, Jameco Gravel and the Raritan Formation, followed by bedrock. The bedrock generally consists of Manhattan Schist overlain by Inwood Limestone.

Specifically the soils in the vicinity of the site are classified as urban land. Urban land consists of areas where at least 85 percent of the land surface is covered with asphalt, concrete, or other impervious building materials. Based on a review of boring logs generated in conjunction with the past environmental work conducted at the site, approximately half of the property, the northern half along the East River, consists of imported fill material consisting of brown medium to fine sands, asphalt, gravel, cinder, concrete, brick fragments and wood fragments that generally exists to depths of approximately 2-5' below surface grade (bsg); however, fill materials have been detected to depths greater than 10' bsg at some historic boring locations. Native till materials underlie the fill and consist of fine to medium sand with trace amounts of medium gravel.

Based on data obtained during the initial investigations, the depth to ground water was reported at 8-12 feet bsg. However, more recent data obtained from on-site monitoring wells revealed a depth to ground water ranging from 2-8 feet bsg. The ground water table is largely contained within the glacial deposits and would presumably follow the local topography, which slopes toward the north. However, due to the site's proximity to the East River (and based on the variability in the depth to ground water and the high chloride and total dissolved solids value exhibited by MW-4), the ground water in the vicinity of the site is likely tidally influenced and is expected to be influenced by saline intrusion.

3.0 EXISTING/PROPOSED SITE USE

The site is currently used as a truck/maintenance facility and vehicle storage yard by multiple tenants. These tenants include Globis Bus, US Towing, Ken-Ben Towing, Ras Dairy, Nicmanda Trucking and Tempa Construction.

Construction equipment and machinery are also stored at the site by various tenants. The site is currently zoned for manufacturing purposes.

The proposed site use includes the development of a significant portion of the site for residential purposes with an open space area along the East River. As part of the proposed development, a substantial portion of the site will be covered with impervious surfaces, consisting of roadway, driveways, and building foundations.

4.0 REMEDIAL HISTORY

The majority of the work conducted at the site to date, was solely for investigatory purposes, and included both soil and ground water sampling and analysis. Limited remedial activities have been completed, but these activities have been limited to the removal of underground storage tank systems, and in some cases, the excavation and disposal of contaminated soil associated with the historic use of these systems.

No active remediation systems were ever present at the site, nor are any future systems proposed at this time.

As stated previously, the work proposed in the accompanying RIWP will provide additional data to supplement this Assessment, and as such, the opinions and conclusions purported herein, are subject to modification upon the receipt and review of any additional data generated during the course of the proposed remedial investigation, and if ultimately deemed necessary, any completed remedial actions.

5.0 PREVIOUS REPORTS

The historic reports listed below were reviewed to facilitate the preparation of this initial Assessment. These reports were previously submitted to the NYSDEC in conjunction with the Brownfield Cleanup Program (BCP) application for the site:

- "Phase I Environmental Site Assessment", prepared by IVI Environmental, Inc., November 19, 2001
- "Phase II Environmental Site Assessment", prepared by IVI Environmental, Inc., November 20, 2001
- "Preliminary Subsurface Investigation", prepared by Leggette, Brashears & Graham, Inc., March 2002
- "Tank Closure Report", prepared by Enviro-Comp Consultants, Inc., May 23, 2002
- "UST Removal Documentation", prepared by TradeWinds Environmental Restoration, Inc., February 2003

- "Additional Subsurface Investigation", prepared by Leggette, Brashears & Graham, Inc., December 23, 2003
- "Environmental Due Diligence Report", prepared by TRC Environmental Corporation, January 2004
- "Assessment of Environmental Conditions", prepared by ATC Associates, Inc., February 25, 2005
- "Phase I Environmental Site Assessment Update", prepared by ATC Associates Inc., May 10, 2005

6.0 EXPOSURE PATHWAY EVALUATION

6.1 Contaminants of Concern

The source of the contamination is the source of contaminant release to the environment; if the original source is unknown, it is the environmental medium (soil, air, water, etc.) at the point of exposure.

The site was historically occupied by residential houses, a park/pavilion recreation area, a restaurant, a metal shop, a boat manufacturer and a shooting range and shop until circa 1950. An asphalt plant operated from approximately 1952 through 1992. Concrete manufacturing was conducted concurrently with the asphalt manufacturing operations until approximately 1986-1988. The asphalt plant, which was located in the northwest corner of the site, was razed in March of 2002. From the early 1980s through the present, the site was also used as a maintenance garage for truck, bus and other vehicle repairs.

Based on reports describing previous investigations of the property, and EWMA's review of historic aerial photographs, the following areas of the property are particularly relevant to this assessment:

- Approximately half of the property, the northern half along the East River, consists of imported fill material consisting of brown medium to fine sands, asphalt, gravel, cinder, concrete, brick fragments and wood fragments that generally exists to depths of approximately 2-5' bsg; however, fill materials have been detected to depths greater than 10' bsg at some historic boring locations. Elevated concentrations of semi-volatile organic compounds (SVOCs) and metals have been detected in the fill material.

- Elevated concentrations of SVOCs and metals have been detected in the area of the former asphalt and concrete plant located in the northwestern corner of the property.

- Elevated concentrations of volatile organic compounds (VOCs), methyl-tertiary-butyl-ether (MTBE) and lead have been detected in the area of former gasoline and diesel underground storage tanks (USTs) located along the west side of the existing Main Building on the property (located on the western portion of the property), and near the 6th Street property entrance.

- Free petroleum hydrocarbon product has been detected in one monitoring well located at the property, MW-2. Sheen was detected in MW-4. MW-2 was installed in the vicinity of the former asphalt plant and MW-4 was installed northeast of the Main Building, along the northern property boundary line (near the East River).

Maps depicting the soil and ground water sample locations with contaminant concentrations that exceed the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCO) are included as Figures 4 and 5 in the RIWP.

6.2 Receptor Population

The receptor population is those people who are, or may be, exposed to contaminants at the point of exposure.

Currently, there are no human receptor populations that are exposed to the contaminants. The current tenant operations do not involve contact with the subsurface soils or ground water. There is currently no evidence to suggest that the contamination has migrated off-site or that vapor migration pathways are a concern.

Exposure of the worker population (i.e. those individuals conducting the work proposed in the RIWP) is addressed by the site-specific Health and Safety Plan (HASP) and the Community Air Monitoring Plan (CAMP). The CAMP also addresses exposure concerns to air-borne contaminants that might be generated during implementation of the RIWP. Exposure to the worker receptor and adjacent occupant populations will be closely monitored and steps will be employed during the implementation of the RIWP (i.e. the use of personal protective equipment for on-site personnel, dust suppression, etc.) to eliminate exposure to these populations.

The work proposed in the RIWP is designed to further characterize the environmental conditions at the site in the soil, ground water and vapor media. Once this data has been generated, the potential for both the on-site and off-site human receptor populations to be exposed to the contamination will be evaluated.

If contamination remains on site after the remediation is completed, environmental easements will be required. Once the site has been completely developed, exposure to the future occupant population will be eliminated via the engineering controls utilized in developing the site (i.e. pavement, buildings, clean fill barriers, etc.). If necessary, long-term institutional controls will be implemented to ensure that the worker population is not exposed (i.e. for utility repairs, etc.).

6.3 Contaminant Release and Transport Mechanisms

Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed. The primary contaminant release and transport mechanisms for the identified contaminants at this site include: leaching of soil-bound contaminants to the ground water; and the migration of dissolved and/or particulate-bound contaminants in the ground water to sensitive receptors. However, the historic site data is insufficient to determine if contaminated soil is currently impacting ground water, and if the ground water contamination, if present, is migrating to points where people may be exposed. Since the current site operations do not disturb the subsurface soils or cause the occupants of the site to come in contact with them or the ground water, these two mechanisms are currently viewed as incomplete pathways. Once the sampling proposed in the RIWP is completed, these primary contaminant release and transport mechanisms will be reevaluated.

The contamination at the site had been identified in the ground water and subsurface soils. Therefore, surface water runoff containing particulates and the airborne dispersion of vapors and contaminated particulate matter from surface soils are not currently viewed as a concern. However, an evaluation of the surface soils has not been conducted and, as such, is included in the RIWP. Should data from the proposed sampling or monitoring activities indicate that contamination exists in the surface soils; these two mechanisms will be further evaluated. The airborne dispersion of vapors will also be evaluated in the proposed soil vapor sampling reveals impact.

Additionally, as part of the CAMP, vapors and particulate matter will be evaluated during the course of the investigation to ensure that the disturbance of subsurface contaminated soils (i.e. through intrusive excavation activities) will not cause an adverse release of contaminants via vapors or particulate matter. This plan outlines remedial activities that will take place if/when established particulate and/or vapor threshold concentrations are exceeded. The site-specific HASP outlines worker protection steps that will be taken to eliminate worker exposures to on-site contaminants. Any impacted soils that are excavated and temporarily stockpiled on site will be staged on, and covered

with, plastic sheeting to prevent the migration of contaminants from the stockpiled soil.

Extensive soil sampling is proposed in the RIWP to evaluate both the soil and ground water at the site and to determine if the identified contaminants are migrating beyond the property boundary. If the contaminants are confined to the property, potential exposure to the contaminated ground water and soil is limited to only those individuals performing the ongoing investigative and remedial activities. However, since the proposed work will be performed in accordance with the provisions outlined in the site-specific HASP and the CAMP, potential exposure scenarios will be eliminated via the proposed monitoring and subsequent community and worker protection response plans. These response plans include vapor and/or particulate suppression steps and worker personal protective equipment requirements.

Once the site has been fully evaluated, specifications designed to mitigate any potential release and transport mechanisms will be incorporated into the site design plan. These specifications may include, but are not limited to, the use of vapor barriers beneath buildings, the use of sub-slab depressurization systems, capping of impacted soil areas (i.e. pavement, asphalt, building foundations, 2' clean fill layer); and ground water use restrictions.

6.4 Exposure Points

Exposure points are locations where actual or potential human contact with a contaminated medium may occur. Currently, there is no information to suggest that the contamination extends beyond the property boundary and therefore, the off-site population is not impacted. Additionally, since the contamination has only been identified in the subsurface soils and ground water, no potential contact can occur between the on-site population and the contamination.

The primary source of potential exposure to site contamination is from disturbed soils and dust generated during remediation and construction activities. However, all proposed work will be completed in accordance with the site-specific HASP and the CAMP.

Any soil contamination that is allowed to remain on site will be covered with either impermeable construction materials (i.e. pavement, concrete or buildings) or, in the case of "green" areas, a 2' clean fill layer. The boundary between the clean fill and existing soils will be demarcated utilizing a high visibility mesh layer, placed on top of the existing soil. A long-term institutional control, in the form of an environmental easement, if required, may also be utilized to safeguard future workers/occupants of the property in the event intrusive work is required (i.e. utility repair work).

Ground water at the site is not currently used nor are there any proposals for its use, either for potable or other (e.g., irrigation) purposes. It is not anticipated that wells (other than monitoring and/or recovery wells) will remain on-site once the residential development is complete. Any remaining monitoring or recovery wells will need to be secured in a way which prevents damage from vandalism and the potential for exposure, however remote. Contaminated ground water from the site may lead to off-site impacts due to the tidal influence at this location. This type of impact will be evaluated in conjunction with the proposed Fish and Wildlife Assessment Plan as well as the proposed ground water investigation activities. If necessary, the future use of the ground water beneath the site will be restricted via long-term institutional control.

6.5 Routes of Exposure

Potential exposures to site contaminants may occur from one of the following scenarios:

1. Ingestion of soil or ground water;
2. Inhalation of dusts, vapors or gases from soil or from vapors from ground water; or
3. Direct contact with soil or ground water (i.e. dermal absorption).

The potential for exposure to contaminated soils and ground water at the site are discussed in detail in the following sections:

6.5.1 Soils

The potential for ingestion, inhalation and dermal absorption exposure to contaminated subsurface soil is currently not a concern as long as these media are not disturbed.

During the implementation of the proposed RIWP, and potentially during the proposed conversion of the property into a residential housing complex, the investigation and/or construction activities may create the potential for ingestion, inhalation and dermal absorption exposure to contaminated soil. However this exposure is limited to specific phases of property development. This includes the following phases:

- During any construction and earthmoving activities on-site, to demolish and remove buildings and foundations, and to clear and grade the property for the construction road and the development roadways and building lots;
- During any soil removal to prepare for re-grading and introduction of clean fill and/or topsoil;

- Prior to the placement of topsoil and sod on the individual lots.

There is also potential for exposure during intrusive work, e.g., during trenching for utilities or extensive landscaping. However, this potential exposure pathway is substantially diminished through the introduction of the mesh (demarcation) layer separating the new, clean soil from the existing soil.

There is also the potential for exposure of residents and workers on adjacent properties to dust created during construction activities and the tracking of impacted soils off-site by construction vehicles. However, the CAMP requires dust monitoring and the employment of dust suppression techniques. Additionally, a tracking pad will be constructed at the exit/entrances to the construction site to minimize the tracking of mud (i.e. potentially impacted soils) from the site by construction vehicles.

6.5.2 Ground Water

Ingestion **-** There is essentially no potential for the ingestion of the ground water from the site since it is not currently used nor are there any proposals for its use, either for potable or other (e.g., irrigation) purposes.

Inhalation **-** The potential inhalation hazard of volatile vapors from ground water is greatest in the areas of former tanks. Soil vapor data from these areas does not exist and therefore the exposure potential cannot currently be evaluated. Soil vapor sampling is proposed in the RIWP.

If an exposure pathway is determined to exist during the course of the RIWP, methods exist to substantially reduce or eliminate the exposure pathway. These include removing and/or treating the source of potential volatiles and, if necessary, the installation of a vapor barrier and/or a sub-slab depressurization system beneath the concrete slab of any buildings on the property.

Direct Contact – There is currently no direct contact with the ground water on this site. Other than potential de-watering activities during construction activities that would create a direct contact exposure for construction workers, it is not anticipated that any party other than the ground water remediation specialists would have direct contact with ground water at this site.

Off-Site Impacts **-** Ground water contamination from the site may lead to off-site impacts due to the tidal influence at this location. However, data to facilitate this conclusion has not been evaluated. This type of impact will be evaluated within the overall context of conditions within the East River and cumulative discharges to it in the vicinity of the site (i.e. adverse impacts to the

East River from past and on-going industrial facilities and impacted sites along the East River).

7.0 TABLES

Tables summarizing the historic soil and ground water results are included as Figures 2A through 2H in the RIWP.

As stated previously, this Assessment will be reevaluated once the proposed work in the accompanying RIWP is completed. The reevaluation will include tables summarizing all sample and ground water results.

8.0 FIGURES

Maps depicting the soil and ground water sample locations with contaminant concentrations that exceed the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCO) are included as Figures 4 and 5 in the RIWP.

As stated previously, this Assessment will be reevaluated once the proposed work in the accompanying RIWP is completed. The reevaluation will also include a figure showing all adjacent properties and receptors within 500 ft. and types of uses (residential vs. commercial, slab vs. basement); a figure depicting all well locations in the area, all on-site and off-site utilities and ground water flow direction; and a figure showing the soil and ground water (on-site/off-site) contaminant concentrations to support the site exposure assessment evaluation/conclusions.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Subsurface soils and ground water impacted with concentrations of SVOCs and metals above the NYSDEC UUSCO have been detected throughout the property. These contaminants are associated with former asphalt plant operations and historic fill material located on the property. Subsurface soils and ground water impacted with concentrations of VOCs and petroleum hydrocarbons above the NYSDEC UUSCO have been detected on the northwestern portion of the property and near the 6th Street entrance to the property in the vicinity of former gasoline, diesel and oil underground storage tanks. Currently, there is no data to support that the occupant receptor population is at risk from these identified contaminants, nor is their any information to suggest that off-site receptor populations are at risk.

The data generated during the course of the RIWP will be evaluated to determine if contamination is present at the site that poses a risk to the on-site and off-site receptor populations.

The primary risk of the release and subsequent exposure to these contaminants will exist during the proposed site investigation, and if necessary remediation and re-development activities that will include the construction of residential housing and open space that will be performed by site construction workers and environmental remediation specialists.

To minimize risk of exposure and in preparation for site remediation and construction activities, a HASP and a CAMP have been prepared to protect the community as well as site workers, and are included as appendices to the RIWP. The CAMP provides a measure of protection for the surrounding community (i.e., off-site receptors including residents and on-site workers not directly involved with the work activities) from potential airborne releases resulting from investigative and remedial work activities. The CAMP also helps confirm that work activities did not spread airborne contaminants off-site.

The VO contaminants also carry with them a secondary exposure risk via the migration and accumulation of soil vapors. Soil vapor sampling to evaluate the potential for both on-site and off-site soil vapor intrusion will be performed as part of the site investigative activities to ensure, that if soil vapor exposure pathways are found to exist, that they will be mitigated and/or controlled in conjunction with the proposed development activities.

Once the proposed work in the RIWP is completed, a Remedial Investigation Report (RIR) will be prepared and submitted to the DEC for review. In accordance with DER 10, a Qualitative Human Health Exposure Assessment will be included with the RIR.

Fish and Wildlife Impact Analysis Work Plan
Waterpointe – Whitestone, New York

Submitted to:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, NJ 08550

December 5, 2006

Submitted by:

Great Eastern Ecology, Inc.
2231 Broadway, Suite 4
New York, NY 10024
ph (212) 579-6800
fax (212) 496-4034
www.greateasternecology.com

Table of Contents

Fish and Wildlife Impact Analysis Work Plan
Waterpointe – Whitestone, New York

Introduction

Environmental Waste Management Associates, LLC (EWMA) retained Great Eastern Ecology, Inc. (GEE) to prepare the following Fish and Wildlife Impact Analysis Workplan (FWIAW) for a parcel owned by 151-45 Sixth Road Partners, LLC (Whitestone). Due to the historical presence of contaminants within the parcel and the parcel's adjacency to the East River, a FWIAW is required as part of the Remedial Action Workplan being developed by EWMA. This FWIAW was prepared in compliance with the *New York State Department of Environmental Conservation* (NYSDEC) *Division of Fish and Wildlife Fish and Wildlife Impact Analysis for Hazardous Waste Sites*. Once the tasks in the Workplan are completed, the results will be summarized in a Fish and Wildlife Impact Analysis (FWIA) report. The FWIA report will confirm to the following steps, as detailed below.

Step I - Site Description

Objectives and Scope

The objectives of Step I, site description, are:

> (1) to identify the fish and wildlife resources that presently exist and that existed before contaminant introduction, and
> (2) to provide information necessary for the design of a remedial investigation.

Maps, site descriptions, and resource descriptions will be used to identify possible pathways of contaminant migration affecting fish and wildlife. Information obtained during Step I will be used to select the media of concern and the locations to be sampled during the remedial investigation.

Applicable fish and wildlife regulatory criteria, including Applicable or Relevant and Appropriate Requirements (ARAR's), Standards, Criteria, and Guidance (SCG's), and To Be Considered (TBC's), will be identified in order to assess site-related contamination and to determine remedial objectives. The regulatory criteria will be used to identify contaminant impacts to fish and wildlife, and to evaluate contaminant-specific and site-specific ecological effects associated with proposed remedial alternatives. Consequently, criteria will be determined after contaminants and resources have been identified, but before assessing a contaminant-specific impact in the remedial investigation and before evaluating remedial alternatives in a feasibility study. A complete site description as outlined in Step I is necessary for the Whitestone site since fish and wildlife resources located in the East River may be affected by site-related contaminants.

A. Site Maps

A series of three site maps will be created and included in the FWIA to identify resources and potential contaminant pathways.

1. Topographic Map

A topographic map covering the area within two miles of the site perimeter will clearly depict:

- The location of the site;
- The site perimeter; and
- Documented fish and wildlife resources including, but not limited to:

    1. NYSDEC Significant Habitats as defined by the New York State Natural Heritage Program (Ecological Communities of New York State, 1990);
    2. Habitats supporting endangered, threatened, or rare species, or species of special concern;
    3. Regulated wetlands;
    4. Wild, scenic and recreational rivers;
    5. Significant coastal zone areas; and
    6. Streams and lakes.

Major resources that may be affected by site-related contaminants farther than two miles downstream of the site, will be indicated on a one inch equals 2,000 feet topographic map identifying their location .

2. Covertype Map

A one inch equals 500 feet covertype map will be drawn for the site and the area within 0.5 miles from the perimeter of the site. The map will be derived from aerial photos, ground-level photos, USGS topographic maps, and/or soil maps. Major vegetative communities including wetlands, aquatic habitats, NYSDEC Significant Habitats, and areas of special concern will be shown. The NYSDEC Natural Heritage Program descriptions and classifications of natural communities will be used to identify the covertypes (Ecological Communities of New York State, NYSDEC, 1990). Any unique covertypes not described by the Natural Heritage Program also will be identified and mapped. All covertypes and vegetative species will be field verified.

3. Drainage Map

A drainage map will clearly depict preferential surface flow occurring on the site. In addition, storm drains and outfalls will be depicted on the drainage map.

B. Description of Fish and Wildlife Resources

1. Fish and Wildlife Resources and Covertypes

The description of aquatic resources will include chemical and physical parameters such as water chemistry, temperature, dissolved oxygen, depth, substrate composition, discharge, flow rates, gradients, streambed morphology and other significant characteristics. Submerged aquatic vegetation (if present) will be identified and its abundance and distribution described. For covertypes, typical vegetative species and their abundance, distribution, and density will be described. NYSDEC, United States Environmental Protection Agency (USEPA), and United States Fish and Wildlife Service (USFWS) will serve as additional sources of information to augment any field data collected by the applicant.

2. Fauna Expected Within Each Covertype and Aquatic Habitat

The typical fish and wildlife species expected for each covertype and aquatic habitat will be determined using regional background information. Endangered, threatened, rare species and species of special concern will be highlighted if they may occur.

3. Observations of Stress if present

Obviously contaminated areas on site such as stained soils, leachate seeps, and/or exposed waste will be located and described as they pertain to potential biomagnification. In addition, atypical biotic conditions such as reduced vegetative growth and density, wildlife mortality, changes in species assemblages and distribution, or the absence of expected biota will be reported. Records of past fish and wildlife contamination and/or mortality possibly associated with the site will be obtained from appropriate sources.

C. Description of Fish and Wildlife Resource Value

1. Value of Habitat to Associated Fauna

A qualitative assessment will be made of the general ability of the area within 0.5 miles of the site to support fish and wildlife by qualified biologists. The degree to which the habitats meet the requirements for food, cover, bedding areas, breeding, and roosting sites, will be discussed. Qualitative assessments of fish and wildlife population densities and diversities will be included in the FWIA.

2. Value of Resources to Humans

The current and potential use of fish and wildlife resources by humans will be assessed. Resources on-site or within 0.5 miles of the site, documented resources within two miles of the site perimeter, and resources downstream of the site that may be affected by contaminants will be included. Human use of fish and wildlife resources may include hunting, fishing, wildlife observation, scientific research, and other recreational or economic activities.

D. Identification of Applicable Fish and Wildlife Regulatory Criteria

Both contaminant-specific and site-specific criteria applicable to the remediation of fish and wildlife resources will be identified. Examples of contaminant-specific criteria include water quality standards and guidance values for the protection of aquatic life (6 New York Codes, Rules, and Regulations [NYCRR] Part 701 and NYSDEC Division of Water Technical and Operational Guidance Series [TOGS] 1.1.1) and sediment criteria developed by the NYSDEC Division of Fish and Wildlife (Technical Guidance for Screening Contaminated Sediments).

Site-specific criteria include the Freshwater Wetlands Act and its implementing regulations (NYS Environmental Conservation Law [ECL] Article 24, 6 NYCRR Parts 663, 664, 702, 703, and 800ff), The Tidal Wetlands Act (ECL Article 25, 6 NYCRR Part 661) and the laws and regulations governing streams and navigable water bodies (ECL Article 15, 6 NYCRR Part 608 and ECL Section 11-0503). Identification of site-specific criteria will briefly describe performance standards for permit issuance cited in the regulation. The responsibilities of the NYSDEC Division of Fish and Wildlife include the regulation and maintenance of fish and wildlife resources for human use. Consequently, the NYSDEC Division of Fish and Wildlife and other agencies have developed criteria that reflect this role. These criteria include Section 11-0515 of the ECL, Chapter 43-B.

Step II - Contaminant-Specific Impact Assessment

Objective and Scope

The objective of Step II is to determine the potential impacts of site-related contaminants on fish and wildlife resources. These potential impacts depend upon the contaminants of potential ecological concern (COPEC), the concentrations of contaminants in the media, the potential exposure of biota to the contaminants, and the potential effects of the exposures. The impact assessment will demonstrate the extent ot which any potential contamination has an impact on biotic resources. If a significant impact exists, we will identify the effects of site-related contaminants on the productivity, diversity, biomass, abundance, and habitat usability of fish and wildlife to the extent this can be quantified.

The development of the contaminant-specific impact assessment follows a stepwise process. This section presents three steps of increasing complexity (Pathway Analysis, Criteria-Specific Analysis, and Analysis of Toxic Effects) that assess the impacts of site-related contaminants on fish and wildlife. Each step relies on progressively more specific information and less conservative assumptions. Whether the impact assessment progresses through additional steps will depend on the conclusions reached at each step regarding the degree of impact. If minimal impact can be demonstrated at a specific step in the assessment, additional steps need not be undertaken. However, based upon GEE's preliminary understanding of the site, all three step will likely be required.

The contaminant-specific impact assessment is based on Step I information and on the characterization and distribution of contaminants as determined in the remedial investigation. Although the final impact assessment need not be reported until the last phase of the remedial investigation, GEE will review information as it becomes available. When possible, steps of the impact assessment for which information exists will be conducted during the initial phase of the remedial investigation. If the analysis does not demonstrate a minimal impact to fish and wildlife, the collection of additional information during subsequent phases of the remedial investigation may be required.

A. Pathway Analysis

A pathway analysis is the first step of the contaminant-specific assessment. Fish and wildlife resources, COPECs, sources of contaminants, and potential pathways of contaminant migration and exposure will be identified. If no resources or pathways are present, we will conclude that there are no adverse impacts to biotic resources. Similarly, if the results from the field studies demonstrate that contaminants have not migrated to a resource along a potential pathway then we will consider the impact minimal or nonexistent. If the results of the pathway analysis show minimal or no impacts then there will be no additional analyses conducted nor required.

B. Criteria-Specific Analysis

A criteria-specific analysis presumes the presence of contaminated resources and pathways of migration for site-related contaminants. This analysis uses numerical criteria (ARAR's, SCG's, TBC's) for COPECs that have been established for specific media or biota. These published standards come from DEC, EPA or other literature (such as Oak Ridge) that GEE maintains in its library. If published numerical criteria do not exist, criteria will be derived using methods established in ARARs, SCGs, or TBCs. For example, an analysis may develop numerical water quality criteria by applying methodology outlined in 6 NYCRR Part 701. Implicit in this analysis is the need for laboratory detection limits that are less than or equal to criteria. (Note that criteria for some metals in water are affected by hardness and bioavailability of some sediment contaminants is influenced by total organic carbon; these should be analyzed in their respective media.)

Comparing site-specific contaminant levels with numerical criteria provides an assessment of potential impact. If contaminant levels in a medium (soil, water, sediment, air) fall below criteria, it will be assumed that the contaminant poses minimal threat to the resource, and additional analysis is unnecessary. If numerical criteria are exceeded or if they do not exist and cannot be developed by methods prescribed in regulations, an analysis of toxic effects is required.

C. Toxic Effect Analysis

Like criteria-specific analysis, a toxic effect analysis presumes that fish and wildlife resources have been identified and that the contamination of resources and contaminant pathways exist. Toxicity information used in the analysis will be taken from the scientific literature. When toxicity information for fish and wildlife does not exist for a contaminant, extrapolations from available laboratory animal data will be used based on EPA standards. An analysis of toxic effects may look at individual organisms, populations, communities, or ecosystems. The approach selected will depend on several factors including the complexity of the system, the relative importance assigned to specific biota, the modes of contaminant exposure, and the expected degree of toxicity associated with contaminant levels. More than one approach may be required to adequately characterize toxic and ecological effects. Impact is assessed by determining the degree to which contaminants affect the productivity and diversity of populations, species assemblages, communities, or ecosystems through direct toxicological and indirect ecological effects. This analysis will also discuss how the contamination affects the utility of wildlife to meet human needs, such as consumption of wildlife.

1. Organism Level Analysis

An analysis of toxic effects at the individual organism level necessarily precedes an evaluation of higher-level effects. If contaminant toxicity is not affecting individuals, there is no need to assess effects on populations, communities, or ecosystems. However, effects on individuals must always be considered when endangered, threatened or rare species are vulnerable. Toxicity will be evaluated for a full life cycle or for the most sensitive life stage using a sensitive species. The level of exposure will be derived from an evaluation of site-related contaminant data.

2. Population Level Analysis

A population level analysis is used to evaluate the acute and chronic toxic effects of contaminants on one or more species. Populations may be affected through changes in growth, reproduction, mortality or behavior, and may be vulnerable at any stage of the life cycle. Exposure is assumed to be continuous throughout the entire life cycle and not to vary among individuals or with life stages.

Exposure scenarios for a population level analysis will be developed from site-specific data. The analysis will assess the toxic effects on the dynamics of the population (age structure, recruitment, and survival rates). Ultimately, the population analysis will assess the impact on productivity due to contaminant exposure.

3. Community Level Analysis

For ecological communities with highly interdependent species, an analysis of alterations in diversity due to contaminant exposure may be necessary. For example, communities with highly specialized predators that depend on a limited array of prey species (simple food webs), communities with highly competitive species (high niche overlap), or communities whose composition and diversity are maintained by keystone species are likely to undergo alterations in community structure as a result of toxic effects to one or

more species. This analytical approach will require site-specific data describing the species composition and structure of affected ecological communities. The analysis will indicate the extent to which composition and structure within the community are altered by contaminant exposure.

4. Ecosystem Level Analysis

The ecological changes from toxic substances may be analyzed from the perspective of trophic dynamics. The analysis should include an evaluation of direct toxic and indirect ecological effects on productivity that result in contaminant-related alterations to trophic structure and function.

Ecosystem analysis will be undertaken if contaminants are expected to affect physiological processes that are associated with energy transformation within a specific trophic level. For example, if contaminants affect photosynthetic reactions of primary producers or affect common chemical processes regulating the metabolism of decomposers, an analysis employing trophic concepts may be appropriate in characterizing the toxic and ecological effects. An analysis of materials transfer among trophic levels will be considered if trophic function is limited by the effect of contaminants on nutrient availability or if contaminants are likely to be transferred among trophic levels.

D. Study Methods

Performing a contaminant-specific impact assessment (Step II) will require specific toxicological or ecological information. Following are a number of sources/methods that will be used to develop the appropriate information:

- Contaminant-specific toxicity data obtained from the scientific literature;
- Bioaccumulation calculations supported by the analysis of contaminated media and biota;
- Modelling the environmental fate of contaminants;
- In situ and laboratory toxicity tests of contaminated and uncontaminated media;
- Histopathological studies of populations exposed to contaminants;
- Comparison of population density, diversity, and species richness data from contaminated and uncontaminated areas;
- Analysis of tissues from biota collected in contaminated and uncontaminated areas; and
- Evaluation of the potential use of fish and wildlife resources by humans from information available in surveys and records.

Step III - Ecological Effects of Remedial Alternatives

Objective and Scope

The objective of Step III is to evaluate the effects of the remedial alternatives on the productivity and diversity of fish and wildlife resources. This requires consideration of the potential non-contaminant related impacts of remedial activity, as well as consideration of the efficacy of remedial alternatives in correcting contaminant-specific effects. Remedial alternatives are evaluated using the Contaminant-Specific Impact Assessment as a "baseline." Similarly, non-contaminant related impacts are evaluated using the ecological information obtained in Step I as a "baseline." Before concerns for fish and wildlife resources can be weighed against other concerns (such as cost) in selecting the preferred alternative, the biological "costs and benefits" associated with both non-contaminant and contaminant specific ecological effects of each remedial alternative must be determined.

Ecological effects of remedial alternatives will be evaluated as part of the feasibility study. The effectiveness of remedial alternatives in achieving desired ecological effects and meeting other concerns will be evaluated concurrently. The evaluation process should clearly indicate the importance given to concerns for fish and wildlife resources in relationship to other concerns. Discussion of the selection of the preferred alternative and selected alternative in the Proposed Remedial Action Plan (PRAP) and the Record of Decision (ROD), respectively, should indicate how and to what extent the remedial action would address concerns for fish and wildlife resources. The need for a monitoring program will be determined. The degree of contaminant removal or destruction under the remedial action is critical in making this determination. If a monitoring program is required, components of the program including monitoring of ecological resources, pathways, and contaminants of concern should be identified in the PRAP and the ROD.

A. Evaluation and Comparison of Remedial Alternatives

1. Contaminant-Related Effects

Contaminant-related effects include alterations in productivity and diversity that are directly or indirectly related to contaminant toxicity. Direct effects include mortality, morbidity, and alterations in behavior and reproduction, that are induced by exposure to contaminants. Indirect effects include alterations in species assemblages, ecological communities, and ecosystem function due to loss or reduction of biotic components. Additionally, diminished use by humans as a result of contaminated biota must be considered. The remedial alternatives will be compared initially with contaminant-specific "baseline" conditions. The Contaminant-Specific Impact Assessment describing the current impacts on resources will serve as a "baseline." The evaluation of each alternative will indicate whether contaminant specific criteria (ARARs, SCGs, and TBCs) are satisfied. If criteria cannot be satisfied under one or more remedial alternative, a comparison of alternatives will be made to establish the relative efficacy of each in

restoring and/or maintaining the productivity, diversity and usability of fish and wildlife resources.

2. Other Effects

Non-contaminant related effects include alterations in the productivity and diversity of fish and wildlife resources due to the loss or modification of habitat. Remedial actions may eliminate habitat through construction or affect ecological communities through the modification of factors that affect habitat quality (hydrology, soil conditions, adjacent plant communities, etc.). Remedial alternatives will be compared initially to "baseline" conditions to determine their potential for significant impact on resource productivity and diversity by habitat loss or modification. If an alternative may result in harm to a resource, further delineation and description of the resource may be necessary during the feasibility study to develop appropriate mitigation. The evaluation of each alternative will include mitigation for loss or modification of habitat. Effects should be categorized as long or short term. If a significant impact is expected from one or more alternatives, the relative potential impact of these alternatives on the productivity and diversity of resources will be identified.

B. Ecological Considerations in Selecting a Preferred Alternative

The Feasibility Study will compare the impacts of alternatives on the productivity and diversity of fish and wildlife resources. Comparisons will include the potential ecological costs and benefits of both contaminant and non-contaminant related effects. The alternative that will best restore and maintain the productivity and diversity of the affected resources will be identified as the alternative that minimizes risk to those resources. The weight of ecological concerns in the selection of a preferred alternative will be discussed. If the preferred alternative does not minimize risk to affected resources, an explanation will be provided indicating why minimization of risk to fish and wildlife is not possible and the extent to which the preferred alternative fails to meet this goal.

C. Conceptual Monitoring Program

1. Evaluation of Monitoring Need

The selected remedy will be evaluated to determine if a monitoring program is required. Sites that are remediated by containment or partial removal of contaminants will require post-remedial monitoring programs. Monitoring may not be required if residual contaminant levels present minimal risks to fish and wildlife.

2. Components of Monitoring Program

The objectives of the monitoring program are to determine: (1) if remedial measures meet expectations for minimizing risk to fish and wildlife and (2) if remedial measures remain effective over time. Affected resources, migration pathways, and contaminants of concern will be identified.

Step IV - Fish & Wildlife Requirements For Implementation of Remedial Actions

Scope and Objectives

This phase of a remedial action involves fish and wildlife requirements for implementation of the selected remedial alternative. It requires the accurate location of areas to be remediated or protected and the formulation of design plans for remedial construction. If appropriate, fish and wildlife resources may require delineation, and plans for restoration and/or protection may need to be developed. Specific information will be included on project plans and in construction specifications.

A. Delineation of Affected Resources

Although Steps I and III generally indicate the location of fish and wildlife resources and identify those that are contaminated and require remediation, a detailed delineation of resources affected by contamination or construction activity may be required at the design stage. Often, contamination affecting flowing waters requires detailed delineation, and the delineation of uncontaminated resources that may be affected by construction activities may be necessary.

B. Methods of Protection for Fish and Wildlife Resources

Specific methods for protecting affected resources will be indicated on plans and in construction specifications. For example, siltation and erosion controls and a seasonal limitation for construction activities are often required. Siltation and erosion controls must be placed in construction specifications, bid documents and on engineering drawings which clearly depict to scale resource boundaries (e.g. wetland boundaries) and the placement, design, performance criteria and maintenance of the controls. Controls must be in place prior to creating erodible conditions. If controls are to be designed by the contractor, specific plans must be submitted for review before construction begins.

C. Restoration/Replacement of Resources

If restoration or replacement of fish and wildlife resources is required as part of the selected remedial alternative, plans will be submitted for review during the design stage. Mitigation may include on-site or off-site restoration or the replacement of affected resources.

Step V - Monitoring Program

Scope and Objectives

The objectives of the monitoring program include insuring that the work performed complies with design specifications as they pertain to fish and wildlife resources,

evaluating the efficacy of the remedial actions in minimizing risk to fish and wildlife, and determining the effectiveness of remedial measures over time.

A. Design Compliance

On-site inspection and evaluation will be done to insure that implementation complies with design specifications. The monitoring program will include criteria for evaluating results. Monitoring of biological populations may be needed to insure that construction is not affecting biota. Frequent inspections of erosion control devices will be required, and sampling of soil, water, or sediments may be necessary. An acceptable program must be completed before the remedial design is carried out. If monitoring results do not meet criteria, the design and methods will be re-evaluated and/or corrective action taken.

B. Remedial Action Effectiveness

Monitoring techniques to insure that the remedial action is effective in minimizing the risk from site-related contaminants to fish and wildlife may include: sampling media (water, sediment, soil, etc.), sampling tissue, toxicity testing, biomonitoring, or monitoring trends in population density or community diversity.

In the case of habitat restoration or replacement, long-term evaluation of communities may be necessary to insure that there is adequate compensation for lost resources. Long-term sampling schedules and evaluation criteria must be established. If monitoring indicates that criteria have been exceeded, the remedial measures must be re-evaluated and/or corrective action taken.

Community Air Monitoring Plan

Property Known As:

Waterpointe – Whitestone New York
151-45 6th Road
Whitestone, New York 11357
BCP Site #C241091

Prepared For:

151-45 Sixth Road Whitestone Partners, LLC
c/o Bayrock Group, LLC
725 5th Ave, 24th Floor
New York, NY 10022

Prepared by:

Environmental Waste Management Associates, LLC
51 Everett Drive, Suite A-10
West Windsor, New Jersey 08550
EWMA Case No. 204494

April 24, 2007

TABLE OF CONTENTS

1.0 INTRODUCTION AND PURPOSE

Environmental Waste Management Associates, LLC (EWMA) has prepared this Community Air Monitoring Plan (CAMP) for implementation during the investigation activities proposed in EWMA's December 2006 Remedial Investigation Workplan (RIW) for the property known as Waterpointe – Whitestone, New York, which is located at 151-45 6th Road, Whitestone, New York (subject property and site). EWMA was retained by 151-45 Sixth Road Whitestone Partners, LLC (Whitestone) to prepare and implement the RIW.

The RIW has been prepared on behalf of the Volunteer (i.e. Whitestone) to fulfill the Brownfield Cleanup Program (BCP) requirements to address the nature and extent of the contamination at the site and any potential off-site impacts.

The purpose of this CAMP is to provide a measure of protection to the surrounding community including residences, businesses, and on site employees from potential airborne releases as a direct result of the investigative or remedial work on the site. This plan is not intended for use in establishing action levels for worker exposure protection, as this is addressed in the site-specific Health and Safety Plan (HASP).

The investigation activities proposed in the RIW include a geophysical survey of several areas to confirm the presence of suspected underground storage tanks and other subsurface structures, the installation of soil borings, test pits and monitoring wells, and the subsequent sampling of ground water from the monitoring wells. Additionally, the RIW proposes to abandon in place or remove any USTs, if feasible, that are identified by the geophysical survey.

The geophysical survey employs non-invasive techniques and will not disturb the subsurface soils at the site. Therefore, dust and odors will not be released during the geophysical survey activities. Additionally, the release of dust and odors during the soil boring activities will be inconsequential since the borehole advanced into the ground is only 2" in diameter and the soil core is encapsulated in a plastic liner when it is extracted from the borehole. Further, the ground water sampling activities are not anticipated to cause significant disturbance of the underlying ground surface in such a manner that would release dust and odors. Therefore, except as noted in EWMA's Health and Safety Plan

(Appendix 10 of the accompanying RIW), no air monitoring is proposed during the geophysical survey, soil boring installation and monitoring well sampling activities.

Elevated concentrations of airborne contaminants are not expected to result from the limited, intrusive activities that are currently contemplated under the RIW, Nevertheless, the air monitoring activities to be employed as a precautionary measure during the investigation activities that include the installation of permanent monitoring wells, test pit excavations and possible removal of underground storage tanks are discussed in the following sections:

2.0 WORK AREA AIR MONITORING PLAN

The work area (i.e. exclusion zone) will be monitored for volatile compounds and particulate levels as outlined in the site specific Health and Safety Plan (HASP) in order to ensure work safety.

Real-time air monitoring for volatile compounds and particulate levels at the perimeter of the exclusion zone (i.e. immediate work area) will be performed during site drilling, test pit and excavation activities to protect the surrounding community including residences, businesses, and on site employees from potential airborne releases as a direct result of the investigative or remedial work on the site. Volatile compounds will be monitored utilizing properly calibrated photoionization detectors (PIDs). The particulate levels will be monitored using direct read dust monitors. The volatile organic compound and particulate monitoring programs are discussed in detail below in Sections 2.1 and 2.2.

2.1 Volatile Organic Compound Monitoring

Volatile organic compounds will be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 parts per million (ppm) above background, work activities will be halted and monitoring continued under the provisions of the Vapor Emission Response Plan (see Section 3.0). All readings will be recorded and be available for state (NYS DEC and NYS DOH) personnel to review.

2.2 Particulate Monitoring

Particulates will be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 100 micrograms per cubic meter (ug/m3) greater than the upwind particulate level, then dust suppression techniques will be employed. In addition, visual observations will be made during all work activities to monitor for dispersion outside the immediate work area. Dust suppression techniques may include applying water or water with hygroscopic salts to the disturbed soil, reducing the volume and speed of on-site vehicles, and wet sweeping paved areas. All readings will be recorded and be available for state (NYS DEC and NYS DOH) personnel to review.

3.0 VAPOR EMISSION RESPONSE PLAN

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities will resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities will resume provided:

- The organic vapor level 200 feet downwind of the perimeter of the work area, or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emissions do not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

4.0 MAJOR VAPOR EMISSION MONITORING

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the perimeter of the work area, or half the

distance to the nearest residential or commercial property, whichever is less, all work activities will be halted.

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 work area, then the air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect.

However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background, 200 feet downwind or half the distance to the nearest residential/commercial property.

5.0 MAJOR VAPOR EMISSION RESPONSE PLAN

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts, as listed in the Health and Safety Plan (Appendix 10 of the RIW), will go into effect.

2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.

3. Frequent air monitoring will be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

4. In addition, an attempt to identify the point source of the elevated vapor emission will be made. If identified, suppression activities, i.e. containing or covering the source with a vapor impermeable material, will be carried out to minimize the on-going vapor emission event prior to restarting the work activities.

6.0 AIRBORNE PARTICULATE RESPONSE PLAN

If the downwind airborne particulate concentration is greater than 100 micrograms/cubic meter (mg/m^3) than the background concentration or visible dust is observed leaving the work area, then dust suppression methods will be employed. The methods that may be utilized are listed in Section 2.2 above. Work may continue with dust suppression methods as long as the concentration level does not exceed 150 mg/m^3 and no visible dust leaves the work area.

7.0 MAJOR AIRBORNE PARTICULATE RESPONSE PLAN

If the downwind airborne particulate concentration is greater than 150 micrograms/cubic meter (mg/m^3) than the background concentration, work will cease and both the work activity and dust suppression techniques re-evaluated to reduce further particulate dispersion. Work will only resume after the downwind airborne particulate concentration is reduced to below 150 mg/m^3 against the background level and no visible dust is observed leaving the work area.

GRAPHIC SCALE

0 0.5 1 MILE

(IN MILES)

SOURCE: USGS FLUSHING, N.Y. 7.5 MINUTE QUADRANGLE

Environmental Waste Management Associates, LLC
P.O. Box 5430
Parsippany, NJ 07054
Tel: (973) 560-1400

SCALE: 1" = 2,000'	PROJECT# 204494
DATE: 7/28/06	
DRAWN BY: RR	
CHECKED BY: SB	
FILE: k:\drawings\204000\204494\20449 4f1.dwg	

SITE LOCATION
151-45 SIXTH ROAD WHITESTONE PARTNERS LLC
6TH ROAD & 152ND STREET
WHITESTONE BOROUGH, QUEENS CNTY, NEW YORK CITY, NY

FIGURE# 1

AREA OF CONCERN LIST:

AOC-1 – NINE (9) FORMER 550 GALLON USTs ADJACENT TO THE FORMER EDENWALD CONTRACTING

AOC-2 – THREE (3) ABANDONED 550 GALLON GASOLINE USTs, REPORTEDLY CLOSED IN PLACE IN 1992, AND ONE FORMER 4,000 GALLON DIESEL UST LOCATED NE OF THE INTERSECTION OF 151 STREET AND 6TH ROAD

AOC-3 – ONE (1) FORMER 3,000 GALLON DIESEL UST AND ONE WASTE OIL UST LOCATED APPROXIMATELY 50' NORTH OF THE FORMER GRACE REPAIR SHOP

AOC-4 – THREE (3) FORMER 550 GALLON OIL USTs

AOC-5 – TWO (2) POSSIBLE 2,000 GALLON DIESEL USTs

AOC-6 – SPILL NUMBER 9214054

AOC-7 – POSSIBLE ADDITIONAL USTs

AOC-8 – MISC. DRUMS AND STAINED SURFACE SOILS THROUGHOUT THE SITE

AOC-9 – DOWN HILL OF DRUM CLUSTER AND INTERIOR FLOOR STAINING OUTSIDE NE CORNER OF THE FORMER GRACE MAINTENANCE BUILDING

AOC-10 – NORTH SIDE OF FORMER ASPHALT PLANT

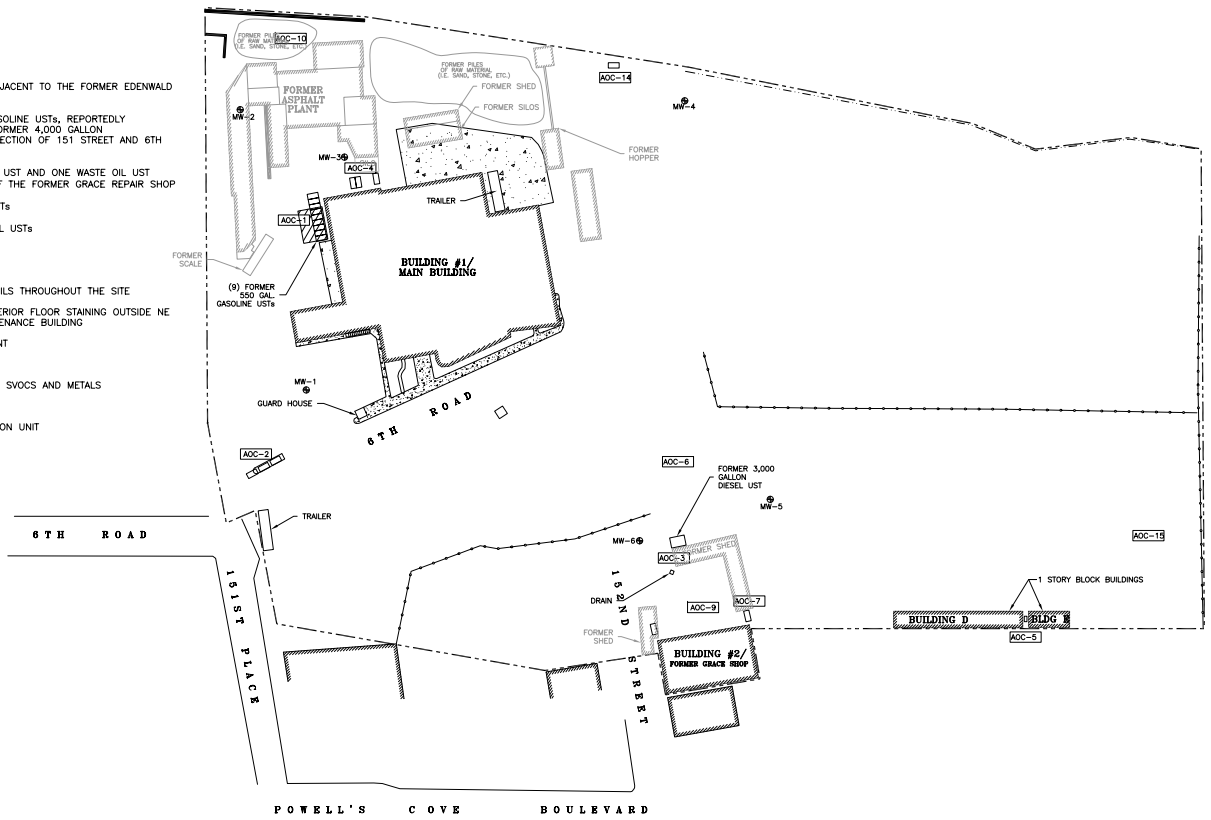
AOC-11 – GROUND WATER

AOC-12 – HISTORIC FILL MATERIAL IMPACTED WITH SVOCS AND METALS

AOC-13 – SUMP WITH UNKNOWN DISCHARGE

AOC-14 – UNDERGROUND STORM WATER COLLECTION UNIT

AOC-15 – SOUTHEAST CORNER OF PROPERTY (DARKER SOILS OBSERVED ON AERIALS)



LEGEND

MW-1 — MONITORING WELL LOCATION

PROPERTY BOUNDARY

FENCE

EDGE OF RIP RAP

WALL

CONCRETE

GRAPHIC SCALE

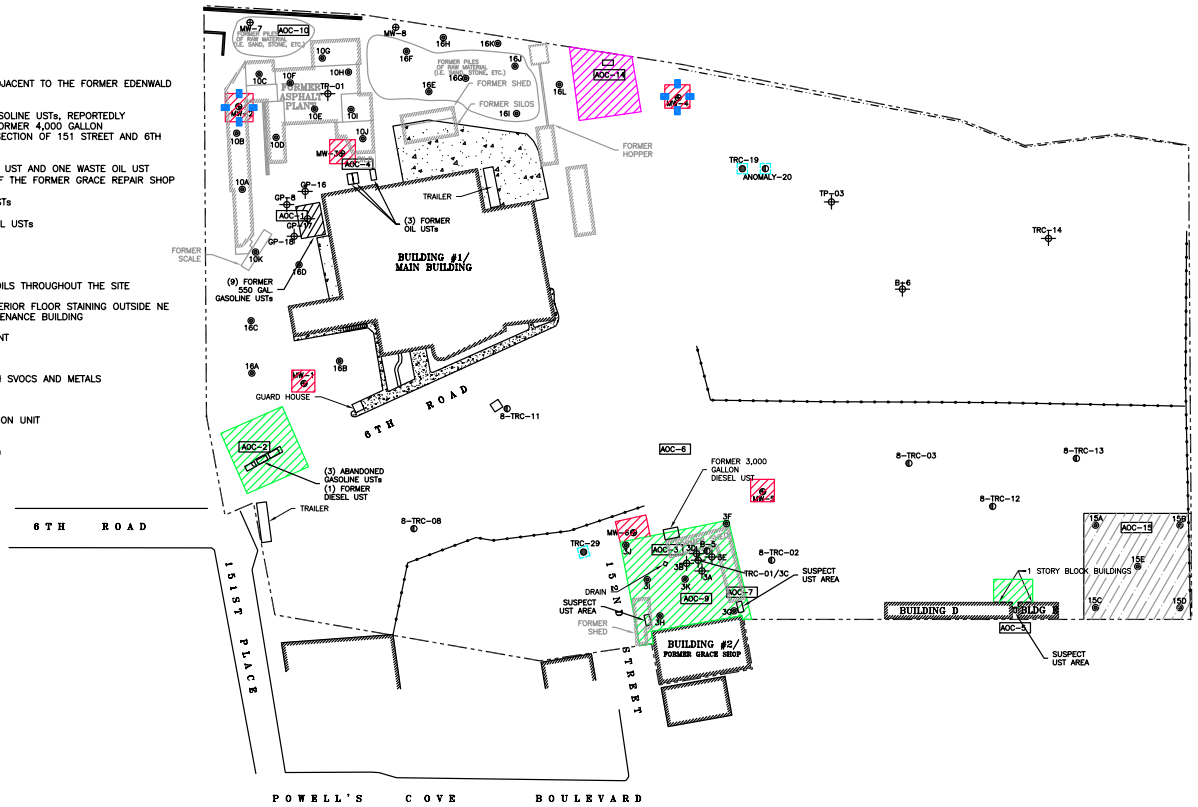
60 0 30 60 120

(IN FEET)

Environmental Waste Management Associates, LLC P.O. Box 5430 Parsippany, NJ 07054 Tel: (973) 560-1400	SCALE: AS SHOWN DATE: 3/21/06 DRAWN BY: RR CHECKED BY: LD	PROJECT# 204494
SITE PLAN WITH AREAS OF CONCERN 151-45 SIXTH ROAD WHITESTONE PARTNERS LLC 6TH ROAD & 152ND STREET WHITESTONE BOROUGH, QUEENS CNTY. NEW YORK CITY, NY		FIGURE# 2

AREA OF CONCERN LIST:

- AOC-1 – NINE (9) FORMER 550 GALLON USTs ADJACENT TO THE FORMER EDENWALD CONTRACTING
- AOC-2 – THREE (3) ABANDONED 550 GALLON GASOLINE USTs, REPORTEDLY CLOSED IN PLACE IN 1992, AND ONE FORMER 4,000 GALLON DIESEL UST LOCATED NE OF THE INTERSECTION OF 151 STREET AND 6TH ROAD
- AOC-3 – ONE (1) FORMER 3,000 GALLON DIESEL UST AND ONE WASTE OIL UST LOCATED APPROXIMATELY 50' NORTH OF THE FORMER GRACE REPAIR SHOP
- AOC-4 – THREE (3) FORMER 550 GALLON OIL USTs
- AOC-5 – TWO (2) POSSIBLE 2,000 GALLON DIESEL USTs
- AOC-6 – SPILL NUMBER 9214054
- AOC-7 – POSSIBLE ADDITIONAL USTs
- AOC-8 – MISC. DRUMS AND STAINED SURFACE SOILS THROUGHOUT THE SITE
- AOC-9 – DOWN HILL OF DRUM CLUSTER AND INTERIOR FLOOR STAINING OUTSIDE NE CORNER OF THE FORMER GRACE MAINTENANCE BUILDING
- AOC-10 – NORTH SIDE OF FORMER ASPHALT PLANT
- AOC-11 – GROUND WATER
- AOC-12 – HISTORIC FILL MATERIAL IMPACTED WITH SVOCS AND METALS
- AOC-13 – SUMP WITH UNKNOWN DISCHARGE
- AOC-14 – UNDERGROUND STORM WATER COLLECTION UNIT
- AOC-15 – SOUTHEAST CORNER OF PROPERTY (DARKER SOILS OBSERVED ON AERIALS)



LEGEND

- MW-1 – MONITORING WELL LOCATION
- SOIL AND GROUND WATER SAMPLE LOCATION
- SOIL SAMPLE ONLY LOCATION
- PROPOSED MONITORING WELL LOCATION
- PROPOSED SURFICIAL SOIL SAMPLE LOCATION
- PROPOSED SOIL BORING LOCATION
- PROPOSED TEST PIT LOCATION
- PROPOSED EXCAVATION AREA
- PROPERTY BOUNDARY
- FENCE
- EDGE OF RIP RAP
- WALL
- CONCRETE

- GPR
- GPR, POSSIBLE TEST PITS, POSSIBLE UST REMOVAL (PROPOSED SOIL SAMPLES 2A-2D)
- GPR, POSSIBLE TEST PITS, POSSIBLE SUBSURFACE STRUCTURE REMOVAL

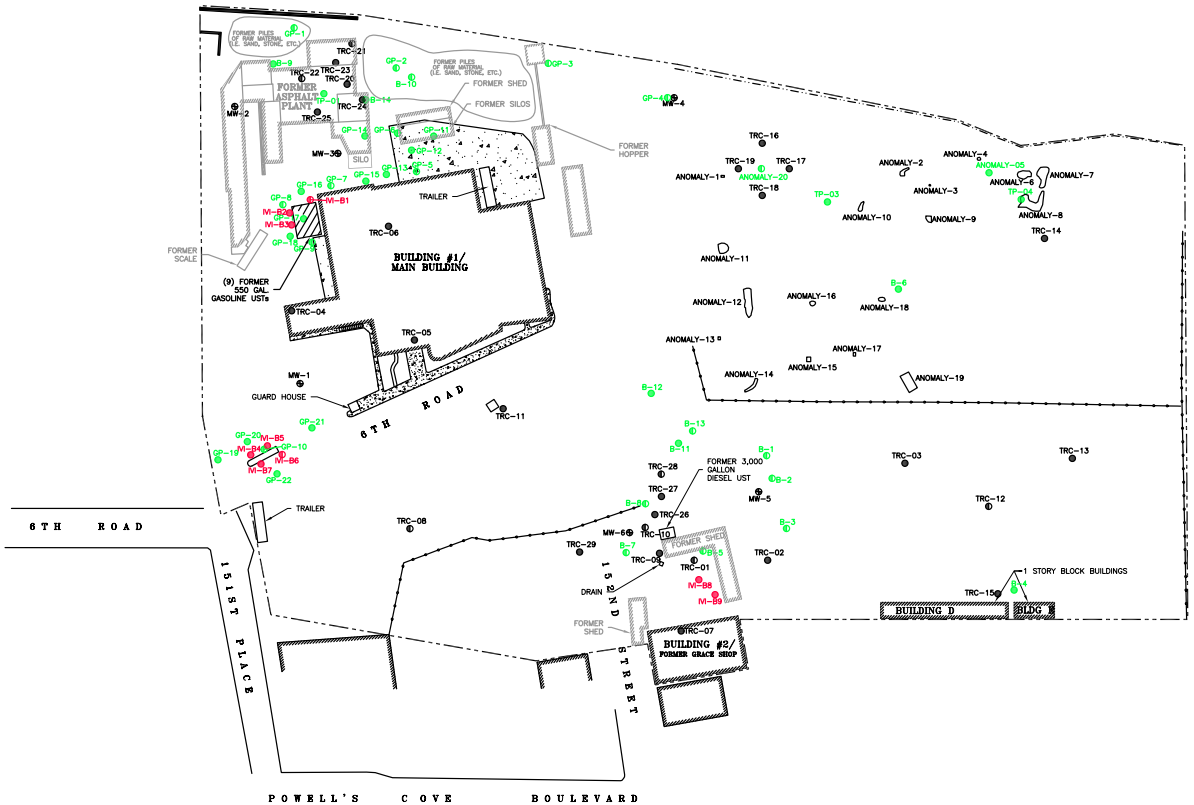
NOTE: SELECT LOCATIONS WILL ALSO BE SAMPLED FOR SOIL VAPORS. THE LOCATIONS WILL BE BIASED TO THOSE SAMPLES THAT EXHIBIT THE MOST ELEVATED CONCENTRATIONS OF SOIL AND/OR GROUND WATER CONTAMINATION

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)

Environmental Waste Management Associates, LLC
P.O. Box 5430
Parsippany, NJ 07054
Tel (973) 560-1400

SCALE:	AS SHOWN
DATE:	3/21/06
DRAWN BY:	RR
CHECKED BY:	LD
PROJECT#	204494
FIGURE#	2A

PROPOSED SAMPLE LOCATION PLAN
151-45 SIXTH ROAD WHITESTONE PARTNERS LLC
6TH ROAD & 152ND STREET
WHITESTONE BOROUGH, QUEENS CNTY, NEW YORK CITY, NY



LEGEND

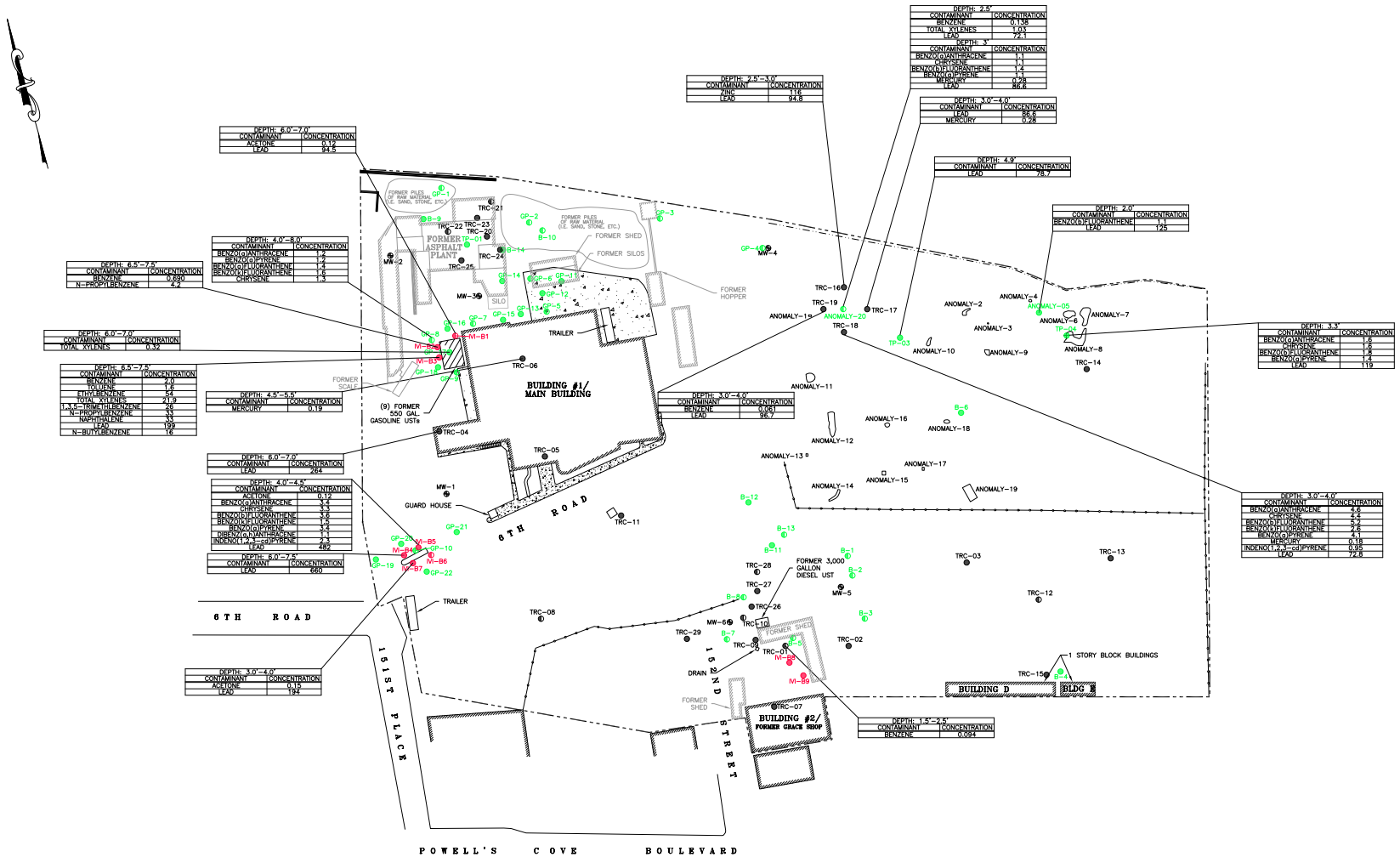
MW-1	MONITORING WELL LOCATION
TRC	TRC SAMPLE LOCATION
IVI	IVI SAMPLE LOCATION
LBG	LBG SAMPLE LOCATION
	SOIL AND GROUND WATER SAMPLE LOCATION
	SOIL SAMPLE ONLY LOCATION
	PROPERTY BOUNDARY
	FENCE
	EDGE OF RIP RAP
	WALL
	CONCRETE

GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

Environmental Waste Management Associates, LLC	SCALE: AS SHOWN	PROJECT# 204494
P.O. Box 5430 Parsippany, NJ 07054 Tel (973) 560-1400	DATE: 3/21/06	
	DRAWN BY: KR	
	CHECKED BY: LD	
HISTORIC SAMPLE LOCATION PLAN		FIGURE# 3
151-45 SIXTH ROAD WHITESTONE PARTNERS LLC 6TH ROAD & 152ND STREET WHITESTONE BOROUGH, QUEENS CNTY, NEW YORK CITY, NY		



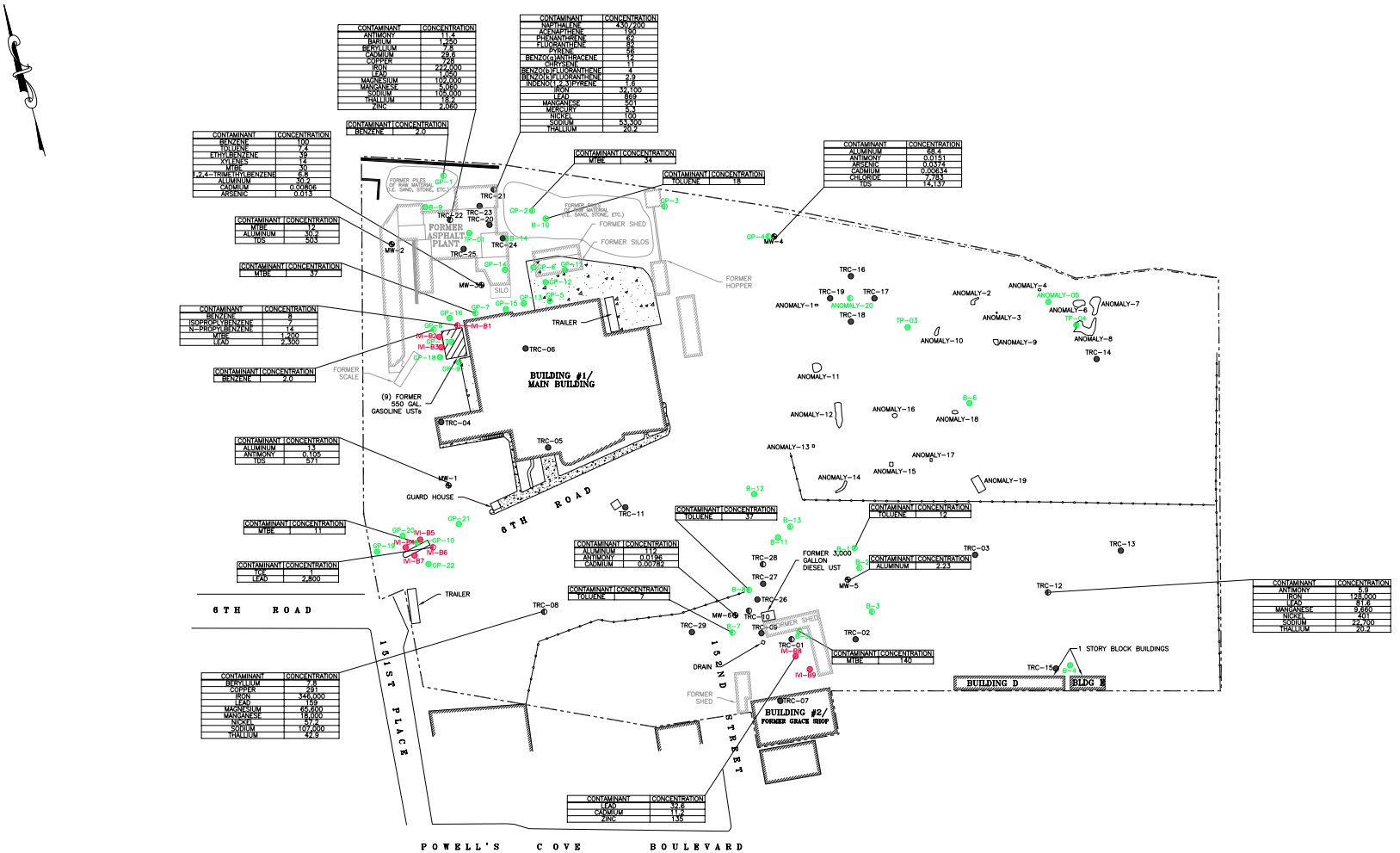
LEGEND

- MW-1 — MONITORING WELL LOCATION
- TRC — TRC SAMPLE LOCATION WITH EXCEEDANCES
- IVI — IVI SAMPLE LOCATION WITH EXCEEDANCES –SAMPLES EXCAVATED
- LBG — LBG SAMPLE LOCATION WITH EXCEEDANCES
- SOIL AND GROUND WATER SAMPLE LOCATION
- SOIL SAMPLE ONLY LOCATION
- PROPERTY BOUNDARY
- FENCE
- EDGE OF RIP RAP
- WALL
- CONCRETE

NOTE: RESULTS SHOWN EXCEED 6 NYCRR SUBPART 375-6.8(a), THE UNRESTRICTED USE SOIL CLEANUP OBJECTIVES; ALL RESULTS GIVEN IN PARTS PER MILLION (PPM)

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)

Environmental Waste Management Associates, LLC P.O. Box 5430 Parsippany, NJ 07054 Tel: (973) 560-1400	SCALE: AS SHOWN DATE: 3/21/06 DRAWN BY: RR CHECKED BY: LD	PROJECT# 204494
HISTORIC SOIL SAMPLE LOCATION PLAN WITH EXCEEDANCES 151-45 SIXTH ROAD WHITESTONE PARTNERS LLC 6TH ROAD & 152ND STREET WHITESTONE BOROUGH, QUEENS CNTY. NEW YORK CITY. NY		FIGURE# 4



LEGEND

- MW-1 — MONITORING WELL LOCATION
- TRC — TRC SAMPLE LOCATION WITH EXCEEDANCES
- IVI — IVI SAMPLE LOCATION WITH EXCEEDANCES
- LBG — LBG SAMPLE LOCATION WITH EXCEEDANCES
- SOIL AND GROUND WATER SAMPLE LOCATION
- SOIL SAMPLE ONLY LOCATION
- PROPERTY BOUNDARY
- FENCE
- EDGE OF RIP RAP
- WALL
- CONCRETE

NOTE: RESULTS SHOWN ARE ABOVE NYSDEC TOGS 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDENCE VALUES FOR CLASS GA GROUND WATER, ALL RESULTS IN PARTS PER BILLION (PPB)

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)

Environmental Waste Management Associates, LLC P.O. Box 5430 Parsippany, NJ 07054 Tel: (973) 560-1400	SCALE: AS SHOWN DATE: 3/21/06 DRAWN BY: RR CHECKED BY: LD	PROJECT# 204494
HISTORIC GROUND WATER SAMPLE LOCATION PLAN WITH EXCEEDANCES 151-45 SIXTH ROAD WHITESTONE PARTNERS LLC 6TH ROAD & 152ND STREET WHITESTONE BOROUGH, QUEENS CNTY. NEW YORK CITY. NY		FIGURE# 5

Legend

Approx. Extent of Historic Fill Material

Approx. Property Boundary

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES, LLC 51 Everett Drive, Suite A-10 West Windsor, NJ 08550 Ph: (609) 799-7300	SCALE: Unknown DATE: 2/8/2007 ASSEMBLED BY: SB CHECKED BY: LD	PROJECT # 204494
Site Plan Depicting Approx. Extent of Historic Fill 151-45 6th Rd Whitestone Partners, LLC 6th Road & 152nd Street Whitestone Borough, Queens City, New York, NY		Figure 6

New York State Department of Environmental Conservation

FACT SHEET

Brownfield Cleanup Program

Waterpoint-Whitestone, New York **April 24, 2007**
BCP Site #C241091
Whitestone, NY

Remedial Investigation Work Plan Available for Public Comment

The New York State Department of Environmental Conservation (NYSDEC) requests public comments as it reviews a work plan to investigate Waterpoint-Whitestone, New York located at 151-45 Sixth Road in Whitestone, Queens County. See map for the location of the site. The "Remedial Investigation Work Plan" was submitted by 151-45 Sixth Road Whitestone Partners, LLC under New York's Brownfield Cleanup Program (BCP).

NYSDEC previously accepted an application submitted by 151-45 Sixth Road Whitestone Partners, LLC to participate in the BCP. The application proposes that the site will be used as a waterfront residential community, which will include on-site parking for building residents and an approximately 6,600 square foot clubhouse. In addition to the residential aspect, the development will feature a large amount of open space including a waterfront promenade, which will be available for use by the local community.

Public Comments about the Remedial Investigation Work Plan
NYSDEC is accepting written public comments about the Remedial Investigation (RI) Work Plan for 30 days, from **April 25, 2007** through **May 25, 2007.** The RI Work Plan is available for public review at the document repository identified in this fact sheet.

Written comments should be submitted to:

James Drumm
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7016

Brownfield Cleanup Program: New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and redeveloped. These uses include recreation, housing and business.

A **brownfield** is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination.

For more information about the BCP, visit:
www.dec.state.ny.us/website/der/bcp

Highlights of the Proposed Remedial Investigation

The remedial investigation has several goals:
1) define the nature and extent of contamination in soil, surface water, groundwater and any other impacted media;
2) identify the source(s) of the contamination;
3) assess the impact of the contamination on public health and/or the environment; and
4) provide information to support the development of a Remedial Work Plan to address the contamination.

The investigation will be performed by 151-45 Sixth Road Whitestone Partners, LLC with oversight by NYSDEC and the New York State Department of Health (NYSDOH).

Known Environmental Conditions

Numerous investigative activities have been completed at the site to date. Soil samples have been obtained through the installation of test pits, the installation of soil borings and the collection of post-excavation samples in conjunction with on-site remedial activities (i.e. soil excavation). Impact by volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals has been detected in the soil across the site.

Ground water samples have been obtained through the installation of temporary points and five permanent monitoring wells at the site. The ground water samples collected from the temporary and permanent wells revealed impact from VOCs and metals.

The following investigative activities are proposed in order to eliminate gaps in currently existing data and to ensure that all known and suspected environmental conditions have been identified:

- A geophysical survey will be performed to locate/investigate the suspected presence of underground storage tanks (USTs):
  1) Northeast of the intersection of 151st Street and 6th Road
  2) 50' North of the Former Grace Repair Shop
  3) Adjacent to the Former Grace Repair Shop

- At a minimum, test pits will be installed to investigate a suspected underground stormwater collection unit and the possible impact of site contaminants on this structure. Additionally, test pits will be installed to investigate any anomalous areas identified during the geophysical survey. Soil borings will be installed and sampled to investigate several historic areas of concern.

- Monitoring wells will be installed and sampled to further characterize, evaluate and delineate (if necessary) the presence or absence of dissolved metals and organic contaminants. These locations, may include, but are not limited to:
  1) To the north and west of the main building;
  2) Northeast of the intersection of 151st Street and 6th Road; and
  3) Along the northern boundary of the site.

- Inspection/evaluation of the sump construction and discharge (two sumps located within the main building).

- Soil vapor sampling will be conducted to evaluate vapor intrusion concerns.

- Sediment and water sampling will be conducted at the site (along the northern boundary of the site) in the East River, if deemed necessary by the NYSDEC.

Next Steps
NYSDEC will consider public comments when it completes its review, has any necessary revisions made, and approves the RI Work Plan. NYSDOH must concur in the approval of the RI Work Plan. The approved RI Work Plan will be placed in the document repository (see below). After the RI Work Plan is approved, 151-45 Sixth Road Whitestone Partners, LLC may proceed with the remedial investigation of the site. It is estimated that the remedial investigation will take about 120-days to complete.

The applicant will develop a Remedial Investigation Report that summarizes the results of the remedial investigation.

NYSDEC will keep the public informed during the investigation and remediation of Waterpoint-Whitestone, New York.

Background
The site is an approximate 12.5 acre parcel of land in the Whitestone section of Queens, New York. The site has a street address of 151-45 6th Road, Whitestone, New York, 11357 and is identified as the following lots and blocks: Block 4487, Lots 160, 169, 170 and 200; Block 4524, Lots 77 and 92; and, Block 4531, Lots 79 and 92.

The site is located in an area characterized by commercial/light industrial and residential development. The site is bordered by the East River to the north.

The site is currently used as a truck/maintenance facility and vehicle storage yard by multiple tenants.

These tenants include Globis Bus, US Towing, Ken-Ben Towing, Ras Dairy, Nicmanda Trucking and Tempa Construction. Construction equipment and machinery are also stored at the site by various tenants. The site is currently zoned for manufacturing purposes.

The site was historically occupied by residential houses, a park/pavilion recreation area, a restaurant, a metal shop, a boat manufacturer and a shooting range and shop until circa 1950. An asphalt plant operated from approximately 1952 through 1992. Concrete manufacturing was conducted concurrently with the asphalt manufacturing operations until approximately 1986-1988. The asphalt plant was razed in March of 2002. From the early 1980's through the present, the site was also used as a maintenance garage for truck, bus and other vehicle repairs.

Areas of concern (AOCs) that have been identified at the site, related to past and current uses, include former and existing USTs, staining, drums, impacted ground water, sump pit, storm water collection unit, and historic fill material.

Numerous investigative activities have been completed at the site to date. Soil samples have been obtained through the installation of test pits, the installation of soil borings and the collection of post-excavation samples in conjunction with on-site remedial activities (i.e. soil excavation). Impact by VOCs, SVOCs and metals has been detected in the soil across the site.

Ground water samples have been obtained through the installation of temporary points and five permanent monitoring wells at the site. The ground water samples collected from the temporary and permanent wells revealed impact from VOCs and metals.

Several interim remedial measures have been completed over the years. These measures, which relate to the underground storage tanks, included the removal of underground storage tanks and the excavation and disposal of contaminated soil.

To date, the following activities within the BCP have transpired:
- Submittal of BCP Application, November 2005
- Acceptance into BCP, May 1, 2006
- BCP Agreement Executed, June 19, 2006

FOR MORE INFORMATION

Document Repository
A local document repository has been established at the following location to help the public to review important project documents. These documents include the RI Work Plan and the application to participate in the BCP accepted by NYSDEC:

Queens Library, Whitestone Branch
151-10 14th Road
Whitestone, NY 11357
(718) 767-8010

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

Project Related Questions
James Drumm
New York State Department of Environmental Conservation
Remedial Bureau B, 625 Broadway, Albany, NY 12233-7016
(518) 402-9774
jjdrumm@gw.dec.state.ny.us

Health Related Questions
Steve Karpinski
New York State Department of Health
Bureau of Environmental Exposure Investigation, 547 River Street, Troy, NY 12180
(518) 402-7860
sxk23@health.state.ny.us

If you know someone who would like to be added to the project mailing list, have them contact the NYSDEC project manager above. We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.