Soil Vapor

Petroleum-related were detected in soil vapor. The CVOCs, carbon tetrachloride and PCE, were detected in vapor samples collected across the site. Carbon tetrachloride and PCE detections in soil vapor may be indicative of an off-site chemical release associated with historical or current use of surrounding properties.

6.4 Conceptual Site Model

A conceptual site model (CSM) has been developed based on the findings of the RI and previous investigations. The purpose of the CSM is to develop a simplified framework for understanding the distribution of impacted materials, potential migration pathways, and potentially complete exposure pathways.

6.4.1 Potential Sources of Contamination

Potential sources of contamination include historical and current petroleum bulk storage at the site, historic fill, the oil-water separators, and potential off-site sources.

Historic fill material encountered beneath surface cover to depths ranging from about 2.5 to 24 feet bgs originated from unidentified source areas and was placed as backfill in the late 1890s and early 1900s. Pesticides detected at concentrations above the Part 375 UU SCO collected across the site are likely related to the historic fill. SVOCs detected at concentrations above the Part 375 UU, PGW, and/or RRU SCOs may be related to the nature of historic fill. Metals detected at concentrations above the Part 375 UU, PGW, and/or RRU SCOs may be related to the historic fill or regional soil quality. 4,4'-DDT and four metals (arsenic, trivalent chromium, lead, mercury) were detected above Part 375 UU and PGW SCOs in native soil samples collected from five borings (RB07, RB18, RB19, RB21, RB22). These detections may be a result of infiltration of historic fill material into the borehole during sample collection.

Evidence of petroleum-related contamination observed in the northern part of the site is related to historical releases from historical and current gasoline USTs and oil-water separators on Lots 3 and 12. Evidence of SVOCs in the groundwater on Lot 20 may be related to entrained sediment and related to historic fill quality.

Petroleum-related VOCs were detected in soil vapor. Carbon tetrachloride and PCE detections in soil vapor may be indicative of an off-site chemical release associated with historical or current use of surrounding properties.

6.4.2 Exposure Media

The impacted media include soil, groundwater, and soil vapor. Petroleum-related VOCs in soil and groundwater were detected above standards in the northern part of the site. Historic fill-related metals were detected in soil across the site. Lead was detected in the 0- to 2-foot interval at hazardous concentrations in one boring (RB06). SVOCs were identified in historic fill material in the southern part of the site and five pesticides were identified in historic fill material across the site. Petroleum-related VOCs were detected in soil vapor. PCE was detected in vapor samples collected throughout the site footprint and carbon tetrachloride was detected in vapor samples in Lot 1.

6.4.3 Receptor Populations

The site is improved with one one-story warehouse with a partial cellar, which is occupied by a food distribution company (Lot 1), two one-story vacant warehouses (Lots 3 and 12), and one one-story vacant warehouse with a partial cellar (Lot 20). Current receptor populations include the tenants in Lot 1 and public and pedestrians adjacent to the site. During site development, human receptors will be limited to construction and remediation workers, authorized guests visiting the site, and the public and pedestrians adjacent to the site. Under future conditions, receptors will include the residential and commercial use occupants, employees, and the nearby community, including children.

6.5 Potential Exposure Pathways – On-Site

6.5.1 Current Conditions

The site is covered by an impervious surface (the concrete building slabs). Human exposure to contaminated soil through dermal absorption, inhalation, and ingestion is minimal and controlled through the presence of the impervious surface. There is a potential exposure pathway through dermal absorption, inhalation, and ingestion during soil sampling associated with site investigation, but it is controlled through implementation of the Health and Safety Plan (HASP).

As groundwater in this area of New York City is not used as a potable water source, a complete exposure pathway to groundwater under current site conditions is unlikely. There is a potential exposure pathway through dermal absorption and ingestion during groundwater sampling associated with site investigation, but it is controlled through implementation of the HASP. The ambient air sample collected in the asphalt-paved open area on Lot 3 contained concentrations of petroleum-related VOCs, which may be related to automotive emissions from street traffic, or to vapors emanating through preferential pathways in the asphalt-paved area. An indoor air sample was not collected; however, the buildings on Lots 3, 12, and 20 are vacant, therefore,

exposure to potential sub–surface soil through inhalation is limited. Potential receptors to potential sub-surface vapor through inhalation is limited to workers on Lot 3.

There is a potential exposure pathway to soil vapor through inhalation during soil, groundwater, and soil vapor sampling associated with site investigation. This pathway is controlled through implementation of the HASP.

6.5.2 Construction/Remediation Conditions

Construction and remediation may result in potential exposures to site contaminants in the absence of a HASP and a Community Air Monitoring Plan (CAMP). Construction and remedial activities include demolition, the excavation and off-site disposal of impacted soil, removal and off-site disposal of tanks and separators, potential dewatering and construction of foundation components.

In the absence of a HASP and CAMP, this scenario presents the potential for soil COC exposure to construction and remediation workers via dermal absorption, ingestion, and inhalation of vapors and particulate matter. This exposure pathway will be mitigated through the implementation of the HASP, CAMP, and dust suppression techniques.

If dewatering is required, groundwater will be encountered during excavation by workers, and there is potential for exposure to groundwater COCs, in the absence of a HASP, to construction workers via dermal absorption or ingestion. This exposure pathway will be mitigated through the implementation of the HASP.

During site development, construction and remediation workers and the surrounding community could be exposed to petroleum during tank cleaning or soil vapor COCs via inhalation. Exposure to vapors will be limited through the implementation of a HASP, CAMP, and vapor suppression techniques.

6.5.3 Proposed Future Conditions

The proposed development will encompass the entire site footprint. Upon completion of the new development, the site will be covered by a concrete building slab, with a continuous waterproofing/vapor barrier under the slab and along subsurface foundation walls.

The foundation and cellar slab with waterproofing/vapor barrier will cover the full building footprint will prevent direct human exposure to residual impacted media that may be left in place or may migrate to the site from an off-site location. As such, there is no complete exposure pathway for future users.

There is no pathway for ingesting groundwater COCs, because the site and surrounding area will continue to obtain municipally-supplied drinking water that originates from surface water reservoirs located upstate. Landscaped or vegetated areas are not anticipated.

6.6 Potential Exposure Pathways – Off-Site

In the absence of a CAMP and a HASP, soil has the potential to be transported off-site by wind in the form of dust or on the tires of vehicles or equipment leaving the site during the excavation and foundation construction stage of redevelopment, which includes remediation. This could create a potential exposure pathway to the public adjacent to the site. Groundwater that will potentially be removed during construction will be pre-treated and discharged to the New York City sewer system, per NYCDEP permit requirements. Therefore, the potential for public exposure to groundwater on adjacent sites will be minimalized. During construction, soil vapor will primarily migrate vertically through the subsurface and will dissipate and dilute with ambient air.

The potential off-site migration of site soil, groundwater, and/or soil vapor contaminants is not expected to result in a complete exposure pathway for current, construction-phase, or future conditions for the following reasons:

- The site is located in an urban area and is covered with continuous impervious surface material (concrete building slab).
- During site excavation, foundation construction, and remediation the following protective measures will be implemented:
    - Air monitoring will be conducted for particulates (dust) and VOCs during ground-intrusive work as part of a CAMP. Dust and/or vapor suppression techniques will be employed to limit the potential for off-site migration of soil and vapors.
    - Vehicle tires and undercarriages will be washed as necessary prior to leaving the site to prevent tracking material off-site.
    - A soil erosion/sediment control plan will be implemented during construction to control off-site migration of soil.
- The new building will include a waterproofing/vapor barrier to be installed beneath the cellar slab and along the sidewalls to sidewalk grade. A continuous impervious surface covering comprised of the proposed building slab will span the site footprint.
- An in-situ groundwater remedy will be implemented and will improve the overall water quality post construction.
- Groundwater in New York City is not used as a potable water source and the nearest ecological receptor, the Harlem River, is located about 450 feet west of the site.

6.7 Evaluation of Human Health Exposure

Based on the CSM and the review of environmental data, complete on-site exposure pathways appear to be present, in the absence of engineering controls, in current and construction-phase conditions. The complete exposure pathways indicate there is a risk of exposure to humans from site contaminants via exposure to soil, groundwater, and soil vapor if mitigation and controls are not implemented.

Complete exposure pathways have the following five elements: 1) a contaminant source; 2) a contaminant release and transport mechanism; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population. A discussion of the five elements comprising a complete pathway as they pertain to the site is provided below.

6.7.1 Current Conditions

Contaminant sources include historic fill with varying concentrations of SVOCs, metals, and pesticides; petroleum-impacted soil and groundwater containing varying concentrations of VOCs and/or SVOCs; and soil vapor with carbon tetrachloride, PCE, and petroleum-related VOCs.

Contaminant release and transport mechanisms include potential release and transport during penetration of the site cover for soil, groundwater, and soil vapor sampling. The potential receptor is the on-site sampling personnel, workers on Lot 3, and the nearby public. Under current conditions, the likelihood of exposure to humans is limited due to the following:

- The site footprint is covered by a continuous concrete building slabs and an asphalt-paved lot (Lot 3), which prevents direct contact with soil, groundwater, and soil vapor.
- The site is fenced off and warehouse buildings on Lots 3, 12, and 20 are vacant and locked, preventing access to the public.
- The warehouse building on Lot 1 is locked, preventing access to the public
- Sampling activities are completed in accordance with a HASP and CAMP that is designed to monitor and prevent exposure to soil, groundwater, and soil vapor contaminants.
- Groundwater at the site is not a potable water source.

6.7.2 Construction/Remediation Activities

During the excavation and foundation construction stage of redevelopment, which includes remediation, points of exposure include disturbed and exposed soil during excavation, dust and potential organic vapors generated during excavation, and contaminated groundwater encountered during excavation and/or dewatering operations. Routes of exposure include ingestion and dermal absorption of contaminated soil and groundwater, inhalation of potential

organic vapors arising from contaminated soil vapor and groundwater, and inhalation of dust originating from contaminated soil. The receptor population includes construction and remediation workers and, to a lesser extent, the public adjacent to the site.

The potential for completed exposure pathways is present since all five elements exist; however, the risk can be avoided or minimized by applying appropriate health and safety measures during construction and remediation, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, cleaning truck undercarriages and securing tarp covers before they leave the site to prevent off-site soil tracking, maintaining site security, and wearing the appropriate personal protective equipment (PPE).

A HASP, a RAWP, and a CAMP that include measures such as conducting an air-monitoring program, donning PPE, covering soil stockpiles, altering work sequencing, maintaining a secure construction entrance, proper housekeeping, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented. Such measures will prevent completion of potential migration pathways for soil, groundwater, and soil vapor contaminants.

6.7.3 Proposed Future Conditions

For the proposed future conditions, residual contaminants may remain on-site, depending on the efficacy of the groundwater remedy. If residual impacts exist and engineering/institutional controls are not implemented, points of exposure could include potential cracks in the foundation of the proposed development, exposure during any future ground-intrusive work, or inhalation of vapors entering the building. The receptor population includes residential and commercial use occupants, employees, and the nearby community, including children. The possible routes of exposure can be avoided or mitigated by removal of contaminated soil or construction and maintenance of a site capping system (e.g., concrete building slab or at least 2 feet of clean soil), installation of a waterproofing/vapor barrier, and implementation of a Site Management Plan (SMP), if necessary depending on the remedy.

6.7.4 Human Health Exposure Assessment Conclusions

1. Human exposure to site contaminants is limited under current conditions due to the surface cover, and access is limited to investigation workers, workers on Lot 1, and authorized guests. The primary exposure pathways are dermal contact, ingestion, and inhalation of soil, groundwater, or soil vapor by site investigation workers and, to a lesser extent, the nearby public. The exposure risks can be avoided or minimized by following the appropriate HASP and vapor and dust suppression measures, and by implementing a CAMP during investigation activities.

2. In the absence of mitigation and controls, there is potential for exposure during the construction-phase activities. The primary exposure pathways are:

    a. Dermal contact, ingestion, and inhalation of contaminated soil, groundwater, or soil vapor by construction workers.

    b. Dermal contact, ingestion, and inhalation of soil (dust) and inhalation of soil vapor by the community in the vicinity of the site.

    These can be avoided or minimized by implementing CAMP and by following the appropriate HASP, vapor and dust suppression, site security measures, and following a NYSDEC-approved RAWP.

3. The existence of a complete exposure pathway for site contaminants to human receptors during proposed future conditions is unlikely, as contaminated soil will be excavated and transported to an off-site disposal facility, groundwater will be remediated, and residual soil will be capped, if required, with an impermeable cover or 2 feet of clean soil. Regional groundwater is not used as a potable water source in New York City. The potential pathway for soil vapor intrusion into the building would be addressed by installation of a waterproofing/vapor barrier, which will minimize soil vapor infiltration.

4. It is possible that a complete exposure pathway exists for the migration of site contaminants to off-site human receptors during current, construction-phase, and future conditions. Monitoring and control measures have been and will continue to be used during investigation and construction to prevent completion of this pathway. Under future conditions, the site will be remediated and engineering and institutional controls will be implemented, if necessary, to prevent completion of this pathway.

7.0 NATURE AND EXTENT OF CONTAMINATION

This section evaluates the nature and extent of soil, groundwater, and soil vapor contamination. The nature and extent of the contamination is derived from a combination of field observations and analytical data that were discussed in Section 5.0.

7.1 Soil Contamination

Historic Fill Material

Historic fill consisting predominantly of brown, fine- to medium-grained sand, with varying amounts of silt, clay, gravel, brick, coal, coal ash, slag, concrete, asphalt, glass, plastic, metal, ceramic tile, wood ash, and wood, was encountered across the site beneath the surface cover to depths ranging from about 2.5 to 24 feet bgs. SVOCs, Metals, and pesticides detected at concentrations above the Part 375 UU, PGW, and/or RRU SCOs are likely related to the quality of historic fill. One sample collected from soil boring RB06 contains hazardous concentrations of lead in the 0- to 2-foot interval.

Petroleum-Related Contamination

Petroleum-related contamination in the north part of the site was generally identified at or below the water table from about 13 to 32 feet bgs, with the exception of RB03 and RB13, where localized impacts were identified. Field evidence of petroleum impacts were observed at RB03 between 1 and 2 feet bgs and petroleum-related VOCs were detected above UU, PGW, and/or RRU SCOs at RB13 between 0 to 2 and 8 to 9 feet bgs. The depth of petroleum impacts was delineated vertically (as evidenced by the absence of visual/olfactory observations, PID readings above background, and/or analytical data indicating petroleum-related VOCs at, or below, the groundwater interface) at RB04/RMW04, RB06, RB16/RMW16, RB17/RMW17, and RB20.

The horizontal extent of the petroleum impacts in the northern part of the site was delineated to the eastern, western, and northern site boundaries, and is defined by petroleum impacts in soil and groundwater at RB01/RMW01, RB02, RB03/RMW03, RB09/RMW09 through RB11/RMW11, RB12, RB13, RB14/RMW14, RB15, SB01/MW01, SB06/MW06, SB08/MW08, and SB11 through SB13 and the absence of petroleum impacts in RB04/RMW04, RB06, RB16/RMW16, RB17/RMW17, and RB20. The petroleum impacted area is roughly 16,650 square feet and occupies about 55% of the site. Petroleum-related contamination is related to the historical and current petroleum bulk storage and/or the oil-water separators on site.

7.2 Groundwater Contamination

PID headspace readings of up to 730 ppm, petroleum-like odors, and petroleum-related VOCs and/or SVOCs above SGVs were observed at monitoring wells MW01, MW06, MW08, RMW03,

RMW09, RMW10, RMW11, and RMW14. Petroleum impacts to groundwater were delineated horizontally by the absence of visual/olfactory observations, PID headspace readings above background, and/or petroleum-related VOCs above SGVs in monitoring wells RMW04, RMW05, RMW16, and RMW17. Petroleum-related VOCs were localized to the northern part of the site and are related to the historical and current petroleum bulk storage at the site.

SVOCs were detected at concentrations above the SGVs in groundwater samples collected throughout the site and, with the exception of naphthalene, are likely related to entrained sediments from historic fill.

Dissolved metals (including iron, magnesium, manganese, and sodium) were detected at concentrations above the SGVs in groundwater samples collected throughout the site. Iron, magnesium, manganese, and sodium are attributable to regional groundwater conditions and are not indicative of a release.

7.3 Soil Vapor Contamination

All but one vapor sample contained PCE detections that may be indicative of an off-site chemical release associated with historical or current use of surrounding properties. Historical use of surrounding properties include auto repair facilities that may have used degreasers, unknown manufacturing, and a dry cleaning facility located about 1,100 feet up-gradient of the site. Two vapor samples contained carbon tetrachloride that may also be indicative of an off-site chemical release associated with historical or current use of surrounding properties. The petroleum-related VOCs detected in soil vapor are likely related to the historical and current USTs and/or oil-water separators located on each lot.

8.0 CONCLUSIONS

The conclusions are based on data collected during the September 2017 Subsurface Investigation and RI. The findings summarized herein are based on qualitative data (field observations and instrumental readings) and laboratory analytical soil, groundwater, and soil vapor sample results. Findings and conclusions are as follows:

1. Stratigraphy: Historic fill consisting predominantly of brown, fine- to medium-grained sand with varying amounts of silt, clay, gravel, brick, coal, coal ash, slag, concrete, asphalt, glass, plastic, metal, ceramic tile, wood ash, and wood, was encountered across the site beneath the surface cover to depths ranging from about 2.5 to 24 feet bgs. Native soil encountered below historic fill predominantly consists of fine- to medium-grained sand with varying amounts of fine gravel and silt, and a clay layer varying in thickness between 1 and 7 feet, which was encountered at depths ranging between 13 and 24 feet. Bedrock was not encountered during the remedial investigation or a geotechnical investigation performed by Langan in September 2017; however, weathered rock consisting of decomposed mica, schist, quartz, and granite was encountered in several boring locations between 63 and 103 feet bgs.

2. Hydrogeology: Synoptic groundwater measurements were collected on July 26, 2019 from 14 of the 15 groundwater monitoring wells (RMW09 was inaccessible). Groundwater elevations ranged from el 2.26 to el 3.12, which correspond to depths of about 12.08 and 18.95 feet bgs, respectively. Groundwater generally flows to the west toward the Harlem River. Underground utilities, stratigraphy, and other subsurface structures may locally influence the direction of groundwater flow.

3. Petroleum Impacts in Soil, Groundwater and Soil Vapor: Petroleum impacts were generally identified in soil samples at or below the water table from about 13 to 32 feet bgs, across an area of roughly 16,650 square feet, occupying about 55% of the site. Petroleum-related VOCs were identified in several borings in the northern part of the site at concentrations that exceeded the UU, PGW, and/or RURR SCOs. Petroleum impacts in soil were primarily identified at or just below the groundwater interface. Petroleum-related VOCs in soil are likely related to impacted groundwater from releases associated with former site operations. Petroleum-related VOCs above SGVs were identified in monitoring wells MW01, MW06, MW08, RMW01, RMW03, RMW09, RMW10, RMW11, and RMW14. Naphthalene was also identified in MW01, MW06, and RMW14 at concentrations above the SGV. SVOCs above SGVs were identified in all monitoring wells with the exception of RMW11, RMW23, and RMW25. The concentrations of SVOCs in groundwater, which are attributed to entrained sediments, are likely related to the on-site historic fill. Dissolved metals (including iron, magnesium, manganese, and sodium) were detected at concentrations above the SGVs in groundwater samples collected throughout

the site. The petroleum-related VOCs detected in soil vapor are likely related to releases associated with former on-site operations.

4. Historic Fill: SVOCs were detected in historic fill across the site at concentrations exceeding the UU, PGW, and/or RRU SCOs to depths of up to 20 feet bgs. Metals, including lead, arsenic, and mercury, were detected in historic fill across the site at concentrations exceeding the UU and/or RRU SCOs to depths down to 25 feet bgs. A hazardous concentration of lead was identified in one surficial sample (0 to 2 bgs) from RB06 located in the southern part of Lot 3. Pesticides were detected at concentrations above UU SCOs in seven borings. SVOCs, metals and pesticides in soil are likely related to the nature of the historic fill material.

5. Native Soil: 4,4'-DDT and four metals (arsenic, trivalent chromium, lead, mercury) were detected above Part 375 UU SCOs in native soil samples collected from five borings (RB07, RB18, RB19, RB21, and RB22). These detections may be a result of infiltration of historic fill material into the borehole during sample collection.

6. Soil Vapor: Petroleum-related VOCs were detected in soil vapor; Total BTEX and Total VOCs were detected at concentrations of up to 949 µg/m^3 and 10,472 µg/m^3, respectively. The chlorinated solvents carbon tetrachloride and PCE were detected at concentrations of up to 27.2 µg/m^3 and 57.1 µg/m^3, respectively. Carbon tetrachloride and PCE in soil vapor may be indicative of an off-site chemical release associated with historical or current use of surrounding properties, or from former site operations, although carbon tetrachloride and PCE were not identified in soil or groundwater.

Sufficient analytical data were gathered during the 2019 RI to establish site-specific soil cleanup levels and to develop a remedy for the site. The remedy will be described and evaluated in the RAWP prepared in accordance with New York State BCP guidelines. The remedy will address impacts to soil, groundwater, and soil vapor described in this RIR.

9.0 REFERENCES

1. AEI, Phase II Subsurface Investigation for 445 Gerard Avenue, dated March 7, 2012
2. AEI, Phase I Environmental Site Assessment for 445 Gerard Avenue, dated April 16, 2012
3. GEI, Phase I Environmental Site Assessment for 417 Gerard Avenue, dated June 2015
4. AEI, Phase I Environmental Site Assessment for 440 Exterior Street, dated August 28, 2015
5. AEI, Limited Phase II Subsurface Investigation, dated October 12, 2015
6. AEI, Phase I Environmental Site Assessment, dated August 16, 2016
7. Langan, Subsurface Investigation Letter Report, dated March 2, 2018
8. Langan, Draft Geotechnical Engineering Report, dated September 24, 2018
9. New York State Department of Environmental Conservation, Division of Environmental Remediation, Draft Brownfield Cleanup Program Guide, dated May 2004.
10. New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, issued May 3, 2010; effective June 18, 2010.
11. New York State Department of Environmental Conservation, Part 375 of Title 6 of the New York Codes, Rules, and Regulations, Effective December 14, 2006.
12. New York State Department of Health, Final Guidance for the Evaluation of Soil Vapor Intrusion in the State of New York, dated October 2006, revised May 2017.
13. New York State Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) dated June 1998.
14. United States Environmental Protection Agency, Low Flow Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, EQASOP-GW 001, January 19, 2010, revised September 19, 2017.
15. New York State Department of Environmental Conservation, Environmental Site Remediation Database Search, Accessed February

TABLES

Table 1
Remedial Investigation Report
Previous Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	SB01 SB01_11.5-12 L1731603-02 9/7/2017 11.5-12	SB02 SB02_6-7 L1731603-03 9/7/2017 6-7	SB03 SB03_18-19 L1731603-04 9/7/2017 18-19	SB04 SB04_6-7 L1731335-01 9/5/2017 6-7	SB04 SB04_6-7 L1731603-05 9/5/2017 6-7	SB05 SB05_6-7 L1731335-09 9/6/2017 6-7	SB06 SB06_23-23.5 L1731335-07 9/6/2017 23-23.5	SB07 SB07_0-2 L1731335-04 9/5/2017 0-2	SB08 SB08_23-24 L1731335-02 9/5/2017 23-24	SB09 SB09_0-2 L1731144-01 9/5/2017 0-2	SB11 SB11_19.5-20 L1734010-01 9/22/2017 19.5-20	SB12 SB12_18-19 L1734010-02 9/22/2017 18-19	SB13 SB13_18-19 L1734010-03 9/22/2017 18-19
Volatile Organic Compounds (mg/kg)																
1,1,1-Trichloroethane	0.68	100	~	0.00076 U	0.0014 U	0.001	0.00044 J	NA	0.0012 U	0.6 U	0.00052 J	0.12 U	0.0013 J	0.069 U	0.086 U	0.67 U
1,2,4,5-Tetramethylbenzene	~	~	~	0.1	0.0057 U	0.00017 J	0.0038 U	NA	0.0049 U	27	0.004 U	0.27 J	0.0071 U	2.2	0.5	5.6
1,2,4-Trimethylbenzene	3.6	52	3.6	0.022	0.0072 U	0.00039 J	0.0048 U	NA	0.0061 U	3 U	0.005 U	0.16 J	0.0089 U	**8.5**	0.31 J	**63**
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	8.4	0.0016 J	0.0072 U	0.005 U	0.0048 U	NA	0.0061 U	0.96 J	0.005 U	0.064 J	0.0089 U	3.1	0.07 J	**23**
1,4-Diethyl Benzene	~	~	~	0.044	0.0057 U	0.004 U	0.0038 U	NA	0.0049 U	7.1	0.004 U	0.48 U	0.0071 U	6.7	0.34 U	23
4-Ethyltoluene	~	~	~	0.11	0.0057 U	0.004 U	0.0038 U	NA	0.0049 U	2.3 J	0.004 U	0.19 J	0.0071 U	3	0.16 J	45
Acetone	0.05	100	~	0.028	0.0045 J	0.039 J	0.01	NA	0.007 J	*6* U	**0.08**	*1.2* U	0.026	*0.69* U	*0.86* U	*6.7* U
Benzene	0.06	4.8	0.06	0.0011	0.0014 U	0.0051	0.00096 U	NA	0.0012 U	*0.6* U	0.001 U	**0.11** J	0.0018 U	**0.085**	**0.38**	**3.6**
Bromomethane	~	~	~	0.0015 U	0.0029 U	0.002 U	0.0019 U	NA	0.0024 U	1.2 U	0.002 U	0.081 J	0.0036 U	0.14 U	0.17 U	1.3 U
Carbon Disulfide	~	~	~	0.0062 J	0.014 U	0.0021 J	0.0096 U	NA	0.012 U	6 U	0.01 U	1.2 U	0.018 U	0.69 U	0.86 U	6.7 U
Cymene	~	~	~	0.013	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	1.6	0.001 U	0.12 U	0.0018 U	0.31	0.023 J	3.6
Ethylbenzene	1	41	1	0.034	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	**3.3**	0.001 U	0.067 J	0.0018 U	0.99	0.12	**26**
Isopropylbenzene (Cumene)	~	~	~	0.089	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	17	0.001 U	0.069 J	0.0018 U	0.51	0.29	3.7
M,P-Xylene	~	~	~	0.0033	0.0029 U	0.00042 J	0.0019 U	NA	0.0024 U	0.59 J	0.002 U	0.21 J	0.0036 U	2.1	0.44	88
Methyl Ethyl Ketone (2-Butanone)	0.12	100	~	0.0076 U	0.014 U	0.0073 J	0.0096 U	NA	0.012 U	*6* U	0.004 J	*1.2* U	0.018 U	*0.69* U	*0.86* U	*6.7* U
Methylene Chloride	0.05	100	~	0.0076 U	0.014 U	0.01 U	0.0096 U	NA	0.012 U	**1.1** J	0.01 U	*1.2* U	0.018 U	*0.69* U	*0.86* U	*6.7* U
n-Butylbenzene	12	100	~	0.033	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	12 J	0.001 U	0.052 J	0.0018 U	0.94	0.13	2.8
n-Propylbenzene	3.9	100	3.9	0.08	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	**42**	0.001 U	0.16	0.0018 U	1.5	0.86	**7.7**
o-Xylene (1,2-Dimethylbenzene)	~	~	~	0.005	0.0029 U	0.00066 J	0.0019 U	NA	0.0024 U	1.2 U	0.002 U	0.24 U	0.0036 U	0.3	0.073 J	26
Sec-Butylbenzene	11	100	11	0.02	0.0014 U	0.001 U	0.00096 U	NA	0.0012 U	3.8	0.001 U	0.14	0.0018 U	0.32	0.12	2.1
Styrene	~	~	~	0.0012 J	0.0029 U	0.002 U	0.0019 U	NA	0.0024 U	1.2 U	0.002 U	0.24 U	0.0036 U	0.14 U	0.17 U	1.3 U
T-Butylbenzene	5.9	100	~	0.0011 J	0.0072 U	0.005 U	0.0048 U	NA	0.0061 U	0.31 J	0.005 U	0.6 U	0.0089 U	0.029 J	0.43 U	0.24 J
Tert-Butyl Methyl Ether	0.93	100	~	0.0015 U	0.0029 U	0.002 U	0.0019 UJ	NA	0.0024 UJ	*1.2* U	0.00018 J	0.019 J	0.0036 U	0.14 UJ	0.019 J	*1.3* UJ
Tetrachloroethene (PCE)	1.3	19	~	0.00076 U	0.0023	0.001 U	0.00053 J	NA	0.0012 U	0.6 U	0.001 U	0.12 U	0.0018 U	0.069 U	0.086 U	0.67 U
Toluene	0.7	100	0.7	0.0027	0.0022 U	0.00057 J	0.0014 U	NA	0.00047 J	*0.91* U	0.0015 U	0.16 J	0.0027 U	0.037 J	0.18	**1.4**
Total Xylenes	0.26	100	1.6	0.0083	0.0029 U	0.0011 J	0.0019 U	NA	0.0024 U	**0.59** J	0.002 U	0.21 J	0.0036 U	**2.4**	**0.51** J	**110**
Trichloroethene (TCE)	0.47	21	~	0.0011	0.0016	0.0059	0.0038	NA	0.0038	*0.6* U	0.0035	0.12 U	0.013	0.069 U	0.086 U	*0.67* U
Semivolatile Organic Compounds (mg/kg)																
2-Methylnaphthalene	~	~	~	0.24	0.23 U	0.037 J	0.21 U	NA	0.23 U	7.3	0.11 J	0.32 U	0.086 J	NA	NA	NA
3 & 4 Methylphenol (m&p Cresol)	0.33	100	~	0.28 U	0.27 U	0.28 U	0.25 U	NA	0.27 U	0.27 U	0.25 U	0.16 J	*0.35* U	NA	NA	NA
Acenaphthene	20	100	98	7.3	0.057 J	0.23	0.14 U	NA	0.15 U	0.15 U	0.27	0.21 U	0.19	NA	NA	NA
Acenaphthylene	100	100	~	3.6	0.15 U	0.054 J	0.14 U	NA	0.15 U	0.15 U	0.059 J	0.21 U	0.054 J	NA	NA	NA
Anthracene	100	100	~	5.3	0.12	0.42	0.1 U	NA	0.11 U	0.11 U	0.71	0.16 U	0.44	NA	NA	NA
Benzo(a)Anthracene	1	1	1	**4.2**	0.35	0.94	0.061 J	NA	0.11 U	0.11 U	**1.9**	0.076 J	0.9	NA	NA	NA
Benzo(a)Pyrene	1	1	22	**3.9**	0.29	0.86	0.054 J	NA	0.15 U	0.15 U	**1.6**	0.1 J	0.86	NA	NA	NA
Benzo(b)Fluoranthene	1	1	1.7	**3.2**	0.4	**1.1**	0.069 J	NA	0.11 U	0.11 U	**2**	0.093 J	**1.1**	NA	NA	NA
Benzo(g,h,i)Perylene	100	100	~	2.1	0.17	0.43	0.037 J	NA	0.15 U	0.15 U	0.91	0.07 J	0.49	NA	NA	NA
Benzo(k)Fluoranthene	0.8	3.9	1.7	0.65	0.12	0.33	0.1 U	NA	0.11 U	0.11 U	0.6	0.16 U	0.38	NA	NA	NA
Biphenyl (Diphenyl)	~	~	~	0.25 J	0.43 U	0.45 U	0.4 U	NA	0.43 U	0.19 J	0.4 U	0.6 U	0.55 UJ	NA	NA	NA
Carbazole	~	~	~	0.34	0.039 J	0.11 J	0.18 U	NA	0.19 U	0.19 U	0.3	0.26 U	0.2 J	NA	NA	NA
Chrysene	1	3.9	1	**4.3**	0.32	0.92	0.06 J	NA	0.11 U	0.11 U	**1.9**	0.072 J	0.85	NA	NA	NA
Dibenz(a,h)Anthracene	0.33	0.33	~	**0.43**	0.047 J	0.11 J	0.1 U	NA	0.11 U	0.11 U	0.22	0.16 U	0.11 J	NA	NA	NA
Dibenzofuran	7	59	~	0.78	0.024 J	0.12 J	0.18 U	NA	0.19 U	0.19 U	0.16 J	0.26 U	0.17 J	NA	NA	NA
Fluoranthene	100	100	~	5.6	0.71	1.9	0.11	NA	0.023 J	0.11 U	4.4	0.13 J	2	NA	NA	NA
Fluorene	30	100	~	5.7	0.05 J	0.2	0.18 U	NA	0.19 U	0.045 J	0.23	0.26 U	0.18 J	NA	NA	NA
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	8.2	**1.4**	0.18	0.47	0.036 J	NA	0.15 U	0.15 U	**0.97**	0.057 J	**0.54**	NA	NA	NA
Naphthalene	12	100	12	1.6	0.033 J	0.12 J	0.18 U	NA	0.19 U	**14**	0.19	0.077 J	0.17 J	NA	NA	NA
Phenanthrene	100	100	~	7.3	0.52	1.5	0.065 J	NA	0.11 U	0.037 J	3.8	0.054 J	1.8	NA	NA	NA
Pyrene	100	100	~	12	0.56	1.7	0.11	NA	0.02 J	0.11 U	4.4	0.17	1.7	NA	NA	NA

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 1
Remedial Investigation Report
Previous Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	SB01 SB01_11.5-12 L1731603-02 9/7/2017 11.5-12	SB02 SB02_6-7 L1731603-03 9/7/2017 6-7	SB03 SB03_18-19 L1731603-04 9/7/2017 18-19	SB04 SB04_6-7 L1731335-01 9/5/2017 6-7	SB04 SB04_6-7 L1731603-05 9/5/2017 6-7	SB05 SB05_6-7 L1731335-09 9/6/2017 6-7	SB06 SB06_23-23.5 L1731335-07 9/6/2017 23-23.5	SB07 SB07_0-2 L1731335-04 9/5/2017 0-2	SB08 SB08_23-24 L1731335-02 9/5/2017 23-24	SB09 SB09_0-2 L1731144-01 9/5/2017 0-2	SB11 SB11_19.5-20 L1734010-01 9/22/2017 19.5-20	SB12 SB12_18-19 L1734010-02 9/22/2017 18-19	SB13 SB13_18-19 L1734010-03 9/22/2017 18-19
Pesticides (mg/kg)																
4,4'-DDE	0.0033	8.9	~	NA	0.00291 J	NA	NA	NA	0.00175 U	NA	0.00165 U	NA	NA	NA	NA	NA
4,4'-DDT	0.0033	7.9	~	NA	**0.0272**	NA	NA	NA	0.00329 U	NA	0.0031 U	NA	NA	NA	NA	NA
Alpha Chlordane	0.094	4.2	~	NA	0.003	NA	NA	NA	0.00219 U	NA	0.00206 U	NA	NA	NA	NA	NA
Beta Endosulfan	2.4	24	~	NA	0.00177 U	NA	NA	NA	0.00175 U	NA	0.00339 J	NA	NA	NA	NA	NA
Chlordane (alpha and gamma)	~	~	~	NA	0.017 J	NA	NA	NA	0.0142 U	NA	0.0134 U	NA	NA	NA	NA	NA
Gamma Chlordane	~	~	~	NA	0.00249 J	NA	NA	NA	0.00219 U	NA	0.00206 U	NA	NA	NA	NA	NA
Heptachlor	0.042	2.1	~	NA	0.000963 J	NA	NA	NA	0.000876 U	NA	0.000825 U	NA	NA	NA	NA	NA
Polychlorinated Biphenyls (mg/kg)																
PCB-1254 (Aroclor 1254)	~	~	~	NA	0.00591 J	NA	NA	NA	0.0377 U	NA	0.0357 U	NA	NA	NA	NA	NA
PCB-1260 (Aroclor 1260)	~	~	~	NA	0.00904 J	NA	NA	NA	0.0377 U	NA	0.0357 U	NA	NA	NA	NA	NA
Total PCBs	0.1	1	~	NA	0.015 J	NA	NA	NA	0.0377 U	NA	0.0357 U	NA	NA	NA	NA	NA
Inorganics (mg/kg)																
Aluminum	~	~	~	5,510	3,090	8,770	NA	6,830	5,800	5,700	7,330	7,710	7,090	NA	NA	NA
Antimony	~	~	~	4.63 U	0.338 J	4.72 U	NA	4.29 U	4.49 U	4.53 U	0.398 J	6.15 U	1.29 J	NA	NA	NA
Arsenic	13	16	~	**24.5**	7.66	3.21	NA	3.92	6.02	0.48 J	5.18	4.87	6.95	NA	NA	NA
Barium	350	400	~	63.3	**370**	79	NA	176	251	12.8	50.7	87	280	NA	NA	NA
Beryllium	7.2	72	~	0.24 J	0.268 J	0.632	NA	0.249 J	0.224 J	0.263 J	0.337 J	0.344 J	0.413 J	NA	NA	NA
Cadmium	2.5	4.3	~	0.204 J	0.511 J	0.529 J	NA	0.352 J	0.314 J	0.263 J	0.735 J	0.529 J	1.15 U	NA	NA	NA
Calcium	~	~	~	36,000	24,700	5,950	NA	20,200	86,800	498	937	6,610	62,900	NA	NA	NA
Chromium, Total	~	~	~	11.5	11	18.6	NA	13.6	10.2	8.73	11.9	15.8	16.8	NA	NA	NA
Cobalt	~	~	~	4.93	4.89	9.97	NA	4.95	3.99	4.52	5.64	5.92	4.87	NA	NA	NA
Copper	50	270	~	22.9	38.4	32.5	NA	43.5	15.5	8.94	20.6	40.3	**107**	NA	NA	NA
Iron	~	~	~	11,400	6,920	22,700	NA	12,800	7,960	11,200	24,300	16,600	12,400	NA	NA	NA
Lead	63	400	~	**87.4**	**115**	56.4	NA	**365**	**574**	11.5	**227**	**691**	**702**	NA	NA	NA
Magnesium	~	~	~	2,060	1,300	4,850	NA	3,580	3,160	2,050	2,210	3,490	7,800	NA	NA	NA
Manganese	1,600	2,000	2,000	296	65.4	653	NA	223	249	120	318	171	250	NA	NA	NA
Mercury	0.18	0.81	~	0.17	0.08	**0.32**	NA	0.13	0.07 U	**0.31**	0.11	**1**	**0.8**	NA	NA	NA
Nickel	30	310	~	11.5	10.7	19.8	NA	13.9	9.1	8.75	11.8	12.5	11.6	NA	NA	NA
Potassium	~	~	~	1,700	501	3,590	NA	950	672	493	542	1,240	1,440	NA	NA	NA
Selenium	3.9	180	~	1.85 U	0.26 J	1.89 U	NA	1.72 U	2.52	1.81 U	1.73 U	2.46 U	0.597 J	NA	NA	NA
Sodium	~	~	~	681	266	195	NA	368	274	102 J	81.5 J	157 J	428	NA	NA	NA
Vanadium	~	~	~	14.9	24.7	26	NA	18	14.1	13.2	16.3	17.3	17.3	NA	NA	NA
Zinc	109	10,000	~	37	**432**	66.3	NA	**188**	**280**	19.4	84.5	**112**	**312**	NA	NA	NA
General Chemistry (%)																
Total Solids	~	~	~	84.5	87.2	83.6	NA	92.2	86.6	86.4	91.9	62.4	68.3	85.9	82.8	81.5

Notes provided on Page 3.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 1
Remedial Investigation Report
Previous Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use, Restricted Use Restricted-Residential and Protection of Groundwater Soil Cleanup Objectives (SCO).
2. Only detected analytes are shown in the table.
3. Detected analytical results above Unrestricted Use SCOs are bolded.
4. Detected analytical results above Restricted Use Restricted-Residential SCOs are shaded.
5. Detected analytical results above Protection of Groundwater SCOs are red.
6. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
7. ~ = Regulatory limit for this analyte does not exist
8. bgs = below grade surface
9. mg/kg = milligrams per kilogram
10. % = percent
11. NA = Not analyzed

Qualifiers:
J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ – The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 2
Remedial Investigation Report
Previous Groundwater Sample Analytical Results Summary

Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Location		MW01		MW01		MW06		MW08	
Sample ID	NYSDEC	MW01_090717		MW01_090717 (LAB FILTER		MW06_090817		MW08_090817	
Laboratory ID	SGVs	L1731603-06		L1731603-08		L1731771-02		L1731771-01	
Sample Date		9/7/2017		9/7/2017		9/8/2017		9/8/2017	
Volatile Organic Compounds (µg/L)									
1,2,4,5-Tetramethylbenzene	5	**27**		NA		**20**		0.85	J
1,2,4-Trimethylbenzene	5	**96**		NA		**10**		2.5	U
1,3,5-Trimethylbenzene (Mesitylene)	5	**13**		NA		**33**		2.5	U
1,4-Diethyl Benzene	~	11		NA		19		7.6	
4-Ethyltoluene	~	47		NA		14		2	U
Benzene	1	**56**		NA		**5.4**		0.5	U
Carbon Disulfide	60	1.1	J	NA		10	U	5	UJ
Cymene	5	2.8		NA		5	U	2.5	U
Ethylbenzene	5	**15**		NA		**170**		2.5	U
Isopropylbenzene (Cumene)	5	**51**		NA		**45**		4.6	
M,P-Xylene	5	**110**		NA		**16**		2.5	U
n-Butylbenzene	5	5		NA		3.8	J	1.2	J
n-Propylbenzene	5	**44**		NA		**73**		3.3	
o-Xylene (1,2-Dimethylbenzene)	5	**76**		NA		2.4	J	2.5	U
Sec-Butylbenzene	5	4.4		NA		2.6	J	**5.3**	
Tetrachloroethene (PCE)	5	0.25	J	NA		1	U	0.5	U
Toluene	5	**21**		NA		1.8	J	2.5	U
Total Xylenes	5	**190**		NA		**18**	J	2.5	U
Semivolatile Organic Compounds (µg/L)									
2-Methylnaphthalene	~	2		NA		14		0.33	
Acenaphthene	20	**36**		NA		0.1	U	0.31	U
Acenaphthylene	~	2.3		NA		0.1	U	0.11	U
Anthracene	50	4.5		NA		0.1	U	0.07	J
Benzo(a)Anthracene	0.002	**1.6**		NA		**0.02**	J	**0.13**	
Benzo(a)Pyrene	0	**1.5**		NA		*0.1*	UJ	**0.11**	
Benzo(b)Fluoranthene	0.002	**1.4**		NA		**0.02**	J	**0.18**	
Benzo(g,h,i)Perylene	~	1		NA		0.1	U	0.06	J
Benzo(k)Fluoranthene	0.002	**0.43**		NA		*0.1*	U	**0.07**	J
Carbazole	~	9.2		NA		1.9	U	1.9	U
Chrysene	0.002	**1.6**		NA		*0.1*	U	**0.12**	
Dibenz(a,h)Anthracene	~	0.24		NA		0.1	U	0.11	U
Dibenzofuran	~	2		NA		1.9	U	1.9	U
Fluoranthene	50	4.5		NA		0.04	J	0.46	
Fluorene	50	14		NA		0.04	J	0.06	J
Indeno(1,2,3-c,d)Pyrene	0.002	**0.82**		NA		*0.1*	UJ	**0.06**	J
Naphthalene	10	**240**		NA		**43**		0.24	U
Phenanthrene	50	7.7		NA		0.1	U	0.15	U
Pyrene	50	6.9		NA		0.04	J	0.41	
Polychlorinated Biphenyls (µg/L)	~	NA		NA		ND		ND	
Inorganics (µg/L)									
Aluminum	~	29,200		NA		11,200		372	
Aluminum (Dissolved)	~	37,400		38.8		10	U	33.2	
Arsenic	25	**54.38**		NA		8.1		0.99	U
Arsenic (Dissolved)	25	**86.58**		2.02		1.13		0.67	
Barium	1,000	942.5		NA		499.6		15.48	U
Barium (Dissolved)	1,000	**1,482**		229.3		279.4		12.6	
Beryllium	3	**3.92**		NA		0.84	U	0.5	U
Beryllium (Dissolved)	3	**4.52**		0.5	U	0.5	U	0.5	U
Cadmium	5	**7.3**		NA		0.2	U	0.2	U
Cadmium (Dissolved)	5	**8.96**		0.2	U	0.2	U	0.2	U
Calcium	~	485,000		NA		230,000		54,800	
Calcium (Dissolved)	~	550,000		214,000		250,000	J	42,100	J
Chromium, Total	50	**506.6**		NA		**491.7**		4.96	U
Chromium, Total (Dissolved)	50	**524.8**		0.21	J	1	U	1	U
Cobalt	~	47.86		NA		13.32		1	U
Cobalt (Dissolved)	~	61.49		0.98		2.3		0.22	J
Copper	200	113		NA		60.81		28.46	
Copper (Dissolved)	200	**368.4**	J	2.34		1	U	9.8	U
Iron	300	**102,000**		NA		**49,400**		**922**	
Iron (Dissolved)	300	**116,000**		79.8		37.8	J	37.3	J
Lead	25	**2,520**		NA		**57.87**		22.85	
Lead (Dissolved)	25	**3,476**		1.39		2.2		0.71	J
Magnesium	35,000	**59,100**		NA		**79,600**		9,180	
Magnesium (Dissolved)	35,000	**64,100**		**43,400**		**80,400**		8,500	
Manganese	300	**3,211**		NA		**5,174**		75.77	J
Manganese (Dissolved)	300	**3,337**		20.43		**4,422**		55.84	
Mercury	0.7	**2.4**		NA		0.2	U	0.2	U
Mercury (Dissolved)	0.7	**3.36**		0.4	U	0.2	U	0.2	U
Nickel	100	**264.5**		NA		**234**		4.67	U
Nickel (Dissolved)	100	**314**		4.99		13	U	2	U
Potassium	~	30,600		NA		12,300		5,580	
Potassium (Dissolved)	~	35,500		21,800		12,700		5,190	
Selenium	10	**28.7**		NA		2.43	J	5	U
Selenium (Dissolved)	10	**30**		5	U	5	U	5	U
Silver	50	5.61		NA		0.4	U	0.4	U
Silver (Dissolved)	50	6.53		0.4	U	0.4	U	0.4	U
Sodium	20,000	**310,000**		NA		**300,000**	J	19,100	J
Sodium (Dissolved)	20,000	**334,000**		**285,000**		**382,000**		18,200	
Thallium	0.5	**0.56**		NA		0.5	U	0.5	U
Thallium (Dissolved)	0.5	**1.22**	J	0.5	U	0.5	U	0.5	U
Vanadium	~	177.4		NA		30.03		4.14	J
Vanadium (Dissolved)	~	204.5		3.18	J	5	U	3.18	J
Zinc	2,000	**2,126**		NA		53.9		21.79	
Zinc (Dissolved)	2,000	**2,352**		5.46	J	3.47	J	7.97	J

Notes:
1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (NYSDEC SGVs).
2. Only detected analytes are shown in the table.
3. Analytes detected with concentrations above NYSDEC SGVs are bolded and shaded.
4. Analytical results with reporting limits (RL) above NYSDEC SGVs are italicized.
5. ~ = Regulatory limit for this analyte does not exist
6. µg/L = micrograms per liter
7. NA = Not analyzed
8. ND = Not detected

Qualifiers:
J – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ – The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contar

Table 3
Remedial Investigation Report
Previous Soil Vapor Sample Analytical Results Summary

Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Location	NYSDOH AGVs	AA01		SV01		SV06		SV08	
Sample ID		AA01_090716		SV01_090716		SV06_090617		SV08_090617	
Laboratory ID		L1731622-02		L1731622-01		L1731370-01		L1731370-02	
Sample Date		9/7/2017		9/7/2017		9/6/2017		9/6/2017	
Sample Type		AA		SV		SV		SV	
Volatile Organic Compounds (µg/m³)									
1,2,4-Trimethylbenzene	~	0.983	U	19.7	U	32.4		23.5	
1,3,5-Trimethylbenzene (Mesitylene)	~	0.983	U	19.7	U	8.95		6.98	
1,3-Butadiene	~	0.442	U	25.4		2.39		1.11	U
2,2,4-Trimethylpentane	~	1.45		18.7	U	3.12	U	41.2	
2-Hexanone	~	0.82	U	16.4	U	2.73	U	45.9	
4-Ethyltoluene	~	0.983	U	19.7	U	6.05		5.06	
Acetone	~	13.1		47.5	U	111		102	
Benzene	~	1.02		141		18.9		4.06	
Carbon Disulfide	~	0.623	U	240		62.9		1.56	U
Chloroform	~	0.977	U	19.5	U	8.01		4.11	
Chloromethane	~	1.41		8.26	U	1.38	U	1.03	U
Cyclohexane	~	0.688	U	29.9		516		10.4	
Dichlorodifluoromethane	~	1.42		19.8	U	3.3	U	2.47	U
Ethanol	~	16.3		188	U	31.5	U	23.6	U
Ethylbenzene	~	0.869	U	17.4	U	12.7		10.2	
Isopropanol	~	1.68		24.6	U	4.87		3.07	U
M,P-Xylene	~	1.74	U	34.7	U	42.7		34.4	
Methyl Ethyl Ketone (2-Butanone)	~	1.86		83.5		83.2		67.2	
Methylene Chloride	60	1.94		34.7	U	5.8	U	4.34	U
n-Heptane	~	0.893		3,500		525		19.7	
n-Hexane	~	1.45		6,340		930		19	
o-Xylene (1,2-Dimethylbenzene)	~	0.869	U	17.4	U	22.3		18.2	
Styrene	~	0.852	U	17	U	5.15		3.73	
Tert-Butyl Alcohol	~	1.52	U	30.3	U	90.6		66.1	
Tetrachloroethene (PCE)	30	3.72		**62.4**		11.4		9.9	
Tetrahydrofuran	~	1.47	U	29.5	U	4.93	U	4.25	
Toluene	~	4.52		50.1		46.4		34.3	
Trichlorofluoromethane	~	1.36		22.5	U	3.75	U	2.81	U

Notes:
1. Soil vapor sample analytical results are compared to the New York State Department of Health Air Guideline Values (AGVs) as set forth in the New York State Department of Health (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York and subsequent updates (2013, 2015).
2. Only detected analytes are shown in the table.
3. Analytes detected with concentrations above the NYSDOH AGVs sample are shaded and bolded.
4. Analytical results with reporting limits (RL) above the NYSDOH AGVs are italicized.
5. ~ = Regulatory limit for this analyte does not exist
6. µg/m³ = micrograms per cubic meter
7. AA = Ambient Air
8. SV = Soil Vapor

Qualifiers:
U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 4
Sample Summary
Remedial Investigation Report
Gerard Avenue and East 146th Street

Bronx, New York
Langan Project No. 170487001
BCP ID No. C203111

Sample No.	Sample ID	Boring Location	Sample Depth (feet bgs)	Date	Sampling Rationale	Analysis
SOIL SAMPLES						
1	RB01_0-2	RB01/RMW01	0 to 2	12/27/2018	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
2	RB01_9-11		9 to 11	12/27/2018	Development depth (about 10 feet bgs)	
3	RB01_14-15		13 to 15	12/27/2018	Greatest degree of observable impacts	
4	RB01_25-27		25 to 27	12/27/2018	Interval below observable impacts	
5	RB02_0-2	RB02	0 to 2	12/26/2018	Upper two feet of historic fill	
6	RB02_7-9		7 to 9	12/26/2018	Historic fill above groundwater interface	
7	RB02_10-12		10 to 12	12/26/2018	Development depth (about 10 feet bgs)	
8	RB02_13-15		13 to 15	12/26/2018	Historic fill terminus	
9	RB03_0-2	RB03/RMW03	0 to 2	12/26/2018	Upper two feet of historic fill / greatest degree of observable impacts	
10	RB03_2-3		2 to 3	12/26/2018	Interval below observable impacts	
11	RB03_10-12		10 to 12	12/26/2018	Development depth (about 10 feet bgs)	
12	RB03_17-18		17 to 18	12/26/2018	Historic fill terminus	
13	RB04_0-2	RB04/RMW04	0 to 2	12/21/2018	Upper two feet of historic fill	
14	RB04_8-10		8 to 10	12/21/2018	Development depth (about 10 feet bgs) / historic fill above groundwater interface	
15	RB04_13-15		13 to 15	12/21/2018	Historic fill below groundwater interface	
16	RB04_18-20		18 to 20	12/21/2018	Historic fill terminus	
17	RB05_0-2	RB05/RMW05	0 to 2	12/21/2018	Upper two feet of historic fill	
18	RB05_8-10		8 to 10	12/21/2018	Development depth (about 10 feet bgs) / historic fill above groundwater interface	
19	RB05_13-15		13 to 15	12/21/2018	Historic fill below groundwater interface	
20	RB05_19-21		19 to 21	12/21/2018	Historic fill terminus	
21	RB06_0-2	RB06	0 to 2	12/21/2018	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, and TCLP Lead
22	RB06_8-10		8 to 10	12/21/2018	Historic fill terminus	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
23	RB06_10-12		10 to 12	12/21/2018	Development depth (about 10 feet bgs) / historic fill above groundwater interface	
24	RB07_0-2	RB07/RMW07	0 to 2	12/20/2018	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
25	RB07_8-10		8 to 10	12/20/2018	Historic fill terminus / two-foot interval above groundwater interface	
26	RB07_10-12		10 to 12	12/20/2018	Development depth (about 10 feet bgs)	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
27	RB08_0-2	RB08	0 to 2	12/27/2018	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
28	RB08_10-12		10 to 12	12/27/2018	Development depth (about 10 feet bgs)	
29	RB08_12-14		12 to 14	12/27/2018	Historic fill terminus	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
30	RB08_14-16		14 to 16	12/27/2018	First two feet of native soil	
31	RB09_0-2	RB09/RMW09	0 to 2	1/2/2019	Upper two feet of historic fill	
32	RB09_19-21		19 to 21	1/2/2019	Greatest degree of observable impacts / development depth (about 20 feet bgs)	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
33	RB09_28-30		28 to 30	1/2/2019	Interval below observable impacts	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
34	RB10_0-2	RB10	0 to 2	1/8/2019	Upper two feet of historic fill	
35	RB10_18-20		18 to 20	1/8/2019	Greatest degree of observable impacts / development depth (about 20 feet bgs)	
36	RB10_33-35		33 to 35	1/8/2019	Interval below observable impacts	
37	RB11_0-2	RB11/RMW11	0 to 2	1/2/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
38	RB11_19-21		19 to 21	1/2/2019	Greatest degree of observatble impacts / development depth (about 20 feet bgs)	
39	RB11_28-30		28 to 30	1/2/2019	Interval below observable impacts	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
40	RB12_0-2	RB12	0 to 2	12/26/2018	Upper two feet of historic fill	
41	RB12_10-12		10 to 12	12/26/2018	Development depth (about 20 feet bgs)	
42	RB12_8-9		8 to 9	12/26/2018	Greatest degree of observable impacts	
43	RB12_9-10		9 to 10	12/26/2018	Interval below observable impacts	
44	RB13_0-2	RB13	0 to 2	1/7/2019	Upper two feet of historic fill	
45	RB13_18-20		18 to 20	1/7/2019	Development depth (about 20 feet bgs)	
46	RB13_22-24		22 to 24	1/7/2019	Greatest degree of observable impacts	
47	RB13_33-35		33 to 35	1/7/2019	Interval below observable impacts	
48	RB14_0-2	RB14/RMW14	0 to 2	1/7/2019	Upper two feet of historic fill	
49	RB14_18-20		18 to 20	1/7/2019	Development depth (about 20 feet bgs)	
50	RB14_23-25		23 to 25	1/7/2019	Greatest degree of observable impacts	
51	RB14_33-35		33 to 35	1/7/2019	Interval below observable impacts	
52	RB15_0-2	RB15	0 to 2	1/8/2019	Upper two feet of historic fill	
53	RB15_18-20		18 to 20	1/8/2019	Development depth (about 20 feet bgs)	
54	RB15_23-25		23 to 25	1/8/2019	Greatest degree of observable impacts	
55	RB15_28-30		28 to 30	1/8/2019	Interval below observable impacts	
56	RB16_0-2	RB16/RMW16	0 to 2	1/8/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
57	RB16_18-20		18 to 20	1/8/2019	Historic fill terminus / development depth (about 20 feet bgs)	
58	RB16_13-15		13 to 15	1/8/2019	Historic fill above groundwater interface	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide

Notes:
1. All volatile soil samples were collected using TerraCore sampler kits
2. VOC = Volatile Organic Compound
3. SVOC = Semi-volatile Organic Compound
4. PCB = Polychlorinated Biphenyl
5. TCL = Target Compound List
6. TAL = Target Analyte List
7. TCLP = Toxicity Characteristic Leaching Procedure
8. NA = Not Applicable
9. MS/MSD = Matrix Spike/Matrix Spike Duplicate
10. QA/QC = Quality Assurance/Quality Control
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Table 4
Sample Summary
Remedial Investigation Report
Gerard Avenue and East 146th Street

Bronx, New York
Langan Project No. 170487001
BCP ID No. C203111

Sample No.	Sample ID	Boring Location	Sample Depth (feet bgs)	Date	Sampling Rationale	Analysis
SOIL SAMPLES						
59	RB17_0-2	RB17	0 to 2	1/4/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
60	RB17_4-6		4 to 6	1/4/2019	Historic fill above groundwater interface	
61	RB17_8-10		8 to 10	1/4/2019	Historic fill terminus	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
62	RB17_18-20		18 to 20	1/4/2019	Development depth (about 20 feet bgs)	
63	RB18_0-2	RB18	0 to2	1/4/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
64	RB18_6-8		6 to 8	1/4/2019	Greatest degree of observable impacts	
65	RB18_15-17		15 to 17	1/4/2019	Interval below observable impacts	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
66	RB18_18-20		18 to 20	1/4/2019	Development depth (about 20 feet bgs)	
67	RB19_0-2	RB19	0 to 2	1/3/2019	Upper two feet of historic fill	
68	RB19_20-22		20 to 22	1/3/2019	Greatest degree of observable impacts / development depth (about 20 feet bgs)	
69	RB19_24-25		24 to 25	1/3/2019	Interval below observable impacts	
70	RB20_0-2	RB20	0 to 2	1/4/2019	Upper two feet of historic fill	
71	RB20_7-9		7 to 9	1/4/2019	Historic fill above groundwater interface	
72	RB20_13-15		13 to 15	1/4/2019	Historic fill terminus	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, and TCLP Lead
73	RB20_18-20		18 to 20	1/4/2019	Development depth (about 20 feet bgs)	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
74	RB21_0-2	RB21	0 to 2	1/3/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, and TCLP Lead
75	RB21_2-4		2 to 4	1/3/2019	Historic fill terminus	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
76	RB21_18-20		18 to 20	1/3/2019	Development depth (about 20 feet bgs) / groundwater interface	
77	RB22_0-2	RB22/RMW22	0 to 2	1/3/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide, PFAS, and 1,4-Dioxane
78	RB22_3-5		3 to 5	1/3/2019	Historic fill terminus	
79	RB22_20-22		20 to 22	1/4/2019	Development depth (about 20 feet bgs)	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
80	RB23_0-2	RB23/RMW23	0 to 2	7/10/2019	Upper two feet of historic fill	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, PFAS, and 1,4-Dioxane
81	RB23_10-12		10 to 12	7/10/2019	Development depth (about 10 feet bgs)	
82	RB23_13-15		13 to 15	7/10/2019	Groundwater Interface	
83	RB23_0-2	RB24	0 to 2	7/10/2019	Upper two feet of historic fill	
84	RB23_3-5		10 to 12	7/10/2019	Development depth (about 10 feet bgs)	
85	RB23_20-22		13-15	7/10/2019	Groundwater Interface	
86	RB25_0-2	RB25/MW25	0 to 2	7/11/2019	Upper two feet of historic fill	
87	RB25_9-11		10 to 12	7/11/2019	Development depth (about 10 feet bgs)	
88	RB25_11-13		13-15	7/11/2019	Groundwater Interface	
89	RB26_0-2	RB26	0 to 2	7/11/2019	Upper two feet of historic fill	
90	RB26_10-12		10 to 12	7/11/2019	Development depth (about 10 feet bgs)	
91	RB26_14-16		14 to 16	7/11/2019	Groundwater Interface	
92	RB27_0-2	RB27	0 to 2	7/11/2019	Upper two feet of historic fill	
93	RB27_9-11		9 to 11	7/11/2019	Development depth (about 10 feet bgs)	
94	RB27_11-13		11 to 13	7/11/2019	Groundwater Interface	
95	RB28_0-2	RB28	0 to 2	7/11/2019	Upper two feet of historic fill	
96	RB28_6- 8		6 to 8	7/11/2019	Development depth (about 10 feet bgs)	
97	RB28_14-16		14 to 16	7/11/2019	Groundwater Interface	
SOIL QA/QC SAMPLES						
98	SODUP01_122118	RB04	8 to 10	12/21/2018	Duplicate Sample	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
99	SODUP02_122718	RB08	14 to 16	12/27/2018		
100	SODUP03_010219	RB09	19 to 21	1/2/2019		
101	SODUP04_010719	RB14	23 to 25	1/4/2019		
102	SODUP05_010819	RB15	23 to 25	1/8/2019		
103	SODUP06_070919	RB11	0 to 2	7/9/2019		PFAS and 1,4-Dioxane
104	SODUP06_071119	RB28	6 to 8	7/11/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, PFAS (21-compound list), and 1,4-Dioxane
105	RB01_25-27	RB01	25 to 27	12/29/2018	MS/MSD Sample	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
106	RB21_2-4	RB21	2 to 4	1/3/2019		
107	RB13_22-24	RB13	22 to 24	1/7/2019		
108	RB10_33-35	RB10	23 to 24	1/8/2019		
109	RB15_28-30	RB15	24 to 24	1/8/2019		
110	SOFB01_122118	NA	NA	12?21/18	Field Blank	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, and Total Cyanide
111	SOFB02_122718			12/27/2018		
112	SOFB03_010719			1/7/2019		
113	SOFB04_010819			1/8/2019		
114	SOFB05_070919			7/9/2019		PFAS and 1,4-Dioxane
115	SOFB05_071019			7/10/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals, Hexavalent/Trivalent Chromium, Total Cyanide, PFAS (21-compound list), and 1,4-Dioxane
116	SOTB01_122118	NA	NA	12/21/2018	Trip Blank	Part 375/TCL VOCs
117	SOTB02_122618			12/26/2018		
118	SOTB03_122718			12/27/2018		
119	SOTB04_010219			1/2/2019		
120	SOTB05_010319			1/3/2019		
121	SOTB06_010719			1/7/2019		
122	SOTB07_010819			1/8/2019		
123	SOTB06_071019			7/10/2019		
124	SOTB07_071119			7/11/2019		

Notes:
1. All volatile soil samples were collected using TerraCore sampler kits
2. VOC = Volatile Organic Compound
3. SVOC = Semi-volatile Organic Compound
4. PCB = Polychlorinated Biphenyl
5. TCL = Target Compound List
6. TAL = Target Analyte List
7. TCLP = Toxicity Characteristic Leaching Procedure
8. NA = Not Applicable
9. MS/MSD = Matrix Spike/Matrix Spike Duplicate
10. QA/QC = Quality Assurance/Quality Control
11. bgs = Below Grade Surface
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Table 4
Sample Summary
Remedial Investigation Report
Gerard Avenue and East 146th Street

Bronx, New York
Langan Project No. 170487001
BCP ID No. C203111

Sample No.	Sample ID	Boring/Monitoring Well Location	Screened Interval (feet bgs)	Date	Sampling Rationale	Analysis
GROUNDWATER SAMPLES						
1	RMW01_011619	RB01/RMW01	5 to 20	1/16/2019	Middle of observed water column based on initial gauging results	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, and Total Cyanide
2	RMW03_011519	RB03/RMW03	10 to 25	1/15/2019		
3	RMW04_011519	RB04/RMW04	9 to 24	1/15/2019		
4	RMW05_011519	RB05/RMW05	8 to 23	1/15/2019		
5	RMW07_011619	RB07/RMW07	4 to 24	1/16/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, Total Cyanide, PFAS and 1,4-Dioxane
6	RMW09_011619	RB09/RMW09	13 to 28	1/16/2019		
7	RMW10_011719	RB10/RMW10	18 to 28	1/17/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, and Total Cyanide
8	RMW11_011719	RB11/RMW11	13 to 28	1/17/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, and Total Cyanide
9	RMW14_011719	RB14/RMW14	17 to 27	1/17/2019		
10	RMW16_011719	RB16/RMW16	17 to 27	1/17/2019		
11	RMW17_011719	RB17/RMW17	18 to 28	1/17/2019		
12	RMW18_011419	RB18/RMW18	17 to 27	1/14/2019		
13	RMW22_011419	RB22/RMW22	17 to 27	1/14/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, Total Cyanide, PFAS, and 1,4-Dioxane
14	RMW23_071219	RB23/RMW23	9 to 19	7/12/2019		
15	RMW25_071219	RB25/RMW25	10 to 20	7/12/2019		
GROUNDWATER QA/QC SAMPLES						
16	GWDUP01_011519	RB03/RMW03	10 to 25	1/15/2019	Duplicate Sample	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, and Total Cyanide
17	GWDUP02_071219	RB23/RMW23	9 to 19	7/12/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, Total Cyanide, PFAS and 1,4-Dioxane
18	RMW04_011519	RB04/RMW04	9 to 24	1/15/2019	MS/MSD Sample	Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, and Total Cyanide
19	GWFB01_011419	NA	NA	1/14/2019	Field Blank	PFAS and 1,4-Dioxane
20	GWFB02_011619		NA	1/16/2019		Part 375/TCL VOCs, SVOCs, PCBs, Pesticides, Herbicides, TAL Metals (total and dissolved), Hexavalent/Trivalent Chromium, Total Cyanide, PFAS and 1,4-Dioxane
21	GWTB01_011419	NA	NA	1/14/2019	Trip Blank	Part 375/TCL VOCs
22	GWTB02_011519		NA	1/15/2019		
23	GWTB03_011519		NA	1/16/2019		
24	GWTB04_011519		NA	1/17/2019		
Sample No.	**Sample ID**	**Sample Location**	**Depth**	**Date**	**Sampling Rationale**	**Analysis**
SOIL VAPOR SAMPLES						
1	RSV01_123118	RSV01	9	1/2/2019	Soil vapor (2 feet above groundwater)	TO-15 VOCs
2	RSV02_123118	RSV02	8	1/2/2019		
3	RSSV01_123118	RSSV01	0.5	1/2/2019	Sub-slab vapor (2 to 3 inches beneath building slab)	
4	RSSV02_123118	RSSV02	1.17	1/2/2019		
5	RSSV03_123118	RSSV03	1.17	1/2/2019		
6	RSSV04_123118	RSSV04	1.17	1/2/2019		
7	RSSV05_010919	RSSV05	0.33	1/9/2019		
8	RSSV06_010919	RSSV06	0.83	1/9/2019		
9	RSSV07_123118	RSSV07	0.83	1/2/2019		
10	RSSV08_071519	RSSV08	0.5	7/15/2019		
11	RSSV09_071519	RSSV07	0.5	7/15/2019		
SOIL VAPOR QA/QC SAMPLES						
12	RAA01_123118	RAA01	NA	1/2/2019	Ambient Air (3 to 5 feet above surface)	TO-15 VOCs
13	RAA02_071519	RAA02	NA	7/15/2019	Ambient Air (3 to 5 feet above surface)	TO-15 VOCs

Notes:
1. All volatile soil samples were collected using TerraCore sampler kits
2. VOC = Volatile Organic Compound
3. SVOC = Semi-volatile Organic Compound
4. PCB = Polychlorinated Biphenyl
5. TCL = Target Compound List
6. TAL = Target Analyte List
7. TCLP = Toxicity Characteristic Leaching Procedure
8. NA = Not Applicable
9. MS/MSD = Matrix Spike/Matrix Spike Duplicate
10. QA/QC = Quality Assurance/Quality Control
11. bgs = Below Grade Surface
12. PFAS = Per- and polyfluoroalkyl substances

Table 5
Well Construction and Groundwater Elevation Data Summary
Remedial Investigation Report
Gerard Avenue and East 146th Street

Bronx, New York
Langan Project No. 170487001
BCP Site No. C203111

Well ID	Top of Pipe Elevation (feet NAVD88)	Installation Date	Screened Interval (feet bgs)	Depth of Boring (feet bgs)	Synoptic Gauging Event #1 (01/17/2019)		Synoptic Gauging Event #2 (07/26/2019)	
					Depth to Groundwater (feet bgs)	Groundwater Elevation (feet NAVD88)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet NAVD88)
RMW01	13.66	12/27/2018	5-20	30	11.41	2.25	10.84	2.82
RMW03	13.48	12/26/2018	10-25	20	11.34	2.14	10.94	2.54
RMW04	13.74	12/21/2018	9-24	20	11.74	2	11.41	2.33
RMW05	14.04	12/21/2018	8-23	21	12.21	1.83	11.60	2.44
RMW07	14.34	12/20/2018	4-24	24	12.41	1.93	12.08	2.26
RMW09	21.67	1/2/2019	17-27	30	19.44	2.23	NA	NA
RMW10	21.5	1/8/2019	18-28	35	19.16	2.34	18.62	2.88
RMW11	21.61	1/2/2019	13-28	30	19.26	2.35	18.68	2.93
RMW14	21.36	1/7/2019	17-27	35	19.03	2.33	18.43	2.93
RMW16	21.25	1/8/2019	17-27	25	18.89	2.36	18.29	2.96
RMW17	21.96	1/4/2019	18-28	25	20.09	1.87	19.03	2.93
RMW18	22.07	1/8/2019	17-27	20	19.76	2.31	18.95	3.12
RMW22	22.29	1/4/2019	17-27	25	20.08	2.21	19.76	2.53
RMW23	15.79	7/10/2019	9-19	19	NI	NI	13.22	2.57
RMW25	15.26	7/11/2019	10-20	20	NI	NI	12.28	2.98

Notes:
1. bgs = below grade surface
2. Elevations are referenced to the North American Vertical Datum of 1988 (NAVD88).
3. Monitoring wells were surveyed by Langan on January 24 and July 24, 2019.
4. Monitoring wells were gauged on January 17 and July 26, 2019.
5. NI = Not Installed at the time of the gauging event.
6. NA = Not Accessible at the time of the gauging event.

Table 6
Remedial Investigation Report
Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB01 RB01_0-2 L1853234-01 12/27/2018 0-2	445GERARD RB01 RB01_9-11 L1853234-09 12/27/2018 9-11	445GERARD RB01 RB01_14-15 L1853234-02 12/27/2018 14-15	445GERARD RB01 RB01_25-27 L1853234-03 12/27/2018 25-27	445GERARD RB02 RB02_0-2 L1853111-08 12/26/2018 0-2	445GERARD RB02 RB02_7-9 L1853111-09 12/26/2018 7-9	445GERARD RB02 RB02_10-12 L1853111-10 12/26/2018 10-12	445GERARD RB02 RB02_13-15 L1853111-11 12/26/2018 13-15	445GERARD RB03 RB03_0-2 L1853111-01 12/26/2018 0-2	445GERARD RB03 RB03_2-3 L1853111-02 12/26/2018 2-3	445GERARD RB03 RB03_10-12 L1853111-03 12/26/2018 10-12	445GERARD RB03 RB03_17-18 L1853110-01 12/26/2018 17-18	445GERARD RB04 RB04_0-2 L1852926-08 12/21/2018 0-2	445GERARD RB04 RB04_8-10 L1852926-09 12/21/2018 8-10
Volatile Organic Compounds (mg/kg)																		
1,2,3-Trichloropropane	~	~	~	0.0031 U	0.0016 U	0.28 U	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.0022 U	0.11 U	0.0029 U	0.13 U	0.12 U	0.0024 U	0.0019 U
1,2,4,5-Tetramethylbenzene	~	~	~	0.00048 J	0.00021 J	4.4	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.0022 U	0.15	0.0029 U	0.27	0.12	0.0024 UJ	0.0019 UJ
1,2,4-Trimethylbenzene	3.6	52	3.6	0.0043	0.0016 U	0.067 J	0.0034 U	0.0024 U	0.00062 J	0.0018 U	0.00087 J	0.54	0.00084 J	0.25	0.71	0.0024 U	0.0019 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	~	0.0031	0.0016 U	0.28 U	0.0034 U	0.0024 U	0.00041 J	0.0018 U	0.0022 U	0.33	0.00046 J	0.075 J	0.024 J	0.0024 U	0.0019 U
1,4-Diethyl Benzene	~	~	~	0.0024 J	0.0016 U	0.54	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.0022 U	0.77	0.0029 U	0.2	0.05 J	0.0024 U	0.0019 U
4-Ethyltoluene	~	~	~	0.0024 J	0.0016 U	1.2	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.0022 U	0.27	0.001 J	0.097 J	0.18	0.0024 U	0.0019 U
Acetone	0.05	100	~	0.014 J	0.0081 U	**2.2**	**0.07**	0.012 U	0.011 J	0.012	0.043	*0.55* U	0.0077 J	*0.65* U	*0.62* U	0.012 UJ	0.0093 UJ
Benzene	0.06	4.8	0.06	0.0012	0.00032 J	**0.18**	0.00086 U	0.00059 U	0.00036 J	0.00017 J	0.00038 J	0.018 J	0.00054 J	0.013 J	**0.18**	0.00061 U	0.00046 U
Carbon Disulfide	~	~	~	0.016 U	0.0081 U	1.4 U	0.015 J	0.012 UJ	0.018 UJ	0.0092 UJ	0.011 UJ	0.55 U	0.014 UJ	0.65 U	0.62 U	0.012 U	0.0093 U
Carbon Tetrachloride	0.76	2.4	~	0.0016 U	0.00081 U	0.14 U	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.0011 U	0.055 U	0.0014 U	0.065 U	0.062 U	0.0012 U	0.00093 U
Chloroform	0.37	49	~	0.0005 J	0.0012 U	0.21 U	0.0026 U	0.0018 U	0.00046 J	0.0014 U	0.0016 U	0.083 U	0.00037 J	0.098 U	0.093 U	0.0018 U	0.0014 U
Cymene	~	~	~	0.0016 U	0.00081 U	0.1 J	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.0011 U	0.13	0.0014 U	0.036 J	0.03 J	0.0012 U	0.00093 U
Ethylbenzene	1	41	1	0.00094 J	0.00081 U	0.08 J	0.0017 U	0.0012 U	0.00028 J	0.00092 U	0.00051 J	0.044 J	0.00062 J	0.032 J	0.097	0.0012 U	0.00093 U
Hexachlorobutadiene	~	~	~	0.0063 U	0.0032 U	0.56 U	0.0069 U	0.0047 U	0.007 U	0.0037 U	0.0043 U	0.22 U	0.0058 U	0.26 U	0.25 U	0.0049 U	0.0037 U
Isopropylbenzene (Cumene)	~	~	~	0.0016 U	0.00081 U	0.44	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.00062 J	0.039 J	0.0014 U	0.042 J	0.29	0.0012 U	0.00093 U
M,P-Xylene	~	~	~	0.0032	0.0016 U	0.14 J	0.0034 U	0.0024 U	0.0012 J	0.0018 U	0.0022 U	0.12	0.0013 J	0.13 U	0.2	0.0024 U	0.0019 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	~	0.016 U	0.0081 U	**0.35** J	0.0094 J	0.012 U	0.018 U	0.0092 U	0.0076 J	*0.55* U	0.014 U	*0.65* U	*0.62* U	0.012 UJ	0.0093 UJ
n-Butylbenzene	12	100	12	0.0016 U	0.00081 U	0.36	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.00022 J	0.049 J	0.0014 U	0.079	0.038 J	0.0012 U	0.00093 U
n-Propylbenzene	3.9	100	3.9	0.0016 U	0.00081 U	0.14 U	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.00028 J	0.039 J	0.0014 U	0.079	0.39	0.0012 U	0.00093 U
o-Xylene (1,2-Dimethylbenzene)	~	~	~	0.0011 J	0.00081 U	0.05 J	0.0017 U	0.0012 U	0.00053 J	0.00092 U	0.0011 U	0.074	0.00044 J	0.033 J	0.042 J	0.0012 U	0.00093 U
Sec-Butylbenzene	11	100	11	0.0016 U	0.00081 U	1	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.00083 J	0.078	0.0014 U	0.063 J	0.051 J	0.0012 U	0.00093 U
Styrene	~	~	~	0.0016 U	0.00081 U	0.052 J	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.0011 U	0.055 U	0.0014 U	0.055 J	0.062 U	0.0012 UJ	0.00093 UJ
T-Butylbenzene	5.9	100	~	0.0031 U	0.0016 U	0.28 U	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.00022 J	0.013 J	0.0029 U	0.13 U	0.12 U	0.0024 U	0.0019 U
Tert-Butyl Methyl Ether	0.93	100	~	0.0031 U	0.0016 U	0.28 U	0.0034 U	0.0024 U	0.0035 U	0.0018 U	0.0022 U	0.11 U	0.0029 U	0.13 U	0.12 U	0.0024 U	0.0019 U
Tetrachloroethene (PCE)	1.3	19	~	0.042	0.0022	0.07 U	0.00086 U	0.00059 U	0.0017	0.00046 U	0.00054 U	0.74	0.031	0.025 J	0.031 U	0.0022	0.00046 U
Toluene	0.7	100	0.7	0.0029	0.00046 J	0.17	0.0017 U	0.0012 U	0.0018 U	0.00092 U	0.0011 U	0.055 U	0.002	0.065 U	0.062 U	0.0012 U	0.00093 U
Total Xylenes	0.26	100	1.6	0.0043 J	0.00081 U	0.19 J	0.0017 U	0.0012 U	0.0017 J	0.00092 U	0.0011 U	0.19	0.0017 J	0.033 J	0.24 J	0.0012 U	0.00093 U
Semivolatile Organic Compounds (mg/kg)																	
2-Methylnaphthalene	~	~	~	0.17 J	0.75 J	1.7	0.038 J	0.42 U	0.45 J	2.1 U	0.075 J	0.37 J	2.2 U	0.61 J	0.2 J	0.097 J	0.22 U
2-Methylphenol (o-Cresol)	0.33	100	~	0.2 U	*0.94* U	*1.3* U	0.27 U	*0.35* U	*0.47* U	*1.8* U	0.2 U	*1.8* U	*1.8* U	*2* U	*0.41* U	0.18 U	0.18 U
3 & 4 Methylphenol (m&p Cresol)	0.33	100	~	0.054 J	*1.4* U	*1.9* U	*0.38* U	*0.5* U	*0.67* U	*2.6* U	0.034 J	*2.5* U	*2.6* U	*2.9* U	*0.59* U	0.27 U	0.27 U
Acenaphthene	20	100	98	0.16	1.3	12	0.14 J	0.28 U	0.12 J	0.25 J	0.7	1.4 U	1.5 U	6.5	1.9	0.08 J	0.15 U
Acenaphthylene	100	100	~	0.66	14	10	0.096 J	0.1 J	2.8	0.29 J	0.13 J	0.4 J	1.5 U	9.8	1.7	0.64	0.15 U
Acetophenone	~	~	~	0.35	0.94 U	1.3 U	0.27 U	0.35 U	0.18 J	1.8 U	0.2 U	0.38 J	1.8 U	2 U	0.41 U	0.18 U	0.18 U
Anthracene	100	100	~	0.54	1.4	3.7	0.074 J	0.096 J	0.57	0.94 J	0.73	1 U	1.1 U	2.6	1.5	0.46	0.11 U
Benzo(a)Anthracene	1	1	1	**1.8**	**3.7**	**10**	0.13 J	0.46	0.82	**2.4**	**1.9**	1	0.52 J	**8.6**	**3.5**	**1.6**	0.026 J
Benzo(a)Pyrene	1	1	22	**1.8**	**4.7**	**13**	0.12 J	0.47	**3.1**	**2.5**	**1.9**	**1.4**	0.63 J	**9**	**4.7**	**1.6**	0.15 U
Benzo(b)Fluoranthene	1	1	1.7	**2.6**	**3.8**	**11**	0.11 J	0.61	**2.7**	**2.8**	**2.3**	**1.7**	0.7 J	**6.4**	**4**	**2.2**	0.043 J
Benzo(g,h,i)Perylene	100	100	~	1.9	4.2	5.5	0.073 J	0.34	5.4	1.5	1.2	1.4	0.7 J	5.3	4.1	1.1	0.032 J
Benzo(k)Fluoranthene	0.8	3.9	1.7	**0.85**	**1.1**	**2.2**	0.16 U	0.18 J	0.52	**1** J	0.63	0.58 J	*1.1* U	**1.3**	**1.1**	0.79	0.11 U
Benzyl Butyl Phthalate	~	~	~	0.2 U	0.94 U	1.3 U	0.27 U	0.35 U	0.47 U	1.8 U	0.2 U	1.8 U	1.8 U	2 U	0.41 U	0.18 U	0.18 U
Biphenyl (Diphenyl)	~	~	~	0.05 J	0.34 J	0.69 J	0.61 U	0.8 U	0.21 J	4.1 U	0.078 J	4 U	4.2 U	0.5 J	0.39 J	0.42 U	0.42 U
Bis(2-Ethylhexyl) Phthalate	~	~	~	0.1 J	0.94 U	1.3 U	0.27 U	0.35 U	0.47 U	1.8 U	0.2 U	1.8 U	1.8 U	2 U	0.18 J	0.18 U	0.18 U
Carbazole	~	~	~	0.44	0.39 J	0.42 J	0.27 U	0.35 U	0.47 U	0.26 J	0.2	1.8 U	1.8 U	0.29 J	0.17 J	0.18	0.18 U
Chrysene	1	3.9	1	**2.3**	**3.7**	**12**	0.12 J	0.52	1	**2.1**	**1.6**	**1.1**	0.47 J	**8**	**3.2**	**1.6**	0.025 J
Dibenz(a,h)Anthracene	0.33	0.33	~	**0.39**	**0.68**	**1.2**	0.16 U	0.087 J	**0.54**	**0.34** J	0.25	0.28 J	*1.1* U	**0.78** J	0.31	0.23	0.11 U
Dibenzofuran	7	59	~	0.14 J	0.94 U	0.42 J	0.029 J	0.35 U	0.47 U	0.22 J	0.2	1.8 U	1.8 U	0.66 J	0.17 J	0.078 J	0.18 U
Di-N-Butyl Phthalate	~	~	~	0.2 U	0.94 U	1.3 U	0.27 U	0.35 U	0.47 U	1.8 U	0.2 U	1.8 U	1.8 U	2 U	0.41 U	0.18 U	0.18 U
Di-N-Octylphthalate	~	~	~	0.2 U	0.94 U	1.3 U	0.27 U	0.35 U	0.47 U	1.8 U	0.2 U	1.8 U	1.8 U	2 U	0.41 U	0.18 U	0.18 U
Fluoranthene	100	100	~	3.6	4.9	17	0.27	0.64	1.1	4.4	3.1	1.4	0.65 J	16	12	3.2	0.042 J
Fluorene	30	100	~	0.21	2.1	2.3	0.056 J	0.037 J	0.36 J	0.27 J	0.34	1.8 U	1.8 U	11	1.2	0.1 J	0.18 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	8.2	**1.6**	**2.6**	**4.2**	0.055 J	0.32	**2.6**	**1.6**	**1.3**	**1.3** J	0.5 J	**3.4**	**3**	**1.1**	0.15 U
Naphthalene	12	100	12	0.43	1.8	5.1	0.23 J	0.047 J	1.5	0.36 J	1.1	0.76 J	1.8 U	3.1	2.2	0.14 J	0.18 U
Pentachlorophenol	0.8	6.7	0.8	0.16 U	0.75 UJ	*1* UJ	0.21 U	0.28 U	0.37 U	*1.4* U	0.16 U	*1.4* U	*1.5* U	*1.6* U	0.33 U	0.15 U	0.15 U
Phenanthrene	100	100	~	2.8	2.4	3.3	0.16	0.51	1.1	3.2	1.8	0.49 J	0.31 J	3.4	1.4	1.7	0.024 J
Phenol	0.33	100	0.33	0.034 J	*0.94* U	*1.3* U	0.27 U	*0.35* U	*0.47* U	*1.8* U	0.2 U	*1.8* U	*1.8* U	*2* U	*0.41* UJ	0.18 U	0.18 U
Pyrene	100	100	~	3.4	9.6	29	0.39	0.7	1.8	4.1	3.6	1.4	0.72 J	31	16	2.7	0.048 J

Notes provided on Page 13.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 6
Remedial Investigation Report
Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB01 RB01_0-2 L1853234-01 12/27/2018 0-2	445GERARD RB01 RB01_9-11 L1853234-09 12/27/2018 9-11	445GERARD RB01 RB01_14-15 L1853234-02 12/27/2018 14-15	445GERARD RB01 RB01_25-27 L1853234-03 12/27/2018 25-27	445GERARD RB02 RB02_0-2 L1853111-08 12/26/2018 0-2	445GERARD RB02 RB02_7-9 L1853111-09 12/26/2018 7-9	445GERARD RB02 RB02_10-12 L1853111-10 12/26/2018 10-12	445GERARD RB02 RB02_13-15 L1853111-11 12/26/2018 13-15	445GERARD RB03 RB03_0-2 L1853111-01 12/26/2018 0-2	445GERARD RB03 RB03_2-3 L1853111-02 12/26/2018 2-3	445GERARD RB03 RB03_10-12 L1853111-03 12/26/2018 10-12	445GERARD RB03 RB03_17-18 L1853110-01 12/26/2018 17-18	445GERARD RB04 RB04_0-2 L1852926-08 12/21/2018 0-2	445GERARD RB04 RB04_8-10 L1852926-09 12/21/2018 8-10
Pesticides (mg/kg)																		
4,4'-DDD	0.0033	13	~	0.0019 U	*0.0348* U	*0.0245* U	0.0025 U	0.00165 U	*0.0109* U	0.00172 U	0.00185 U	0.00168 U	*0.0174* U	*0.0943* U	*0.0379* U	0.00264 IP	0.00182 U
4,4'-DDE	0.0033	8.9	~	0.0019 U	*0.0348* U	*0.0245* U	0.0025 U	0.00165 U	*0.0109* U	0.00172 U	0.00185 U	0.00168 U	*0.0174* U	*0.0943* U	*0.0379* U	**0.0446**	0.00182 U
4,4'-DDT	0.0033	7.9	~	*0.00356* U	*0.0652* U	*0.046* U	0.00279 J	0.0031 U	*0.0205* U	0.00322 U	*0.00346* U	0.00316 U	*0.0326* U	*0.177* U	*0.0711* U	**0.174**	*0.00341* U
Alpha Chlordane	0.094	4.2	~	0.00237 U	0.0435 U	0.0307 U	0.00312 U	0.00207 U	0.0137 U	0.00215 U	0.00231 U	0.0021 U	0.0217 U	*0.118* U	0.0474 U	0.0161	0.00228 U
Beta Endosulfan	2.4	24	~	0.00169 J	0.0348 U	0.0245 U	0.0025 U	0.00165 U	0.0109 U	0.00205 J	0.00185 U	0.00102 J	0.0174 U	0.0943 U	0.0379 U	0.00178 U	0.00182 U
Dieldrin	0.005	0.2	~	0.00118 U	*0.0217* U	*0.0153* U	0.00156 U	0.00103 U	*0.00684* U	0.00107 U	0.00115 U	0.00105 U	*0.0108* U	*0.0589* U	*0.0237* U	0.00111 U	0.00114 U
Endosulfan Sulfate	2.4	24	~	0.00079 U	0.0145 U	0.0102 U	0.00104 U	0.000689 U	0.00456 U	0.000716 UJ	0.000769 UJ	0.000701 U	0.00723 U	0.0393 U	0.0158 U	0.000742 U	0.000758 U
Endrin	0.014	11	~	0.00079 U	*0.0145* U	0.0102 U	0.00104 U	0.000689 U	0.00456 U	0.000716 U	0.000769 U	0.000701 U	0.00723 U	*0.0393* U	*0.0158* U	0.000742 U	0.000758 U
Endrin Aldehyde	~	~	~	0.00237 U	0.0435 U	0.0307 U	0.00312 U	0.00207 U	0.0137 U	0.00215 U	0.00231 U	0.0021 U	0.0217 U	0.118 U	0.0474 U	0.00223 U	0.00228 U
Gamma Chlordane	~	~	~	0.00237 U	0.0435 U	0.0307 U	0.00312 U	0.00207 U	0.0137 U	0.00215 U	0.00231 U	0.000657 J	0.0217 U	0.118 U	0.0474 U	0.0152 IP	0.00228 U
Heptachlor	0.042	2.1	~	0.000948 U	0.0174 U	0.0123 U	0.00125 U	0.000826 U	0.00547 U	0.00086 U	0.000923 U	0.000841 U	0.00868 U	*0.0471* U	0.019 U	0.000891 U	0.00091 U
Heptachlor Epoxide	~	~	~	0.00356 U	0.0652 U	0.046 U	0.00469 U	0.0031 U	0.0205 U	0.00322 U	0.00346 U	0.00316 U	0.0326 U	0.177 U	0.0711 U	0.00103 JIP	0.00341 U
Herbicides (mg/kg)	~	~	~	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (mg/kg)																	
PCB-1254 (Aroclor 1254)	~	~	~	0.0385 U	0.0382 U	0.0511 U	0.0543 U	0.0346 U	0.0468 U	0.00603 J	0.0383 U	0.035 U	0.0362 U	0.0401 U	0.0404 U	0.0368 U	0.0369 U
PCB-1260 (Aroclor 1260)	~	~	~	0.0385 U	0.0382 U	0.0511 U	0.0543 U	0.0346 U	0.0468 U	0.012 J	0.0383 U	0.035 U	0.0362 U	0.0401 U	0.0404 U	0.0487 P	0.0369 U
PCB-1268 (Aroclor 1268)	~	~	~	0.0385 U	0.0382 U	0.0511 U	0.0543 U	0.0346 U	0.0468 U	0.0364 U	0.0383 U	0.035 U	0.0362 U	0.0401 U	0.0404 U	0.0175 J	0.0369 U
Total PCBs	0.1	1	~	0.0385 U	0.0382 U	0.0511 U	0.0543 U	0.0346 U	0.0468 U	0.018 J	0.0383 U	0.035 U	0.0362 U	0.0401 U	0.0404 U	0.0662 J	0.0369 U
Inorganics (mg/kg)																	
Aluminum	~	~	~	9,400	9,740	8,370	13,200	2,920	3,560	4,560	6,650	5,000	3,840	5,830	5,640	6,460	6,810
Antimony	~	~	~	4.61 U	4.46 U	6.02 U	6.62 U	4 U	5.49 U	0.359 J	0.41 J	8.09	1.88 J	0.79 J	4.74 U	1.68 J	0.774 J
Arsenic	13	16	~	**43.7**	3.88	0.337 J	6.94	10.3	6.2	2.58	4.21	**17.2**	7.86	2.94	2.73	9.85	3.56
Barium	350	400	~	**591**	92	78.3	28.4	53.4	52.8	75.8	74	178	137	56.9	56.4	282	49.8
Beryllium	7.2	72	~	0.461 U	0.17 J	0.048 J	0.516 J	0.112 J	0.209 J	0.217 J	0.4 J	0.26 J	0.384 J	0.19 J	0.152 J	0.362 J	0.324 J
Cadmium	2.5	4.3	~	**3.34**	0.402 J	0.217 J	0.503 J	0.801 U	1.1 U	0.835 U	0.976 U	**7.4**	0.873 U	0.952 U	0.322 J	0.882 U	0.9 U
Calcium	~	~	~	32,200 J	13,300 J	3,350 J	2,740 J	48,200	293,000	15,900	7,550	16,300	19,400	4,160	6,470	39,500	13,600
Chromium, Hexavalent	1	110	~	0.962 UJ	0.917 UJ	*1.28* UJ	*1.33* UJ	0.856 U	*1.14* U	0.878 U	0.978 UJ	0.181 J	0.892 U	0.979 U	0.995 UJ	0.901 UJ	0.913 UJ
Chromium, Total	~	~	~	51.9	19.6	20.6	28.8	7.26	5	11.5	15.7	18	7.8	13.9	17.1	12.7	12.9
Chromium, Trivalent	30	180	~	**52**	20	21	29	7.3	5	12	16	18 J	7.8	14	17	13	13
Cobalt	~	~	~	11.3	9.06	9.48	9.66	3.2	2.81	5.31	8.05	7.62	5.49	7.86	6.08	6.49	7.64
Copper	50	270	~	**275** J	**88.4** J	22.8 J	12.5 J	8	35.5	23.9	19	**270**	**150**	**126**	20.5	18.5	18.4
Cyanide	27	27	~	0.31 J	1 UJ	1.2 J	1.6 UJ	1 UJ	2.3 J	0.28 J	1.1 J	1 UJ	0.24 J	3 J	1.1 UJ	0.35 J	1.1 UJ
Iron	~	~	~	21,700	18,800	16,000	26,800	6,460	4,600	8,740	13,700	34,000	10,800	16,200	11,800	12,300	16,700
Lead	63	400	~	**619** J	**134** J	19.7 J	23.5 J	**80.8**	**95.4**	**198**	**388**	**621**	**108**	51.8	**97.1**	**294**	**72** J
Magnesium	~	~	~	7,590	4,520	3,840	6,200	5,460	716	2,750	3,560	2,650	5,700	2,660	2,770	4,440	8,370
Manganese	1,600	2,000	2,000	253	234	225	349	93.2	75.2	124	265	229	63.2	112	295	205	284
Mercury	0.18	0.81	~	**0.536**	**0.262**	0.131	0.032 J	0.076	0.09 U	**0.768**	**0.476**	**1.32**	**1.83**	**0.226**	**0.716**	**0.506**	**0.639** J
Nickel	30	310	~	19.9	19.8	23.4	20.2	6.16	6.91	12.6	14.3	19.2	25.6	14.9	**31**	12.2	12.5
Potassium	~	~	~	5,290 J	2,880 J	3,340 J	2,880 J	1,060	429	1,090	2,320	888	440	2,060	1,290	1,710	1,210
Selenium	3.9	180	~	1.95	1.03 J	0.626 J	1.06 J	0.489 J	0.516 J	0.676 J	0.488 J	2.4	0.864 J	0.523 J	0.606 J	0.494 J	1.8 U
Silver	2	180	~	1.74	0.893 U	1.2 U	1.32 U	0.801 U	1.1 U	0.835 U	0.976 U	**35.7**	**9.66**	0.58 J	0.947 U	0.882 U	0.9 U
Sodium	~	~	~	244	209	323	701	238	1,090	192	264	322	260	197	149 J	503	166 J
Vanadium	~	~	~	34.6	23.7	24.3	36.3	9.12	6.37	13.7	21.6	23.4	17.4	21.6	16.7	18.3	18.6
Zinc	109	10,000	~	**1,080** J	**216** J	40.9 J	69.5 J	39.7	82.7	95.7	67.8	**3,040**	**277**	**430**	64.8	**476**	**129** J
General Chemistry (%)																	
Total Solids	~	~	~	83.2	87.2	62.6	60.3	93.5	70.2	91.1	81.8	93.7	89.7	81.7	80.4	88.8	87.6

Notes provided on Page 13.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 6
Remedial Investigation Report
Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB04 SODUP01_122118 L1852926-11 12/21/2018 8-10		445GERARD RB04 RB04_13-15 L1852926-10 12/21/2018 13-15		445GERARD RB04 RB04_18-20 L1852926-14 12/21/2018 18-20		445GERARD RB05 RB05_0-2 L1852926-01 12/21/2018 0-2		445GERARD RB05 RB05_8-10 L1852926-02 12/21/2018 8-10		445GERARD RB05 RB05_13-15 L1852926-03 12/21/2018 13-15		445GERARD RB05 RB05_19-21 L1852926-04 12/21/2018 19-21		445GERARD RB06 RB06_0-2 L1852926-05 12/21/2018 0-2		445GERARD RB06 RB06_8-10 L1852926-06 12/21/2018 8-10		445GERARD RB06 RB06_10-12 L1852926-07 12/21/2018 10-12		445GERARD RB07 RB07_0-2 L1852610-01 12/20/2018 0-2		445GERARD RB07 RB07_8-10 L1852610-02 12/20/2018 8-10		445GERARD RB07 RB07_10-12 L1852610-03 12/20/2018 10-12		445GERARD RB08 RB08_0-2 L1853234-04 12/27/2018 0-2		445GERARD RB08 RB08_10-12 L1853234-05 12/27/2018 10-12		445GERARD RB08 RB08_12-14 L1853234-06 12/27/2018 12-14		445GERARD RB08 RB08_14-16 L1853234-07 12/27/2018 14-16		445GERARD RB08 SODUP02_122718 L1853234-08 12/27/2018 14-16	
Volatile Organic Compounds (mg/kg)																																	
1,2,3-Trichloropropane	~	~	~	0.002	U	0.0023	U	0.0027	U	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
1,2,4,5-Tetramethylbenzene	~	~	~	0.002	U	0.0023	UJ	0.0017	J	0.0022	U	0.0019	UJ	0.0018	UJ	0.0021	UJ	0.0022	UJ	0.0021	UJ	0.0031	UJ	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.00046	J	0.0025	U
1,2,4-Trimethylbenzene	3.6	52	3.6	0.002	U	0.0023	U	0.0029		0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0006	J	0.0025	U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	~	0.002	U	0.0023	U	0.0027	U	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
1,4-Diethyl Benzene	~	~	~	0.002	U	0.0023	U	0.00042	J	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.00032	J	0.0025	U
4-Ethyltoluene	~	~	~	0.002	U	0.0023	U	0.0027	U	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
Acetone	0.05	100	~	0.01	U	0.024	J	**0.052**		0.011	U	0.0094	UJ	0.0046	J	0.023	J	0.011	UJ	0.018	J	0.026	J	0.014	U	0.009	U	0.019		0.011	U	0.011	U	0.0066	J	**0.082**	J	0.028	J
Benzene	0.06	4.8	0.06	0.0005	U	0.00058	U	0.00036	J	0.00055	U	0.00017	J	0.00014	J	0.00052	U	0.00054	U	0.00054	U	0.00038	J	0.0007	U	0.00087		0.0004	J	0.00057	U	0.00023	J	0.00016	J	0.00071	U	0.00063	U
Carbon Disulfide	~	~	~	0.01	U	0.012	U	0.014	U	0.011	U	0.0094	U	0.0088	U	0.01	U	0.011	U	0.011	U	0.011	J	0.014	UJ	0.009	UJ	0.01	UJ	0.011	U	0.011	U	0.0096	U	0.014	U	0.012	U
Carbon Tetrachloride	0.76	2.4	~	0.001	U	0.0012	U	0.0014	U	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Chloroform	0.37	49	~	0.0015	U	0.0018	U	0.002	U	0.0016	U	0.0014	U	0.0013	U	0.0016	U	0.0016	U	0.0016	U	0.0023	U	0.0021	U	0.0014	U	0.0015	U	0.00041	J	0.0017	U	0.00063	J	0.0021	U	0.0019	U
Cymene	~	~	~	0.001	U	0.0012	U	0.0014	U	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.00027	J	0.0012	U
Ethylbenzene	1	41	1	0.001	U	0.0012	U	0.0016		0.0011	U	0.00094	U	0.00023	J	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Hexachlorobutadiene	~	~	~	0.004	U	0.0047	U	0.0055	U	0.0044	U	0.0038	U	0.0035	U	0.0042	U	0.0043	U	0.0043	U	0.0062	U	0.0056	U	0.0036	U	0.004	U	0.0046	U	0.0045	U	0.0038	U	0.0057	U	0.005	U
Isopropylbenzene (Cumene)	~	~	~	0.001	U	0.0012	U	0.00078	J	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
M,P-Xylene	~	~	~	0.002	U	0.0023	U	0.0027	U	0.0022	U	0.0019	U	0.00088	J	0.0021	U	0.0022	U	0.0022	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	~	0.01	U	0.012	UJ	0.011	J	0.011	U	0.0094	UJ	0.0088	UJ	0.01	UJ	0.011	UJ	0.011	UJ	0.015	UJ	0.014	U	0.009	U	0.01	U	0.011	U	0.011	U	0.0096	U	0.014		0.0047	J
n-Butylbenzene	12	100	12	0.001	U	0.0012	U	0.00023	J	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
n-Propylbenzene	3.9	100	3.9	0.001	U	0.0012	U	0.00043	J	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
o-Xylene (1,2-Dimethylbenzene)	~	~	~	0.001	U	0.0012	U	0.00062	J	0.0011	U	0.00094	U	0.0004	J	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Sec-Butylbenzene	11	100	11	0.001	U	0.0012	U	0.00028	J	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Styrene	~	~	~	0.001	U	0.0012	UJ	0.0014	U	0.0011	U	0.00094	UJ	0.00088	UJ	0.001	UJ	0.0011	UJ	0.0011	UJ	0.0015	UJ	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
T-Butylbenzene	5.9	100	~	0.002	U	0.0023	U	0.00019	J	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
Tert-Butyl Methyl Ether	0.93	100	~	0.002	U	0.0023	U	0.0027	U	0.0022	U	0.0019	U	0.0018	U	0.0021	U	0.0022	U	0.0021	U	0.0031	U	0.0028	U	0.0018	U	0.002	U	0.0023	U	0.0022	U	0.0019	U	0.0028	U	0.0025	U
Tetrachloroethene (PCE)	1.3	19	~	0.0005		0.00058	U	0.00068	U	0.0019		0.00032	J	0.00042	J	0.00052	U	0.00074		0.00067		0.00077	U	0.0007	U	0.00045	U	0.0005	U	0.00057	U	0.00025	J	0.00048	U	0.00071	U	0.00063	U
Toluene	0.7	100	0.7	0.001	U	0.0012	U	0.0014	U	0.0011	U	0.00094	U	0.00088	U	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.00059	J	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Total Xylenes	0.26	100	1.6	0.001	U	0.0012	U	0.00062	J	0.0011	U	0.00094	U	0.0013	J	0.001	U	0.0011	U	0.0011	U	0.0015	U	0.0014	U	0.0009	U	0.001	U	0.0011	U	0.0011	U	0.00096	U	0.0014	U	0.0012	U
Semivolatile Organic Compounds (mg/kg)																																	
2-Methylnaphthalene	~	~	~	0.22	U	0.054	J	0.27		0.083	J	0.22	U	0.22	U	0.031	J	0.034	J	0.087	J	0.29	U	0.22	U	0.12	J	0.24	U	0.035	J	0.23	U	0.24	U	0.29	U	0.27	U
2-Methylphenol (o-Cresol)	0.33	100	~	0.18	U	0.19	U	0.19	U	0.18	U	0.18	U	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	0.19	U	0.19	U	0.2	U	0.24	U	0.22	U
3 & 4 Methylphenol (m&p Cresol)	0.33	100	~	0.26	U	0.03	J	0.27	U	0.035	J	0.26	U	0.26	U	0.12	J	0.049	J	0.082	J	*0.34*	U	0.27	U	0.27	U	0.29	U	0.27	U	0.27	U	0.28	U	*0.34*	U	0.32	U
Acenaphthene	20	100	98	0.14	U	0.16		0.97		0.14		0.061	J	0.1	J	0.31		0.052	J	0.096	J	0.19	U	0.15	U	0.14	J	0.026	J	0.054	J	0.038	J	0.062	J	0.19	U	0.18	U
Acenaphthylene	100	100	~	0.14	U	0.11	J	0.089	J	0.88		0.14	U	0.14	U	0.052	J	1.5		2.4		0.19	U	0.46		0.095	J	0.034	J	0.34		0.34		0.16	U	0.19	U	0.18	U
Acetophenone	~	~	~	0.18	U	0.19	U	0.19	U	0.18	U	0.18	U	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	0.19	U	0.19	U	0.2	U	0.24	U	0.22	U
Anthracene	100	100	~	0.11	U	0.62		1.8		0.64		0.13		0.13		0.12	J	0.7		1.2		0.14	U	0.18		0.44		0.071	J	0.34		0.24		0.15		0.14	U	0.13	U
Benzo(a)Anthracene	1	1	1	0.026	J	1.8		2.4		1.4		0.42		0.53		1.1		2.4		3.3		0.14	U	0.76		0.85		0.29		1		0.7		0.51		0.14	U	0.13	U
Benzo(a)Pyrene	1	1	22	0.14	U	**1.7**		**2.3**		**1.7**		0.49		0.62		**1.1**		**2.6**		**3.5**		0.19	U	0.81		0.76		0.29		0.76		0.59		0.5		0.19	U	0.18	U
Benzo(b)Fluoranthene	1	1	1.7	0.035	J	2.1		2.7		2.3		0.59		0.68		**1.2**		3.8		5		0.14	U	**1.1**		0.94		0.37		1		0.83		0.59		0.14	U	0.13	U
Benzo(g,h,i)Perylene	100	100	~	0.14	U	0.88		1.3		1.3		0.31		0.38		0.74		2		2.9		0.19	U	0.75		0.5		0.22		0.55		0.41		0.34		0.19	U	0.18	U
Benzo(k)Fluoranthene	0.8	3.9	1.7	0.11	U	0.56		**0.9**		0.74		0.2		0.2		0.36		**1.1**		**1.3**		0.14	U	0.43		0.35		0.13		0.42		0.26		0.19		0.14	U	0.13	U
Benzyl Butyl Phthalate	~	~	~	0.18	U	0.19	U	0.19	U	0.057	J	0.18	U	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	0.059	J	0.19	U	0.2	U	0.24	U	0.22	U
Biphenyl (Diphenyl)	~	~	~	0.41	U	0.44	U	0.1	J	0.41	U	0.41	U	0.41	U	0.49	U	0.43	U	0.42	U	0.54	U	0.42	U	0.43	U	0.46	U	0.43	U	0.43	U	0.45	U	0.55	U	0.51	U
Bis(2-Ethylhexyl) Phthalate	~	~	~	0.18	U	0.19	U	0.14	J	0.15	J	0.087	J	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	1.2		0.19	U	0.2	U	0.24	U	0.1	J
Carbazole	~	~	~	0.18	U	0.062	J	0.44		0.25		0.037	J	0.036	J	0.04	J	0.24		0.42		0.24	U	0.065	J	0.11	J	0.034	J	0.1	J	0.082	J	0.051	J	0.24	U	0.22	U
Chrysene	1	3.9	1	0.027	J	1.5		2		1.5		0.4		0.48		0.93		2.4		3.2		0.14	U	0.84		0.79		0.27		0.95		0.67		0.48		0.14	U	0.13	U
Dibenz(a,h)Anthracene	0.33	0.33	~	0.11	U	0.18		0.26		0.26		0.053	J	0.066	J	0.13		0.4		0.63		0.14	U	0.15		0.11		0.048	J	0.15		0.1	J	0.074	J	0.14	U	0.13	U
Dibenzofuran	7	59	~	0.18	U	0.086	J	0.52		0.099	J	0.028	J	0.037	J	0.043	J	0.051	J	0.19		0.24	U	0.022	J	0.1	J	0.021	J	0.04	J	0.029	J	0.039	J	0.24	U	0.22	U
Di-N-Butyl Phthalate	~	~	~	0.18	U	0.19	U	0.19	U	0.18	U	0.18	U	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	0.19	U	0.19	U	0.2	U	0.24	U	0.22	U
Di-N-Octylphthalate	~	~	~	0.18	U	0.19	U	0.19	U	0.18	U	0.18	U	0.18	U	0.22	U	0.19	U	0.18	U	0.24	U	0.19	U	0.19	U	0.2	U	0.2		0.19	U	0.2	U	0.24	U	0.22	U
Fluoranthene	100	100	~	0.055	J	3.2		4.8		2.8		1.1		1.1		1.8		4.2		6.3		0.14	U	1.3		1.9		0.52		1.8		1.3		1.1		0.14	U	0.13	U
Fluorene	30	100	~	0.18	U	0.18	J	0.87		0.15	J	0.049	J	0.062	J	0.047	J	0.097	J	0.2		0.24	U	0.023	J	0.15	J	0.026	J	0.066	J	0.055	J	0.055	J	0.24	U	0.22	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	8.2	0.14	U	**0.93**		**1.4**		**1.3**		0.31		0.38		**0.65**		**2**		**2.9**		0.19	U	**0.71**		**0.53**		0.22		**0.58**		0.42		0.33		0.19	U	0.18	U
Naphthalene	12	100	12	0.18	U	0.57		1.1		0.16	J	0.048	J	0.095	J	0.15	J	0.11	J	0.28		0.058	J	0.064	J	0.12	J	0.033	J	0.065	J	0.037	J	0.076	J	0.24	U	0.22	U
Pentachlorophenol	0.8	6.7	0.8	0.14	U	0.13	J	0.18		0.14	U	0.14	U	0.14	U	0.17	U	0.15	U	0.15		0.19	U	0.15	U	0.15	U	0.16	U	0.15	U	0.15	U	0.16	U	0.19	U	0.18	U
Phenanthrene	100	100	~	0.028	J	1.6		4.6		1.3		0.5		0.47		0.25		1.4		3.1		0.14	U	0.32		1.5		0.33		1		0.77		0.53		0.14	U	0.13	U
Phenol	0.33	100	0.33	0.18	U	0.19	U	0.19	U	0.18	U	0.18	U	0.18	U	0.22	U	0.19	U	0.043	J	0.24	U	0.19	U	0.19	U	0.2	U	0.19	U	0.19	U	0.2	U	0.24	U	0.22	U
Pyrene	100	100	~	0.051	J	3.1		4.5		2.4		0.95		1		1.7		3.7		5.1		0.14	U	1.2		1.7		0.46		1.6		1.1		0.99		0.029	J	0.023	J

Notes provided on Page 13.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 6
Remedial Investigation Report
Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB04 SODUP01_122118 L1852926-11 12/21/2018 8-10	445GERARD RB04 RB04_13-15 L1852926-10 12/21/2018 13-15	445GERARD RB04 RB04_18-20 L1852926-14 12/21/2018 18-20	445GERARD RB05 RB05_0-2 L1852926-01 12/21/2018 0-2	445GERARD RB05 RB05_8-10 L1852926-02 12/21/2018 8-10	445GERARD RB05 RB05_13-15 L1852926-03 12/21/2018 13-15	445GERARD RB05 RB05_19-21 L1852926-04 12/21/2018 19-21	445GERARD RB06 RB06_0-2 L1852926-05 12/21/2018 0-2	445GERARD RB06 RB06_8-10 L1852926-06 12/21/2018 8-10	445GERARD RB06 RB06_10-12 L1852926-07 12/21/2018 10-12	445GERARD RB07 RB07_0-2 L1852610-01 12/20/2018 0-2	445GERARD RB07 RB07_8-10 L1852610-02 12/20/2018 8-10	445GERARD RB07 RB07_10-12 L1852610-03 12/20/2018 10-12	445GERARD RB08 RB08_0-2 L1853234-04 12/27/2018 0-2	445GERARD RB08 RB08_10-12 L1853234-05 12/27/2018 10-12	445GERARD RB08 RB08_12-14 L1853234-06 12/27/2018 12-14	445GERARD RB08 RB08_14-16 L1853234-07 12/27/2018 14-16	445GERARD RB08 SODUP02_122718 L1853234-08 12/27/2018 14-16
Pesticides (mg/kg)																						
4,4'-DDD	0.0033	13	~	0.00195 U	*0.0902* U	*0.0896* U	0.00176 U	0.00177 U	*0.0351* U	*0.0413* U	0.00318 IP	0.00142 J	0.00231 U	0.000913 J	0.0018 U	0.0013 J	0.00178 U	0.00174 U	0.00184 U	0.00223 U	0.00217 U
4,4'-DDE	0.0033	8.9	~	0.00195 U	*0.0902* U	*0.0896* U	**0.0785**	0.00177 U	*0.0351* U	*0.0413* U	**0.101**	0.00231 U	**0.0129**	**0.00667**	0.00302 J	0.00206 J	0.00174 U	0.00184 U	0.00223 U	0.00217 U
4,4'-DDT	0.0033	7.9	~	*0.00365* U	*0.169* U	*0.168* U	**0.265**	*0.00332* U	*0.0657* U	*0.0775* U	**0.259**	**0.0978**	*0.00433* U	**0.0269**	**0.0166**	**0.00426** J	**0.0133** J	**0.00366**	*0.00344* U	*0.00418* U	*0.00406* U
Alpha Chlordane	0.094	4.2	~	0.00243 U	*0.113* U	*0.112* U	0.0106 IP	0.00221 U	0.0438 U	0.0516 U	0.0267 IP	0.00788 IP	0.00288 U	0.00502 J	0.00105 J	0.00242 U	0.00238 J	0.00218 U	0.00229 U	0.00278 U	0.00271 U
Beta Endosulfan	2.4	24	~	0.00195 U	0.0902 U	0.0896 U	0.00176 U	0.00177 U	0.0351 U	0.0413 U	0.00184 U	0.00228 U	0.00231 U	0.00173 U	0.0018 U	0.00193 U	0.00178 U	0.00174 U	0.00184 U	0.00223 U	0.00217 U
Dieldrin	0.005	0.2	~	0.00122 U	*0.0564* U	*0.056* U	0.0011 U	0.0011 U	*0.0219* U	*0.0258* U	0.00115 U	0.00142 U	0.00144 U	0.00157 J	0.00112 U	0.00121 U	0.00111 U	0.00109 U	0.00115 U	0.00139 U	0.00136 U
Endosulfan Sulfate	2.4	24	~	0.000811 U	0.0376 U	0.0373 U	0.000734 U	0.000737 U	0.0146 U	0.0172 U	0.000768 U	0.000948 U	0.000962 U	0.000392 J	0.0012	0.000772 J	0.00074 U	0.000727 U	0.000765 U	0.000928 U	0.000903 U
Endrin	0.014	11	~	0.000811 U	*0.0376* U	*0.0373* U	0.000734 U	0.000737 U	*0.0146* U	*0.0172* U	0.000768 U	0.000948 U	0.000962 U	0.00072 U	0.000749 U	0.000805 U	0.00074 U	0.000727 U	0.000765 U	0.000928 U	0.000903 U
Endrin Aldehyde	~	~	~	0.00243 U	0.113 U	0.112 U	0.0022 U	0.00221 U	0.0438 U	0.0516 U	0.0023 U	0.00284 U	0.00288 U	0.00216 U	0.00225 U	0.00242 U	0.00222 U	0.00218 U	0.00229 U	0.00278 U	0.00271 U
Gamma Chlordane	~	~	~	0.00243 U	0.113 U	0.112 U	0.0118 IP	0.00128 JIP	0.0438 U	0.0516 U	0.035 IP	0.0156 IP	0.00288 U	0.00513 J	0.00129 J	0.000811 J	0.00222 U	0.00218 U	0.00229 U	0.00278 U	0.00271 U
Heptachlor	0.042	2.1	~	0.000973 U	*0.0451* U	*0.0448* U	0.00088 U	0.000884 U	0.0175 U	0.0206 U	0.000568 J	0.00114 U	0.00115 U	0.000863 U	0.000899 U	0.000966 U	0.000888 U	0.000872 U	0.000918 U	0.00111 U	0.00108 U
Heptachlor Epoxide	~	~	~	0.00365 U	0.169 U	0.168 U	0.00361	0.00332 U	0.0657 U	0.0775 U	0.00126 JIP	0.00427 U	0.00433 U	0.00324 U	0.00337 U	0.00362 U	0.00333 U	0.00327 U	0.00344 U	0.00418 U	0.00406 U
Herbicides (mg/kg)	~	~	~	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (mg/kg)																					
PCB-1254 (Aroclor 1254)	~	~	~	0.0364 U	0.0375 U	0.0367 U	0.0354 U	0.0368 U	0.0365 U	0.0427 U	0.0365 U	0.0362 U	0.0479 U	0.0364 U	0.0366 U	0.0386 U	0.0361 U	0.0375 U	0.0376 U	0.0474 U	0.0446 U
PCB-1260 (Aroclor 1260)	~	~	~	0.0364 U	0.0375 U	0.0367 U	0.0577	0.0368 U	0.0365 U	0.0427 U	0.0365 U	0.0362 U	0.0479 U	0.0359 J	0.00865 J	0.0386 U	0.0407	0.0375 U	0.0376 U	0.0474 U	0.0446 U
PCB-1268 (Aroclor 1268)	~	~	~	0.0364 U	0.0375 U	0.0367 U	0.0354 U	0.0368 U	0.0365 U	0.0427 U	0.0131 J	0.013 J	0.0479 U	0.0364 U	0.0366 U	0.0386 U	0.0361 U	0.0375 U	0.0376 U	0.0474 U	0.0446 U
Total PCBs	0.1	1	~	0.0364 U	0.0375 U	0.0367 U	0.0577	0.0368 U	0.0365 U	0.0427 U	0.0131 J	0.013 J	0.0479 U	0.0359 J	0.00865 J	0.0386 U	0.0407	0.0375 U	0.0376 U	0.0474 U	0.0446 U
Inorganics (mg/kg)																					
Aluminum	~	~	~	4,850	6,240	5,930	4,080	7,460	6,640	6,400	2,970	5,760	11,200	7,260	8,070	3,210	4,610	5,340	9,200	11,000	10,400
Antimony	~	~	~	0.55 J	0.411 J	4.4 U	2.14 J	0.498 J	0.712 J	1.45 J	5.01	1.01 J	1.18 J	4.44 U	4.35 U	0.425 J	4.28 U	4.45 U	4.5 U	5.83 U	5.32 U
Arsenic	13	16	~	1.9	3.11	2.52	8.66	3.18	4.26	7.68	7.39	7.04	8.6	3.39	4.87	7.24	7.2	4.9	2.24	7.97	6.46
Barium	350	400	~	32.8	94.4	58.2	**647**	75.1	96.2	101	**826**	91.5	22.9	**468** J	**456** J	340 J	**1,460**	**661**	112	40.4	51.6
Beryllium	7.2	72	~	0.241 J	0.283 J	0.211 J	0.211 J	0.365 J	0.322 J	0.33 J	0.153 J	0.331 J	0.585	0.444 U	0.174 J	0.135 J	0.428 U	0.089 J	0.117 J	0.443 J	0.361 J
Cadmium	2.5	4.3	~	0.86 U	0.914 U	0.879 U	1.12	0.089 J	0.847 U	1.03 U	0.955	0.872 U	1.15 U	0.506 J	1.21	1.59	**5.19**	0.712 J	0.333 J	0.455 J	0.415 J
Calcium	~	~	~	9,970	18,900	14,600	61,900	14,400	7,990	5,060	56,400	16,900	2,200	36,500	25,200	14,300	37,000 J	44,700 J	12,000 J	2,860 J	5,700 J
Chromium, Hexavalent	1	110	~	0.43 J	0.924 UJ	0.911 U	0.888 UJ	0.894 UJ	0.896 UJ	*1.06* UJ	0.716 J	0.19 J	*1.17* UJ	**1.54**	0.926 U	0.988 U	0.908 UJ	0.918 UJ	0.955 UJ	*1.18* UJ	*1.11* UJ
Chromium, Total	~	~	~	10.6	14	11.4	19.1	35.2	16.3	14.4	11.4	11.4	22.9	13.6	19.1	28.4	15.4	18	18.1	24.1	23.9
Chromium, Trivalent	30	180	~	10 J	14	11	19	**35**	16	14	11 J	11 J	23	12	19	28	15	18	18	24	24
Cobalt	~	~	~	6.15	6.24	7.18	4.34	8.17	8.39	7.59	3.08	5.54	9.16	7.28	7.58	4.97	4.93	5.75	9.87	7.78	7.84
Copper	50	270	~	28.4	19.9	18.4	**73.5**	**188**	26.3	**227**	14.2	37.1	9.15	18.2	22	**85.3**	19.3 J	23.4 J	23.9 J	19.2 J	23.8 J
Cyanide	27	27	~	1 UJ	0.39 J	0.25 J	0.34 J	1.1 UJ	1 UJ	1.3 UJ	0.92 J	1.1 J	1.4 UJ	1 UJ	1.1 UJ	1.1 UJ	1 UJ	1.1 UJ	1.1 UJ	1.4 UJ	1.3 UJ
Iron	~	~	~	11,900	13,800	11,400	10,200 J	13,600	17,200	14,200	5,920	11,400	23,700	13,000	14,000	10,300	8,200	11,800	18,600	22,100	19,700
Lead	63	400	~	32.5 J	57.5	52.2	**976**	**79.4**	**191**	**268**	**1,120**	**539**	10.9	**164** J	**94** J	**282** J	**753** J	**229** J	**160** J	53.6 J	**71.3** J
Magnesium	~	~	~	6,470	4,830	4,470	4,850	5,980	3,230	2,630	4,070	2,300	5,660	6,830	11,700	2,130	3,810	4,440	4,260	5,030	4,740
Manganese	1,600	2,000	2,000	205	295	269	219	329	160	163	163	245	254	301	392	128	220	200	370	299	258
Mercury	0.18	0.81	~	**0.277** J	**0.553**	**0.242**	**0.514**	**0.688**	**1.11**	**1.12**	**0.417**	**1.12**	0.092 U	0.15 U	0.171 U	**1.83**	**0.213**	0.177	**0.364**	**1.45** J	0.125 J
Nickel	30	310	~	8.8	11.1	11.6	15.7	**30.1**	16	13.6	5.39	15.8	18.8	14.2	**37**	23.6	7.02	11.2	16.6	17.2	18.4
Potassium	~	~	~	1,020	1,720	2,540	830	2,050	2,310	1,640	644	599	2,390	3,120	1,440	545	1,520 J	1,590 J	3,020 J	2,240 J	2,340 J
Selenium	3.9	180	~	1.72 U	0.247 J	0.325 J	0.492 J	1.78 U	0.788 J	0.836 J	0.333 J	0.331 J	0.367 J	0.364 J	1.74 U	**10.9**	0.428 J	1.78 U	0.504 J	0.607 J	0.999 J
Silver	2	180	~	0.86 U	0.914 U	0.879 U	0.879 U	0.89 U	0.847 U	1.03 U	0.901 U	0.872 U	1.15 U	0.888 U	0.871 U	0.966 U	0.855 U	0.338 J	0.9 U	1.17 U	1.06 U
Sodium	~	~	~	137 J	164 J	205	360	121 J	77 J	128 J	373	125 J	233	323	124 J	121 J	240	287	89.7 J	386	351
Vanadium	~	~	~	16.1	15	15.5	27.3	21.4	20.2	20.6	14.8	13.7	29	23.2	27.4	13.1	20.9	23.8	28.3	28.4	27
Zinc	109	10,000	~	39.9 J	67.8	43.4	**731**	**208**	103	**130**	**1,190**	**114**	59.2	**221** J	**293**	**321**	**2,990** J	**439** J	85.2 J	73.4 J	96.3 J
General Chemistry (%)																					
Total Solids	~	~	~	90.8	86.6	87.8	90.1	89.5	89.3	75.2	86.6	89.2	68.5	88.8	86.4	81	88.1	87.1	83.8	67.8	72.3

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BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB09 RB09_0-2 L1900156-01 1/2/2019 0-2		445GERARD RB09 RB09_19-21 L1900156-02 1/2/2019 19-21		445GERARD RB09 SODUP03_010219 L1900156-07 1/2/2019 19-21		445GERARD RB09 RB09_28-30 L1900156-03 1/2/2019 28-30		445GERARD RB10 RB10_0-2 L1900879-01 1/8/2019 0-2		445GERARD RB10 RB10_18-20 L1900879-02 1/8/2019 18-20		445GERARD RB10 RB10_33-35 L1900879-03 1/8/2019 33-35		445GERARD RB11 RB11_0-2 L1900156-04 1/2/2019 0-2		445GERARD RB11 RB11_19-21 L1900156-05 1/2/2019 19-21		445GERARD RB11 RB11_28-30 L1900156-06 1/2/2019 28-30		445GERARD RB12 RB12_0-2 L1853111-04 12/26/2018 0-2		445GERARD RB12 RB12_8-9 L1853111-05 12/26/2018 8-9		445GERARD RB12 RB12_9-10 L1853111-06 12/26/2018 9-10		445GERARD RB12 RB12_10-12 L1853111-07 12/26/2018 10-12		445GERARD RB13 RB13_0-2 L1900707-01 1/7/2019 0-2		445GERARD RB13 RB13_18-20 L1900707-02 1/7/2019 18-20		445GERARD RB13 RB13_22-24 L1900707-03 1/7/2019 22-24		445GERARD RB13 RB13_33-35 L1900707-04 1/7/2019 33-35	
Volatile Organic Compounds (mg/kg)																																					
1,2,3-Trichloropropane	~	~	~	0.002	U	1.1	U	1.1	U	0.002	U	0.0018	U	0.2	U	0.0021	U	0.0019	U	0.24	U	0.0015	U	0.15	U	0.25	U	0.13	U	0.0019	U	0.0023	U	1.1	U	0.6	U	0.0024	U
1,2,4,5-Tetramethylbenzene	~	~	~	0.002	U	17	J	36	J	0.005		0.0018	U	5.7		0.0021	U	0.0059		13		0.0029		0.032	J	2.1		0.038	J	0.0019	U	0.00066	J	12		20		0.00086	J
1,2,4-Trimethylbenzene	3.6	52	3.6	0.002	U	1.1	U	1.1	U	0.002	U	0.0018	U	0.9		0.0021	U	0.0066		0.21	J	0.00062	J	0.2		**11**		0.54		0.0012	J	0.0023	U	110		0.3	J	0.0024	U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	~	0.002	U	0.13	J	0.25	J	0.00027	J	0.0018	U	0.18	J	0.0021	U	0.0041		0.25		0.00053	J	0.12	J	2.2		0.18		0.00043	J	0.00026	J	**38**		6.7		0.0007	J
1,4-Diethyl Benzene	~	~	~	0.002	U	5.3	J	11	J	0.0015	J	0.0018	U	2.2		0.0021	U	0.015		3.5		0.0019		0.15		9		0.21		0.0019	U	0.0023	U	3.2		5.8		0.0016	J
4-Ethyltoluene	~	~	~	0.002	U	1.1		2.3		0.00074	J	0.0018	U	1.2		0.0021	U	0.0044		0.32		0.00083	J	0.34		2.4		0.27		0.00047	J	0.0023	U	75		6.4		0.00054	J
Acetone	0.05	100	~	0.01	U	*5.3*	U	*5.7*	U	0.0055	J	0.009	UJ	**9.3**		0.01	UJ	0.024		*1.2*	U	0.0042	J	*0.77*	U	*1.3*	U	*0.64*	U	0.0095	U	0.0074	J	*5.6*	U	*3*	U	0.012	U
Benzene	0.06	4.8	0.06	0.0005	U	**1.1**	J	**2.5**	J	0.00019	J	0.00045	U	**9.5**		0.00052	U	0.00084		0.06	U	0.00016	J	0.048		*0.063*	U	0.028	J	0.00048		0.00076		**1.7**		**1.4**		0.00021	J
Carbon Disulfide	~	~	~	0.01	U	5.3	U	5.7	U	0.0098	U	0.009	U	0.98	U	0.01	U	0.0096	U	1.2	U	0.0074	U	0.77	U	1.3	U	0.64	U	0.0095	UJ	0.012	U	5.6	U	3	U	0.012	U
Carbon Tetrachloride	0.76	2.4	~	0.001	U	0.53	U	0.57	U	0.00098	U	0.0009	U	0.098	U	0.001	U	0.00096	U	0.12	U	0.00074	U	0.077	U	0.13	U	0.064	U	0.00095	U	0.0012	U	0.56	U	0.3	U	0.0012	U
Chloroform	0.37	49	~	0.0007	J	*0.8*	U	*0.86*	U	0.0015	U	0.0014	U	0.15	U	0.0016	U	0.0014	U	0.18	U	0.00017	J	0.12	U	0.19	U	0.096	U	0.0002	J	0.0017	U	*0.84*	U	*0.45*	U	0.0018	U
Cymene	~	~	~	0.001	U	0.34	J	0.71		0.0004	J	0.0009	U	0.056	J	0.001	U	0.00024	J	0.58		0.0008		0.034	J	1.9		0.042	J	0.00095	U	0.0012	U	2		2.3		0.0012	U
Ethylbenzene	1	41	1	0.001	U	0.79		**1.6**		0.00089	J	0.0009	U	**2.6**		0.001	U	0.00056	J	0.26		0.011		0.12		0.032	J	0.079		0.00047	J	0.00018	J	**37**		**9.7**		0.00097	J
Hexachlorobutadiene	~	~	~	0.004	U	2.1	U	2.3	U	0.0039	U	0.0036	U	0.39	U	0.0042	U	0.0038	U	0.48	U	0.003	U	0.31	U	0.5	U	0.26	U	0.0038	U	0.0046	U	0.16	J	1.2	U	0.0048	U
Isopropylbenzene (Cumene)	~	~	~	0.001	U	8.7	J	19	J	0.0028		0.0009	U	2.8		0.001	U	0.00019	J	3		0.0007		0.018	J	0.1	J	0.03	J	0.00095	U	0.0012	U	7.1		12		0.00056	J
M,P-Xylene	~	~	~	0.002	U	0.5	J	1.1		0.002	U	0.0018	U	6.8		0.0021	U	0.0047		0.24	U	0.0015	U	0.62		0.25	U	0.16		0.0019	U	0.00088	J	93		4		0.0024	U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	~	0.01	U	*5.3*	U	*5.7*	U	0.0098	U	0.009	UJ	*0.98*	U	0.01	UJ	0.0096	U	*1.2*	U	0.0074	U	*0.77*	U	*1.3*	U	*0.64*	U	0.0095	U	0.012	U	*5.6*	U	*3*	U	0.012	U
n-Butylbenzene	12	100	12	0.001	U	7.2	J	**14**	J	0.002		0.0009	U	1.6		0.001	U	0.00096	U	4		0.0014		0.019	J	2		0.07		0.00095	U	0.0012	U	5.5		11		0.00055	J
n-Propylbenzene	3.9	100	3.9	0.001	U	**21**	J	**44**	J	0.006		0.0009	U	**6.7**		0.001	U	0.0004	J	**9.1**		0.012		0.08		0.44		0.074		0.00095	U	0.0012	U	**18**		**30**		0.0011	J
o-Xylene (1,2-Dimethylbenzene)	~	~	~	0.001	U	0.53	U	0.17	J	0.00098	U	0.0009	U	0.84		0.001	U	0.0025		0.12	U	0.00074	U	0.2		0.13	U	0.053	J	0.00095	U	0.0012	U	24		1.2		0.0012	U
Sec-Butylbenzene	11	100	11	0.001	U	2.6	J	5.3	J	0.0013		0.0009	U	1.4		0.001	U	0.00016	J	1.4		0.0011		0.029	J	1.6		0.093		0.00018	J	0.0012	U	2		2.9		0.0012	U
Styrene	~	~	~	0.001	U	0.53	U	0.57	U	0.00098	U	0.0009	U	0.098	U	0.001	U	0.00096	U	0.12	U	0.00074	U	0.077	U	0.13	U	0.064	U	0.00095	U	0.0012	U	0.56	U	0.3	U	0.0012	U
T-Butylbenzene	5.9	100	~	0.002	U	0.26	J	0.54	J	0.00048	J	0.0018	U	0.13	J	0.0021	U	0.0019	U	0.16	J	0.00031	J	0.15	U	0.09	J	0.13	U	0.0019	U	0.0023	U	0.2	J	0.28	J	0.0024	U
Tert-Butyl Methyl Ether	0.93	100	~	0.002	U	*1.1*	U	*1.1*	U	0.002	U	0.0018	U	0.2	U	0.0021	U	0.0019	U	0.24	U	0.0015	U	0.15	U	0.25	U	0.13	U	0.0019	U	0.0023	U	*1.1*	U	0.6	U	0.0024	U
Tetrachloroethene (PCE)	1.3	19	~	0.00046	J	0.27	U	0.29	U	0.00049	U	0.00045	U	0.049	U	0.00052	U	0.00038	J	0.06	U	0.00037	U	0.13		0.063	U	0.032	U	0.00022	J	0.00077		0.28	U	0.15	U	0.0006	U
Toluene	0.7	100	0.7	0.001	U	0.53	U	0.36	J	0.00098	U	0.0009	U	**8.5**		0.001	U	0.0023		0.12	U	0.00074	U	0.4		0.13	U	0.16		0.001		0.0008	J	**1.6**		0.49		0.0012	U
Total Xylenes	0.26	100	1.6	0.001	U	**0.5**	J	**1.3**	J	0.00098	U	0.0009	U	**7.6**		0.001	U	0.0072		0.12	U	0.00074	U	**0.82**		0.13	U	0.21	J	0.00095	U	0.00088	J	120		**5.2**		0.0012	U
Semivolatile Organic Compounds (mg/kg)																																					
2-Methylnaphthalene	~	~	~	0.053	J	7.6	J	19	J	0.23	U	1.1	U	1.4		0.24	U	0.72		9.5		0.028	J	0.94	J	0.82	J	0.074	J	0.65		0.092	J	0.55		16		0.22	U
2-Methylphenol (o-Cresol)	0.33	100	~	0.17	U	0.19	U	0.19	U	0.2	U	*0.92*	U	0.086	J	0.2	U	0.18	U	0.19	U	0.18	U	*1.8*	U	*1.8*	U	0.18	U	*0.37*	U	0.19	U	0.19	U	*0.99*	U	0.18	U
3 & 4 Methylphenol (m&p Cresol)	0.33	100	~	0.24	U	0.27	U	0.28	U	0.28	U	*1.3*	U	**0.38**	J	0.28	U	0.25	U	0.27	U	0.26	U	*2.6*	U	*2.6*	U	0.26	U	0.089	J	0.28	U	0.28	U	*1.4*	U	0.26	U
Acenaphthene	20	100	98	0.2		0.074	J	0.14	J	0.16	U	0.27	J	0.68		0.16	U	0.058	J	0.027	J	0.14	U	4		0.82	J	0.16		1.1		0.15	U	0.052	J	0.79	U	0.14	U
Acenaphthylene	100	100	~	0.13		0.15	U	0.15	U	0.16	U	0.73	U	2		0.16	U	0.03	J	0.15	U	0.14	U	2		6.6		0.072	J	1		0.092	J	0.16	U	0.79	U	0.14	U
Acetophenone	~	~	~	0.17	U	0.19	U	0.19	U	0.2	U	0.92	U	0.45	U	0.2	U	0.18	U	0.19	U	0.18	U	1.8	U	1.8	U	0.18	U	0.14	J	0.067	J	0.19	U	0.99	U	0.18	U
Anthracene	100	100	~	0.7		0.1	J	0.2		0.12	U	0.74		7.1		0.12	U	0.23		0.11	U	0.11	U	10		5.1		0.35		2.2		0.061	J	0.12	U	0.59	U	0.11	U
Benzo(a)Anthracene	1	1	1	**2.7**		0.14		0.27		0.12	U	**2.5**		**12**		0.12	U	0.41		0.033	J	0.11	U	**20**		**12**		**2**		**3.5**		0.16		0.12	U	0.16	J	0.11	U
Benzo(a)Pyrene	1	1	22	**2.4**		0.11	J	0.21		0.16	U	**2**		**11**		0.16	U	0.35		0.15	U	0.14	U	**19**		**12**		**2.6**		**3.6**		0.18		0.16	U	0.79	U	0.14	U
Benzo(b)Fluoranthene	1	1	1.7	**3**		0.13		0.25		0.12	U	**2.8**		**15**	J	0.12	U	0.47		0.032	J	0.11	U	**24**		**13**		**3.1**		**4**		0.32		0.12	U	0.59	U	0.11	U
Benzo(g,h,i)Perylene	100	100	~	1.4		0.082	J	0.14	J	0.16	U	1.4		8.7		0.16	U	0.31		0.026	J	0.14	U	11		12		2		2		0.24		0.16	U	0.12	J	0.14	U
Benzo(k)Fluoranthene	0.8	3.9	1.7	**0.99**		0.044	J	0.083	J	0.12	U	**0.82**		**4.5**		0.12	U	0.14		0.11	U	0.11	U	**8.2**		**4.7**		**1**		**1.4**		0.098	J	0.12	U	0.59	U	0.11	U
Benzyl Butyl Phthalate	~	~	~	0.17	U	0.19	U	0.19	U	0.2	U	0.92	UJ	0.45	UJ	0.2	U	0.18	U	0.19	U	0.096	J	1.8	U	1.8	U	0.18	U	0.37	U	0.19	U	0.19	U	0.99	U	0.18	U
Biphenyl (Diphenyl)	~	~	~	0.38	U	0.43	U	0.13	J	0.44	U	2.1	U	1	U	0.45	U	0.4	U	0.43	U	0.42	U	4.1	U	4	U	0.42	U	0.24	J	0.44	U	0.44	U	0.46	J	0.42	U
Bis(2-Ethylhexyl) Phthalate	~	~	~	0.17	U	0.19	U	0.19	U	0.2	U	0.92	U	0.45	U	0.2	U	0.34		0.19	U	0.22		1.8	U	1.8	U	0.18	U	0.37	U	0.19	U	0.19	U	0.99	U	0.18	U
Carbazole	~	~	~	0.25		0.027	J	0.04	J	0.2	U	0.14	J	0.41	J	0.2	U	0.042	J	0.19	U	0.18	U	2.3		0.52	J	0.082	J	0.93		0.034	J	0.023	J	0.99	U	0.18	U
Chrysene	1	3.9	1	**2.5**		0.13		0.25		0.12	U	**2.2**		**9.6**		0.12	U	0.37		0.028	J	0.11	U	**18**		**11**		**1.8**		**3.9**		0.24		0.12	U	0.14	J	0.11	U
Dibenz(a,h)Anthracene	0.33	0.33	~	**0.38**		0.11	U	0.035	J	0.12	U	0.3	J	**1.7**		0.12	U	0.064	J	0.11	U	0.11	U	**2.8**		**2**		**0.38**		**0.57**		0.05	J	0.12	U	*0.59*	U	0.11	U
Dibenzofuran	7	59	~	0.11	J	0.047	J	0.093	J	0.2	U	0.12	J	0.54		0.2	U	0.051	J	0.19	U	0.18	U	2.6		0.77	J	0.088	J	1		0.019	J	0.19	U	0.99	U	0.18	U
Di-N-Butyl Phthalate	~	~	~	0.17	U	0.19	U	0.19	U	0.2	U	0.92	U	0.45	U	0.2	U	0.18	U	0.19	U	0.18	U	1.8	U	1.8	U	0.18	U	0.37	U	0.19	U	0.19	U	0.99	U	0.18	U
Di-N-Octylphthalate	~	~	~	0.17	U	0.19	U	0.19	U	0.2	U	0.92	U	0.45	U	0.2	U	0.18	U	0.19	U	0.18	U	1.8	U	1.8	U	0.18	U	0.37	U	0.19	U	0.19	U	0.99	U	0.18	U
Fluoranthene	100	100	~	5.3		0.33	J	0.67	J	0.12	U	4.3		34		0.12	U	0.92		0.064	J	0.11	U	41		23		3.1		7.6		0.3		0.12	U	0.28	J	0.11	U
Fluorene	30	100	~	0.18		0.1	J	0.19		0.2	U	0.25	J	1.9		0.2	U	0.069	J	0.065	J	0.18	U	3.4		1.5	J	0.13	J	1.5		0.19	U	0.022	J	0.17	J	0.18	U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	8.2	**1.5**		0.069	J	0.12	J	0.16	U	**1.3**		**8.2**		0.16	U	0.27		0.15	U	0.14	U	**12**		**10**		**2**		**2.1**		0.2		0.16	U	*0.79*	U	0.14	U
Naphthalene	12	100	12	0.13	J	6.4	J	**21**	J	0.2	U	0.92	U	1.9		0.2	U	0.63		1.9		0.18	U	1.2	J	2.7		0.53		2.6		0.16	J	0.94		**22**		0.18	U
Pentachlorophenol	0.8	6.7	0.8	0.13	U	0.15	U	0.15	U	0.16	U	0.73	U	0.36	U	0.16	U	0.14	U	0.15	U	0.14	U	*1.4*	U	*1.4*	U	0.15	U	0.29	U	0.15	U	0.16	U	0.79	U	0.14	U
Phenanthrene	100	100	~	3.2		0.4	J	0.83	J	0.12	U	3.2		26		0.12	U	0.95		0.1	J	0.11	U	35		15		1.2		8.7		0.19		0.12	U	0.32	J	0.11	U
Phenol	0.33	100	0.33	0.17	U	0.19	U	0.19	U	0.2	U	*0.92*	U	0.16	J	0.2	U	0.18	U	0.19	U	0.18	U	*1.8*	U	*1.8*	U	0.18	U	0.072	J	0.19	U	0.19	U	*0.99*	U	0.18	U
Pyrene	100	100	~	4.7		0.32	J	0.66	J	0.12	U	4.7		29		0.12	U	0.83		0.072	J	0.11	U	34		22		3.2		7.5		0.34		0.12	U	0.33	J	0.11	U

Notes provided on Page 13.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.

Table 6
Remedial Investigation Report
Soil Sample Analytical Results Summary
Gerard Avenue and East 146th Street
Bronx, New York
BCP No.: C203111
Langan Project No.: 170487001

Site Address Location Sample ID Laboratory ID Sample Date Depth Range (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use - Restricted Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs	445GERARD RB09 RB09_0-2 L1900156-01 1/2/2019 0-2	445GERARD RB09 RB09_19-21 L1900156-02 1/2/2019 19-21	445GERARD RB09 SODUP03_010219 L1900156-07 1/2/2019 19-21	445GERARD RB09 RB09_28-30 L1900156-03 1/2/2019 28-30	445GERARD RB10 RB10_0-2 L1900879-01 1/8/2019 0-2	445GERARD RB10 RB10_18-20 L1900879-02 1/8/2019 18-20	445GERARD RB10 RB10_33-35 L1900879-03 1/8/2019 33-35	445GERARD RB11 RB11_0-2 L1900156-04 1/2/2019 0-2	445GERARD RB11 RB11_19-21 L1900156-05 1/2/2019 19-21	445GERARD RB11 RB11_28-30 L1900156-06 1/2/2019 28-30	445GERARD RB12 RB12_0-2 L1853111-04 12/26/2018 0-2	445GERARD RB12 RB12_8-9 L1853111-05 12/26/2018 8-9	445GERARD RB12 RB12_9-10 L1853111-06 12/26/2018 9-10	445GERARD RB12 RB12_10-12 L1853111-07 12/26/2018 10-12	445GERARD RB13 RB13_0-2 L1900707-01 1/7/2019 0-2	445GERARD RB13 RB13_18-20 L1900707-02 1/7/2019 18-20	445GERARD RB13 RB13_22-24 L1900707-03 1/7/2019 22-24	445GERARD RB13 RB13_33-35 L1900707-04 1/7/2019 33-35
Pesticides (mg/kg)																						
4,4'-DDD	0.0033	13	~	0.00157 UJ	0.00179 UJ	*0.09* UJ	0.00187 UJ	0.00172 U	0.00215 U	0.00187 U	0.00142 J	*0.0919* UJ	0.0017 UJ	0.00174 U	*0.0343* U	0.00174 U	0.00175 U	0.00184 U	0.00186 U	0.00187 U	0.00173 U
4,4'-DDE	0.0033	8.9	~	0.00157 UJ	0.00179 UJ	*0.09* UJ	0.00187 UJ	0.00172 U	0.00215 U	0.00187 U	0.00163 UJ	*0.0919* UJ	0.0017 UJ	0.00174 U	*0.0343* U	0.00174 U	0.00175 U	0.00184 U	0.00186 U	0.00187 U	0.00173 U
4,4'-DDT	0.0033	7.9	~	0.00294 UJ	*0.00336* UJ	*0.169* UJ	*0.00351* UJ	0.00323 U	*0.00403* U	*0.00351* U	0.00156 J	*0.172* UJ	0.0032 UJ	0.00327 U	*0.0644* U	0.00326 U	0.00328 U	*0.00345* U	*0.00348* U	*0.00351* U	0.00324 U
Alpha Chlordane	0.094	4.2	~	0.00196 UJ	0.00224 UJ	*0.112* UJ	0.00234 UJ	0.00215 U	0.00268 U	0.00234 U	0.00204 UJ	*0.115* UJ	0.00213 UJ	0.00218 U	0.0429 U	0.00217 U	0.00219 U	0.0023 U	0.00232 U	0.00234 U	0.00216 U
Beta Endosulfan	2.4	24	~	0.00157 UJ	0.00179 UJ	0.09 UJ	0.00187 UJ	0.00161 JIP	0.00215 U	0.00187 U	0.00163 UJ	0.0919 UJ	0.0017 UJ	0.00687 J	0.0343 U	0.00174 U	0.00175 U	0.00184 U	0.00186 U	0.00187 U	0.00173 U
Dieldrin	0.005	0.2	~	0.00098 UJ	0.00112 UJ	*0.0562* UJ	0.00117 UJ	0.00108 U	0.00134 U	0.00117 U	0.000531 J	*0.0574* UJ	0.00106 UJ	0.00109 U	**0.0169** J	0.00109 U	0.00109 U	0.00115 U	0.00116 U	0.00117 U	0.00108 U
Endosulfan Sulfate	2.4	24	~	0.000653 UJ	0.000746 UJ	0.0375 UJ	0.00078 UJ	0.000718 U	0.000895 U	0.00078 U	0.000679 UJ	0.0383 UJ	0.00071 UJ	0.000726 U	0.0143 U	0.000724 U	0.000729 U	0.000766 U	0.000773 U	0.00078 U	0.000721 U
Endrin	0.014	11	~	0.000653 UJ	0.000746 UJ	*0.0375* UJ	0.00078 UJ	0.00573 P	0.000895 U	0.00078 U	0.000679 UJ	*0.0383* UJ	0.00071 UJ	0.000726 U	*0.0143* U	0.0016 J	0.000729 U	0.000766 U	0.000773 U	0.00078 U	0.000721 U
Endrin Aldehyde	~	~	~	0.00196 UJ	0.00224 UJ	0.112 UJ	0.00234 UJ	0.00215 U	0.00268 U	0.00234 U	0.00204 UJ	0.115 UJ	0.00213 UJ	0.00218 U	0.0429 U	0.00217 U	0.00219 U	0.0023 U	0.00232 U	0.00234 U	0.00216 U
Gamma Chlordane	~	~	~	0.00196 UJ	0.00224 UJ	0.112 UJ	0.00234 UJ	0.00215 U	0.00268 U	0.00234 U	0.000935 J	0.115 UJ	0.00213 UJ	0.000956 J	0.0429 U	0.000748 J	0.00219 U	0.0023 U	0.00232 U	0.00234 U	0.00216 U
Heptachlor	0.042	2.1	~	0.000784 UJ	0.000895 UJ	*0.045* UJ	0.000936 UJ	0.000862 U	0.00107 U	0.000937 U	0.000814 UJ	*0.046* UJ	0.000852 UJ	0.000872 U	0.0172 U	0.000869 U	0.000874 U	0.00092 U	0.000928 U	0.000936 U	0.000866 U
Heptachlor Epoxide	~	~	~	0.00294 UJ	0.00336 UJ	0.169 UJ	0.00351 UJ	0.00323 U	0.00403 U	0.00351 U	0.00305 UJ	0.172 UJ	0.0032 UJ	0.00327 U	0.0644 U	0.00326 U	0.00328 U	0.00345 U	0.00348 U	0.00351 U	0.00324 U
Herbicides (mg/kg)	~	~	~	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (mg/kg)																					
PCB-1254 (Aroclor 1254)	~	~	~	0.0331 U	0.0374 U	0.0386 U	0.0393 U	0.0358 U	0.0444 U	0.0391 U	0.0185 J	0.0373 U	0.0347 U	0.035 U	0.0354 U	0.0357 U	0.0362 U	0.0386 U	0.0377 U	0.0383 U	0.037 U
PCB-1260 (Aroclor 1260)	~	~	~	0.0331 U	0.0374 U	0.0386 U	0.0393 U	0.0358 U	0.0444 U	0.0391 U	0.0117 J	0.0373 U	0.0347 U	0.035 U	0.0224 J	0.0357 U	0.0362 U	0.0386 U	0.0377 U	0.0383 U	0.037 U
PCB-1268 (Aroclor 1268)	~	~	~	0.0331 U	0.0374 U	0.0386 U	0.0393 U	0.0358 U	0.0444 U	0.0391 U	0.0351 U	0.0373 U	0.0347 U	0.035 U	0.0354 U	0.0357 U	0.0362 U	0.0386 U	0.0377 U	0.0383 U	0.037 U
Total PCBs	0.1	1	~	0.0331 U	0.0374 U	0.0386 U	0.0393 U	0.0358 U	0.0444 U	0.0391 U	0.0302 J	0.0373 U	0.0347 U	0.035 U	0.0224 J	0.0357 U	0.0362 U	0.0386 U	0.0377 U	0.0383 U	0.037 U
Inorganics (mg/kg)																					
Aluminum	~	~	~	3,430	4,520	4,170	3,480	5,840	4,100	3,050	6,870	4,590	5,060	3,080	8,460	8,610	5,040	8,550	9,480	3,160	4,760
Antimony	~	~	~	0.402 J	4.57 U	4.64 U	4.73 U	4.27 U	5.45 U	4.73 U	4.23 U	4.59 U	4.24 U	0.988 J	4.18 U	4.52 U	1.05 J	0.915 J	4.53 U	4.74 U	4.24 U
Arsenic	13	16	~	3.98	1.76	1.99	1.74	2.48	**17.2**	0.558 J	4.05	1.06	1.78	6.86	1.47	1.97	7.58	4.1	5.15	0.987	0.603 J
Barium	350	400	~	97.9	27 J	12.4 J	7.66	50	57.4	39	101	19.4	46.6	92.6	73.8	129	56.8	42.8	117	9.92	35.7
Beryllium	7.2	72	~	0.41 U	0.11 J	0.093 J	0.151 J	0.427 U	0.087 J	0.123 J	0.423 U	0.128 J	0.424 U	0.269 J	0.41 J	0.244 J	0.22 J	0.302 J	0.281 J	0.133 J	0.424 U
Cadmium	2.5	4.3	~	0.476 J	0.201 J	0.158 J	0.189 J	0.213 J	0.556 J	0.946 U	0.626 J	0.184 J	0.237 J	0.867 U	0.836 U	0.903 U	0.847 U	0.178 J	0.907 U	0.949 U	0.849 U
Calcium	~	~	~	2,320	1,140	724	614	8,040	34,100	513	48,400	706	1,760	28,600	11,700	4,200	22,700	2,430	3,010	855	23,400
Chromium, Hexavalent	1	110	~	0.836 U	0.94 U	0.944 U	0.965 U	0.884 UJ	0.663 J	0.363 J	0.864 U	0.942 U	0.882 U	0.884 U	0.863 U	0.909 U	0.882 U	0.934 U	0.952 U	0.964 U	0.902 U
Chromium, Total	~	~	~	9.35	7.55	9.01	6.45	14.6	7.47	6.84	13.9	7.45	12	7.26	18.7	19.8	11	12	22.4	6.86	7.04
Chromium, Trivalent	30	180	~	9.4	7.6	9	6.4	15	6.8 J	6.5 J	14	7.4	12	7.3	19	20	11	12	22	6.9	7
Cobalt	~	~	~	3.88	3.6	2.96	3.52	8.27	3.29	3.57	6.42	3.49	6	5.44	11.7	13.4	5.78	9.94	7.46	2.34	4.64
Copper	50	270	~	**68.2**	6.39	6.48	5.63	27.1	**63.2**	6.43	**422**	7.19	18.7	**56**	24.2	42.3	**52.4**	19.8	14	4.71	13.8
Cyanide	27	27	~	1 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1 UJ	1.4 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	0.66 J	1.1 UJ	1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ
Iron	~	~	~	11,000	9,900	7,500	8,480	17,700	10,600	7,460	13,100	9,120	10,500	7,630	18,200	17,800	9,100	15,000	18,900	6,690	9,510
Lead	63	400	~	**569**	42.1 J	12 J	3.15 J	**71.6**	**96.8**	3.85 J	**162**	7.56	4.34	**162**	27.3	**280**	**126**	**76.2**	37.8	9.56	2.76 J
Magnesium	~	~	~	1,370	2,060	1,770	1,460	5,330	3,480	1,470	4,310	1,870	2,970	1,240	3,040	5,290	2,260	2,730	4,360	1,420 J	16,800
Manganese	1,600	2,000	2,000	171	74.5	78.9	312	235	248	284	173	98	147	72.8	248	149	148	256	563	66.9 J	179
Mercury	0.18	0.81	~	**0.242**	0.074 U	0.074 U	0.076 U	0.159	0.146	0.076 U	**0.235**	0.074 U	0.069 U	**0.446**	0.161	**0.22**	**0.725**	**0.468**	0.066 J	0.083 U	0.072 U
Nickel	30	310	~	8.91	7.07	6.83	7.29	25	7.74	8.45	16.5	7.35	11.7	18.9	17.4	26.8	14.1	11.7	11.5	5.44	7.42
Potassium	~	~	~	878	409	532	378	1,650	645	597	2,410	415	1,530	1,260	3,130	6,230	1,470	530	516	396 J	1,820
Selenium	3.9	180	~	1.64 U	1.83 U	1.86 U	1.89 U	0.264 J	**12.5**	1.89 U	1.69 U	1.84 U	1.7 U	0.373 J	1.67 U	0.596 J	0.492 J	1.78 U	1.81 U	1.9 U	1.7 U
Silver	2	180	~	0.279 J	0.914 U	0.929 U	0.945 U	0.853 U	1.09 U	0.946 U	0.846 U	0.918 U	0.848 U	0.303 J	0.836 U	0.903 U	0.83 J	0.888 U	0.907 U	0.949 U	0.849 U
Sodium	~	~	~	657	48.1 J	85.4 J	103 J	663	219	205	841	40.6 J	229	643	55.5 J	150 J	187	332	152 J	50.1 J	236
Vanadium	~	~	~	11.2	10.3	11.8	8.43	20.3	14.8	8.14	21	10.7	18.1	17.7	26.4	25.8	17	14.9	27.1	8.76	14.8
Zinc	109	10,000	~	**206**	23.5	17.9	16.8	73.8	**130**	15.5	**130**	17	25	95.8	52.8	76	69.2	**120**	56	14.7	26
General Chemistry (%)																					
Total Solids	~	~	~	95.7	85.1	84.7	82.9	90.5	72.4	82.6	92.6	84.9	90.7	90.5	92.7	88	90.7	85.6	84	83	88.7

Notes provided on Page 13.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Restricted-Residential SCOs are shaded.
Concentrations above Protection of Groundwater SCOs are red.